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26-0000 Electrical O&M



Lighting Associates, Inc.
3600 Swiftwater Park Drive
Suwanee GA 30024
Phone: (770) 448-9250

Date: Aug 19, 2025

Job Name
NEWTON COUNTY ENRICHMENT CENTER - O&M's
LAI24-242157
COVINGTON GA

Submittal Date
Aug 19, 2025

Engineer:
Electrical Design Consultants - Macon
175 New Street
Macon GA 31201

Distributor:
Mayer Electric Supply Co., Inc. - Covington
9120 Old City Pond Road
Covington GA 30014



Transmittal

Lighting Associates, Inc.
 3600 Swiftwater Park Drive
 Suwanee GA 30024
 Phone: (770) 448-9250
From: Claudia Popadics

Project **NEWTON COUNTY ENRICHMENT CENTER - O&M's**

Quote# LAI24-242157

Location COVINGTON GA

Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|---|--------------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: O&M's |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|--|
| <input type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input checked="" type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type	MFG	Part
A	Acuity Brands Lighting	STAKS 2X4 ALO6 SWW7 / 2X4SMKSHPPAF
D	Acuity Brands Lighting	LBR6 NCH 15LM 35K AR LSS MWD MVOLT UGZ
E	Acuity Brands Lighting	S4PD LLP 4FT MSL4 80CRI 35K 800LMF SCT MIN10 FLL MVOLT WHTT ZT F2/72A RDCY BLKCY BCRD
F	BlackJack Lighting	SP-LGD-AL-03-PC-35K-3W-SP5
G	Lumenwerx	CURVMRIP-DI-3FT-HLO-HLO-SW-90CRI-750LMF-750LMF-35K-UNV-RD1-1C-POC-W-SC-*LENGTH*-DRC-W
OA	Acuity Brands Lighting	LBR6 NCH 15LM 40K AR LSS MWD MVOLT UGZ WL
OC	Acuity Brands Lighting	RSX2 LED P3 40K R4 MVOLT SPA DDBXD
OC	Hapco Pole Products	SSS25B4-4-D190-ACUITY DDBXD
OD	Acuity Brands Lighting	RSX2 LED P3 40K R4 MVOLT SPA DDBXD
OD	Hapco Pole Products	SSS25B4-4-D280-ACUITY DDBXD
OE	Acuity Brands Lighting	RSXF2 LED P3 40K WFL MVOLT IS DDBXD
OE	Hapco Pole Products	SSS25B4-4-D190-ACUITY DDBXD
OF	Acuity Brands Lighting	LBR6 NCH 10LM 40K AR LSS MWD MVOLT UGZ WL
X	Acuity Brands Lighting	LHQM LED R HO M6
EXT	Acuity Brands Lighting	AFF PEL DDBTXD UVOLT LTP SDRT WT
BUG	Acuity Brands Lighting	ELM2L
SO1	Acuity Brands Lighting	WSXA PDT WH
WARRANTY	Acuity Brands Lighting	CONTROLS
WARRANTY	Acuity Brands Lighting	EXITS & EMERGENCY
WARRANTY	BlackJack Lighting	BLACKJACK



Transmittal

Lighting Associates, Inc.
3600 Swiftwater Park Drive
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Phone: (770) 448-9250
From: Claudia Popadics

Type	MFG	Part
WARRANTY	Hapco Pole Products	HAPCO
WARRANTY	Lumenwerx	LUMENWERX



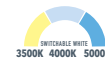
Catalog Number
Notes
Type

Contractor Select™
STACK Switch
 LED Center Element Troffer



Available in 2x2 and 2x4 configurations, STACK Switch allows the end user to select from three lumen packages and three color temperatures all at an affordable price. The wide center basked and curved matte reflector allow STACK Switch to deliver a high quality of light while maintaining optimal performance.

- Contractor Select™ STACK Switch offer the most popular and readily available configurations.
- Color and lumen switching allows for maximum flexibility for contractors, distributors, and end users. High lumen settings allow for more coverage and higher mounting heights. Low lumen settings allow for lower mounting heights and increased power reduction.
- 0-10V dimming to 10%
- Long-life LEDs deliver 80% lumen maintenance at 60,000 hours



Catalog Number	UPC	Description	Lumens	Watts	Voltage	Color Temperature	Pallet qty.
STAKS 2X2 ALO3 SWW7	194995082056	2X2 Center Element Troffer	30L/40L/50L	26W - 45W	120V - 277V	35K/40K/50K	60
STAKS 2X4 ALO6 SWW7	194995082063	2X4 Center Element Troffer	40L/50L/60L	35W - 55W	120V - 277V	35K/40K/50K	30
STAKS 2X2 ALO3 SWW7 UVOLT	196183539205	2X2 Center Element Troffer	30L/40L/50L	21W-41W	120V-347V	35K/40K/50K	60
STAKS 2X4 ALO6 SWW7 UVOLT	196183539670	2X4 Center Element Troffer	40L/50L/60L	31W-49W	120V-347V	35K/40K/50K	30

Accessories: Order as separate catalog number.

DGA24	Drywall grid adapter for 2x4 recessed fixture
DGA22	Drywall grid adapter for 2x2 recessed fixture
2X4 SMKSHP PAF	2X4 Surface Mount Troffer Kit
2X2 SMKSHP PAF	2X2 Surface Mount Troffer Kit
ILB CP10 A	LED emergency battery pack, 10W 50VDC (Noncompliant with CA T20)
ILBLP CP10 HE SD A	LED emergency battery pack, 10W Constant Power, Self-Diagnostic, Certified in CA Title 20 MAEDB
ELA PSRME IC	Remote enclosure for battery for insulated ceiling
RK1BDP J40	Disconnect Plug (BDP) package of 40
RK1BDP J10	Disconnect Plug (BDP) Package of 10



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 STAKS 2X4 ALO6 SWW7 /
 2X4SMKSHP PAF
 Notes:

Type:

A

LAI24-242157



PERFORMANCE DATA

SWITCHABLE TABLE						
Size	Nomenclature	Lumen Package	CCT	Lumens	Wattage	Efficacy
2X2	STAKS 2X2 ALO3 SWW7	Low Lumens	35K	3561	26.92	132
			40K	3683	26.18	141
			50K	3583	27.01	133
		Medium Lumens	35K	4371	34.23	128
			40K	4563	33.13	138
			50K	4375	34.22	128
		High Lumens	35K	5035	40.92	123
			40K	5297	39.41	134
			50K	5053	40.99	123
2X4	STAKS 2X4 ALO6 SWW7	Low Lumens	35K	4325	31.5	137
			40K	4470	30.61	146
			50K	4369	31.6	138
		Medium Lumens	35K	5310	40.09	132
			40K	5517	38.71	143
			50K	5357	40.26	133
		High Lumens	35K	6170	48.51	127
			40K	6492	46.6	139
			50K	6228	48.39	129

Job Name:

NEWTON COUNTY ENRICHMENT CENTER -
O&M's
Engineer: Electrical Design Consultants - Macon
(Macon)

Catalog Number:

STAKS 2X4 ALO6 SWW7 /
2X4SMKSH PAF
Notes:

Type:**A**

LAI24-242157



Specifications

INTENDED USE:

The STACK Switch troffer delivers soft, glare-free, ambient lighting in a popular center-basket design. The slim profile of the luminaire, coupled with energy-saving LED technology make the STACK switch an ideal choice for renovation or new construction. The STACK switch troffer offers a high-quality, cost-effective LED lighting solution for schools, offices, retail, healthcare facilities and other commercial spaces.

CONSTRUCTION:

The reflector is finished with a glare reducing matte white paint for improved aesthetics and increased light diffusion. End plates contain easy-to-position integral T-bar clips for securely attaching the luminaire to the T-grid. For additional T-grid security, optional screw on T-bar clips are available. Diffusers are extruded from impact modified acrylic for increased durability. LED boards are accessible from the room-side, and drivers are accessible from the plenum.

OPTICS:

Volumetric illumination is achieved by creating an optimal mix of light to walls, partitions and vertical and horizontal work surfaces – rendering the interior space, objects and occupants in a more balanced, complimentary luminous environment. High performance extruded acrylic diffusers conceal LEDs and efficiently deliver light in a volumetric distribution.

ELECTRICAL:

Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 80% LED lumen maintenance at 60,000 hours (L80/60,000). 0-10 volt dimming driver. Dims to 10%.

LUMEN AND COLOR SWITCHING:

Integrated lumen and color switching module is easily accessible, and mounted on the driver box on the back of the fixture. Simply adjust the toggle switch for low, medium, and high setting of both lumens and color.

INSTALLATION:

With a depth of only 1.9", the STACK Switch makes for an easy installation, especially in restrictive plenum applications. The STACK Switch fits into standard 15/16" and narrow 9/16" T-grid ceiling systems. Suitable for damp location.

LISTINGS:

CSA Certified to meet U.S. and Canadian standards. IC rated.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY:

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

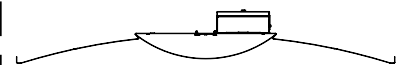
Dimensions

2X4 Length: 47-3/4 (121.3)

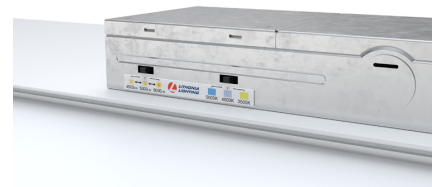
2X2 Length: 23-3/4 (60.3)

Width: 23-3/4 (60.3)

Depth: 1.9 (4.8)



All dimensions are inches (centimeters)
unless otherwise indicated.





FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — New Construction.

Optional goof rings available for additional overlap trim coverage.

1/2"-1-1/2" ceiling thickness

25° ambient temperature

IC rated up to 1000lm

OPTICS — LEDs are binned to a 3-step MacAdam Ellipse. 55° cutoff

New construction frame approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

80CRI standard (90CRI optional)

UGR — UGR is zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg, per CIE 117-1996 Discomfort Glare in Interior Lighting. [UGR FAQ](#)

ELECTRICAL — Adjustable lumen output with four module options. Fixed lumen options also available.

MVOLT 120/277V 50/60Hz driver (0-10V & 120V Phase Dimming to 10% or 1% min dimming level)

FCC CFR Title 47 Part 15 Class A for 277V. FCC CFR Title 47 Part 15 Class B for 120V.

LUMEN MAINTENANCE — L80 at 60,000 hours

LISTINGS — Certified to US and Canadian safety standards. Damp location standard (Wet Location (WL) optional, requires covered ceiling). Some configurations are ENERGY STAR® certified, please visit www.energystar.gov for specific products. TAA compliant. UFC (3-530-01) specification compliant for power factor and THD. GSA P100 6.2.4 compliant for power quality at full output; compliant up to 2000lm at fully dimmed output. Drivers are ROHS compliant

Title 24 compliant (90CRI, up to 1000lm).

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed.

Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

PERFORMANCE DATA

LBR6 AR LSS MWD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	571	99	585	101	599	103	617	105
AL01 (750LM)	9	905	102	926	103	948	105	977	108
AL01 (1000LM)	13	1270	98	1300	100	1330	102	1372	104
AL02 (1000LM)	13	1346	108	1378	110	1410	112	1454	115
AL02 (1500LM)	19	1965	105	2011	107	2059	109	2123	111
AL02 (2000LM)	25	2476	100	2533	101	2593	103	2674	106
AL03 (2000LM)	25	2547	103	2606	105	2668	107	2751	109
AL03 (2500LM)	32	3075	98	3146	100	3221	101	3321	104
AL03 (3000LM)	38	3492	93	3573	95	3658	96	3771	99
AL04 (4000LM)	39	4180	107	4265	109	4350	112	4393	113
AL04 (4500LM)	44	4613	105	4707	107	4801	109	4848	110
AL04 (5000LM)	49	5017	102	5119	104	5221	107	5273	108

LBR6 MS MWD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	480	99	584	101	597	102	616	105
AL01 (750LM)	9	760	102	924	103	946	105	975	108
AL01 (1000LM)	13	1067	98	1297	100	1328	102	1369	104
AL02 (1000LM)	13	1131	108	1375	110	1408	112	1451	115
AL02 (1500LM)	19	1651	105	2007	106	2055	108	2118	111
AL02 (2000LM)	25	2079	99	2528	101	2588	103	2668	105
AL03 (2000LM)	25	2139	103	2601	104	2663	106	2745	109
AL03 (2500LM)	32	2583	98	3140	99	3214	101	3314	103
AL03 (3000LM)	38	2933	93	3566	94	3651	96	3764	98
AL04 (4000LM)	39	3511	90	3583	92	3654	94	3690	95
AL04 (4500LM)	44	3875	88	3954	90	4033	92	4072	93
AL04 (5000LM)	49	4214	86	4300	88	4386	90	4429	90

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical

Catalog Number
Notes
Type

LBR6 NCH

6" Open and Wallwash LED
 New Construction Downlight



New Construction



Open Trim



Wallwash Trim



battery pack



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 LBR6 NCH 15LM 35K AR LSS MWD
 MVOLT UGZ
 Notes:

Type:

D

LAI24-242157

LBR6 NCH

Module ordering

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LBR6 NCH ALO2 SWW1 AR LSS MWD MVOLT UGZ 90CRI

Series	Lumens ‡	Color temperature ‡	Reflector Color	Reflector Flange ‡	Reflector Finish
LBR6 NCH 6" New Construction	Adjustable Lumen Output	Switchable CCT	AR Clear	(blank) Self-flanged	LSS Semi-specular
LBR6WW NCH 6" New Construction Wall Wash	AL01 500/750/1000lm AL02 1000/1500/2000lm AL03 2000/2500/3000lm AL04 4000/4500/5000lm	SWW1 2700K-3000K-3500K-4000K-5000K Fixed CCT 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	BR ‡ Black painted MS ‡ Metallic Silver WR ‡ White painted TCPC ‡ Custom painted trim TRALTB ‡ RAL painted trim	TRW White painted flange TRBL Black painted flange FCPC Custom painted flange only FRALTB RAL painted flange only	
	Fixed Lumen Output 05LM 500lm 07LM 750lm 10LM 1000lm 15LM 1500lm 20LM 2000lm 25LM 2500lm 30LM 3000lm 40LM 4000lm 45LM 4500lm 50LM 5000lm				

Distribution	Voltage	Driver	Emergency ‡	Control Input ‡
MWD Medium wide (1.0 s/mh)	MVOLT	UGZ Universal dimming to 10% 0-10V; line voltage dimming (120V)	(blank) No Emergency Needed	(blank) No Control Input Needed
WD Wide (1.2s/mh)	120	UGZ1 Universal dimming to 1% 0-10V; line voltage dimming (120V)	ELR Batterypack (10W constant power) Non-T20 Compliant remote test switch	JOT Wireless room control with "Just One Touch" pairing
WW ‡ Wallwash	277 347	DALI ‡ DALI dimming to 1% D10 Minimum dimming 10% driver for use with JOT D1 Minimum dimming 1% driver for use with JOT	ETS Iota Emergency Transfer System E10WCP Batterypack (10W constant power) Non-T20 Compliant integral test switch E10WCPR Batterypack (10W constant power) T20 Compliant remote test switch E10WRSTAR Emergency battery pack, 10W with remote test switch and Iota STAR technology	NPS80EZ nLight™ network power/relay pack with 0-10V dimming; ER controls fixtures on emergency circuit. NPS80EZER nLight™ network power/relay pack with 0-10V dimming; ER controls fixtures on emergency circuit. NLTAIR2 nLight™ Air enabled NLTAIRER2 nLight™ AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection. NLTAIREM2 nLight™ AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection.

Options

- 90CRI High CRI (90+)
- AT ‡ Airtight
- EC1 ‡ Extended Conduit (18")
- EC6 ‡ Extended Conduit (6ft)
- WL ‡ Wet Location (IP55)
- QDS ‡ Quick disconnect plugs
- CP ‡ Chicago Plenum

NOTE: ‡ indicates option value has ordering restrictions. Please reference the Option Value Ordering Restrictions chart below.

‡ Option Value Ordering Restrictions

Options	Restriction
Adjustable Lumens/CCT	Adjustable Lumen Output and Switchable CCT must be specified together (for example: ALO1 SWW1).
Fixed Lumens/CCT	Fixed Lumen Output and Fixed CCT must be specified together (for example: 10LM 30K).
AT	Standard for CP and IP55, not available with WW.
E10WCPR	Not available EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
E10WCP	Not available with EC1, EC6, AT, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, WL, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
E10WRSTAR	Not available with wet location, EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT. Top access installation or 17.5" plenum clearance required for roomside installation. Not available with integral test switch
ELR	Not available EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
EC1, EC6	Not Available with CP, QDS, ELR, E10WCP, or E10WCPR.
WL	Not available with WW, All CP is wet location, except WW (Damp). IP55 rated.
QDS	Must be specified for use with LBR_PFWQDS. Not available with 347V, CP, ELR, E10WCP, E10WCPR.
EC1	Not Available with CP, QDS, ELR, E10WCP, or E10WCPR.
JOT	Not available with CP, nLight options, UGZ, or DALI drivers. Max 4500 lumens. Fixed lumens and CCT only. Not available with 2000-4500lm in conjunction with batterypack.
NPS80EZ	Not available with CP, QDS, DALI, D1, OR D10 drivers. 120V OR 277V only. Not available with 347V.
NPS80EZER	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. 120V OR 277V only. Not available with 347V.
NLTAIR2	Not available with CP, QDS, DALI, D1, OR D10 drivers. See UL 924 Sequence of Operation table. Non-emergency luminaires with this option can be used as a normal power sensing device for nLight AIR devices and luminaires with EM emergency options.
NLTAIRER2	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. Not available with 347V.
NLTAIREM2	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. See UL 924 Sequence of Operation table.
CP	Must be specified for use with LBR_PFWCP. Not available with, QDS, EC1, EC6, ELR, E10WCP, E10WCPR, 347V, JOT, NPS80EZ, NPS80EZ ER, NLTAIR2, NLTAIRER2, NLTAIREM2, D1, OR D10 drivers.
ETS	Not available with, QDS, ELR, E10WCP, E10WCPR, 347V, JOT, NPS80EZ, NPS80EZ ER, NLTAIR2, NLTAIRER2, NLTAIREM2, DALI, D1, OR D10 driver.
DALI	Not available with fixed lumens or CCT. Max 4500 lumens.
WW	Not available with WL, EL and E10WCP. Must be ordered with LBR6WW NCH.
TRW, TRBL	Available with MS and AR reflectors only.
MS, WR, BR	Not available with LSS reflector finish.
TRALTB, FRALTB	RALTB for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options.
TCPC, FCPC	CP options for pricing only. Custom color chip needs to be sent in to your Customer Resolution specialist before order can be processed. Click HERE for more details.



LBR6 NCH

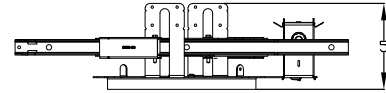
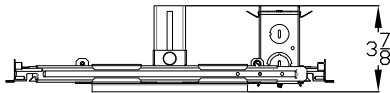
LBR6 NCH

PLENUM DEPTH TABLE				
Aperture Size/Output	Plenum Depth*	IC	Non-IC	Non-IC Marked Spacing
LBR4 500-1000 Lumen	3.44	X		
LBR4 1000-2000 Lumen	3.44		X	
LBR4 2000-3000 Lumen	-			24x24x9
LBR4 4000-5000 Lumen	-			24x24x9

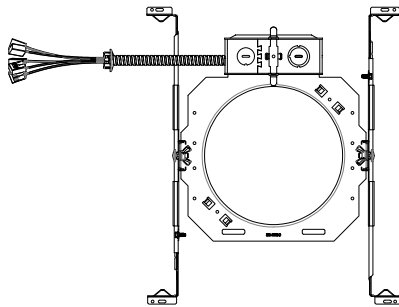
*Above unfinished 1/2" ceiling plane

CEILING COVERAGE TABLE								
Series		Aperture	Trim Flange OD	Min ceiling opening	Ceiling Thickness	Max ceiling opening	Max Ceiling Opening with Goof Ring	Overall Goof Ring OD
LBR4	ROUND	4-1/4"	5-7/16"	4-1/2"	1/2"	5-1/8"	5-1/8"	7-1/4"
LBR4					1-1/2"		5-3/4"	

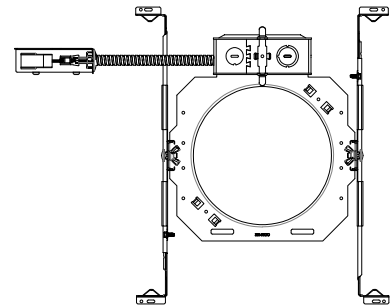
* All dimensions are inches (millimeters) unless otherwise noted.



Aperture Size	Ceiling Cutout
6 in	7-1/8"



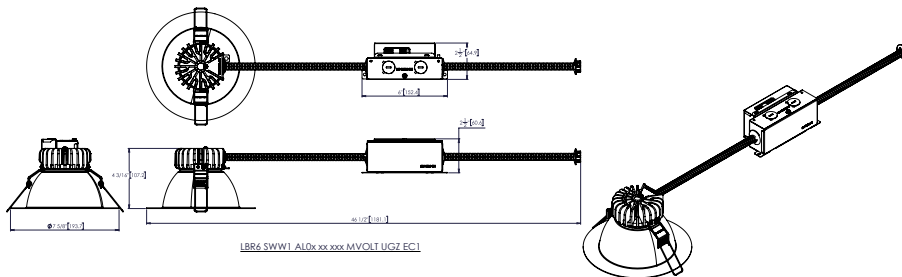
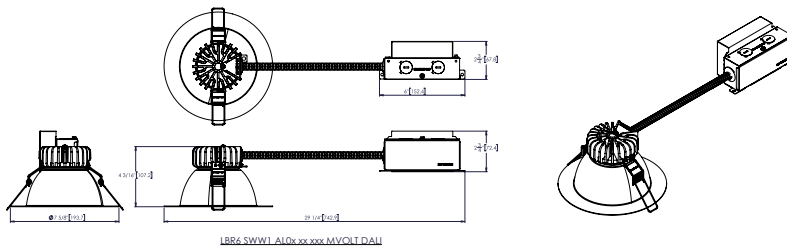
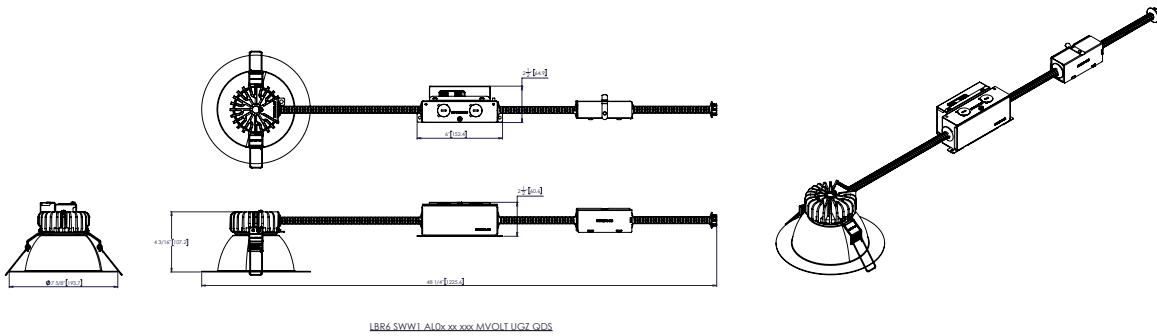
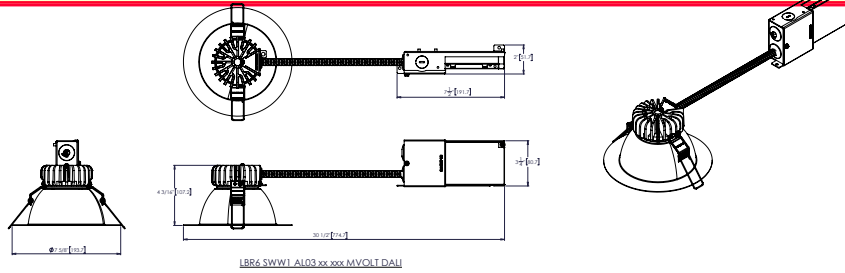
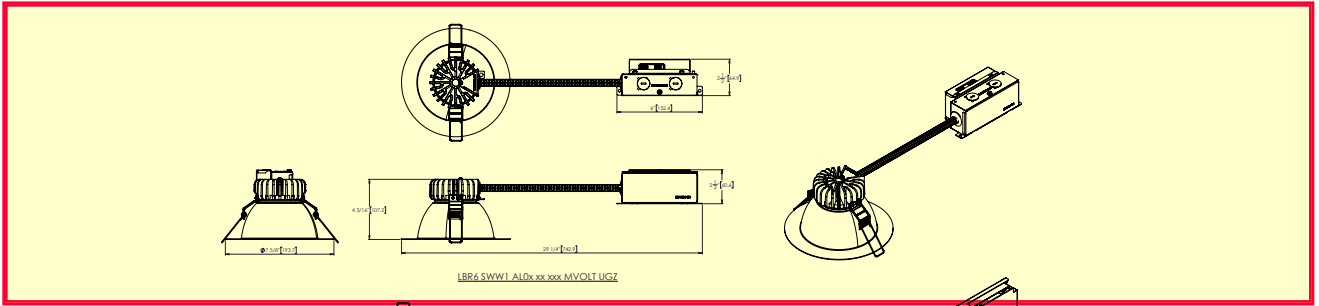
6" New Construction Frame, 18" conduit



6" New Construction Frame, QDS

LBR6 NCH

* All dimensions are inches (millimeters) unless otherwise noted.

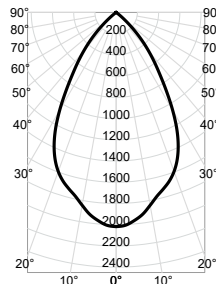


LBR6 NCH

PHOTOMETRY

Distribution Curve Distribution Data Output Data Illuminance Data at 30" Above Floor for a Single Luminaire

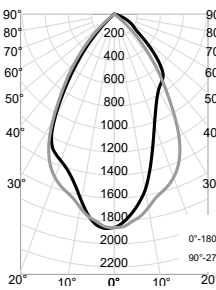
LBR6 SWW1 ALO2 AR LSS MWD MVOLT UGZ, Input Watts: 18.1, Delivered Lumens: 1970, LPW: 108.8, S/MH: 0.94, Test No: 20-518-03



CP Summary		Zonal Lumen Summary			Cone of Light			Luminance (cd/sq.m)	
0°	Zone	Lumens	% Fixture	Mounting Height	Initial FC Center Beam	Beam Diameter	Average Luminance		
0° 2,018	0° - 30°	1,292	66%	6.0	56.1	7.1	0°	142,862	
5° 1,968	0° - 40°	1,751	89%	8.0	31.5	9.5	45°	25,559	
15° 1,721	0° - 60°	1,967	100%	10.0	20.2	11.9	55°	1,074	
25° 1,383	0° - 90°	1,970	100%	12.0	14.0	14.3	65°	402	
35° 724	90° - 180°	0	0%	14.0	10.3	16.7	75°	246	
45° 255	0° - 180°	1,970	100%				85°	162	
55° 9									
65° 2									
75° 1									
85° 0									
90° 0									

Beam Angle: 61.5°
 Field Angle: 92.7°

LBR6WW SWW1 ALO2 AR LSS WW, Input Watts: 18.7, Delivered Lumens: 1981, LPW: 105.9, S/MH: 0.67, Test No: 20-518-A1



CP Summary		Zonal Lumen Summary			Luminance (cd/sq.m)	
0°	90°	Zone	Lumens	% Fixture	Average Luminance	
0° 1,857	1,857	0° - 30°	1,126	57%	0°	131,472
5° 1,740	1,810	0° - 40°	1,581	80%	45°	50,247
15° 1,265	1,602	0° - 60°	1,915	97%	55°	27,523
25° 864	1,349	0° - 90°	1,981	100%	65°	21,156
35° 719	760	90° - 180°	0	0%	75°	12,281
45° 502	280	0° - 180°	1,981	100%	85°	7,229
55° 223	22					
65° 126	10					
75° 45	4					
85° 9	1					
90° 0	2					

LUMEN OUTPUT MULTIPLIERS - CCT			
3000K	3500K	4000K	5000K
0.98	1.0	1.01	1.03

LUMEN OUTPUT MULTIPLIERS - FINISH	
Clear Semi-spec (AR LSS)	1.0
Metallic Silver (MS)	0.84
White Painted (WR)	1.03
Black Painted (BR)	0.60

LUMEN OUTPUT MULTIPLIERS - CRI	
80	1.0
90	0.874

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Output power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

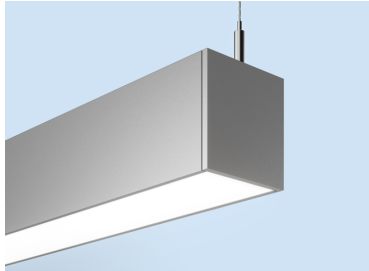
The LPW rating is also available at Designlight Consortium.

MARK ARCHITECTURAL LIGHTING

SPECIFICATIONS

TYPE:

PROJECT:



SLOT 4

PENDANT DIRECT

HIGHLIGHTS

- 300 to 1500 lumens per foot Direct
- Up to 126 Lumens per Watt
- 5 direct distributions: Lambertian, Batwing, Wall Wash Wall Graze or Asymmetric
- Multiple lens treatment options include Continuous, Drop, in 1/2", 1" or 1 1/2" and Edge View
- Shielding provided by optional deep cell baffle
- Integrated control with optional nLight or nLight Air for system networking
- Driver options for Dim to Dark, 1% or 10% minimum dimming
- White, black or silver paint with satin finish
- Declare listed
- UGR data available on page 3

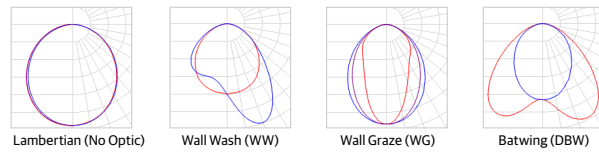
FIXTURE PERFORMANCE

Nominal Lumens/Foot	Direct							
	300LMF	400LMF	600LMF	800LMF	1000LMF	1200LMF	1400LMF	1500LMF
Delivered Lumens/Foot	292	394	575	791	973	1192	1352	1442
Input Watts/Foot	2.39	3.14	4.68	6.33	7.96	10.00	11.93	13.01
Lumens/Watt	122	126	123	125	122	119	113	111

Based on 4FT, 80CRI, 35K with standard Lambertian distribution.

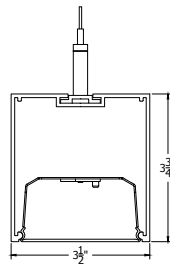


DIRECT DISTRIBUTION

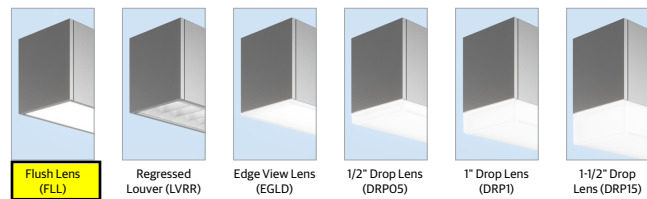


DIMENSIONS

See page 5 for additional details.



DIFFUSERS/SHIELDING





Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 S4PD LLP 4FT MSL4 80CRI 35K 800LMF SCT MIN10
 FLL MVOLT WHTT ZT F2/72A RDCY BLKCY BCRD

Type:

E

LAI24-242157

MARK ARCHITECTURAL LIGHTING™

SLOT 4 Pendant Direct

ORDERING

Example: S4PD LLP 32FT MSL8 90CRI 35K 800LMF MINI FLL SCT MVOLT WHTT ZT F1/36A RDCY WHTCY WCRD

		4FT					
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Series	Linear Plan	Total Run Length	Max Section Length	Direct Light Source Color Rendering	Direct LED Color Temp	Direct LED Light Output	Direct Distribution (Optics)
S4PD SLOT 4 Pendant Direct (Formerly S4LD)	LLP Linear Longest Possible LCB Linear Center Balanced LSL Longest Same Length For more information on linear plans, see page 4.	_FT Specify Continuous Run Length (in 1" increments, 2' minimum) Unit length may affect available options. For runs longer than 8FT: ALWAYS order the run by the TOTAL RUN LENGTH. Ordering the sections individually will not provide the correct joining hardware to allow connection in the field.	MSL2 2FT Length MSL3 3FT Length MSL4 4FT Length MSL5 5FT Length MSL6 6FT Length MSL7 7FT Length MSL8 8FT Length	80CRI 80 CRI 90CRI 90 CRI	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	300LMF 300 Lumens per Foot 400LMF 400 Lumens per Foot 600LMF 600 Lumens per Foot 800LMF 800 Lumens per Foot 1000LMF 1000 Lumens per Foot 1200LMF 1200 Lumens per Foot 1400LMF 1400 Lumens per Foot 1500LMF 1500 Lumens per Foot _LMF Specify Lumens between 300LMF - 1500LMF in 50LMF increments	(blank) Lambertian WW Wallwash Distribution WG Wall Graze Distribution DBW Direct Batwing Distribution Direct Distribution options are only available with FLL lens.

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Switching	Minimum Dimming Level	Direct Shielding	Voltage	Finish	Emergency Options
SCT Single Circuit	NODIM¹ Non Dimming MINI Constant Current, Dimming To 1% MINIO² Constant Current, Dimming To 10% DARK Constant Current, Dimming To 0.1% 1. Not available with Control Input options. 2. MINIO is not available with DALI, ECOD or ECOD2.	FLL Flush Lens (Default) LVRR¹ Regressed Louver LVRRRA¹ Regressed Louver, Natural Aluminum EGLD² Edge Glow, Direct DRPOS³ Drop Lens, 1/2" DRP1³ Drop Lens, 1" DRP15³ Drop Lens, 1-1/2" CLL⁴ Continuous Flush Lens 1. LVRR & LVRRRA are not available with NLTAIR2. Only available in whole foot increments 2. EGLD is not available with E10WLCP, NLTAIR2 or sensors. Only available in whole foot increments. 3. Drop lenses are only available in whole foot increments. 4. CLL is not available with WW, WG, or DBW.	MVOLT Multi-Volt, 120-277 120 120V 277 277V 347¹ 347V 1. 347 is only available with ZT. 347 is not available with emergency options or sensors.	WHTT White (Satin) BLKT Black (Satin) SLVT Silver (Satin) RALTB¹ RAL Paint Finish 1. RALTB is for pricing only. Replace with applicable RAL number & finish when placing order.	(blank) No Emergency Options E10WLCP¹ # of 10W Battery Packs, Constant Power, Self Diagnostics, T20 Compliant WEC² Emergency Circuit for Entire Run _EC # of Emergency Circuits GTD³ Generator Transfer Device (Remote mounted) 1. E10WLCP is not available in units under 4'. E10WLCP with NLTAIR2 is only available in units 7'-8'. 2. WEC is not available with sensors. 3. GTD is remote mounted. (See more information on page 9.) GTD is not available with MVOLT or 347.

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Control Input	Primary Sensor	Secondary Zone	Tertiary Zone	Mounting Type
(blank) Non-Dimming ZT 0-10V NLIGHT nLight Wired NLTAIR2¹ nLight Air 2 Wireless Enabled DALI² DALI ECOD³ Lutron EcoSystem Digital Driver 1. NLTAIR2 can be used as a normal power sensing device for nLight Air devices and luminaires with EM emergency options. It is not available with NODIM. NLTAIR2 with DCT fixtures cannot be less than 4'. 2. DALI is only available with DARK. DALI is not available with sensors. 3. ECOD is only available with MINI. It is not available with E10WLCP & sensors. It is only available with 300LMF, 600LMF, 1000LMF or 1500LMF.	(blank) No sensors or Zones NS_ Primary Zone with No Sensor (Specify length in feet) ADC¹ Daylight Dimming Sensor PDT¹ Dual Technology Occupancy Sensor, PIR and Microphonics Sensor APIR² Passive Infrared Occupancy and Daylight Dimming Sensor APDT² Dual Technology Occupancy and Daylight Dimming Sensor Sensors are only available with FLL and fixtures 4' and above. Please see page 8 for more details. 1. ADC & PDT are available with ZT or NLIGHT. 2. APIR & APDT are available with ZT, NLIGHT or NLTAIR2.	(blank) No Sensors or Secondary Zone SNS_ Secondary Zone with No Sensor (Specify length in feet) SADC¹ Daylight Dimming Sensor, Secondary Zone SPDT¹ Dual Technology Occupancy Sensor, PIR and Microphonics Sensor, Secondary Zone SAPIR² Passive Infrared Occupancy and Daylight Dimming Sensor, Secondary Zone SAPDT² Dual Technology Occupancy and Daylight Dimming Sensor, Secondary Zone Sensors are only available with FLL and fixtures 4' and above. Please see page 8 for more details. 1. ADC & PDT are available with ZT or NLIGHT/ 2. APIR & APDT are available with ZT, NLIGHT or NLTAIR2.	(blank) No Tertiary Zone TNS_ Tertiary Zone (Specify length in feet)	F1/ T-Bar Ceiling with Universal Mounting Bracket F1A/ T-Bar Ceiling with Universal Mounting Bracket & Integrated J-Box F2/ Hard Ceiling

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Overall Suspension	Canopy Form	Canopy Color	Cord Color	Options
36A 36" Adjustable 72A 72" Adjustable 144A 144" Adjustable	RDCY Round Canopy SQCY Square Canopy	BLKCY Black Canopy WHTCY White Canopy SLVCY Silver Canopy	WCRD White Cord BCRD Black Cord CATS cord, when included, will be white.	(blank) No Options MCS Matching Support Canopy PIF¹ Feed Cord Installed BAA Manufactured in US 1. Cord length will match overall suspension length specified.

Note: Unit length and lumen outputs may affect available options.



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:

S4PD LLP 4FT MSL4 80CRI 35K 800LMF SCT MIN10
 FLL MVOLT WHTT ZT F2/72A RDCY BLKCY BCRD

Notes:

Type:

E

LAI24-242157

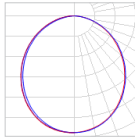
MARK

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 LIGHTING™

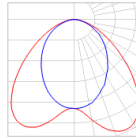
SLOT 4

Pendant Direct

PHOTOMETRICS



Test Report: ISF 222300P181
 IES LM79-08
 S4PD U4 80CRI 35K 1000LMF
 Lumens: 3889.8
 Wattage: 31.85
 Efficacy: 122.13



Test Report: ISF 23344P181
 IES LM79-08
 S4PD U4 80CRI 35K 1000LMF DBW
 Lumens: 3103.9
 Wattage: 31.85
 Efficacy: 97.45

EXPECTED LIFE: L90 @ 60,000 HOURS
CALCULATED LIFE: L80 @ 120,000 HOURS

CCT SCALING CHART

CCT	CRI	MULTIPLIER
27K	80CRI	0.94
30K	80CRI	0.97
35K	80CRI	1.00
40K	80CRI	1.02
50K	80CRI	1.04
27K	90CRI	0.79
30K	90CRI	0.81
35K	90CRI	0.83
40K	90CRI	0.84
50K	90CRI	0.88

Lumen scaling charts can be used to approximate the lumen values at different Kelvin temperatures, color rendering indices, optics or sheilding.
 Example: Find base lumen value x multiplier value = new lumen value

OPTICAL SCALING CHARTS

DOWNLIGHT	
DISTRIBUTIONS	MULTIPLIER
WW	0.80
WG	0.85
DBW	0.80

*Base fixture with Lambertian distribution and flush lens

UGR CHART

COMING SOON		

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR" and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application.

MARK ARCHITECTURAL LIGHTING™

SLOT 4 Pendant Direct

LINEAR PLAN

Mark Lighting offers the ability to provide a continuous run plan to suit your requirements by optionally offering three different methods of configuration.

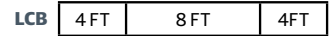
LLP- Linear Longest Possible

In this configuration, the longest length available is optimized, resulting in the fewest segments and mounting locations. Caution should be used where balanced appearance is a concern. Example: 20 FT run would have 2, 8 FT segments and 1, 4 FT segment at the end of the run.



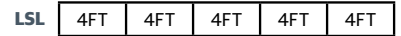
LCB- Linear Center Balanced:

This configuration incorporates the longest center segment(s) along with any additional lengths required to fill the run length, added to the run ends. Example: 16 FT run would have 2, 4 FT segments (one at each end) and 1, 8 FT segment in the center.



LSL- Linear Same Length:

In this configuration, each segment is the same length and is standardized based on the longest length available and is the only option provided. Because it is dependent on one segment length and there are mathematical limitations on what overall row lengths can be achieved. Example: 20 FT row would be achieved with 5, 4 FT long segments equaling 20 FT (nominal).

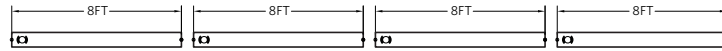


Total Run Length

This system is not modular. Runs longer than 8FT will be automatically configured with left, intermediate and right sections, based on how you specify the TOTAL RUN LENGTH and MAXIMUM SECTION LENGTH parameters in the ordering information. Always order the total run length, not the individual sections.



Example: This run must be ordered as 1pc "S4PD LLP 32FT MSL8..."

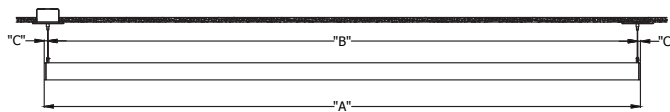


Example: If you order as 4pcs "S4PD LLP 8FT MSL8..." you will receive these INDIVIDUAL sections that cannot be joined together

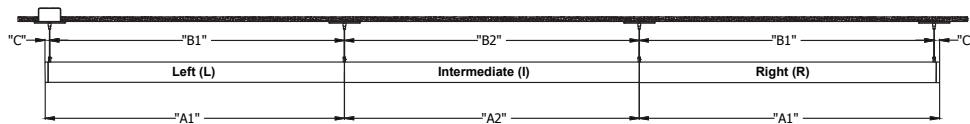
Maximum Section Length

The run will be broken out using as many sections at the chosen maximum section length as possible. Shorter sections will then complete the desired run length.

- Examples:
 S4PD LLP 21FT MSL5... = 5FT / 4FT / 4FT / 4FT / 4FT
 S4PD LLP 21FT MSL6... = 6FT / 6FT / 5FT / 4FT
 S4PD LLP 21FT MSL7... = 7FT / 7FT / 7FT
 S4PD LLP 21FT MSL8... = 8FT / 8FT / 5FT



INDIVIDUAL FIXTURES				
ORDERED LENGTH	"A" O.A.L.	"B" O.C.	"C" FROM END	APPROX. WEIGHT
2FT	2'- 0 9/16"	1'- 11 13/16"	3/8"	2
3FT	3'- 0 9/16"	2'- 11 13/16"	3/8"	3
4FT	4'- 0 9/16"	3'- 11 13/16"	3/8"	4
5FT	5'- 0 9/16"	4'- 11 13/16"	3/8"	5
6FT	6'- 0 9/16"	5'- 11 13/16"	3/8"	6
7FT	7'- 0 9/16"	6'- 11 13/16"	3/8"	7
8FT	8'- 0 9/16"	7'- 11 13/16"	3/8"	8



RUN LAYOUT						
ORDERED LENGTH	"A1" O.A.L.	"A2" O.A.L.	"B1" O.C.	"B2" O.C.	"C" FROM END	APPROX. WEIGHT
4FT	4'- 0 1/4"	4'- 0"	3'- 11 15/16"	4'- 0"	3/8"	4
5FT	5'- 0 1/4"	5'- 0"	4'- 11 15/16"	5'- 0"	3/8"	5
6FT	6'- 0 1/4"	6'- 0"	5'- 11 15/16"	6'- 0"	3/8"	6
7FT	7'- 0 1/4"	7'- 0"	6'- 11 15/16"	7'- 0"	3/8"	7
8FT	8'- 0 1/4"	8'- 0"	7'- 11 15/16"	8'- 0"	3/8"	8

MARK

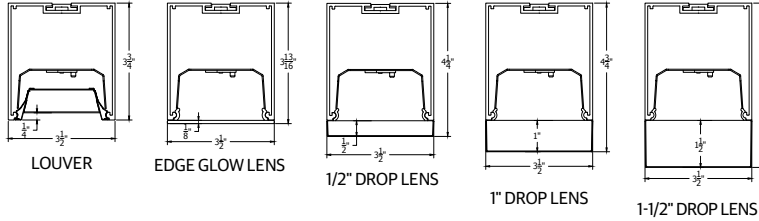
ARCHITECTURAL
 LIGHTING™

SLOT 4

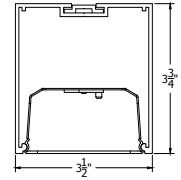
Pendant Direct

SHIELDING, OPTICS & CONNECTORS

Direct Shielding



Direct Optics

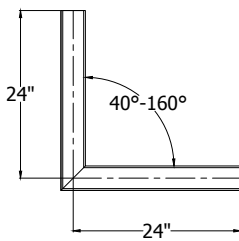


CO-EXTRUDED LENS

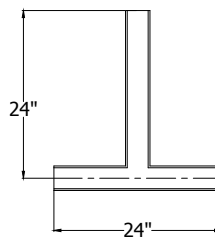
Optical Film with
 Co-Extruded Lens
 (Batwing (DBW),
 Wall Graze (WG),
 Wall Wash (WW))

Run Patterns, Corners and Junction

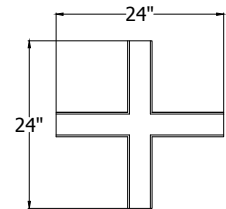
Patterns can be configured in 1' increments with illuminated L, T & X connectors with standard 2' corner. L connectors are available in 40-160 degrees in 1 degree increments. T & X connectors available in 90 degrees. For custom angles, corner or junction lengths, consult factory. See separate pattern spec sheet for more details.



L Connector



T Connector



X Connector

MARK

ARCHITECTURAL
 LIGHTING™

SLOT 4

Pendant Direct

MOST COMMON MOUNTING TYPES AND OPTIONS Options available for this specific luminaire are checked in the boxes below.

Mounting Type

F1/ For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications. (J-box by others)

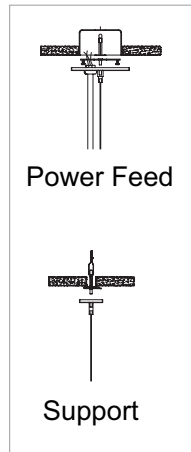
F1A/ For use with most T-Bar grid ceilings. Designed for on-grid applications. Comes complete with J-box with built-in cutout to go over grid

F2/ For use with recessed or surface mount horizontal J-box applications. (J-box by others)

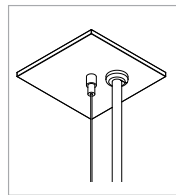
Mounting Options

MCS MCS canopy supplies 5" canopy to match feed point canopy size. Matching canopy at support for aesthetics.

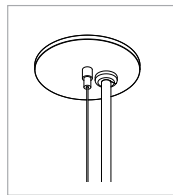
PIF Feed cord installed in fixture.



Mounting with Feed (SPSWIFK)

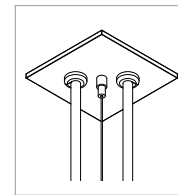


5" Square

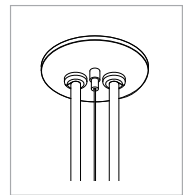


5" Round

Mounting with Dual Feed (SPSW2FK)

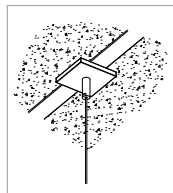


5" Square

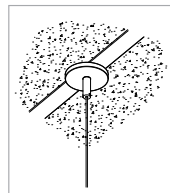


5" Round

Mounting Support (SPSWSK)

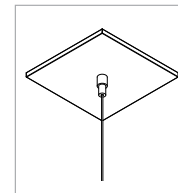


2" Square

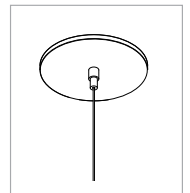


2" Round

MCS Option



5" Square



5" Round

MARK ARCHITECTURAL LIGHTING™

SLOT 4 Pendant Direct

SPECIFICATIONS

Housing

One-piece extruded aluminum housing

Finish

Standard colors for fixtures and end caps are polyester powder coated white, black, or silver with satin sheen. Consult factory for custom colors and RAL color options.

Optics (Distribution)

Wall Wash (WW), Wall Graze (WG), and Direct Batwing (DBW) incorporate co-extruded lenses and films.

Lenses/Shielding

Direct: Extruded acrylic lens, (FLL, CLL). Edge Glow lens, (EGLD), Aluminum baffle with either a powder coat finish (LVRR) or aluminum finish (LVRRRA). Extruded acrylic drop lens (DRP05, DRP1, DRP15).

LED Components

Multiple lumen packages available with 2700K, 3000K, 3500K, 4000K and 5000K CCT. The Acuity Brands circuit boards for the linear LED components use a precise binning algorithm which creates a consistent color temperature from board to board. The color a variation of no greater than a 2.5 Step MacAdam (2.55DECM) along the black body locus from board to board.

Electrical

Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

Circuits

Single and dual switching options available. Dual switching offered with shared neutral.

Controls System Networking Options

Optional integrated nLight® controls make each fixture addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors, and photocontrols. Connection to nLight is simple. It can be accomplished with remote nLight AIR wireless or through standard Cat-5 cabling. (cabling "by others") nLight offers unique plug-and-play convenience as devices and luminaires automatically discover each other, while nLight AIR is commissioned easily through an intuitive mobile app.

Emergency Battery (Optional)

Integral emergency battery (ETOWLCP) for 90 minutes of operation. Emergency battery pack, 10W, Linear Constant Power Certified in CA Title 20 MAEDBS.

Remote generator transfer device (GTD) works in conjunction with an auxiliary generator or a central inverter system to power fixtures for safe egress lighting.

Dimming Drivers

Factory tuned constant current electronic dimming driver is standard. Flicker free dimming available down to <1%. LED drivers perform within the recommended operating areas for flicker as a function of frequency and modulation (%) IEEE Standard 1789-2015 (IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers), in typical operating conditions at representative dimming levels. Electrical specifications at maximum driver load: PF > 0.9 and THD <20%. Meets FCC Title 47 Class A or Class B. Other available drivers include Lutron and DALI protocol drivers. All drivers are RoHS compliant.

Environment

Suitable for damp location. Indoor use only.

Certification

CSA certified to meet U.S. and Canadian standards (UL1598 and UL8750).

Ambient Operating Temperature

-20°C (-4° F) to +25°C (+77°F).

Buy American Act

Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

Fixture Weight

1 lbs per foot, less packaging.

Warranty

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

BLACKJACK® LIGHTING A-Lamp 4" Light Guide Small Pendant

Project:

Type:

Quantity:

Note:

SKU#: SP - LGD - AL - 03 - _ - _ - _ - _ - _

Description

This fun and unique pendant features a clear acrylic diffuser with a laser-etched light bulb in the center. Light from the integrated LED source shines throughout the clear acrylic to playfully illuminate the light bulb. A unique pendant that is sure to bring joy to any space.

Features

- Screw-in, decorative optical acrylic light guide
- Suspends from an 8' adjustable cable
- Standard Finishes: BL - Black, PC - Polished Chrome, or WH - White
- Damp location rated



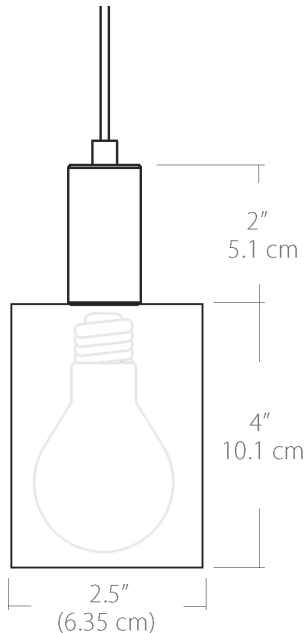
Specifications

- Color Rendering Index: 90CRI
- LED Color Temperature: 3000K (standard)
- Cable Length: 96" (standard); custom lengths available
- For recommended dimmers, see <http://blackjacklighting.com>

Options

- Color Temperature: 2700K, 3000K, 3500K, 4000K
- Lumens: 2W/86 Lumens or 3W/133 Lumens (recommended for single pendant application)
- Lamping: 2W or 3W
- Special Order Powder Coat Finishes for Canopy and Socket: BZ - Bronze, SG - Satin Gold, or SS - Satin Silver
- Mounting: See page 2 for mounting options

Dimensions



Diffuser



ORDERING GUIDE

Category	Series	Diffuser	Size	Finish	Color Temp.	Wattage	Mounting	Length
SP	LGD	AL	03		30K			
SP Small Pendant	LGD Light Guide	AL A-Lamp	03 3" Dia.	Standard BL Black PC Polished Chrome WH White Special Order BZ Bronze SG Satin Gold SS Satin Silver	27K 2700K 30K 3000K 35K 3500K 40K 4000K (30K Standard)	2W 2Watts/86 Lm 3W 3Watts/133 Lm (recommended for single pendant application)	SP5 5" Canopy SP2 2.5" Fascia Canopy MPC Multi-Port Connector JTA JackTrack Adapter (See page 2 for mounting information)	96" Standard (Change Length for custom cable length in inches)

Example: SP-LGD-AL-03-BL-30K-2W-SP5-96

BLACKJACK® L I G H T I N G

Pendant / Mounting Options

Finish

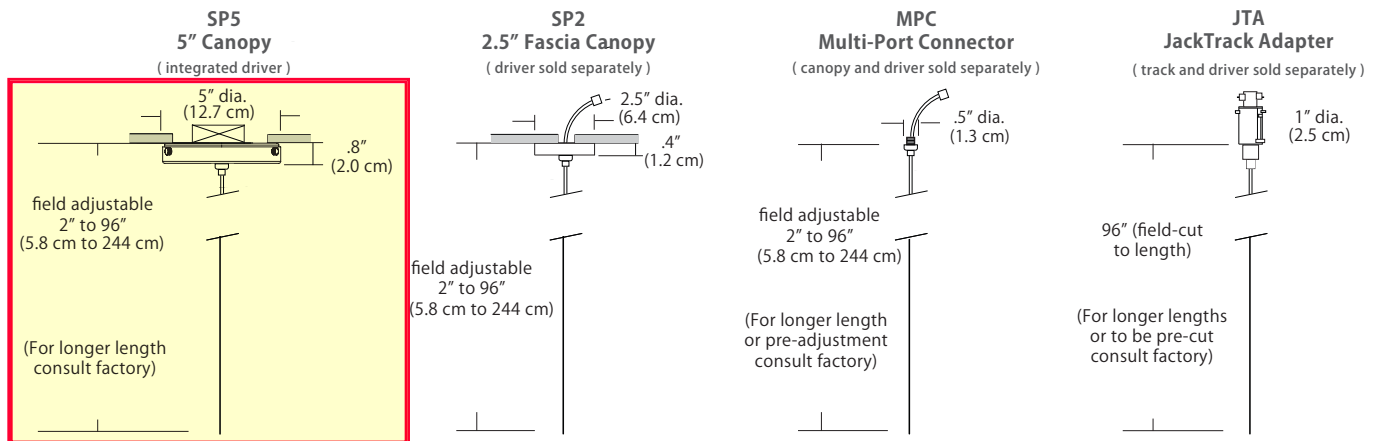
Finish PC BL WH BZ SG SS	 PC - Polished Chrome	 BL - Matte Black	 WH - White	 BZ - Bronze	 SG - Satin Gold	 SS - Satin Silver
	Standard Finishes			Special Order Powder Coat Finishes		

Wattage

Wattage 2W 3W	2W = 2 Watts / 86 Lumens, recommended for Multi-Port applications (Multi-Port system and JackTrack adapter).
	3W = 3 Watts / 133 Lumens, recommended for single pendant applications (5" Canopy and 2.5" Fascia Canopy).
	(Lumens measured at 3000K)

Mounting

Mounting SP5 SP2 MPC JTA	SP5 = 5" canopy with integrated driver (included), attaches to rear of canopy and sits inside ceiling mounted junction box <i>Cable with modular connector attaches to canopy w/ integrated universal driver (120-277V / TRIAC, ELV, 0-10V dimming)</i>
	SP2 = 2.5" thin profile canopy that attaches flush to a rigid ceiling (driver sold separately) <i>Cable with modular connector (and optional wire harness) attaches to a remote driver</i>
	MPC = Multi-port connector attaches to any of BlackJack's Multi-Port canopies (canopy and driver sold separately) <i>Cable with modular connector attaches to a driver inside a Multi-Port canopy (driver may be remote)</i>
	JTA = Adapter connects the pendant in any position along the JackTrack system (track and driver sold separately) <i>Cable is cut to length and inserted in a connector at the bottom of the JackTrack adapter</i>



Max Cable Length

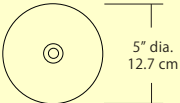
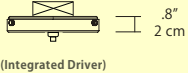


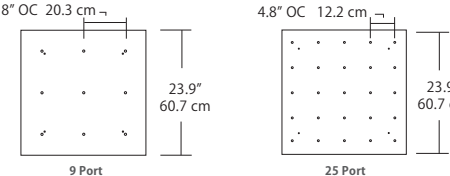
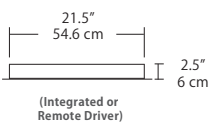
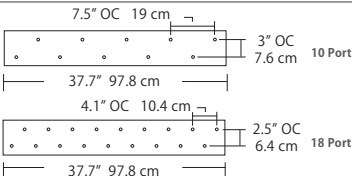
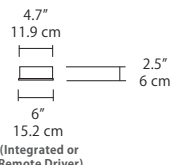
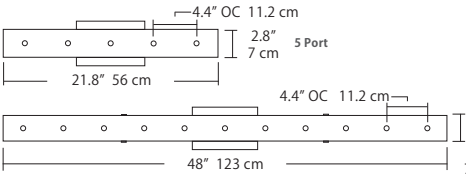
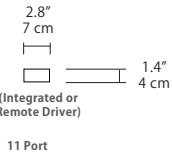
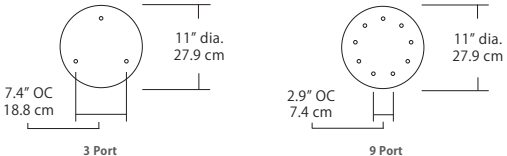
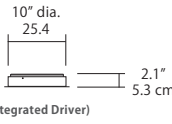
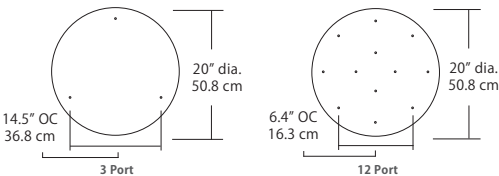
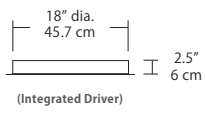
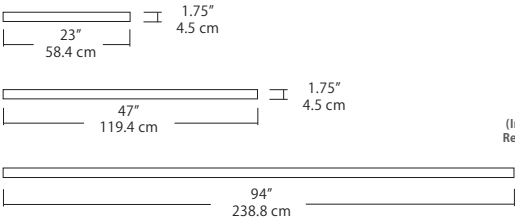
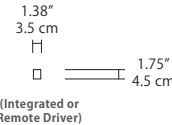
Length 96" (Standard) Custom	96" (Standard) (Change Length for custom cable length, in inches)
	Factory pre-configuration of cable length is available. Consult factory for details.

BLACKJACK®
 LIGHTING

Canopy / Track Options

For full specifications and ordering information, see blackjacklighting.com

(# symbol indicates additional specification required)

Pendant Mounting	Canopy	Dimensions	End / Side View	Finish Options
SP5	5" Canopy Canopy and driver included with pendant	 5" dia. 12.7 cm	 (Integrated Driver) 2.8" 7.1 cm	BL Matte Black PC Pol. Chrome WH White SG Satin Gold BZ Bronze SS Satin Silver
SP2	2.5" Fascia Canopy Canopy included with pendant. Driver sold separately.	 2.5" dia. 6.4 cm	 (Remote Driver Required) 1.3" 3.3 cm	BL Matte Black PC Pol. Chrome WH White SG Satin Gold BZ Bronze SS Satin Silver
MPC	24" Multi-Port Square - 9 Port C-MPS-2409-# 24" Multi-Port Square - 25 Port C-MPS-2425-#	 8" OC 20.3 cm 4.8" OC 12.2 cm 23.9" 60.7 cm 9 Port 25 Port	 21.5" 54.6 cm 2.5" 6.3 cm (Integrated or Remote Driver)	BL Matte Black PC Pol. Chrome WH White SG Satin Gold BZ Bronze SS Satin Silver
MPC	38" Multi-Port Rectangle - 10 Port C-MPT-3810-# 38" Multi-Port Rectangle - 18 Port C-MPT-3818-#	 7.5" OC 19 cm 3" OC 7.6 cm 37.7" 97.8 cm 4.1" OC 10.4 cm 2.5" OC 6.4 cm 10 Port 18 Port 37.7" 97.8 cm	 4.7" 11.9 cm 6" 15.2 cm 2.5" 6.3 cm (Integrated or Remote Driver)	BL Matte Black PC Pol. Chrome WH White SG Satin Gold BZ Bronze SS Satin Silver
MPC	22" Multi-Port Linear - 5 Port C-MPL-2205-# 48" Multi-Port Linear - 11 Port C-MPL-4811-#	 4.4" OC 11.2 cm 2.8" 7 cm 21.8" 56 cm 5 Port 4.4" OC 11.2 cm 48" 123 cm 2.8" 7 cm 11 Port	 2.8" 7 cm 1.4" 3.5 cm (Integrated or Remote Driver)	BL Matte Black PC Pol. Chrome WH White SG Satin Gold BZ Bronze SS Satin Silver
MPC	10" Round - 3 Port C-MPR-1003-# 10" Round - 9 Port C-MPR-1009-#	 11" dia. 27.9 cm 7.4" OC 18.8 cm 3 Port 2.9" OC 7.4 cm 11" dia. 27.9 cm 9 Port	 10" dia. 25.4 cm 2.1" 5.3 cm (Integrated Driver)	BL Matte Black PC Pol. Chrome WH White SG Satin Gold BZ Bronze SS Satin Silver
MPC	20" Round - 3 Port C-MPR-2003-# 20" Round - 12 Port C-MPR-2012-#	 20" dia. 50.8 cm 14.5" OC 36.8 cm 3 Port 20" dia. 50.8 cm 6.4" OC 16.3 cm 12 Port	 18" dia. 45.7 cm 2.5" 6.3 cm (Integrated Driver)	BL Matte Black PC Pol. Chrome WH White SG Satin Gold BZ Bronze SS Satin Silver
JTA	24" JackTrack See Spec Sheet for details 48" JackTrack See Spec Sheet for details 94" JackTrack See Spec Sheet for details	 23" 58.4 cm 1.75" 4.5 cm 47" 119.4 cm 1.75" 4.5 cm 94" 238.8 cm 1.75" 4.5 cm	 1.38" 3.5 cm 1.75" 4.5 cm (Integrated or Remote Driver)	BL Matte Black WH White

BLACKJACK®
 LIGHTING

Modular Systems Options

For full specifications and ordering information, see blackjacklighting.com

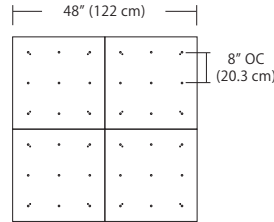
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System	Pendant Mounting	Configuration Examples	Finish Options
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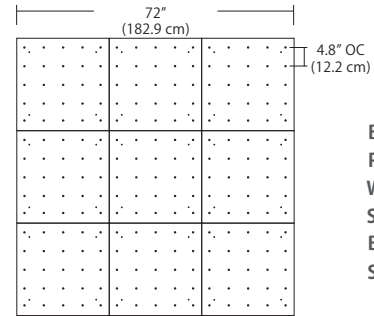
Quatro

Square Configurations - See [Quatro Square Configurations](#) section of our website for specification information (#)

4S (4' 2x2 / 9 Port)
 MSQ-2409-##-4S-##



6S (6' 3x3 / 25 Port)
 MSQ-2425-##-6S-##

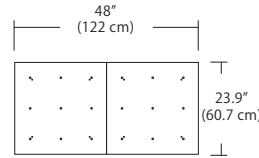


MPC

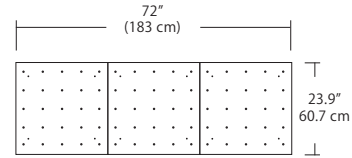
- BL Matte Black
- PC Pol. Chrome
- WH White
- SG Satin Gold
- BZ Bronze
- SS Satin Silver

Linear Configurations - See [Quatro Linear Configurations](#) section of our website for specification information (#)

4L (4'x2' / 9 Port)
 MSQ-2409-##-4L-##



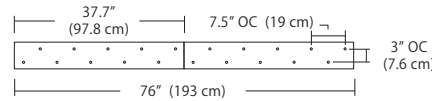
6L (6'x2' / 25 Port)
 MSQ-2425-##-6L-##



Duo

Linear Configurations - See [Duo Linear Configurations](#) section of our website for specification information (#)

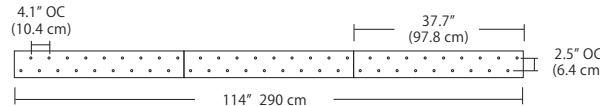
6L (6'4"x6" / 10 Port)
 MSD-3810-##-6L-##



MPC

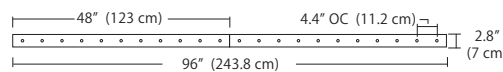
- BL Matte Black
- PC Pol. Chrome
- WH White
- SG Satin Gold
- BZ Bronze
- SS Satin Silver

9L (9'6"x6" / 18 Port)
 MSD-3818-##-9L-##



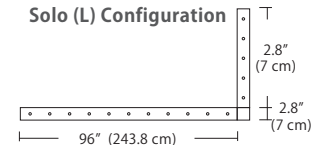
Solo

Solo 48" Linear Configuration - See [Solo Linear Configuration](#) section of our website for specific information (#)

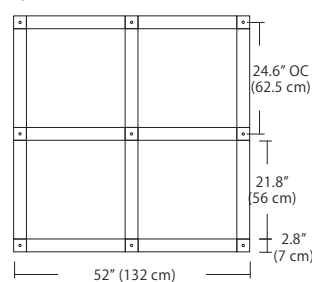


MPC

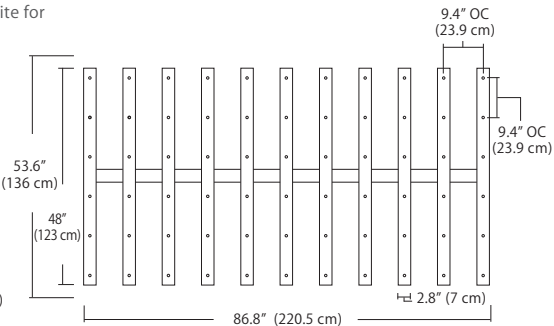
Solo (L) Configuration



Solo 22" Grid Configuration - See [Solo Grid Configuration](#) section of our website for specific information (#)



Solo 48" Grid Configuration



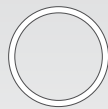
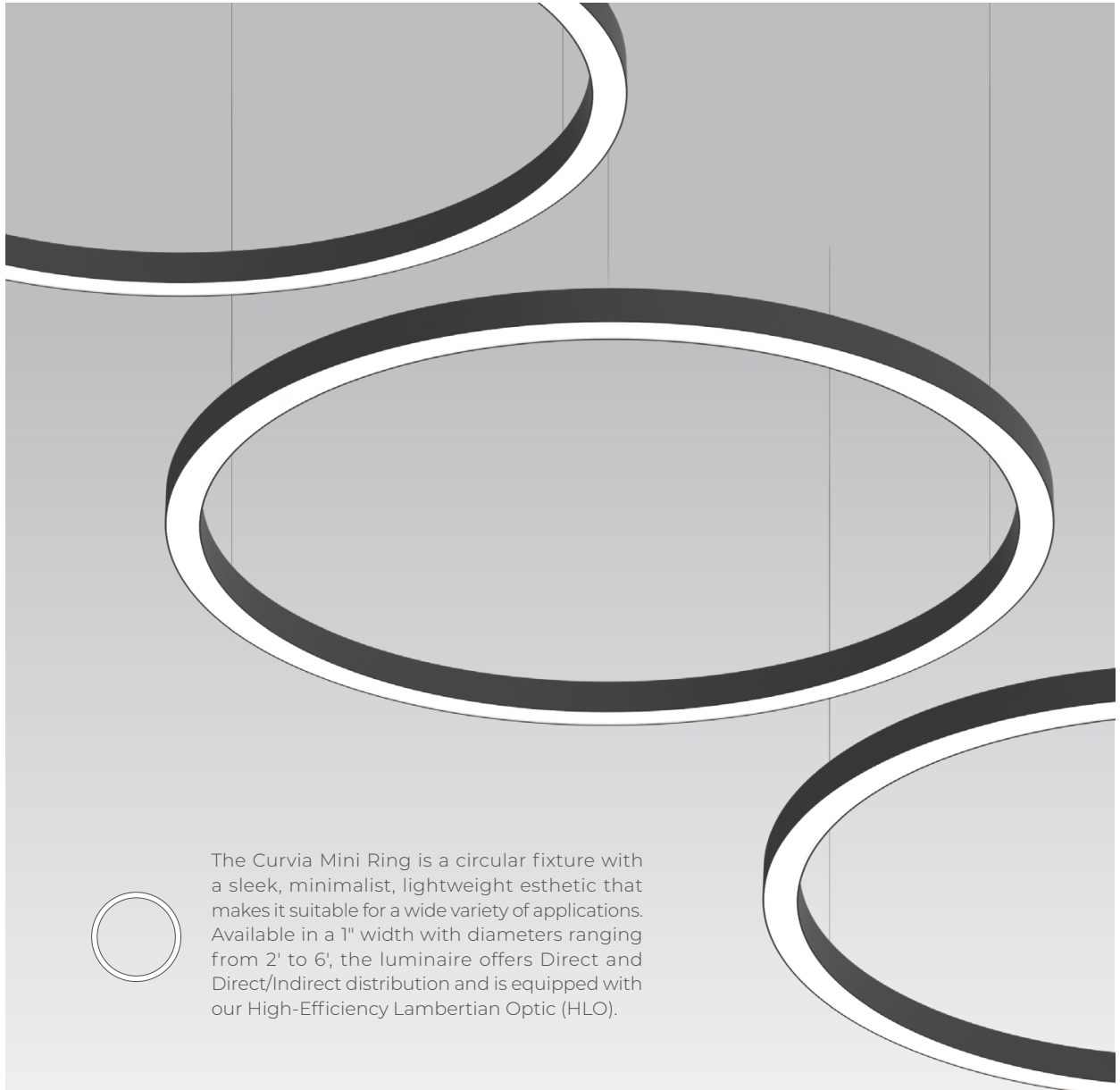
- BL Matte Black
- PC Pol. Chrome
- WH White
- SG Satin Gold
- BZ Bronze
- SS Satin Silver

CURVIA MINI

RING

PENDANT - SURFACE - RECESSED

LUMENWERX



The Curvia Mini Ring is a circular fixture with a sleek, minimalist, lightweight esthetic that makes it suitable for a wide variety of applications. Available in a 1" width with diameters ranging from 2' to 6', the luminaire offers Direct and Direct/Indirect distribution and is equipped with our High-Efficiency Lambertian Optic (HLO).

Curvia Family (Refer to other spec sheets)

Curvia Mini



Ring
1"

Curvia 2 Prism



Ring
2"



Shapes
Square / Rectangle / Capsule
2"



Pattern
2"

Curvia 2, 3, 4



Ring
2' / 3' / 4'



Shapes
Square / Rectangle / Capsule
2' / 3' / 4'



Pattern
2' / 3' / 4'

SENSORS
 For latest information on sensors, click [here](#).





Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 CURVMRIP-DI-3FT-HLO-HLO-SW-90CRI-750LMF-
 750LMF-35K-UNV-RD1-1C-POC-W-SC-*LENGTH*
 DRC-W
Notes:

Type:

G

LAI24-242157

CURVIA MINI RING

PENDANT - SURFACE - RECESSED



Project: _____
 Type: _____

LUMENWERX

Order Guide

LUMINAIRE ID	DISTRIBUTION	SIZE	DIRECT OPTIC	INDIRECT OPTIC <small>Specify NA for Direct fixture</small>	LIGHT SOURCE ²	CRI
			HLO		SW	90CRI
CURVMRIP - Curvia Mini Ring Pendant CURVMRIS - Curvia Mini Ring Surface CURVMRIR - Curvia Mini Ring Recessed	DI ¹ - Direct/Indirect D - Direct	2ET - Ø 2ft 3FT - Ø 3ft 4FT - Ø 4ft 5FT - Ø 5ft 6FT - Ø 6ft	HLO - High-Efficiency Lambertian Optic	HLO - High-Efficiency Lambertian Optic NA - Not applicable	SW - Static white ² Chromawerx Sola, Duo and Quadro also available. Consult factory.	90CRI - 90 CRI

DIRECT LUMEN PACKAGE	INDIRECT LUMEN PACKAGE <small>Specify NA for Direct fixture</small>	COLOR TEMP.	VOLTAGE ³	DRIVER ⁴	ELECTRICAL ⁸
350LMF - Eco low output 350 lm/ft 500LMF - Low output 500 lm/ft 750LMF - Medium output 750 lm/ft	350LMF - Eco low output 350 lm/ft 500LMF - Low output 500 lm/ft 750LMF - Medium output 750 lm/ft NA - Not applicable	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K	120V - 120V 277V - 277V UNV - 120V-277V 347V ⁵ - 347V	REMOTF RD1 - 1% 0-10V RDA ⁶ - DALI RLTEA2W ⁶ - Lutron 1% - 2 wire FP120V RLDE1 ⁵ - Lutron Hi-Lume 1% Eco RELD1 - eldoLED 1% ECOdrive 0-10V RELD0 - eldoLED 0.1% SOLOdrive 0-10V +EB ⁷ - Emergency battery	1C - 1 circuit 2C ⁹ - 2 circuits

³ Only available with RD1 driver.
⁴ PoE (Power-over-Ethernet) compatible. Consult factory for details.
⁵ On-site commissioning is required.
⁶ Available with 120V only.
⁷ For emergency battery, code will be like the following example: RD1 + EB.
⁸ For other circuit configurations consult factory.
⁹ Available for Direct/Indirect only. Separate direct and indirect circuits.

MOUNTING	FINISH

PENDANT	CANOPY FINISH	MOUNTING POINTS	Please Confirm Length		SURFACE DRC - Drywall ceiling	RECESSED DTR - Drywall trim DMF - Drywall mud flange	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL#
			POWER	MOUNTING LENGTH ¹⁴			
POC ¹⁰ - Integrated suspension power-over-aircraft cable BAC - Black power cord + aircraft cable WAC - White power cord + aircraft cable	W - Matte white AL - Aluminum B - Matte black CF - Custom finish, specify RAL#	SC ^{11,12} - Single canopy MC ¹³ - Multiple canopies	18IN - 18" 24IN - 24" 36IN - 36" 48IN - 48" 60IN - 60"	72IN - 72" 96IN - 96" 120IN - 120" #IN - Specify nominal length in inches			

¹⁰ Certain restrictions apply. See page 3 for more details.
¹¹ Available up to Ø 3ft.
¹² Certain restrictions apply. See page 3 for more details.
¹³ 3 Canopies for all sizes when power cord is specified. Number of canopies will vary with POC, consult factory.
¹⁴ For single canopy option the minimum required mounting heights are (distance from ceiling to top of fixture in inches):
 Ø 2Ft - min 15" | Ø 3ft - min. 22".



CURVIA MINI RING

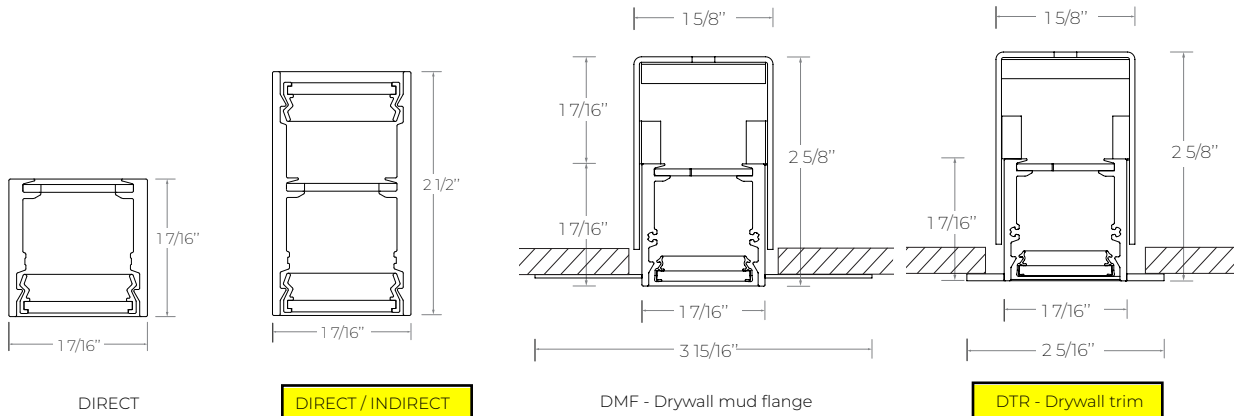
PENDANT - SURFACE - RECESSED

LUMENWERX

Section View

PENDANT, SURFACE

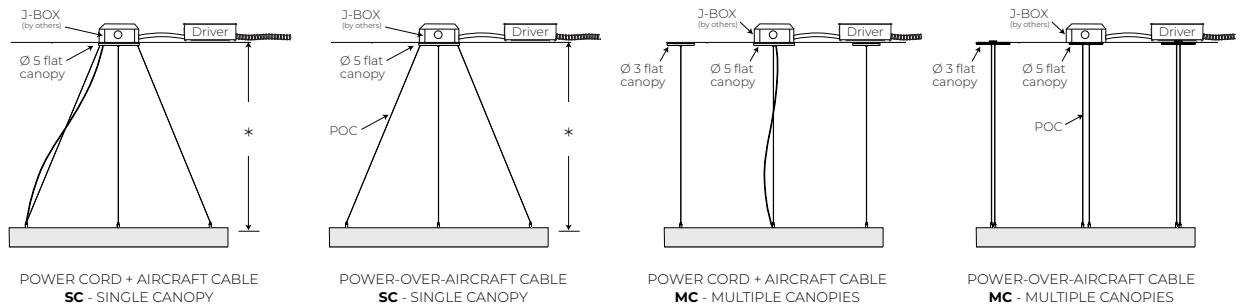
RECESSED



Mounting Options

PENDANT

REMOTE DRIVER



DIRECT
 Available with all configurations
 except for a Ø6 fixture at 750 lm/ft.

DIRECT/INDIRECT
 Available only with the following
 configurations:
 Ø2
 Ø3 at 350 lm/ft - 350 lm/ft
 Ø3 at 500 lm/ft - 350 lm/ft
 Ø3 at 350 lm/ft - 500 lm/ft
 Ø3 at 500 lm/ft - 500 lm/ft
 Ø4 at 350 lm/ft - 350 lm/ft

* For single canopy option, the minimum required mounting heights:
 Ø 2ft : min 15" | Ø 3ft : min 22"

CURVIA MINI RING

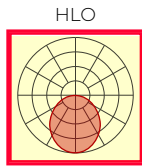
PENDANT - SURFACE - RECESSED

LUMENWERX

Photometrics

Values calculated based on Curvia Mini Ring ø 2 ft at 35K and 90 CRI for all optics.

DIRECT OPTICS



LM/FT	W/FT	LPW
350	4.6	75
500	6.9	72
750	11	68

INDIRECT OPTICS



LM/FT	W/FT	LPW
350	4.5	75
500	6.9	72
750	11	68

MULTIPLIER TABLES

Use these tables to get results for different color temperatures and CRI for all Direct and Indirect photometric tables.

Multiplier - CCT/CRI

CCT (K)	Watts		LPW	
	CRI90	CRI90	CRI90	CRI90
2700	1.26		0.79	
3000	1.23		0.81	
3500	1.20		0.84	
4000	1.17		0.85	

DIRECT/INDIRECT - LPW CALCULATION

For Direct/Indirect performance values, follow the formula.

$$\left(\frac{\text{DIRECT LM/FT} + \text{INDIRECT LM/FT}}{\text{DIRECT W/FT} + \text{INDIRECT W/FT}} \right) = \text{LPW}$$

Job Name:

NEWTON COUNTY ENRICHMENT CENTER -
O&M's
Engineer: Electrical Design Consultants - Macon
(Macon)

Catalog Number:

CURVMRIP-DI-3FT-HLO-HLO-SW-90CRI-750LMF-
750LMF-35K-UNV-RD1-1C-POC-W-SC-*LENGTH*
DRC-W
Notes:

Type:**G**

LAI24-242157

CURVIA MINI

RING

PENDANT - SURFACE - RECESSED

LUMENWERX

Technical Specifications

OPTICS**High-Efficiency Lambertian Optic (HLO)**

Lumenwerx's High-Efficiency Lambertian Optic is engineered with reflective sidewalls that distribute LED output across acrylic shielding. To negotiate the curves of Lumenwerx rounded fixtures, the HLO is equipped with proprietary SupremeGrip™ technology, which keeps the optic securely in place.

LIGHT SOURCE

Custom array of mid-flux LEDs are cartridge-mounted with quick-connect wiring to facilitate service and thermal management. Available in 2700K, 3000K, 3500K and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs operate at reduced drive current to optimize efficacy and lumen maintenance. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

ELECTRICAL

Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency>84%, PF>0.9, THD<20%. Other specifiable options include Lutron Hi-Lume 1% (specify 2-wire, or Ecosystem Dim-to-Off), eldoLED 1% ECOdrive 0-10V, eldoLED 0.1% SOLOdrive 0-10V, and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

PoE

Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

Battery

Factory installed long life, high temperature, maintenance-free Lithium-Ion battery pack with self-test functionality, test switch and charge indicator. Minimum of 90 minutes operation, up to 1000 lumens per 4' (25°C) emergency lighting output and recharge time of 24 hours.

MOUNTING OPTION**Pendant**

Pendant fixtures can be mounted with aircraft cable.

Surface

Fixtures can be mounted directly to drywall and hard surface ceilings, hardware supplied by others. A minimum distance of 6" from the vertical wall is required.

Recessed

Recessed fixtures can be mounted in drywall ceilings with trim or mud flange options.

FINISH

Interior - 95%, reflective matte powder coated white paint.
Exterior - Matte white, matte black or aluminum powder coating. Custom finishes are also available.

CONSTRUCTION

Housing - Extruded aluminum and aluminum sheet, up to 90% recycled content
Reflectors - Aluminum
HLO - Acrylic and polycarbonate
Hanger - Chromed griplock securely attached with spring steel hardware in end caps and/or joiners
Aircraft cable suspension - 7x7 braids aluminum aircraft cable 0.06" thick

WEIGHT

Direct/Indirect	Direct
Ø 2ft - 5.9 lb (2.7 kg)	Ø 2ft - 4.9 lb (2.2 kg)
Ø 3ft - 8.9 lb (4 kg)	Ø 3ft - 7.3 lb (3.3 kg)
Ø 4ft - 11.8 lb (5.4 kg)	Ø 4ft - 9.7 lb (4.4 kg)
Ø 5ft - 14.8 lb (6.7 kg)	Ø 5ft - 12.1 lb (5.5 kg)
Ø 6ft - 17.8 lb (8 kg)	Ø 6ft - 14.6 lb (6.6 kg)

CERTIFICATIONS

ETL - Rated for Indoor dry/damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.
IC rated - Suitable for direct contact with insulation. For Recessed mounting only.

WARRANTY

Lumenwerx provides a five-year limited warranty on electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.



FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — New Construction.

Optional goof rings available for additional overlap trim coverage.

1/2"-1-1/2" ceiling thickness

25° ambient temperature

IC rated up to 1000lm

OPTICS — LEDs are binned to a 3-step MacAdam Ellipse. 55° cutoff

New construction frame approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

80CRI standard (90CRI optional)

UGR — UGR is zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg, per CIE 117-1996 Discomfort Glare in Interior Lighting. [UGR FAQ](#)

ELECTRICAL — Adjustable lumen output with four module options. Fixed lumen options also available.

MVOLT 120/277V 50/60Hz driver (0-10V & 120V Phase Dimming to 10% or 1% min dimming level)

FCC CFR Title 47 Part 15 Class A for 277V. FCC CFR Title 47 Part 15 Class B for 120V.

LUMEN MAINTENANCE — L80 at 60,000 hours

LISTINGS — Certified to US and Canadian safety standards. Damp location standard (Wet Location (WL) optional, requires covered ceiling). Some configurations are ENERGY STAR® certified, please visit www.energystar.gov for specific products. TAA compliant. UFC (3-530-01) specification compliant for power factor and THD. GSA P100 6.2.4 compliant for power quality at full output; compliant up to 2000lm at fully dimmed output. Drivers are ROHS compliant

Title 24 compliant (90CRI, up to 1000lm).

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed.

Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

PERFORMANCE DATA

LBR6 AR LSS MWD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	571	99	585	101	599	103	617	105
AL01 (750LM)	9	905	102	926	103	948	105	977	108
AL01 (1000LM)	13	1270	98	1300	100	1330	102	1372	104
AL02 (1000LM)	13	1346	108	1378	110	1410	112	1454	115
AL02 (1500LM)	19	1965	105	2011	107	2059	109	2123	111
AL02 (2000LM)	25	2476	100	2533	101	2593	103	2674	106
AL03 (2000LM)	25	2547	103	2606	105	2668	107	2751	109
AL03 (2500LM)	32	3075	98	3146	100	3221	101	3321	104
AL03 (3000LM)	38	3492	93	3573	95	3658	96	3771	99
AL04 (4000LM)	39	4180	107	4265	109	4350	112	4393	113
AL04 (4500LM)	44	4613	105	4707	107	4801	109	4848	110
AL04 (5000LM)	49	5017	102	5119	104	5221	107	5273	108

LBR6 MS MWD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	480	99	584	101	597	102	616	105
AL01 (750LM)	9	760	102	924	103	946	105	975	108
AL01 (1000LM)	13	1067	98	1297	100	1328	102	1369	104
AL02 (1000LM)	13	1131	108	1375	110	1408	112	1451	115
AL02 (1500LM)	19	1651	105	2007	106	2055	108	2118	111
AL02 (2000LM)	25	2079	99	2528	101	2588	103	2668	105
AL03 (2000LM)	25	2139	103	2601	104	2663	106	2745	109
AL03 (2500LM)	32	2583	98	3140	99	3214	101	3314	103
AL03 (3000LM)	38	2933	93	3566	94	3651	96	3764	98
AL04 (4000LM)	39	3511	90	3583	92	3654	94	3690	95
AL04 (4500LM)	44	3875	88	3954	90	4033	92	4072	93
AL04 (5000LM)	49	4214	86	4300	88	4386	90	4429	90

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical

Catalog Number
Notes
Type

LBR6 NCH

6" Open and Wallwash LED
 New Construction Downlight



New Construction



Open Trim



Wallwash Trim





Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 LBR6 NCH 15LM 40K AR LSS MWD
 MVOLT UGZ WL
 Notes:

Type:
OA

LAI24-242157

LBR6 NCH

Module ordering

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LBR6 NCH ALO2 SWW1 AR LSS MWD MVOLT UGZ 90CRI

Series	Lumens ‡		Color temperature ‡		Reflector Color	Reflector Flange ‡		Reflector Finish
LBR6 NCH 6" New Construction	Adjustable Lumen Output	Fixed Lumen Output	Switchable CCT		AR Clear	(blank)	Self-flanged	LSS Semi-specular
LBR6WW NCH 6" New Construction Wall Wash	AL01 500/750/1000lm	05LM 500lm	SWW1 2700K-3000K-3500K-4000K-5000K	27K 2700K	BR ‡ Black painted	TRW White painted flange		
	AL02 1000/1500/2000lm	07LM 750lm		30K 3000K	MS ‡ Metallic Silver	TRBL Black painted flange		
	AL03 2000/2500/3000lm	10LM 1000lm		35K 3500K	WR ‡ White painted	FCPC Custom painted flange only		
	AL04 4000/4500/5000lm	15LM 1500lm	Fixed CCT	40K 4000K	TCP ‡ Custom painted trim	FRALTBD RAL painted flange only		
		20LM 2000lm	27K 2700K	50K 5000K	TRALTB ‡ RAL painted trim			
		25LM 2500lm	30K 3000K					
		30LM 3000lm	35K 3500K					
		40LM 4000lm						
		45LM 4500lm						
		50LM 5000lm						

Distribution	Voltage	Driver	Emergency ‡		Control Input ‡
MWD Medium wide (1.0 s/mh)	MVOLT	UGZ Universal dimming to 10% 0-10V; line voltage dimming (120V)	(blank)	No Emergency Needed	(blank) No Control Input Needed
WD Wide (1.2s/mh)	120	UGZ1 Universal dimming to 1% 0-10V; line voltage dimming (120V)	ELR Batterypack (10W constant power) Non-T20 Compliant remote test switch	JOT Wireless room control with "Just One Touch" pairing	NPS80EZ nLight™ network power/relay pack with 0-10V dimming; ER controls fixtures on emergency circuit.
WW ‡ Wallwash	277	DALI ‡ DALI dimming to 1%	ETS Iota Emergency Transfer System	NPS80EZER nLight™ network power/relay pack with 0-10V dimming; ER controls fixtures on emergency circuit.	NLTAIR2 nLight™ Air enabled
	347	D10 Minimum dimming 10% driver for use with JOT	E10WCP Batterypack (10W constant power) Non-T20 Compliant integral test switch	NLTAIRER2 nLight™ AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection.	NLTAIREM2 nLight™ AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection.
		D1 Minimum dimming 1% driver for use with JOT	E10WCPR Batterypack (10W constant power) T20 Compliant remote test switch		
			E10WRSTAR Emergency battery pack, 10W with remote test switch and Iota STAR technology		

Options	
90CRI	High CRI (90+)
AT ‡	Airtight
EC1 ‡	Extended Conduit (18")
EC6 ‡	Extended Conduit (6ft)
WL ‡	Wet Location (IP55)
QDS ‡	Quick disconnect plugs
CP ‡	Chicago Plenum

NOTE: ‡ indicates option value has ordering restrictions. Please reference the Option Value Ordering Restrictions chart below.

‡ Option Value Ordering Restrictions	
Options	Restriction
Adjustable Lumens/CCT	Adjustable Lumen Output and Switchable CCT must be specified together (for example: ALO1 SWW1).
Fixed Lumens/CCT	Fixed Lumen Output and Fixed CCT must be specified together (for example: 10LM 30K).
AT	Standard for CP and IP55, not available with WW.
E10WCPR	Not available EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
E10WCP	Not available with EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, WL, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
E10WRSTAR	Not available with wet location, EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT. Top access installation or 17.5" plenum clearance required for roomside installation. Not available with integral test switch
ELR	Not available EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
EC1, EC6	Not Available with CP, QDS, ELR, E10WCP, or E10WCPR.
WL	Not available with WW, All CP is wet location, except WW (Damp). IP55 rated.
QDS	Must be specified for use with LBR_PFWQDS. Not available with 347V, CP, ELR, E10WCP, E10WCPR.
EC1	Not Available with CP, QDS, ELR, E10WCP, or E10WCPR.
JOT	Not available with CP, nLight options, UGZ, or DALI drivers. Max 4500 lumens. Fixed lumens and CCT only. Not available with 2000-4500lm in conjunction with batterypack.
NPS80EZ	Not available with CP, QDS, DALI, D1, OR D10 drivers. 120V OR 277V only. Not available with 347V.
NPS80EZER	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. 120V OR 277V only. Not available with 347V.
NLTAIR2	Not available with CP, QDS, DALI, D1, OR D10 drivers. See UL 924 Sequence of Operation table. Non-emergency luminaires with this option can be used as a normal power sensing device for nLight AIR devices and luminaires with EM emergency options.
NLTAIRER2	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. Not available with 347V.
NLTAIREM2	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. See UL 924 Sequence of Operation table.
CP	Must be specified for use with LBR_PFWCP. Not available with, QDS, EC1, EC6, ELR, E10WCP, E10WCPR, 347V, JOT, NPS80EZ, NPS80EZ ER, NLTAIR2, NLTAIRER2, NLTAIREM2, D1, OR D10 drivers.
ETS	Not available with, QDS, ELR, E10WCP, E10WCPR, 347V, JOT, NPS80EZ, NPS80EZ ER, NLTAIR2, NLTAIRER2, NLTAIREM2, DALI, D1, OR D10 driver.
DALI	Not available with fixed lumens or CCT. Max 4500 lumens.
WW	Not available with WL, EL and E10WCP. Must be ordered with LBR6WW NCH.
TRW, TRBL	Available with MS and AR reflectors only.
MS, WR, BR	Not available with LSS reflector finish.
TRALTB, FRALTB	RALTB for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options.
TCP, FCPC	CPC options for pricing only. Custom color chip needs to be sent in to your Customer Resolution specialist before order can be processed. Click HERE for more details.



LBR6 NCH

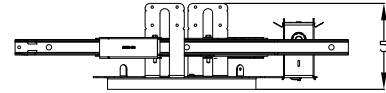
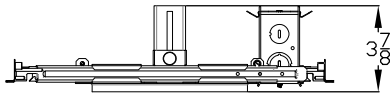
LBR6 NCH

PLENUM DEPTH TABLE				
Aperture Size/Output	Plenum Depth*	IC	Non-IC	Non-IC Marked Spacing
LBR4 500-1000 Lumen	3.44	X		
LBR4 1000-2000 Lumen	3.44		X	
LBR4 2000-3000 Lumen	-			24x24x9
LBR4 4000-5000 Lumen	-			24x24x9

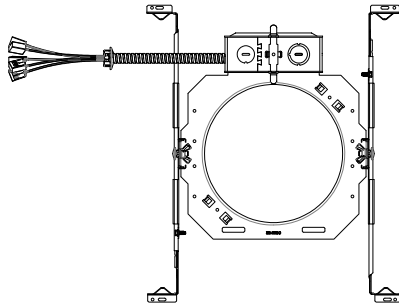
CEILING COVERAGE TABLE								
Series		Aperture	Trim Flange OD	Min ceiling opening	Ceiling Thickness	Max ceiling opening	Max Ceiling Opening with Goof Ring	Overall Goof Ring OD
LBR4	ROUND	4-1/4"	5-7/16"	4-1/2"	1/2"	5-1/8"	5-1/8"	7-1/4"
LBR4					1-1/2"		5-3/4"	

*Above unfinished 1/2" ceiling plane

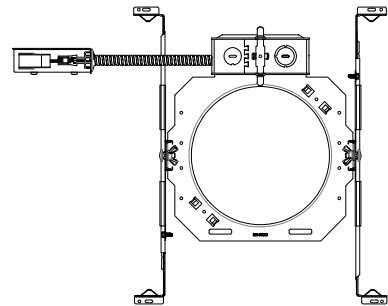
* All dimensions are inches (millimeters) unless otherwise noted.



Aperture Size	Ceiling Cutout
6 in	7-1/8"



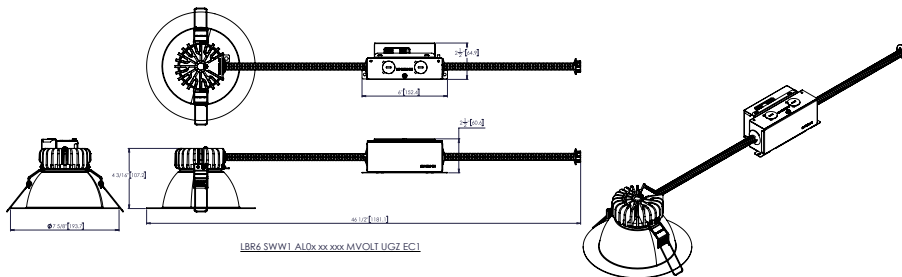
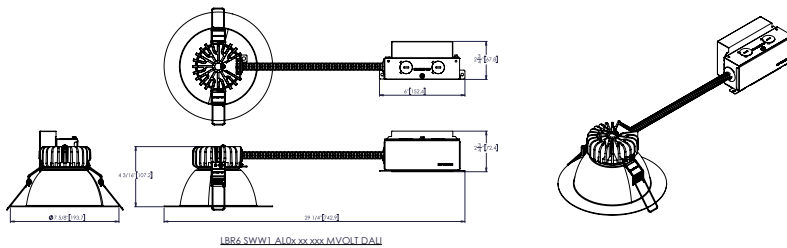
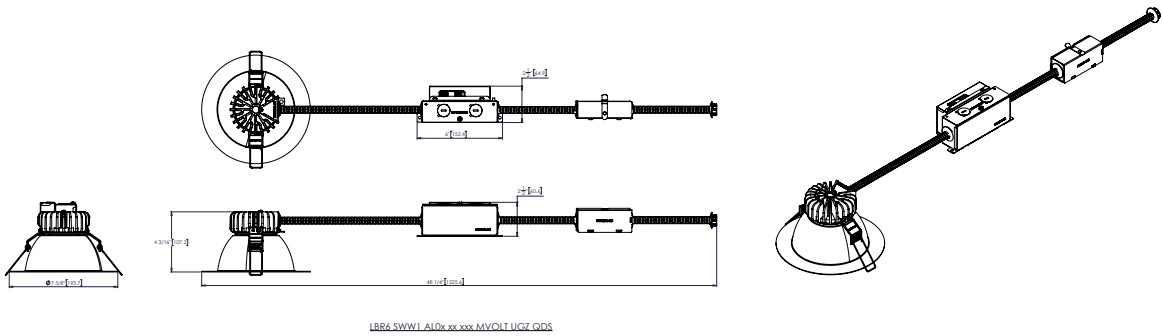
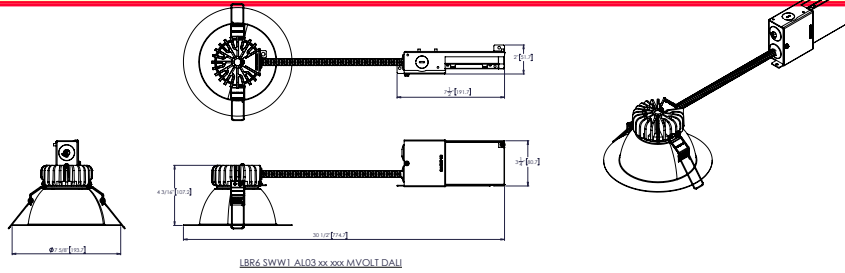
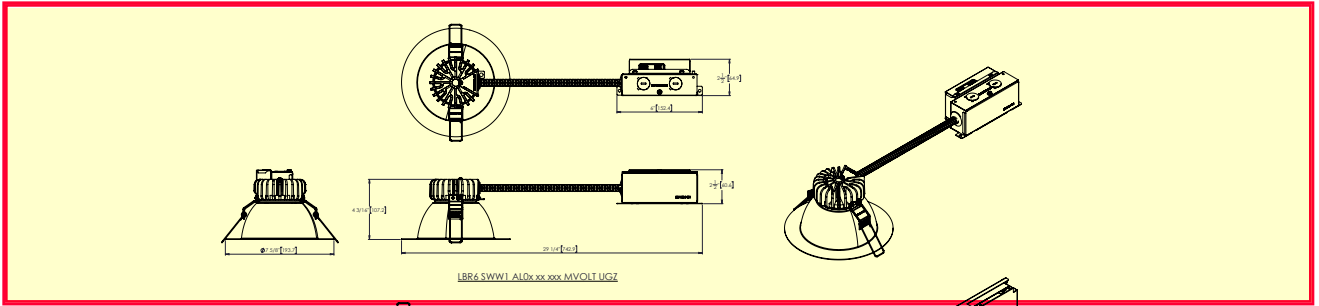
6" New Construction Frame, 18" conduit



6" New Construction Frame, QDS

LBR6 NCH

* All dimensions are inches (millimeters) unless otherwise noted.

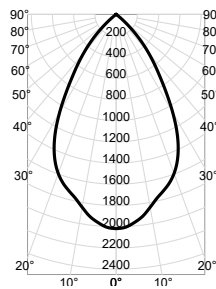


LBR6 NCH

PHOTOMETRY

Distribution Curve Distribution Data Output Data Illuminance Data at 30" Above Floor for a Single Luminaire

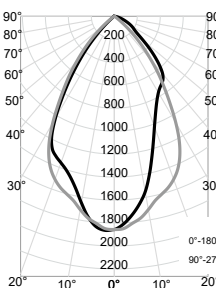
LBR6 SWW1 ALO2 AR LSS MWD MVOLT UGZ, Input Watts: 18.1, Delivered Lumens: 1970, LPW: 108.8, S/MH: 0.94, Test No: 20-518-03



CP Summary		Zonal Lumen Summary			Cone of Light			Luminance (cd/sq.m)	
0°	Zone	Lumens	% Fixture	Mounting Height	Initial FC Center Beam	Beam Diameter	Average Luminance		
0° 2,018	0° - 30°	1,292	66%	6.0	56.1	7.1	0°	142,862	
5° 1,968	0° - 40°	1,751	89%	8.0	31.5	9.5	45°	25,559	
15° 1,721	0° - 60°	1,967	100%	10.0	20.2	11.9	55°	1,074	
25° 1,383	0° - 90°	1,970	100%	12.0	14.0	14.3	65°	402	
35° 724	90° - 180°	0	0%	14.0	10.3	16.7	75°	246	
45° 255	0° - 180°	1,970	100%				85°	162	
55° 9									
65° 2									
75° 1									
85° 0									
90° 0									

Beam Angle: 61.5°
 Field Angle: 92.7°

LBR6WW SWW1 ALO2 AR LSS WW, Input Watts: 18.7, Delivered Lumens: 1981, LPW: 105.9, S/MH: 0.67, Test No: 20-518-A1



CP Summary		Zonal Lumen Summary			Luminance (cd/sq.m)	
0°	90°	Zone	Lumens	% Fixture	Average Luminance	
0° 1,857	1,857	0° - 30°	1,126	57%	0°	131,472
5° 1,740	1,810	0° - 40°	1,581	80%	45°	50,247
15° 1,265	1,602	0° - 60°	1,915	97%	55°	27,523
25° 864	1,349	0° - 90°	1,981	100%	65°	21,156
35° 719	760	90° - 180°	0	0%	75°	12,281
45° 502	280	0° - 180°	1,981	100%	85°	7,229
55° 223	22					
65° 126	10					
75° 45	4					
85° 9	1					
90° 0	2					

LUMEN OUTPUT MULTIPLIERS - CCT			
3000K	3500K	4000K	5000K
0.98	1.0	1.01	1.03

LUMEN OUTPUT MULTIPLIERS - FINISH	
Clear Semi-spec (AR LSS)	1.0
Metallic Silver (MS)	0.84
White Painted (WR)	1.03
Black Painted (BR)	0.60

LUMEN OUTPUT MULTIPLIERS - CRI	
80	1.0
90	0.874

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Output power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

The LPW rating is also available at Designlight Consortium.



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSX2 LED P3 40K R4 MVOLT SPA
 DDBXD
 Notes:

Type:
OC
 LAI24-242157



RSX2 LED Area Luminaire



Catalog Number _____

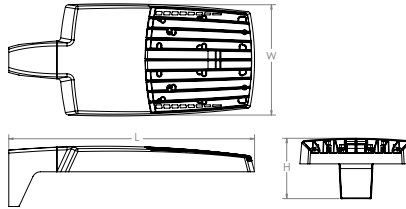
Notes _____

Type _____

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

- EPA (ft²@0°):** 0.69 ft² (0.06 m²)
- Length:** 29.3" (74.4 cm) (SPA mount)
- Width:** 13.4" (34.0 cm)
- Height:** 3.0" (7.6 cm) Main Body
7.2" (18.3 cm) Arm
- Weight:** 30.0 lbs (13.6 kg) (SPA mount)



Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX2 delivers 11,000 to 31,000 lumens allowing it to replace 250W to 1000W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

ds Design Select options indicated by this color background.

Ordering Information

EXAMPLE: RSX2 LED P6 40K R3 MVOLT SPA DDBXD

Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting
RSX2 LED	P1	30K 3000K	R2 Type 2 Wide	MVOLT (120V-277V) ²	SPA Square pole mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°)
	P2	40K 4000K	R3 Type 3 Wide	HVOLT (347V-480V) ³	RPA Round pole mounting (3.2" min. dia. RND pole for 2, 3, 4 at 90°, 3.0" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°)
	P3	50K 5000K	R3S Type 3 Short	XVOLT (277V-480V) ⁴	MA Mast arm adaptor (fits 2-3/8" OD horizontal tenon)
	P4		R4 Type 4 Wide	(use specific voltage for options as noted)	IS Adjustable slipfitter (fits 2-3/8" OD tenon) ⁶
	P5		R4S Type 4 Short	120 ³ 277 ⁵	WBA Wall bracket ¹
	P6		R5 Type 5 Wide ¹	208 ³ 347 ⁵	WBASC Wall bracket with surface conduit box
			R5S Type 5 Short ¹	240 ³ 480 ⁵	AASP Adjustable tilt arm square pole mounting ⁶
			AFR Automotive Front Row		AARP Adjustable tilt arm round pole mounting ⁶
			AFRR90 Automotive Front Row Right Rotated		AAWB Adjustable tilt arm with wall bracket ⁶
			AFRL90 Automotive Front Row Left Rotated		AAWSC Adjustable tilt arm wall bracket and surface conduit box ⁶

Options	Finish
<p>Shipped Installed</p> <ul style="list-style-type: none"> HS House-side shield⁷ PE Photocontrol, button style^{8,9} PER7 Seven-wire twist-lock receptacle only (no controls)^{9,10,11} SF Single fuse (120, 277, 347)⁵ DF Double fuse (208, 240, 480)⁵ SPD20KV 20KV Surge pack (10KV standard) FAO Field adjustable output³ DMG 0-10V dimming extend out back of housing for external control (control ordered separate)⁹ DS Dual switching^{9,12} 	<ul style="list-style-type: none"> DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DOBTXD Textured Dark Bronze DBLBXD Textured Black DNATXD Textured Natural Aluminum DWHGXD Textured White
<p>Shipped Installed</p> <p>*Standalone and Networked Sensors/Controls (factory default settings, see table page 9)</p> <ul style="list-style-type: none"> NLTAIR2 PIRHN nLight AIR generation 2, with Networked, Bi-Level motion/ambient sensor^{2,13,14,15} BAA Buy America(n) Act Compliant CCE Coastal Construction¹⁶ <p>*Note: NLTAIR2 PIRHN with nLight Air can be used as a standalone dimming sensor with out-of-box settings or as a wireless networked solution. See factory default settings table. Sensor coverage pattern is affected when luminaire is tilted.</p> <p>Shipped Separately (requires some field assembly)</p> <ul style="list-style-type: none"> EGS External glare shield⁷ EGFV External glare full visor (360° around light aperture)⁷ BS Bird spikes¹⁷ 	



Ordering Information

Accessories

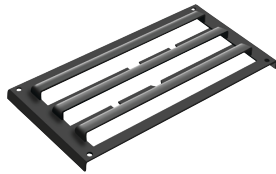
Ordered and shipped separately.

RSX2HS	RSX2 House side shield (includes 2 shields)
RSX2EGS (FINISH) U	External glare shield (specify finish)
RSX2HSAFRR (FINISH) U	RSX2 House side shields for AFR rotated optics (includes 2 shields)
RSX2EGFV (FINISH) U	External glare full visor (specify finish)
RSXRPA (FINISH) U	RSX Universal round pole adaptor plate (specify finish)
RSXWBA (FINISH) U	RSX WBA wall bracket (specify finish) 1
RSXSCB (FINISH) U	RSX Surface conduit box (specify finish, for use with WBA, WBA not included)
DL127F 1.5 JU	Photocell -SSL twist-lock (120-277V) 18
DL1347F 1.5 CUL JU	Photocell -SSL twist-lock (347V) 18
DL1480F 1.5 CUL JU	Photocell -SSL twist-lock (480V) 18
DSHORT SBK U	Shorting cap 18

NOTES

- Any Type 5 distribution, is not available with WBA.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
- XVOLT driver not available with P1. XVOLT driver operates on any line voltage from 277V-480V (50/60 Hz). XVOLT not available with fusing (SF or DF) and not available with PE.
- Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- Maximum tilt is 90° above horizontal.
- It may be ordered as an accessory.
- Requires MVOLT or 347V.
- Two or more of the following options cannot be combined including PE, DMG, PER7, FAO, DS and NLTAIR2 PIRHN. (Exception: PE and FAO can be combined; also PE and DMG can be combined.)
- Compatible with standard twist-lock photocells for dusk to dawn operation or advanced control nodes that provide 0-10V dimming signals. Wire 4/Wire 5 wired to dimming leads on driver. Wire6/Wire7 capped inside luminaire. Twistlock photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
- For units with option PER7, the mounting must be restricted to +/- 45° from horizontal aim per ANSI C136.10-2010.
- DS requires (2) separately switched circuits. DS provides 50/50 fixture operation via (2) different sets of leads using (2) drivers. DS only available with packages P5 and P6.
- Must be ordered with PIRHN.
- Requires MVOLT or HVOLT.
- Must be ordered with NLTAIR2. For additional information on PIRHN visit [tenon](#).
- CCE option not available with WBA, WBASC, AASP, AARP, AAWB, AAWBSC, EGS, EGFV and BS.
- Must be ordered with fixture for factory pre-drilling.
- Compatible with standard twist-lock photocells for dusk to dawn operation or advanced control nodes that provide 0-10V dimming signals. Wire 4/Wire 5 wired to dimming leads on driver. Wire6/Wire7 capped inside luminaire. Twistlock photocell ordered and shipped as a separate line item from Acuity Brands Controls.

External Shields



House Side Shield



External Glare Shield

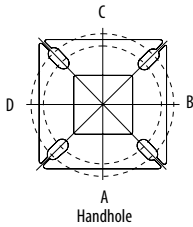


External 360 Full Visor

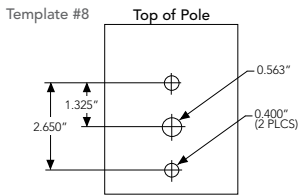
Pole/Mounting Information

Accessories including bullhorns, cross arms and other adapters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit [Accessories](#).

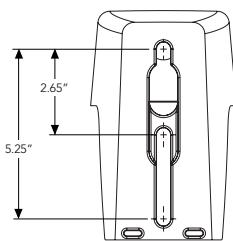
HANDHOLE ORIENTATION



RSX POLE DRILLING



RSX STANDARD ARM & ADJUSTABLE ARM



Round Tenon Mount - Pole Top Slipfitters

Tenon O.D.	RSX Mounting	Single	2 @ 180°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
2 - 3/8"	RPA, AARP	AS3-5190	AS3-5280	AS3-5290	AS3-5320	AS3-5390	AS3-5490
2 - 7/8"	RPA, AARP	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	RPA, AARP	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
#8	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#8	Drill Nomenclature	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS

RSX2 - Luminaire EPA

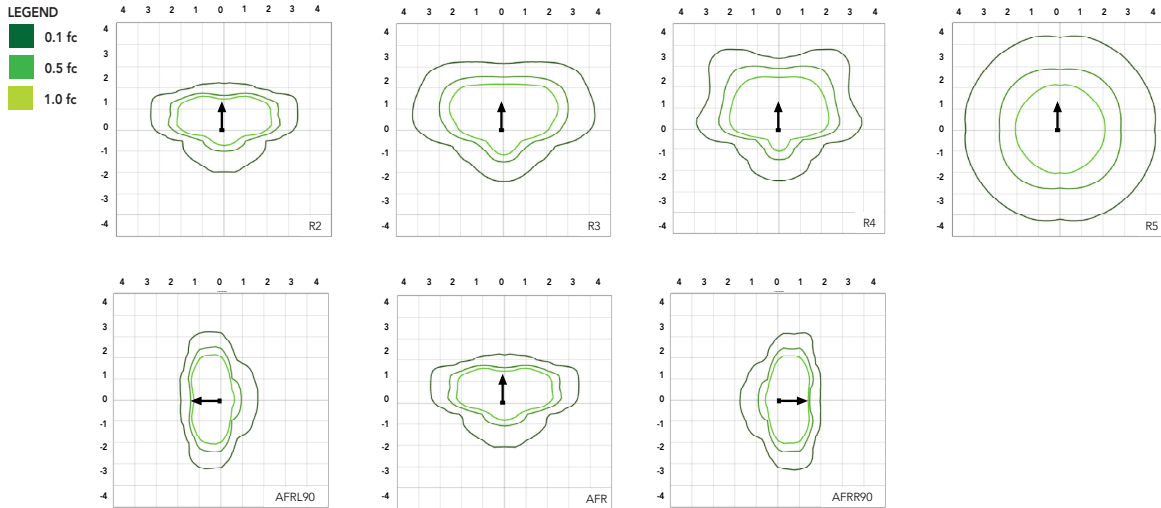
*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
SPA - Square Pole Adaptor	0.69	1.22	1.27	1.8	1.61	2.39	1.37	2.06	2.74
RPA - Round Pole Adaptor	0.74	1.27	1.37	1.9	1.71	2.49	1.42	2.16	2.84
MA - Mast Arm Adaptor	0.61	1.14	1.11	1.64	1.45	2.23	1.29	1.9	2.58
IS - Integral Slipfitter AASP/AARP - Adjustable Arm Square/Round Pole	0°	0.69	1.22	1.27	1.8	1.61	2.39	1.37	2.06
	10°	0.53	1.06	1.05	1.58	1.37	2.08	1.06	1.59
	20°	0.52	1.02	1.03	1.52	1.33	2.02	1.03	1.55
	30°	0.64	1.11	1.18	1.63	1.45	2.21	1.27	1.91
	40°	0.81	1.21	1.35	1.74	1.65	2.39	1.62	2.43
	45°	0.91	1.25	1.5	1.81	1.75	2.48	1.82	2.73
	50°	1.34	1.83	2.17	2.61	2.56	3.62	2.68	4.02
	60°	2.2	2.97	3.57	4.24	4.17	5.89	4.41	6.61
	70°	2.86	4.13	4.7	5.89	5.71	8.21	5.71	8.57
	80°	3.4	5.13	5.67	7.34	7.09	10.21	6.79	10.19
90°	3.85	5.96	6.55	8.58	8.31	11.88	7.70	11.56	

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's RSX Area homepage.

Isofootcandle plots for the RSX2 LED P6 40K. Distances are in units of mounting height (30').



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97
45°C	113°F	0.96
50°C	122°F	0.95

Electrical Load

Performance Package	System Watts (W)	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	71W	0.59	0.34	0.30	0.26	0.20	0.15
P2	111W	0.93	0.53	0.46	0.40	0.32	0.23
P3	147W	1.23	0.70	0.61	0.53	0.42	0.31
P4	187W	1.55	0.90	0.78	0.68	0.53	0.38
P5	210W	1.75	1.01	0.87	0.76	0.60	0.44
P6	244W	2.03	1.17	1.01	0.88	0.70	0.51

Projected LED Lumen Maintenance

Operating Hours	50,000	75,000	100,000
Lumen Maintenance Factor	>0.97	>0.95	>0.92

Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSX2 LED P3 40K R4 MVOLT SPA
 DDBXD
 Notes:

Type:
OC
 LAI24-242157

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	71W	R2	10,040	2	0	1	139	11,031	2	0	1	153	11,031	2	0	1	153
		R3	10,005	2	0	2	141	10,992	2	0	2	155	10,992	2	0	2	155
		R3S	10,271	2	0	2	143	11,285	2	0	2	157	11,285	2	0	2	157
		R4	10,136	2	0	2	143	11,136	2	0	2	157	11,136	2	0	2	157
		R4S	9,779	2	0	2	138	10,744	2	0	2	151	10,744	2	0	2	151
		R5	10,271	4	0	2	145	11,285	4	0	2	159	11,285	4	0	2	159
		R5S	10,544	3	0	1	149	11,585	3	0	2	163	11,585	3	0	2	163
		AFR	10,026	2	0	1	141	11,016	2	0	1	155	11,016	2	0	1	155
		AFRR90	10,122	3	0	2	140	11,121	3	0	2	154	11,121	3	0	2	154
		AFRL90	10,164	3	0	2	141	11,167	3	0	2	155	11,167	3	0	2	155
P2	111W	R2	15,712	2	0	2	138	17,263	2	0	2	151	17,263	2	0	2	151
		R3	15,657	2	0	3	141	17,202	3	0	3	155	17,202	3	0	3	155
		R3S	16,075	2	0	2	141	17,661	2	0	2	155	17,661	2	0	2	155
		R4	15,862	2	0	3	143	17,427	2	0	3	157	17,427	2	0	3	157
		R4S	15,304	2	0	2	138	16,815	2	0	2	151	16,815	2	0	2	151
		R5	16,075	4	0	2	145	17,661	5	0	3	159	17,661	5	0	3	159
		R5S	16,502	4	0	2	149	18,130	4	0	2	163	18,130	4	0	2	163
		AFR	15,691	2	0	2	141	17,240	2	0	2	155	17,240	2	0	2	155
		AFRR90	15,841	3	0	3	139	17,404	4	0	3	153	17,404	4	0	3	153
		AFRL90	15,907	3	0	3	139	17,477	4	0	3	153	17,477	4	0	3	153
P3	147W	R2	19,855	3	0	2	132	21,814	3	0	2	145	21,814	3	0	2	145
		R3	19,785	3	0	3	135	21,737	3	0	4	148	21,737	3	0	4	148
		R3S	20,312	3	0	3	135	22,317	3	0	3	149	22,317	3	0	3	149
		R4	20,044	3	0	3	136	22,022	3	0	4	150	22,022	3	0	4	150
		R4S	19,339	3	0	3	132	21,247	3	0	3	145	21,247	3	0	3	145
		R5	20,313	5	0	3	138	22,317	5	0	3	152	22,317	5	0	3	152
		R5S	20,852	4	0	2	142	22,910	4	0	2	156	22,910	4	0	2	156
		AFR	19,828	3	0	2	135	21,785	3	0	2	148	21,785	3	0	2	148
		AFRR90	20,017	4	0	3	133	21,992	4	0	3	147	21,992	4	0	3	147
		AFRL90	20,101	4	0	3	134	22,084	4	0	3	147	22,084	4	0	3	147
P4	187W	R2	22,836	3	0	2	120	25,090	3	0	2	132	25,090	3	0	2	132
		R3	22,756	3	0	4	122	25,002	3	0	4	134	25,002	3	0	4	134
		R3S	23,363	3	0	3	123	25,668	3	0	3	135	25,668	3	0	3	135
		R4	23,054	3	0	4	123	25,329	3	0	4	135	25,329	3	0	4	135
		R4S	22,243	3	0	3	119	25,059	3	0	3	134	25,059	3	0	3	134
		R5	23,363	5	0	3	125	25,669	5	0	4	137	25,669	5	0	4	137
		R5S	23,983	4	0	2	128	26,350	4	0	2	141	26,350	4	0	2	141
		AFR	22,806	3	0	2	122	25,056	3	0	2	134	25,056	3	0	2	134
		AFRR90	23,023	4	0	3	121	25,295	4	0	3	133	25,295	4	0	3	133
		AFRL90	23,120	4	0	3	122	25,401	4	0	3	134	25,401	4	0	3	134
P5	210W	R2	26,141	3	0	2	122	28,721	3	0	2	135	28,721	3	0	2	135
		R3	26,049	3	0	4	124	28,620	3	0	4	136	28,620	3	0	4	136
		R3S	26,744	3	0	3	125	29,383	3	0	4	138	29,383	3	0	4	138
		R4	26,390	3	0	4	126	28,994	3	0	4	138	28,994	3	0	4	138
		R4S	25,462	3	0	3	121	27,974	3	0	3	133	27,974	3	0	3	133
		R5	26,744	5	0	4	127	29,383	5	0	4	140	29,383	5	0	4	140
		R5S	27,454	4	0	2	131	30,163	4	0	2	144	30,163	4	0	2	144
		AFR	26,106	3	0	2	124	28,682	3	0	2	137	28,682	3	0	2	137
		AFRR90	26,354	4	0	3	123	28,955	5	0	3	136	28,955	5	0	3	136
		AFRL90	26,465	4	0	3	124	29,077	5	0	3	136	29,077	5	0	3	136
P6	244W	R2	27,646	3	0	2	112	30,374	3	0	2	123	30,374	3	0	2	123
		R3	27,549	3	0	4	113	30,267	3	0	4	124	30,267	3	0	4	124
		R3S	28,283	3	0	3	115	31,075	3	0	4	126	31,075	3	0	4	126
		R4	27,909	3	0	4	114	30,663	3	0	4	126	30,663	3	0	4	126
		R4S	26,928	3	0	3	110	29,585	3	0	3	121	29,585	3	0	3	121
		R5	28,284	5	0	4	116	31,075	5	0	4	127	31,075	5	0	4	127
		R5S	29,035	4	0	2	119	31,900	5	0	3	131	31,900	5	0	3	131
		AFR	27,608	3	0	2	112	30,332	3	0	2	123	30,332	3	0	2	123
		AFRR90	27,872	4	0	3	113	30,622	5	0	3	124	30,622	5	0	3	124
		AFRL90	27,989	4	0	3	113	30,751	5	0	3	125	30,751	5	0	3	125



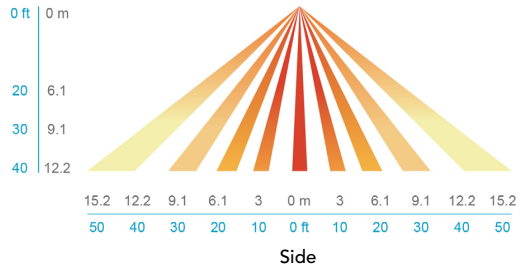
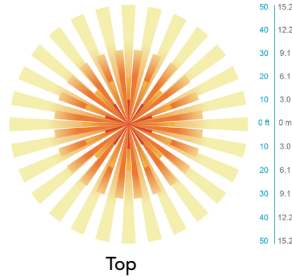
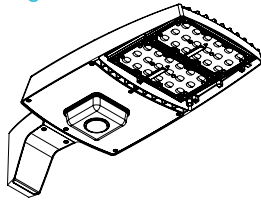
Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSX2 LED P3 40K R4 MVOLT SPA
 DDBXD
 Notes:

Type:
OC
 LAI24-242157

nLight Control - Sensor Coverage and Settings

NLTAIR2 PIRHN nLight
 Sensor Coverage Pattern
 nLight PIRHN



Motion Sensor Default Settings - Option PIRHN						
Option	Dimmed State (unoccupied)	High Level (when occupied)	Photocell Operation	Dwell Time (occupancy time delay)	Ramp-up Time (from unoccupied to occupied)	Ramp-down Time (from occupied to unoccupied)
NLTAIR2 PIRHN	Approx. 30% Output	100% Output	Enabled @ 1.5FC	7.5 minutes	3 seconds	5 minutes

*Note: NLTAIR2 PIRHN default settings including photocell set-point, high/low dim rates, and occupancy sensor time delay are all configurable using the Clarity Pro App. Sensor coverage pattern shown with luminaire at 0°. Sensor coverage pattern is affected when luminaire is tilted.

FEATURES & SPECIFICATIONS

INTENDED USE

The RSX LED area family is designed to provide a long-lasting, energy-efficient solution for the one-for-one replacement of existing metal halide or high pressure sodium lighting. The RSX2 delivers 11,000 to 31,000 lumens and is ideal for replacing 250W to 1000W HID pole-mounted luminaires in parking lots and other area lighting applications.

CONSTRUCTION AND DESIGN

The RSX LED area luminaire features a rugged die-cast aluminum main body that uses heat-dissipating fins and flow-through venting to provide optimal thermal management that both enhances LED performance and extends component life. Integral "no drill" mounting arm allows the luminaire to be mounted on existing pole drillings, greatly reducing installation labor. The light engines and housing are sealed against moisture and environmental contaminants to IP66. The low-profile design results in a low EPA, allowing pole optimization. Vibration rated per ANSI C136.31: 3G Mountings: Include SPA, RPA, MA, IS, AASP, AARP rated for 3G vibration. 1.5G Mountings: Include WBA, WBASC, AAWB and AAWSC rated for 1.5G vibration.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures superior adhesion as well as a minimum finish thickness of 3 mils. The result is high-quality finish that is warranted not to crack or peel.

OPTICS

Precision acrylic refractive lenses are engineered for superior application efficiency, distributing the light to where it is needed most. Available in short and wide pattern distributions including Type 2, Type 3, Type 3S, Type 4, Type 4S, Type 5, Type 5S, AFR (Automotive Front Row) and AFR rotated AFR90 and ARFL90.

COASTAL CONSTRUCTION (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times apply.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted on metal-core circuit boards and aluminum heat sinks to maximize heat dissipation. Light engines are IP66 rated. LED lumen maintenance is >L92/100,000 hours. CCT's of 3000K, 4000K and 5000K (minimum 70 CR) are available. Fixtures ship standard with 0-10v dimming driver. Class 1 electronic drivers ensure system power factor >90% and THD <20%. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The RSX LED area luminaire has a wide assortment of control options. Dusk to dawn controls include MVOLT and 347V button-type photocells and NEMA twist-lock photocell receptacles.

nLIGHT AIR CONTROLS

The RSX LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing with photocontrol functionality and is suitable for mounting heights up to 40 feet. No commissioning is required when using factory default settings that provide basic stand-alone motion occupancy dimming that is switched on and off with a built-in photocell. See chart above for motion sensor default out-of-box settings. For more advanced wireless functionality, such as group dimming, nLight AIR can be commissioned using a smartphone and the easy-to-use CLAIRITY app. nLight AIR equipped luminaires can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor override can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found [here](#).

INSTALLATION

Integral "no-drill" mounting arm allows for fast, easy mounting using existing pole drillings. Select the "SPA" option for square poles and the "RPA" option to mount to round poles. Note, the RPA mount can also be used for mounting to square poles by omitting the RPA adapter plate. Select the "MA" option to attach the luminaire to a 2 3/8" horizontal mast arm or the "IS" option for an adjustable slipfitter that mounts on a 2 3/8" OD tenon. The adjustable slipfitter has an integral junction box and offers easy installation. Can be tilted up to 90° above horizontal. Additional mountings are available including a wall bracket, adjustable tilt arm for direct-to-pole and wall and a surface conduit box for wall mount applications.

LISTINGS

CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only. US Patent No. D882, 146S

BUY AMERICAN ACT

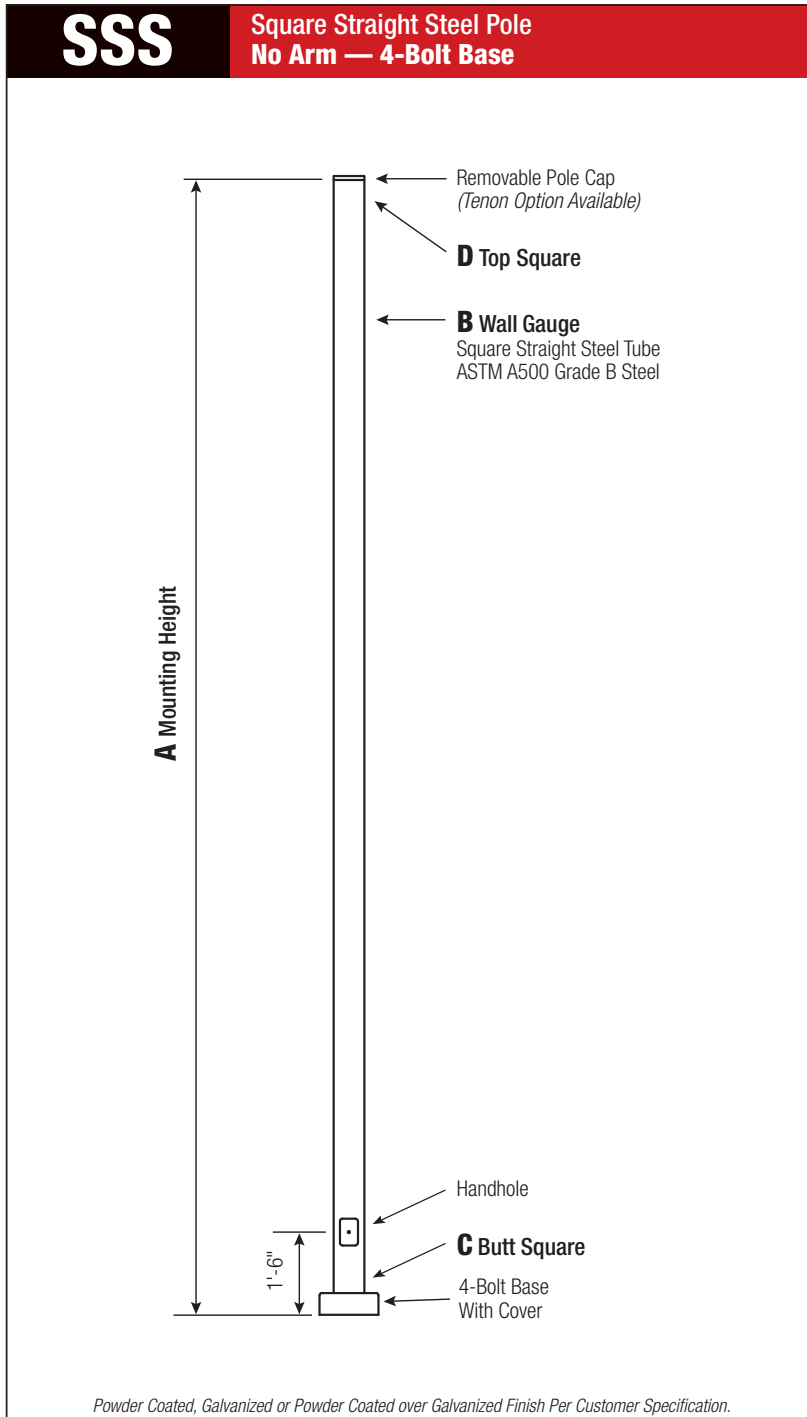
Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.





C Butt Sq.	D Top Sq.	F Bolt Cir. Dia.	G Base Sq.	H Bolt Proj.	I Bolt Size
4 (11 Gauge)	4	8 - 9	8	3.75	.75 x 17 x 3
4 (7 Gauge)	4	8 - 9	8	3.75	.75 x 30 x 3
5 (11 Gauge)*	5	10 - 12	11	4.875	.75 x 30 x 3
5 (7 Gauge)	5	10 - 12	11	4.875	1 x 36 x 4
6	6	11 - 13	12.5	4.875	1 x 36 x 4

*Requires the use of oversized washers (provided).

Dimensions in Inches

Pole

Pole shaft shall be weldable-grade, cold-rolled, commercial quality carbon steel tubing conforming to ASTM A500 Grade B. Options include 11 gauge and 7 gauge. All welds shall conform to AWS D1.1 using ER70S-6 electrodes.

Base Style

4-Bolt Steel Plate Base Flange of fabricated hot rolled carbon steel conforming to ASTM A36 or equivalent (36 ksi minimum yield) with 2-piece Base Cover and attaching hardware.

Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain eight (8) Hex Nuts, four (4) Lock Washers, and eight (8) Flat Washers (all components Galvanized Steel). A paper bolt circle template will be provided.

Handhole

Reinforced, 3" x 5" Handhole with cover, stainless steel screw and backbar. A grounding provision incorporating a tapped 1/2"-13NC hole will be provided.

Base Cover

Square ABS plastic Base Covers are standard on all SSS poles specified in BA-Black, BM-Dark Bronze and BH-White. SSS poles specified in all other colors will be manufactured of metal materials. Custom specification of SSS square metal style Base Covers in BA, BM and BH powder coated finishes is available.

Vibration Damper

If determined necessary by Hapco, or if specified by the customer, a first and/or second mode vibration damper will be provided.



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 SSS25B4-4-D190-ACUITY DDBXD

Type:
 OC

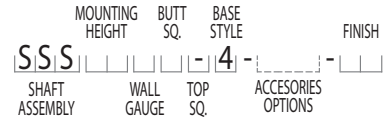
Notes:

LAI24-242157

A Mtg. Hgt.	B Wall Gauge	C Butt Sq.	TOTAL LUM. WEIGHT	MAXIMUM EPA						CATALOG NUMBER
				90	100	110	120	130	140	
10	11	4	320	25.2	20.0	18.6	15.3	12.7	10.6	SSS10B4-4-*
12	11	4	285	20.6	16.2	14.9	12.1	9.9	8.2	SSS12B4-4-*
14	11	4	255	17.0	13.2	12.1	9.7	7.8	6.3	SSS14B4-4-*
15	11	4	245	15.5	11.9	10.9	8.6	6.8	5.4	SSS15B4-4-*
15	7	4	305	23.4	18.4	17.0	13.8	11.4	9.4	SSS15D4-4-*
16	11	4	235	14.0	10.7	9.7	7.6	5.9	4.6	SSS16B4-4-*
16	7	4	290	21.5	16.8	15.5	12.5	10.2	8.4	SSS16D4-4-*
18	11	4	215	11.3	8.4	7.6	5.7	4.3	3.2	SSS18B4-4-*
18	7	4	265	18.0	13.9	12.8	10.2	8.2	6.6	SSS18D4-4-*
20	11	4	200	9.1	6.5	5.8	4.2	2.9	1.9	SSS20B4-4-*
20	11	5	235	14.1	10.3	9.2	6.8	4.9	3.4	SSS20B5-4-*
20	7	4	240	15.1	11.5	10.5	8.2	6.5	5.0	SSS20D4-4-*
20	7	5	330	26.3	20.3	18.6	14.8	11.9	9.6	SSS20D5-4-*
22	11	4	200	7.2	4.9	4.2	2.8	1.7	0.8	SSS22B4-4-*
22	11	5	215	11.4	8.0	7.1	4.9	3.2	1.9	SSS22B5-4-*
22	7	4	225	12.7	9.5	8.6	6.6	5.0	3.7	SSS22D4-4-*
22	7	5	300	22.4	17.1	15.6	12.2	9.6	7.5	SSS22D5-4-*
25	11	4	200	4.7	2.8	2.2	1.0	-	-	SSS25B4-4-*
25	11	5	200	8.0	5.1	4.3	2.4	1.0	-	SSS25B5-4-*
25	7	4	205	9.7	6.9	6.2	4.4	3.1	2.0	SSS25D4-4-*
25	7	5	260	17.7	13.2	11.9	9.0	6.7	4.9	SSS25D5-4-*
28	11	4	200	2.6	1.0	-	-	-	-	SSS28B4-4-*
28	11	5	200	5.1	2.6	1.9	-	-	-	SSS28B5-4-*
28	7	4	200	7.1	4.8	4.1	2.6	1.5	-	SSS28D4-4-*
28	7	5	235	13.9	9.9	8.8	6.3	4.3	2.7	SSS28D5-4-*
30	11	5	200	3.4	1.1	-	-	-	-	SSS30B5-4-*
30	7	4	200	5.6	3.5	2.9	1.6	-	-	SSS30D4-4-*
30	7	5	215	11.7	8.0	7.0	4.7	2.9	1.5	SSS30D5-4-*
30	7	6	275	19.2	13.7	12.2	8.7	5.9	3.8	SSS30D6-4-*
35	7	5	200	6.9	4.0	3.1	1.2	-	-	SSS35D5-4-*
35	7	6	220	12.6	8.0	6.8	3.9	1.6	-	SSS35D6-4-*
39	7	6	200	8.2	4.2	3.1	0.6	-	-	SSS39D6-4-*

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.



Catalog Number Example -

SSS 20 D 5 - 4 - BA

Square Straight Steel, 20' Mounting Height, 7 Gauge, 5" Butt Square, No Taper, 4-Bolt Base, Black Powder Coat Finish.

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25-year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

Mounting Options

Side Drill Mount

Includes removable pole cap.
 NOTE: A luminaire drilling template must be supplied at time of order.

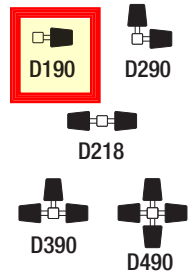


Tenon Mount

For Tenon Mount applications specify both Tenon diameter and length.



Drill Mount Options

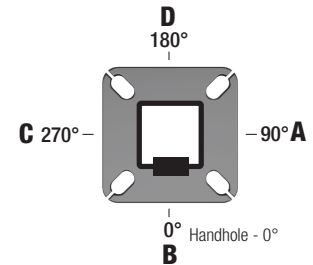


Electrical Box



Note: GFI Options must be specified in Accessories.

Pole Orientation



SSS	HEIGHT	GAUGE	BUTT Sq.	TOP Sq.	BASE STYLE	MOUNTING OPTIONS	ELECTRICAL BOX*	ACCESSORIES/OPTIONS*	FINISH
SSS	10 = 10'	B = 11 Gauge	4 = 4"	"-=" No Taper	4 = 4-Bolt Base	D000 - No Drilling D190 - Std. "A"	FA - 30" Up, "D" FB - 30" Up, "B" FC - 30" Up, "A" FD - 30" Up, "C" FE - 36" Up, "D" FF - 36" Up, "B" FG - 36" Up, "A" FH - 36" Up, "C" FI - 24" Up, "D" FK - 24" Up, "A" FL - 24" Up, "C" FZ - Custom**	C12 - Threaded 1/2" Coupling** C34 - Threaded 3/4" Coupling** C10 - Threaded 1" Coupling** EHH - Extra Handhole** GF1 - Duplex GFI Receptacle (WR) with Cover GF2 - Duplex GFI (WR) with In-Use Cover LAB - Less Anchor Bolts LPC - Less Pole Cap PAB - Pre-shipped Anchor Bolts VD1 - Vib. Damper - First Mode VD2 - Vib. Damper - First Mode	POWDER COAT COLORS BA - Black Powder Coat BH - White Powder Coat BM - Dark Bronze Powder Coat BV - Dark Green Powder Coat GC - Gray Powder Coat XX - Special Colors* GALVANIZED 1Q - Galvanized Over Galv. 1C - Black PC Over Galv. 1D - White PC Over Galv. 1B - D. Bronze PC Over Galv. 1Y - D. Green PC Over Galv. 1J - Gray PC Over Galv. XX - Special PC Over Galv.*
	12 = 12'		5 = 5"			D290 - Std. "A" & "D" D218 - Std. "A" & "C" D390 - Std. "A", "D", & "C" D490 - Std. "A", "B", "C", & "D" DCUS - Custom*	* GFI Receptacle Options Available (Specify in Accessories)	* Add all that apply (Example: CPL-LAB-VDA)	* Provide RAL # or Sample Color Chip
	14 = 14'	D = 7 Gauge	6 = 6"			T204 - 2-3/8" O.D. x 4" T304 - 2-7/8" O.D. x 4" T356 - 3-1/2" O.D. x 6" T406 - 4" O.D. x 6" TCUS - Custom Tenon**	** Specify Height and Orientation	** Specify Location	
	16 = 16'								
	18 = 18'								
	20 = 20'								
	22 = 22'								
	25 = 25'								
	28 = 28'								
	30 = 30'								
	35 = 35'								
	39 = 39'								

SSS- SQUARE STRAIGHT STEEL POLE

SSS- SQUARE STRAIGHT STEEL POLE

NO ARM

4-BOLT BASE

3



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSX2 LED P3 40K R4 MVOLT SPA
 DDBXD
 Notes:

Type:
OD
 LAI24-242157



RSX2 LED Area Luminaire



Catalog Number _____

Notes _____

Type _____

Hit the Tab key or mouse over the page to see all interactive elements.

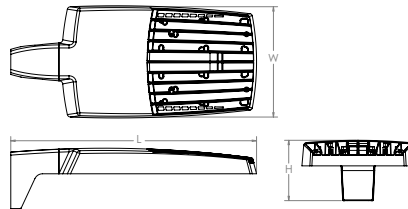
Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX2 delivers 11,000 to 31,000 lumens allowing it to replace 250W to 1000W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

Specifications

- EPA (ft²@0°):** 0.69 ft² (0.06 m²)
- Length:** 29.3" (74.4 cm) (SPA mount)
- Width:** 13.4" (34.0 cm)
- Height:** 3.0" (7.6 cm) Main Body
7.2" (18.3 cm) Arm
- Weight:** 30.0 lbs (13.6 kg) (SPA mount)



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

ds Design Select options indicated by this color background.

Ordering Information

EXAMPLE: RSX2 LED P6 40K R3 MVOLT SPA DDBXD

Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting
RSX2 LED	P1	30K 3000K	R2 Type 2 Wide	MVOLT (120V-277V) ²	SPA Square pole mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°)
	P2	40K 4000K	R3 Type 3 Wide	HVOLT (347V-480V) ³	RPA Round pole mounting (3.2" min. dia. RND pole for 2, 3, 4 at 90°, 3.0" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°)
	P3	50K 5000K	R3S Type 3 Short	XVOLT (277V-480V) ⁴	MA Mast arm adaptor (fits 2-3/8" OD horizontal tenon)
	P4		R4 Type 4 Wide	(use specific voltage for options as noted)	IS Adjustable slipfitter (fits 2-3/8" OD tenon) ⁶
	P5		R4S Type 4 Short	120 ³ 277 ⁵	WBA Wall bracket ¹
	P6		R5 Type 5 Wide ¹	208 ³ 347 ⁵	WBASC Wall bracket with surface conduit box
			R5S Type 5 Short ¹	240 ³ 480 ⁵	AASP Adjustable tilt arm square pole mounting ⁶
			AFR Automotive Front Row		AARP Adjustable tilt arm round pole mounting ⁶
			AFRR90 Automotive Front Row Right Rotated		AAWB Adjustable tilt arm with wall bracket ⁶
			AFRL90 Automotive Front Row Left Rotated		AAWSC Adjustable tilt arm wall bracket and surface conduit box ⁶

Options	Finish
<p>Shipped Installed</p> <ul style="list-style-type: none"> HS House-side shield⁷ PE Photocontrol, button style^{8,9} PER7 Seven-wire twist-lock receptacle only (no controls)^{9,10,11} SF Single fuse (120, 277, 347)⁵ DF Double fuse (208, 240, 480)⁵ SPD20KV 20KV Surge pack (10KV standard) FAO Field adjustable output³ DMG 0-10V dimming extend out back of housing for external control (control ordered separate)⁹ DS Dual switching^{9,12} 	<ul style="list-style-type: none"> DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DOBTXD Textured Dark Bronze DBLBXD Textured Black DNATXD Textured Natural Aluminum DWHGXD Textured White
<p>Shipped Installed</p> <p>*Standalone and Networked Sensors/Controls (factory default settings, see table page 9)</p> <ul style="list-style-type: none"> NLTAIR2 PIRHN nLight AIR generation 2, with Networked, Bi-Level motion/ambient sensor^{2,13,14,15} BAA Buy America(n) Act Compliant CCE Coastal Construction¹⁶ <p>*Note: NLTAIR2 PIRHN with nLight Air can be used as a standalone dimming sensor with out-of-box settings or as a wireless networked solution. See factory default settings table. Sensor coverage pattern is affected when luminaire is tilted.</p> <p>Shipped Separately (requires some field assembly)</p> <ul style="list-style-type: none"> EGS External glare shield⁷ EGFV External glare full visor (360° around light aperture)⁷ BS Bird spikes¹⁷ 	



Ordering Information

Accessories

Ordered and shipped separately.

RSX2HS	RSX2 House side shield (includes 2 shields)
RSX2EGS (FINISH) U	External glare shield (specify finish)
RSX2HSFAFR (FINISH) U	RSX2 House side shields for AFR rotated optics (includes 2 shields)
RSX2EGFV (FINISH) U	External glare full visor (specify finish)
RSXRPA (FINISH) U	RSX Universal round pole adaptor plate (specify finish)
RSXWBA (FINISH) U	RSX WBA wall bracket (specify finish) 1
RSXSCB (FINISH) U	RSX Surface conduit box (specify finish, for use with WBA, WBA not included)
DL127F 1.5 JU	Photocell -SSL twist-lock (120-277V) 18
DL1347F 1.5 CUL JU	Photocell -SSL twist-lock (347V) 18
DL1480F 1.5 CUL JU	Photocell -SSL twist-lock (480V) 18
DSHORT SBK U	Shorting cap 18

NOTES

- Any Type 5 distribution, is not available with WBA.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
- XVOLT driver not available with P1. XVOLT driver operates on any line voltage from 277V-480V (50/60 Hz). XVOLT not available with fusing (SF or DF) and not available with PE.
- Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- Maximum tilt is 90° above horizontal.
- It may be ordered as an accessory.
- Requires MVOLT or 347V.
- Two or more of the following options cannot be combined including PE, DMG, PER7, FAO, DS and NLTAIR2 PIRHN. (Exception: PE and FAO can be combined; also PE and DMG can be combined.)
- Compatible with standard twist-lock photocells for dusk to dawn operation or advanced control nodes that provide 0-10V dimming signals. Wire 4/Wire 5 wired to dimming leads on driver. Wire6/Wire7 capped inside luminaire. Twistlock photocell ordered and shipped

- as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
- For units with option PER7, the mounting must be restricted to +/- 45° from horizontal aim per ANSI C136.10-2010.
 - DS requires (2) separately switched circuits. DS provides 50/50 fixture operation via (2) different sets of leads using (2) drivers. DS only available with packages P5 and P6.
 - Must be ordered with PIRHN.
 - Requires MVOLT or HVOLT.
 - Must be ordered with NLTAIR2. For additional information on PIRHN visit [here](#).
 - CCE option not available with WBA, WBASC, AASP, AARP, AAWB, AAWBSC, EGS, EGFV and BS.
 - Must be ordered with fixture for factory pre-drilling.
 - Requires luminaire to be specified with PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

External Shields



House Side Shield



External Glare Shield

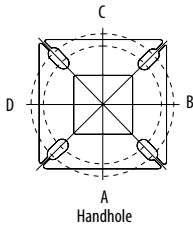


External 360 Full Visor

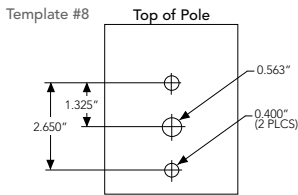
Pole/Mounting Information

Accessories including bullhorns, cross arms and other adapters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit [Accessories](#).

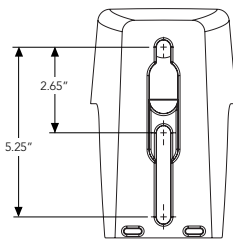
HANDHOLE ORIENTATION



RSX POLE DRILLING



RSX STANDARD ARM & ADJUSTABLE ARM



Round Tenon Mount - Pole Top Slipfitters

Tenon O.D.	RSX Mounting	Single	2 @ 180°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
2 - 3/8"	RPA, AARP	AS3-5190	AS3-5280	AS3-5290	AS3-5320	AS3-5390	AS3-5490
2 - 7/8"	RPA, AARP	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	RPA, AARP	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
#8	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#8	Drill Nomenclature	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS

RSX2 - Luminaire EPA

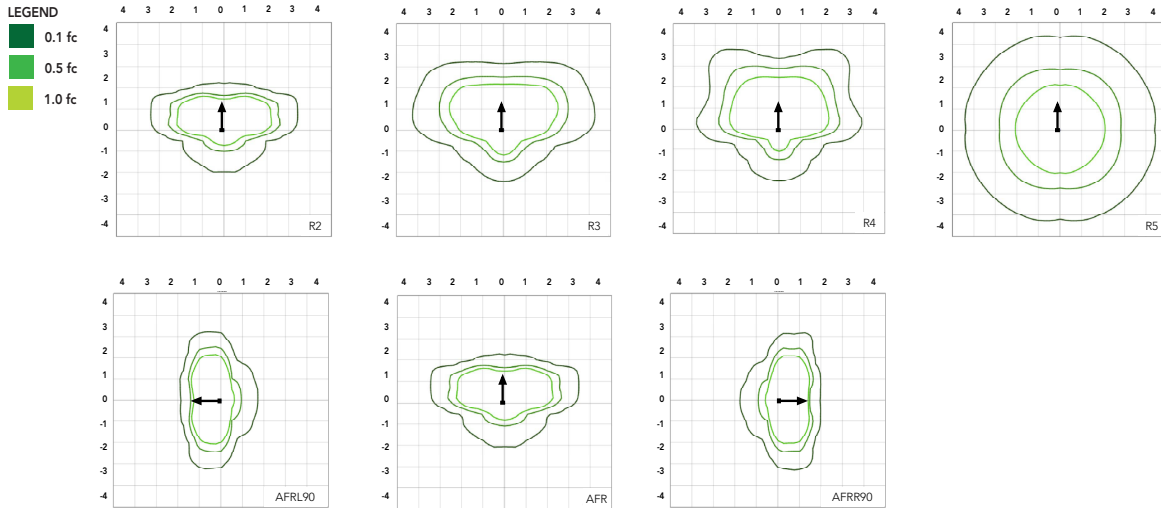
*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
SPA - Square Pole Adaptor	0.69	1.22	1.27	1.8	1.61	2.39	1.37	2.06	2.74
RPA - Round Pole Adaptor	0.74	1.27	1.37	1.9	1.71	2.49	1.42	2.16	2.84
MA - Mast Arm Adaptor	0.61	1.14	1.11	1.64	1.45	2.23	1.29	1.9	2.58
IS - Integral Slipfitter AASP/AARP - Adjustable Arm Square/Round Pole	0°	0.69	1.22	1.27	1.8	1.61	2.39	1.37	2.06
	10°	0.53	1.06	1.05	1.58	1.37	2.08	1.06	1.59
	20°	0.52	1.02	1.03	1.52	1.33	2.02	1.03	1.55
	30°	0.64	1.11	1.18	1.63	1.45	2.21	1.27	1.91
	40°	0.81	1.21	1.35	1.74	1.65	2.39	1.62	2.43
	45°	0.91	1.25	1.5	1.81	1.75	2.48	1.82	2.73
	50°	1.34	1.83	2.17	2.61	2.56	3.62	2.68	4.02
	60°	2.2	2.97	3.57	4.24	4.17	5.89	4.41	6.61
	70°	2.86	4.13	4.7	5.89	5.71	8.21	5.71	8.57
	80°	3.4	5.13	5.67	7.34	7.09	10.21	6.79	10.19
90°	3.85	5.96	6.55	8.58	8.31	11.88	7.70	11.56	

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's RSX Area homepage.

Isofootcandle plots for the RSX2 LED P6 40K. Distances are in units of mounting height (30').



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97
45°C	113°F	0.96
50°C	122°F	0.95

Electrical Load

Performance Package	System Watts (W)	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	71W	0.59	0.34	0.30	0.26	0.20	0.15
P2	111W	0.93	0.53	0.46	0.40	0.32	0.23
P3	147W	1.23	0.70	0.61	0.53	0.42	0.31
P4	187W	1.55	0.90	0.78	0.68	0.53	0.38
P5	210W	1.75	1.01	0.87	0.76	0.60	0.44
P6	244W	2.03	1.17	1.01	0.88	0.70	0.51

Projected LED Lumen Maintenance

Operating Hours	50,000	75,000	100,000
Lumen Maintenance Factor	>0.97	>0.95	>0.92

Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSX2 LED P3 40K R4 MVOLT SPA
 DDBXD
 Notes:

Type:
OD
 LAI24-242157

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	71W	R2	10,040	2	0	1	139	11,031	2	0	1	153	11,031	2	0	1	153
		R3	10,005	2	0	2	141	10,992	2	0	2	155	10,992	2	0	2	155
		R3S	10,271	2	0	2	143	11,285	2	0	2	157	11,285	2	0	2	157
		R4	10,136	2	0	2	143	11,136	2	0	2	157	11,136	2	0	2	157
		R4S	9,779	2	0	2	138	10,744	2	0	2	151	10,744	2	0	2	151
		R5	10,271	4	0	2	145	11,285	4	0	2	159	11,285	4	0	2	159
		R5S	10,544	3	0	1	149	11,585	3	0	2	163	11,585	3	0	2	163
		AFR	10,026	2	0	1	141	11,016	2	0	1	155	11,016	2	0	1	155
		AFRR90	10,122	3	0	2	140	11,121	3	0	2	154	11,121	3	0	2	154
		AFRL90	10,164	3	0	2	141	11,167	3	0	2	155	11,167	3	0	2	155
P2	111W	R2	15,712	2	0	2	138	17,263	2	0	2	151	17,263	2	0	2	151
		R3	15,657	2	0	3	141	17,202	3	0	3	155	17,202	3	0	3	155
		R3S	16,075	2	0	2	141	17,661	2	0	2	155	17,661	2	0	2	155
		R4	15,862	2	0	3	143	17,427	2	0	3	157	17,427	2	0	3	157
		R4S	15,304	2	0	2	138	16,815	2	0	2	151	16,815	2	0	2	151
		R5	16,075	4	0	2	145	17,661	5	0	3	159	17,661	5	0	3	159
		R5S	16,502	4	0	2	149	18,130	4	0	2	163	18,130	4	0	2	163
		AFR	15,691	2	0	2	141	17,240	2	0	2	155	17,240	2	0	2	155
		AFRR90	15,841	3	0	3	139	17,404	4	0	3	153	17,404	4	0	3	153
		AFRL90	15,907	3	0	3	139	17,477	4	0	3	153	17,477	4	0	3	153
P3	147W	R2	19,855	3	0	2	132	21,814	3	0	2	145	21,814	3	0	2	145
		R3	19,785	3	0	3	135	21,737	3	0	4	148	21,737	3	0	4	148
		R3S	20,312	3	0	3	135	22,317	3	0	3	149	22,317	3	0	3	149
		R4	20,044	3	0	3	136	22,022	3	0	4	150	22,022	3	0	4	150
		R4S	19,339	3	0	3	132	21,247	3	0	3	145	21,247	3	0	3	145
		R5	20,313	5	0	3	138	22,317	5	0	3	152	22,317	5	0	3	152
		R5S	20,852	4	0	2	142	22,910	4	0	2	156	22,910	4	0	2	156
		AFR	19,828	3	0	2	135	21,785	3	0	2	148	21,785	3	0	2	148
		AFRR90	20,017	4	0	3	133	21,992	4	0	3	147	21,992	4	0	3	147
		AFRL90	20,101	4	0	3	134	22,084	4	0	3	147	22,084	4	0	3	147
P4	187W	R2	22,836	3	0	2	120	25,090	3	0	2	132	25,090	3	0	2	132
		R3	22,756	3	0	4	122	25,002	3	0	4	134	25,002	3	0	4	134
		R3S	23,363	3	0	3	123	25,668	3	0	3	135	25,668	3	0	3	135
		R4	23,054	3	0	4	123	25,329	3	0	4	135	25,329	3	0	4	135
		R4S	22,243	3	0	3	119	25,059	3	0	3	134	25,059	3	0	3	134
		R5	23,363	5	0	3	125	25,669	5	0	4	137	25,669	5	0	4	137
		R5S	23,983	4	0	2	128	26,350	4	0	2	141	26,350	4	0	2	141
		AFR	22,806	3	0	2	122	25,056	3	0	2	134	25,056	3	0	2	134
		AFRR90	23,023	4	0	3	121	25,295	4	0	3	133	25,295	4	0	3	133
		AFRL90	23,120	4	0	3	122	25,401	4	0	3	134	25,401	4	0	3	134
P5	210W	R2	26,141	3	0	2	122	28,721	3	0	2	135	28,721	3	0	2	135
		R3	26,049	3	0	4	124	28,620	3	0	4	136	28,620	3	0	4	136
		R3S	26,744	3	0	3	125	29,383	3	0	4	138	29,383	3	0	4	138
		R4	26,390	3	0	4	126	28,994	3	0	4	138	28,994	3	0	4	138
		R4S	25,462	3	0	3	121	27,974	3	0	3	133	27,974	3	0	3	133
		R5	26,744	5	0	4	127	29,383	5	0	4	140	29,383	5	0	4	140
		R5S	27,454	4	0	2	131	30,163	4	0	2	144	30,163	4	0	2	144
		AFR	26,106	3	0	2	124	28,682	3	0	2	137	28,682	3	0	2	137
		AFRR90	26,354	4	0	3	123	28,955	5	0	3	136	28,955	5	0	3	136
		AFRL90	26,465	4	0	3	124	29,077	5	0	3	136	29,077	5	0	3	136
P6	244W	R2	27,646	3	0	2	112	30,374	3	0	2	123	30,374	3	0	2	123
		R3	27,549	3	0	4	113	30,267	3	0	4	124	30,267	3	0	4	124
		R3S	28,283	3	0	3	115	31,075	3	0	4	126	31,075	3	0	4	126
		R4	27,909	3	0	4	114	30,663	3	0	4	126	30,663	3	0	4	126
		R4S	26,928	3	0	3	110	29,585	3	0	3	121	29,585	3	0	3	121
		R5	28,284	5	0	4	116	31,075	5	0	4	127	31,075	5	0	4	127
		R5S	29,035	4	0	2	119	31,900	5	0	3	131	31,900	5	0	3	131
		AFR	27,608	3	0	2	112	30,332	3	0	2	123	30,332	3	0	2	123
		AFRR90	27,872	4	0	3	113	30,622	5	0	3	124	30,622	5	0	3	124
		AFRL90	27,989	4	0	3	113	30,751	5	0	3	125	30,751	5	0	3	125





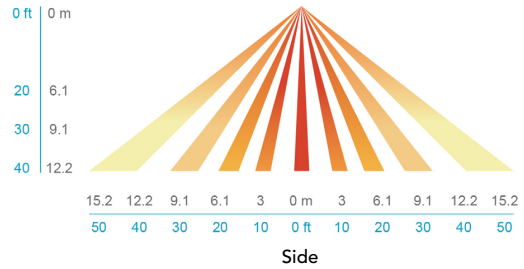
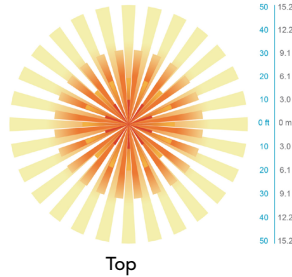
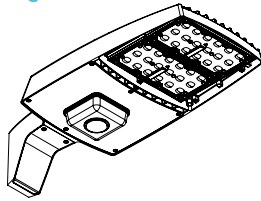
Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSX2 LED P3 40K R4 MVOLT SPA
 DDBXD
 Notes:

Type:
OD
 LAI24-242157

nLight Control - Sensor Coverage and Settings

NLTAIR2 PIRHN nLight
 Sensor Coverage Pattern
 nLight PIRHN



Motion Sensor Default Settings - Option PIRHN						
Option	Dimmed State (unoccupied)	High Level (when occupied)	Photocell Operation	Dwell Time (occupancy time delay)	Ramp-up Time (from unoccupied to occupied)	Ramp-down Time (from occupied to unoccupied)
NLTAIR2 PIRHN	Approx. 30% Output	100% Output	Enabled @ 1.5FC	7.5 minutes	3 seconds	5 minutes

*Note: NLTAIR2 PIRHN default settings including photocell set-point, high/low dim rates, and occupancy sensor time delay are all configurable using the Clarity Pro App. Sensor coverage pattern shown with luminaire at 0°. Sensor coverage pattern is affected when luminaire is tilted.

FEATURES & SPECIFICATIONS

INTENDED USE

The RSX LED area family is designed to provide a long-lasting, energy-efficient solution for the one-for-one replacement of existing metal halide or high pressure sodium lighting. The RSX2 delivers 11,000 to 31,000 lumens and is ideal for replacing 250W to 1000W HID pole-mounted luminaires in parking lots and other area lighting applications.

CONSTRUCTION AND DESIGN

The RSX LED area luminaire features a rugged die-cast aluminum main body that uses heat-dissipating fins and flow-through venting to provide optimal thermal management that both enhances LED performance and extends component life. Integral "no drill" mounting arm allows the luminaire to be mounted on existing pole drillings, greatly reducing installation labor. The light engines and housing are sealed against moisture and environmental contaminants to IP66. The low-profile design results in a low EPA, allowing pole optimization. Vibration rated per ANSI C136.31: 3G Mountings: Include SPA, RPA, MA, IS, AASP, AARP rated for 3G vibration. 1.5G Mountings: Include WBA, WBASC, AAWB and AAWSC rated for 1.5G vibration.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures superior adhesion as well as a minimum finish thickness of 3 mils. The result is high-quality finish that is warranted not to crack or peel.

OPTICS

Precision acrylic refractive lenses are engineered for superior application efficiency, distributing the light to where it is needed most. Available in short and wide pattern distributions including Type 2, Type 3, Type 3S, Type 4, Type 4S, Type 5, Type 5S, AFR (Automotive Front Row) and AFR rotated AFR90 and ARFL90.

COASTAL CONSTRUCTION (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times apply.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted on metal-core circuit boards and aluminum heat sinks to maximize heat dissipation. Light engines are IP66 rated. LED lumen maintenance is >L92/100,000 hours. CCT's of 3000K, 4000K and 5000K (minimum 70 CR) are available. Fixtures ship standard with 0-10v dimming driver. Class 1 electronic drivers ensure system power factor >90% and THD <20%. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The RSX LED area luminaire has a wide assortment of control options. Dusk to dawn controls include MVOLT and 347V button-type photocells and NEMA twist-lock photocell receptacles.

nLIGHT AIR CONTROLS

The RSX LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing with photocontrol functionality and is suitable for mounting heights up to 40 feet. No commissioning is required when using factory default settings that provide basic stand-alone motion occupancy dimming that is switched on and off with a built-in photocell. See chart above for motion sensor default out-of-box settings. For more advanced wireless functionality, such as group dimming, nLight AIR can be commissioned using a smartphone and the easy-to-use CLAIRITY app. nLight AIR equipped luminaires can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor override can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found [here](#).

INSTALLATION

Integral "no-drill" mounting arm allows for fast, easy mounting using existing pole drillings. Select the "SPA" option for square poles and the "RPA" option to mount to round poles. Note, the RPA mount can also be used for mounting to square poles by omitting the RPA adapter plate. Select the "MA" option to attach the luminaire to a 2 3/8" horizontal mast arm or the "IS" option for an adjustable slipfitter that mounts on a 2 3/8" OD tenon. The adjustable slipfitter has an integral junction box and offers easy installation. Can be tilted up to 90° above horizontal. Additional mountings are available including a wall bracket, adjustable tilt arm for direct-to-pole and wall and a surface conduit box for wall mount applications.

LISTINGS

CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only. US Patent No. D882, 146S

BUY AMERICAN ACT

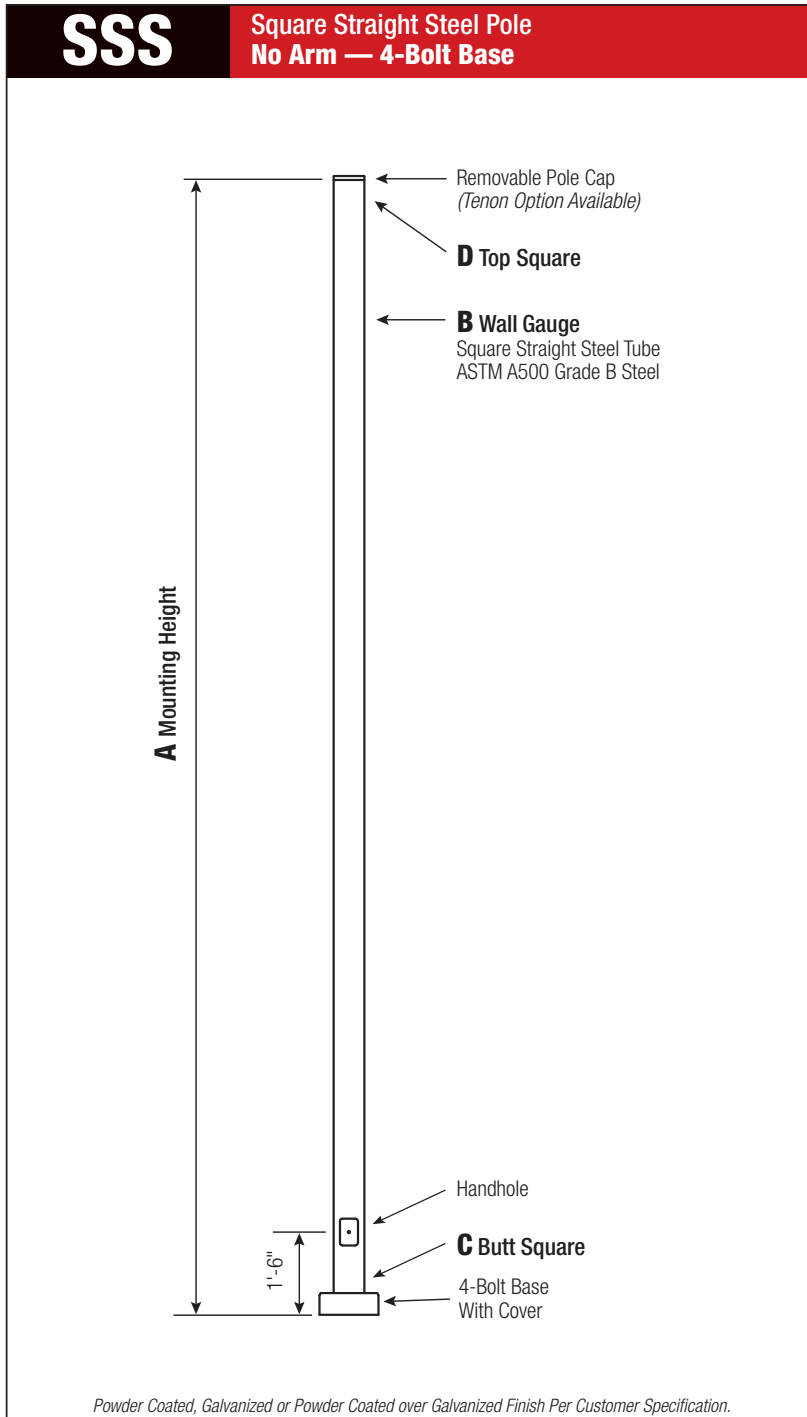
Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.





Powder Coated, Galvanized or Powder Coated over Galvanized Finish Per Customer Specification.

C Butt Sq.	D Top Sq.	F Bolt Cir. Dia.	G Base Sq.	H Bolt Proj.	I Bolt Size
4 (11 Gauge)	4	8 - 9	8	3.75	.75 x 17 x 3
4 (7 Gauge)	4	8 - 9	8	3.75	.75 x 30 x 3
5 (11 Gauge)*	5	10 - 12	11	4.875	.75 x 30 x 3
5 (7 Gauge)	5	10 - 12	11	4.875	1 x 36 x 4
6	6	11 - 13	12.5	4.875	1 x 36 x 4

*Requires the use of oversized washers (provided).

Dimensions in Inches

Pole
 Pole shaft shall be weldable-grade, cold-rolled, commercial quality carbon steel tubing conforming to ASTM A500 Grade B. Options include 11 gauge and 7 gauge. All welds shall conform to AWS D1.1 using ER70S-6 electrodes.

Base Style
 4-Bolt Steel Plate Base Flange of fabricated hot rolled carbon steel conforming to ASTM A36 or equivalent (36 ksi minimum yield) with 2-piece Base Cover and attaching hardware.

Anchorage
 Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain eight (8) Hex Nuts, four (4) Lock Washers, and eight (8) Flat Washers (all components Galvanized Steel). A paper bolt circle template will be provided.

Handhole
 Reinforced, 3" x 5" Handhole with cover, stainless steel screw and backbar. A grounding provision incorporating a tapped 1/2"-13NC hole will be provided.

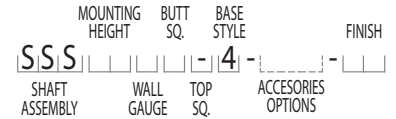
Base Cover
 Square ABS plastic Base Covers are standard on all SSS poles specified in BA-Black, BM-Dark Bronze and BH-White. SSS poles specified in all other colors will be manufactured of metal materials. Custom specification of SSS square metal style Base Covers in BA, BM and BH powder coated finishes is available.

Vibration Damper
 If determined necessary by Hapco, or if specified by the customer, a first and/or second mode vibration damper will be provided.

A Mtg. Hgt.	B Wall Gauge	C Butt Sq.	TOTAL LUM. WEIGHT	MAXIMUM EPA						CATALOG NUMBER
				90	100	110	120	130	140	
10	11	4	320	25.2	20.0	18.6	15.3	12.7	10.6	SSS10B4-4-*
12	11	4	285	20.6	16.2	14.9	12.1	9.9	8.2	SSS12B4-4-*
14	11	4	255	17.0	13.2	12.1	9.7	7.8	6.3	SSS14B4-4-*
15	11	4	245	15.5	11.9	10.9	8.6	6.8	5.4	SSS15B4-4-*
15	7	4	305	23.4	18.4	17.0	13.8	11.4	9.4	SSS15D4-4-*
16	11	4	235	14.0	10.7	9.7	7.6	5.9	4.6	SSS16B4-4-*
16	7	4	290	21.5	16.8	15.5	12.5	10.2	8.4	SSS16D4-4-*
18	11	4	215	11.3	8.4	7.6	5.7	4.3	3.2	SSS18B4-4-*
18	7	4	265	18.0	13.9	12.8	10.2	8.2	6.6	SSS18D4-4-*
20	11	4	200	9.1	6.5	5.8	4.2	2.9	1.9	SSS20B4-4-*
20	11	5	235	14.1	10.3	9.2	6.8	4.9	3.4	SSS20B5-4-*
20	7	4	240	15.1	11.5	10.5	8.2	6.5	5.0	SSS20D4-4-*
20	7	5	330	26.3	20.3	18.6	14.8	11.9	9.6	SSS20D5-4-*
22	11	4	200	7.2	4.9	4.2	2.8	1.7	0.8	SSS22B4-4-*
22	11	5	215	11.4	8.0	7.1	4.9	3.2	1.9	SSS22B5-4-*
22	7	4	225	12.7	9.5	8.6	6.6	5.0	3.7	SSS22D4-4-*
22	7	5	300	22.4	17.1	15.6	12.2	9.6	7.5	SSS22D5-4-*
25	11	4	200	4.7	2.8	2.2	1.0	-	-	SSS25B4-4-*
25	11	5	200	8.0	5.1	4.3	2.4	1.0	-	SSS25B5-4-*
25	7	4	205	9.7	6.9	6.2	4.4	3.1	2.0	SSS25D4-4-*
25	7	5	260	17.7	13.2	11.9	9.0	6.7	4.9	SSS25D5-4-*
28	11	4	200	2.6	1.0	-	-	-	-	SSS28B4-4-*
28	11	5	200	5.1	2.6	1.9	-	-	-	SSS28B5-4-*
28	7	4	200	7.1	4.8	4.1	2.6	1.5	-	SSS28D4-4-*
28	7	5	235	13.9	9.9	8.8	6.3	4.3	2.7	SSS28D5-4-*
30	11	5	200	3.4	1.1	-	-	-	-	SSS30B5-4-*
30	7	4	200	5.6	3.5	2.9	1.6	-	-	SSS30D4-4-*
30	7	5	215	11.7	8.0	7.0	4.7	2.9	1.5	SSS30D5-4-*
30	7	6	275	19.2	13.7	12.2	8.7	5.9	3.8	SSS30D6-4-*
35	7	5	200	6.9	4.0	3.1	1.2	-	-	SSS35D5-4-*
35	7	6	220	12.6	8.0	6.8	3.9	1.6	-	SSS35D6-4-*
39	7	6	200	8.2	4.2	3.1	0.6	-	-	SSS39D6-4-*

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.



Catalog Number Example -

SSS 20 D 5 - 4 - BA

Square Straight Steel, 20' Mounting Height, 7 Gauge, 5" Butt Square, No Taper, 4-Bolt Base, Black Powder Coat Finish.

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25-year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

Mounting Options

Side Drill Mount

Includes removable pole cap.
NOTE: A luminaire drilling template must be supplied at time of order.

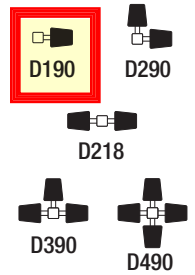


Tenon Mount

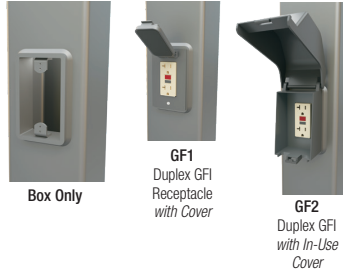
For Tenon Mount applications specify both Tenon diameter and length.



Drill Mount Options

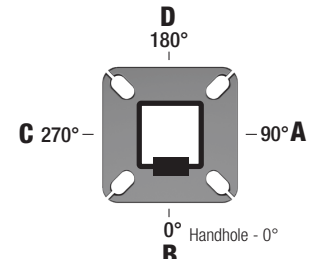


Electrical Box



Note: GFI Options must be specified in Accessories.

Pole Orientation



SSS **4** **D280** **FINISH - ACUITY DDBXD (DARK BRONZE)**

SSS - SQUARE STRAIGHT STEEL POLE	HEIGHT	Gauge	BUTT Sq.	TOP Sq.	BASE STYLE	MOUNTING OPTIONS	ELECTRICAL BOX*	ACCESSORIES/OPTIONS*	FINISH
	10 = 10' 12 = 12' 14 = 14' 16 = 16' 18 = 18' 20 = 20' 22 = 22' 25 = 25' 28 = 28' 30 = 30' 35 = 35' 39 = 39'	B = 11 Gauge D = 7 Gauge	4 = 4" 5 = 5" 6 = 6"	"-" No Taper	4 = 4-Bolt Base	DRILL MOUNT D000 - No Drilling D190 - Std. "A" D290 - Std. "A" & "D" D218 - Std. "A" & "C" D390 - Std. "A", "D", & "C" D490 - Std. "A", "B", "C", & "D" DCUS - Custom* TENON T204 - 2-3/8" O.D. x 4" T304 - 2-7/8" O.D. x 4" T356 - 3-1/2" O.D. x 6" T406 - 4" O.D. x 6" TCUS - Custom Tenon**	FA - 30" Up, "D" FB - 30" Up, "B" FC - 30" Up, "A" FD - 30" Up, "C" FE - 36" Up, "D" FF - 36" Up, "B" FG - 36" Up, "A" FH - 36" Up, "C" FI - 24" Up, "D" FK - 24" Up, "A" FL - 24" Up, "C" FZ - Custom**	C12 - Threaded 1/2" Coupling** C34 - Threaded 3/4" Coupling** C10 - Threaded 1" Coupling** EHH - Extra Handhole** GF1 - Duplex GFI Receptacle (WR) with Cover GF2 - Duplex GFI (WR) with In-Use Cover LAB - Less Anchor Bolts LPC - Less Pole Cap PAB - Pre-shipped Anchor Bolts VD1 - Vib. Damper - First Mode VD2 - Vib. Damper - First Mode	POWDER COAT COLORS BA - Black Powder Coat BH - White Powder Coat BM - Dark Bronze Powder Coat BV - Dark Green Powder Coat GC - Gray Powder Coat XX - Special Colors* GALVANIZED 1Q - Galvanized Over Galv. 1C - Black PC Over Galv. 1D - White PC Over Galv. 1B - D. Bronze PC Over Galv. 1Y - D. Green PC Over Galv. 1J - Gray PC Over Galv. XX - Special PC Over Galv.*

* Specify Number and Orientation
** Specify O.D. and Height

* GFI Receptacle Options Available (Specify in Accessories)
** Specify Height and Orientation

* Add all that apply (Example: CPL-LAB-VDA)
** Specify Location

* Provide RAL # or Sample Color Chip

SSS - SQUARE STRAIGHT STEEL POLE

NO ARM

4-BOLT BASE

3



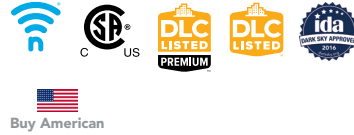
Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSXF2 LED P3 40K WFL MVOLT IS
 DDBXD
 Notes:

Type:
OE
 LAI24-242157



RSXF2 LED Floodlight



Buy American

Catalog Number _____

Notes _____

Type _____

Hit the Tab key or mouse over the page to see all interactive elements.

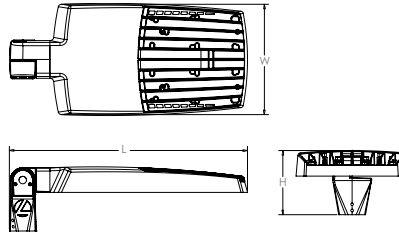
Introduction

The new RSXF LED Flood family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSXF2 delivers 11,000 to 44,000 lumens allowing it to replace 250W to 1000W HID floodlights.

The RSXF features an adjustable integral slipfitter that allows the luminaire to be mounted on a 2-3/8" OD tenon. Integral cover/wire box serves as an approved splice compartment allowing for fast, easy mounting and wiring without opening the electrical compartment. A yoke and other mounting configurations are available.

Specifications

- EPA (ft²@45°):** 0.9 ft² (0.08 m²)
- Length:** 28.3" (71.9 cm)
- Width:** 13.4" (34.0 cm)
- Height:** 3.0" (7.6 cm) Main Body
7.6" (19.3 cm) Arm
- Weight:** 33 lbs (15.0 kg)



Ordering Information

EXAMPLE: RSXF2 LED P4 40K WFL MVOLT IS DDBXD

Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting	
RSXF2 LED	P1	30K 3000K	AWFD Area Wide Forward	MVOLT (120V-277V) ²	IS Adjustable slipfitter (fits 2-3/8" OD tenon) ⁶	
	P2	40K 4000K	WFL Wide Flood	HVOLT (347V-480V) ³	YKC63 Yoke with 16-350 cord, 3ft ⁶	
	P3	50K 5000K	MFL Medium Flood	XVOLT (277V-480V) ⁴	AASP Adjustable tilt arm square pole mounting ⁶	
	P4		NFL Narrow Flood	(use specific voltage for options as noted)	AARP Adjustable tilt arm round pole mounting ⁶	
	P5		SP Spot		AAWB Adjustable tilt arm with wall bracket ⁶	
	P6		NSP Narrow Spot		AAWSC Adjustable tilt arm wall bracket and surface conduit box ⁶	
	P7 ¹				120 ⁵ 277 ⁵	
	P8 ¹				208 ⁵ 347 ⁵	
				240 ⁵ 480 ⁵		

Options	Finish
<p>Shipped Installed</p> <p>PE Photocontrol, button style ^{7,8}</p> <p>PER7 Seven-wire twist-lock receptacle only (no controls) ^{9,10}</p> <p>SF Single fuse (120, 277, 347) ⁵</p> <p>DF Double fuse (208, 240, 480) ⁵</p> <p>SPD20KV 20KV Surge pack (10KV standard)</p> <p>FAO Field adjustable output ⁸</p> <p>DMG 0-10V dimming extend out back of housing for external control (control ordered separate) ⁸</p> <p>DS Dual Switching ^{8,11}</p>	<p>Shipped Installed</p> <p>*Standalone and Networked Sensors/Controls (factory default settings, see table page 9)</p> <p>NLTAIR2 PIRHN nLight AIR generation 2, with Networked, Bi-Level motion/ambient sensor ^{8,12,13,14}</p> <p>BAA Buy America(n) Act Compliant</p> <p>Shipped Separately (requires some field assembly)</p> <p>FV Full Visor (360° around light aperture) ¹⁵</p> <p>UBV Upper/bottom visor ¹⁵</p> <p>BS Bird Spikes ¹⁶</p> <p>*Note: PIRHN with nLight Air can be used as a standalone or networked solution. Sensor coverage pattern is affected when luminaire is tilted.</p>
	<p>DDBXD Dark Bronze</p> <p>DBLXD Black</p> <p>DNAXD Natural Aluminum</p> <p>DWHXD White</p> <p>DDBTXD Textured Dark Bronze</p> <p>DBLTXD Textured Black</p> <p>DNATXD Textured Natural Aluminum</p> <p>DWHGXD Textured White</p>



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSXF2 LED P3 40K WFL MVOLT IS
 DDBXD
 Notes:

Type:
OE
 LAI24-242157

Ordering Information

Accessories

Ordered and shipped separately.

- RSXF2FV (FINISH) U Full visor (specify finish)
- RSXF2UBV (FINISH) U Upper/bottom visor (specify finish)
- DLL127F 1.5 JU Photocell - SSL twist-lock (120-277V) ¹⁷
- DLL347F 1.5 CUL JU Photocell - SSL twist-lock (347V) ¹⁷
- DLL480F 1.5 CUL JU Photocell - SSL twist-lock (480V) ¹⁷
- DSHORT SBK U Shorting cap ¹⁷

NOTES

- 1 P7 and P8 not available with MFL optic.
- 2 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- 3 HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
- 4 XVOLT driver not available with P1. XVOLT driver operates on any line voltage from 277V-480V (50/60 Hz). XVOLT not available with fusing (SF or DF) and not available with PE.
- 5 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- 6 Maximum tilt is 90° above horizontal.
- 7 Requires MVOLT or 347V.
- 8 Two or more of the following options cannot be combined including PE, DMG, PER7, FAO, DS and NLTAIRZ PIRHN. (Exception: PE and FAO can be combined).
- 9 Compatible with standard twist-lock photocells for dusk to dawn operation or advanced control nodes that provide 0-10V dimming signals. Wire 4/Wire 5 wired to dimming leads on driver. Wire 6/Wire 7 capped inside luminaire. Twistlock photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
- 10 For units with option PER7, the mounting must be restricted to +/- 45° from horizontal aim per ANSI C136.10-2010.
- 11 DS only available on performance package P4, P5, P6, P7 and P8.
- 12 Must be ordered with PIRHN.
- 13 Requires MVOLT or HVOLT.
- 14 Must be ordered with NLTAIRZ. For additional information on NLTAIR visit here.
- 15 It may be ordered as an accessory.
- 16 Must be ordered with fixture for factory pre-drilling.
- 17 Requires luminaire to be specified with PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

External Shields



UBV Visor - Top Mounted

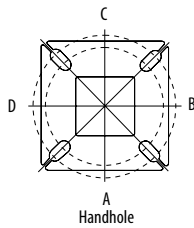
UBV Visor - Bottom Mounted

Full Visor - 360°

Pole/Mounting Information

Accessories including bullhorns, cross arms and other adapters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit [Accessories](#).

HANDHOLE ORIENTATION



Round Tenon Mount - Pole Top Slipfitters

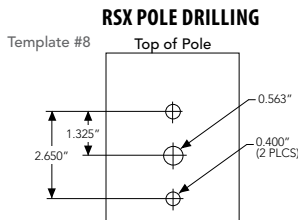
Tenon O.D.	RSX Mounting	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
2 - 3/8"	AARP	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 320	AS3-5 390	AS3-5 490
2 - 7/8"	AARP	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AARP	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Drill Side Location by Configuration Type

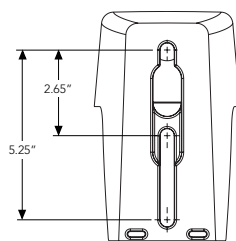
Drilling Template	Mounting Option	Configuration Type					
		Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
#8	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#8	Drill Nomenclature	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS

Minimum Size Pole by Mounting and Configuration Type

Drilling Template	Mounting Option	Mounting Configurations					
		Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
AASP	Square Pole (min. size)	3"	3.5"	3.5"	---	3.5"	3.5"
AARP	Round Pole (min. size DIA)	3"	3"	3.2"	3"	3.2"	3.2"



RSXF ADJUSTABLE ARM



RSXF2 - Luminaire EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Tilt	EPA (ft ²)								
		Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
IS - Integral Slipfitter YK - Yoke AASP/AARP - Adjustable Arm Square/Round Pole	0°	0.69	1.22	1.27	1.8	1.61	2.39	1.37	2.06	2.74
	10°	0.53	1.06	1.05	1.58	1.37	2.08	1.06	1.59	2.12
	20°	0.52	1.02	1.03	1.52	1.33	2.02	1.03	1.55	2.07
	30°	0.64	1.11	1.18	1.63	1.45	2.21	1.27	1.91	2.54
	40°	0.81	1.21	1.35	1.74	1.65	2.39	1.62	2.43	3.23
	45°	0.91	1.25	1.5	1.81	1.75	2.48	1.82	2.73	3.64
	50°	1.34	1.83	2.17	2.61	2.56	3.62	2.68	4.02	5.36
	60°	2.2	2.97	3.57	4.24	4.17	5.89	4.41	6.61	8.82
	70°	2.86	4.13	4.7	5.89	5.71	8.21	5.71	8.57	11.42
	80°	3.4	5.13	5.67	7.34	7.09	10.21	6.79	10.19	13.59
90°	3.85	5.96	6.55	8.58	8.31	11.88	7.7	11.56	15.41	



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800-705-SERV (7378) • www.acuitybrands.com
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Lithonia RSXF2 Flood LED
 Rev. 06/16/22
 Page 2 of 8



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 RSXF2 LED P3 40K WFL MVOLT IS
 DDBXD
 Notes:

Type:
OE
 LAI24-242157

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97
45°C	113°F	0.96
50°C	122°F	0.95

Electrical Load

Performance Package	System Watts (W)	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	71W	0.59	0.34	0.30	0.26	0.20	0.15
P2	111W	0.93	0.53	0.46	0.40	0.32	0.23
P3	147W	1.23	0.70	0.61	0.53	0.42	0.31
P4	187W	1.55	0.90	0.78	0.68	0.53	0.38
P5	210W	1.75	1.01	0.87	0.76	0.60	0.44
P6	244W	2.03	1.17	1.01	0.88	0.70	0.51
P7	274W	2.49	1.41	1.22	1.06	0.85	0.61
P8	326W	2.96	1.68	1.45	1.26	1.01	0.73

Projected LED Lumen Maintenance

Operating Hours	50,000	75,000	100,000
Lumen Maintenance Factor	>0.97	>0.95	>0.92

Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.

Lumen Output

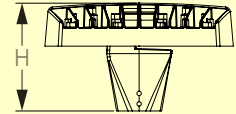
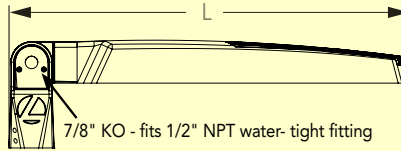
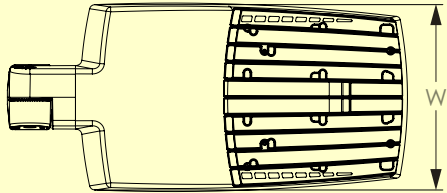
Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Distribution, Type	Field Angle		Beam Angle		30K (3000K, 70 CRI)			40K (4000K, 70 CRI)			50K (5000K, 70 CRI)		
			"H	"V	"H	"V	Lumens	LPW	Max CD	Lumens	LPW	Max CD	Lumens	LPW	Max CD
			P1	71W	AWFD	119	120	69	41	9,663	136	7,915	10,616	150	8,696
WFL	133	129			116	80	9,467	133	4,031	10,401	146	4,428	10,401	146	4,428
MFL	105	110			91	96	9,873	139	4,482	10,847	153	4,924	10,847	153	4,924
NFL	78	79			44	45	9,529	134	14,090	10,469	147	15,480	10,469	147	15,480
SP	48	48			27	27	9,223	130	29,378	10,133	143	32,277	10,133	143	32,277
NSP	42	44			19	21	9,385	132	49,553	10,311	145	54,443	10,311	145	54,443
P2	111W	AWFD	119	120	69	41	15,094	136	12,364	16,584	149	13,584	16,584	149	13,584
		WFL	133	129	116	80	14,788	133	6,296	16,248	146	6,918	16,248	146	6,918
		MFL	105	110	91	96	15,422	139	7,001	16,944	153	7,692	16,944	153	7,692
		NFL	78	79	44	45	14,885	134	22,010	16,354	147	24,182	16,354	147	24,182
		SP	48	48	27	27	14,407	130	45,891	15,828	143	50,418	15,828	143	50,418
		NSP	42	44	19	21	14,660	132	77,406	16,107	145	85,046	16,107	145	85,046
P3	147W	AWFD	119	120	69	41	19,007	129	15,569	20,883	142	17,106	20,883	142	17,106
		WFL	133	129	116	80	18,622	127	7,928	20,460	139	8,711	20,460	139	8,711
		MFL	105	110	91	96	19,420	132	8,816	21,337	145	9,687	21,337	145	9,687
		NFL	78	79	44	45	18,744	128	27,716	20,594	140	30,451	20,594	140	30,451
		SP	48	48	27	27	18,142	123	57,788	19,932	136	63,490	19,932	136	63,490
		NSP	42	44	19	21	18,461	126	97,475	20,282	138	107,090	20,282	138	107,090
P4	187W	AWFD	119	120	69	41	22,974	123	18,819	25,241	135	20,676	25,241	135	20,676
		WFL	133	129	116	80	22,509	120	9,583	24,730	132	10,529	24,730	132	10,529
		MFL	105	110	91	96	23,474	126	10,657	25,790	138	11,708	25,790	138	11,708
		NFL	78	79	44	45	22,656	121	33,500	24,892	133	36,807	24,892	133	36,807
		SP	48	48	27	27	21,928	117	69,848	24,092	129	76,741	24,092	129	76,741
		NSP	42	44	19	21	22,314	119	117,820	24,516	131	129,446	24,516	131	129,446
P5	210W	AWFD	119	120	69	41	24,722	118	20,251	26,786	128	21,941	26,786	128	21,941
		WFL	133	129	116	80	24,222	115	10,312	26,612	127	11,330	26,612	127	11,330
		MFL	105	110	91	96	25,260	120	11,468	27,752	132	12,599	27,752	132	12,599
		NFL	78	79	44	45	24,380	116	36,050	26,786	128	39,607	26,786	128	39,607
		SP	48	48	27	27	23,597	112	75,164	25,925	123	82,580	25,925	123	82,580
		NSP	42	44	19	21	24,012	114	126,785	26,381	126	139,294	26,381	126	139,294
P6	244W	AWFD	119	120	69	41	27,637	113	22,638	30,364	124	24,872	30,364	124	24,872
		WFL	133	129	116	80	27,077	111	11,528	29,749	122	12,666	29,749	122	12,666
		MFL	105	110	91	96	28,237	116	12,819	31,024	127	14,085	31,024	127	14,085
		NFL	78	79	44	45	27,254	112	40,299	29,944	123	44,277	29,944	123	44,277
		SP	48	48	27	27	26,378	108	84,023	28,981	119	92,314	28,981	119	92,314
		NSP	42	44	19	21	26,842	110	141,728	29,491	121	155,715	29,491	121	155,715
P7	274W	AWFD	119	120	69	41	35,876	131	29,386	39,323	144	32,210	39,323	144	32,210
		WFL	133	129	116	80	35,120	128	14,952	38,495	140	16,388	38,495	140	16,388
		NFL	78	79	44	45	35,328	129	52,236	38,722	141	57,255	38,722	141	57,255
		SP	48	48	27	27	34,410	126	109,608	37,716	138	120,140	37,716	138	120,140
		NSP	42	44	19	21	34,813	127	183,819	38,158	139	201,481	38,158	139	201,481
		AWFD	119	120	69	41	41,377	127	33,893	45,353	139	37,149	45,353	139	37,149
P8	326W	WFL	133	129	116	80	40,506	124	17,244	44,398	136	18,901	44,398	136	18,901
		NFL	78	79	44	45	40,745	125	60,246	44,660	137	66,035	44,660	137	66,035
		SP	48	48	27	27	39,687	122	126,416	43,500	133	138,562	43,500	133	138,562
		NSP	42	44	19	21	40,152	123	212,006	44,010	135	232,377	44,010	135	232,377
		AWFD	119	120	69	41	41,377	127	33,893	45,353	139	37,149	45,353	139	37,149
		WFL	133	129	116	80	40,506	124	17,244	44,398	136	18,901	44,398	136	18,901



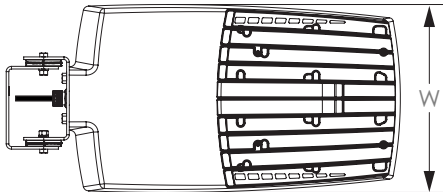
Dimensions

RSXF2 with Adjustable Slipfitter (IS)



Length: 28.3" (71.9 cm)
 Width: 13.4" (34.0 cm)
 Height: 3.0" (7.6 cm) Main Body
 7.6" (19.3 cm) Arm
 Weight: 33 lbs (15.0 kg)

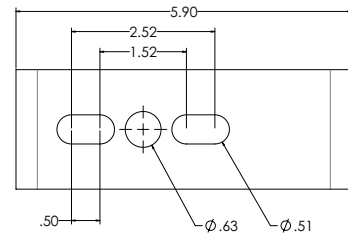
RSXF2 with Yoke (YKC63)



Length: 28.3" (71.9 cm)
 Width: 3.4" (34.0 cm)
 Height: 3.0" (7.6 cm) Main Body
 Weight: 31 lbs (14.1 kg)

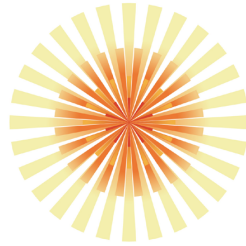
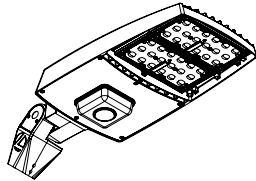
Yoke (YK) Mounting Detail

Note: Mounting hole pattern is in-line with center of luminaire

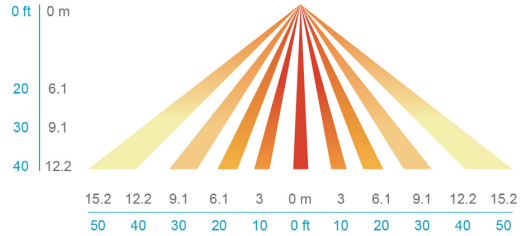


nLight Control - Sensor Coverage and Settings

PIRHN nLight Sensor Coverage Pattern
 nLight PIRHN



Top



Side

Motion Sensor Default Settings - Option PIRHN						
Option	Dimmed State (unoccupied)	High Level (when occupied)	Photocell Operation	Dwell Time (occupancy time delay)	Ramp-up Time (from unoccupied to occupied)	Ramp-down Time (from occupied to unoccupied)
NLAI2R2 PIRHN	Approx. 30% Output	100% Output	Enabled @ 1.5FC	7.5 minutes	3 seconds	5 minutes

*Note: PIRHN default settings including photocell set-point, high/low dim rates, and occupancy sensor time delay are all configurable using the Clarity Pro App.

FEATURES & SPECIFICATIONS

INTENDED USE

The RSX LED flood family is designed to provide a long-lasting, energy-efficient solution for the one-for-one replacement of existing metal halide or high pressure sodium lighting. The RSXF1 delivers 11,000 to 44,000 lumens and is ideal for replacing 250W to 1000W HID floodlights in parking lots and other area lighting applications.

CONSTRUCTION

The RSX LED flood luminaire features a rugged die-cast aluminum main body that uses heat-dissipating fins and flow-through venting to provide optimal thermal management that both enhances LED performance and extends component life. Integral adjustable slipfitter mounts on a 2 3/8" OD tenon. The adjustable slipfitter has an integral junction box for easy installation. The light engines and housing are sealed against moisture and environmental contaminants to IP66. The low-profile design results in a low EPA, allowing pole optimization. Vibration rated per ANSI 136.31: RSXF and mountings rated for 3G vibration include IS, YK, AASP and AARP. RSXF and mountings rated for 1.5G vibration include AAWB and AAWSC.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures superior adhesion as well as a minimum finish thickness of 3 mils. The result is a high-quality finish that is warrantied not to crack or peel.

OPTICS

Precision acrylic refractive lenses are engineered for superior application efficiency, distributing the light to where it is needed most. Available in short and wide pattern distributions including Wide Flood, Medium Flood, Narrow Flood, Spot, Narrow Spot and an Area Wide/Forward distribution pattern featuring a strong forward throw reach that is ideal for lighting large areas from the perimeter.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted on metal-core circuit boards and aluminum heat sinks to maximize heat dissipation. Light engines are IP66 rated. LED lumen maintenance is >L92/100,000 hours. CCT's of 3000K, 4000K and 5000K (minimum 70 CRI) are available. Fixtures ship standard with 0-10v dimming driver. Class 1 electronic drivers ensure system power factor >90% and THD <20%. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The RSX LED flood luminaire has a wide assortment of control options. Dusk to dawn controls include MVOLT and 347V button-type photocells and NEMA twist-lock photocell receptacles.

nLIGHT AIR CONTROLS

The RSXF LED flood luminaire is also available with nLight® AIR which can be used for simple motion occupancy dimming or for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing with photocontrol functionality and is suitable for mounting heights up to 40 feet. No commissioning is required when using factory default settings that provide basic stand-alone motion occupancy dimming that is switched on and off with a built-in photocell. See chart above for motion sensor default out-of-box settings. For more advanced wireless functionality, such as group dimming, nLight AIR can be commissioned using a smartphone and the easy-to-use CLAIRITY app. nLight AIR equipped luminaires can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found [here](#).

INSTALLATION

The integral "IS" mount offers an adjustable slipfitter that mounts on a 2 3/8" OD tenon. The adjustable slipfitter has an integral junction box and offers easy installation, wiring and precision distribution pattern aiming. A steel yoke mount is also available and includes a water-tight cord grip and cord. Additional mountings are available including an adjustable tilt arm for direct-to-pole and wall and a surface conduit box for wall mount applications. All mountings are adjustable in 5° increments. RSXF is not rated for tilting above 90° or mounting within 4 feet of ground. Can be tilted up to 90° above horizontal.

LISTINGS

CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only. U.S Patent No. D882,156S

BUY AMERICAN

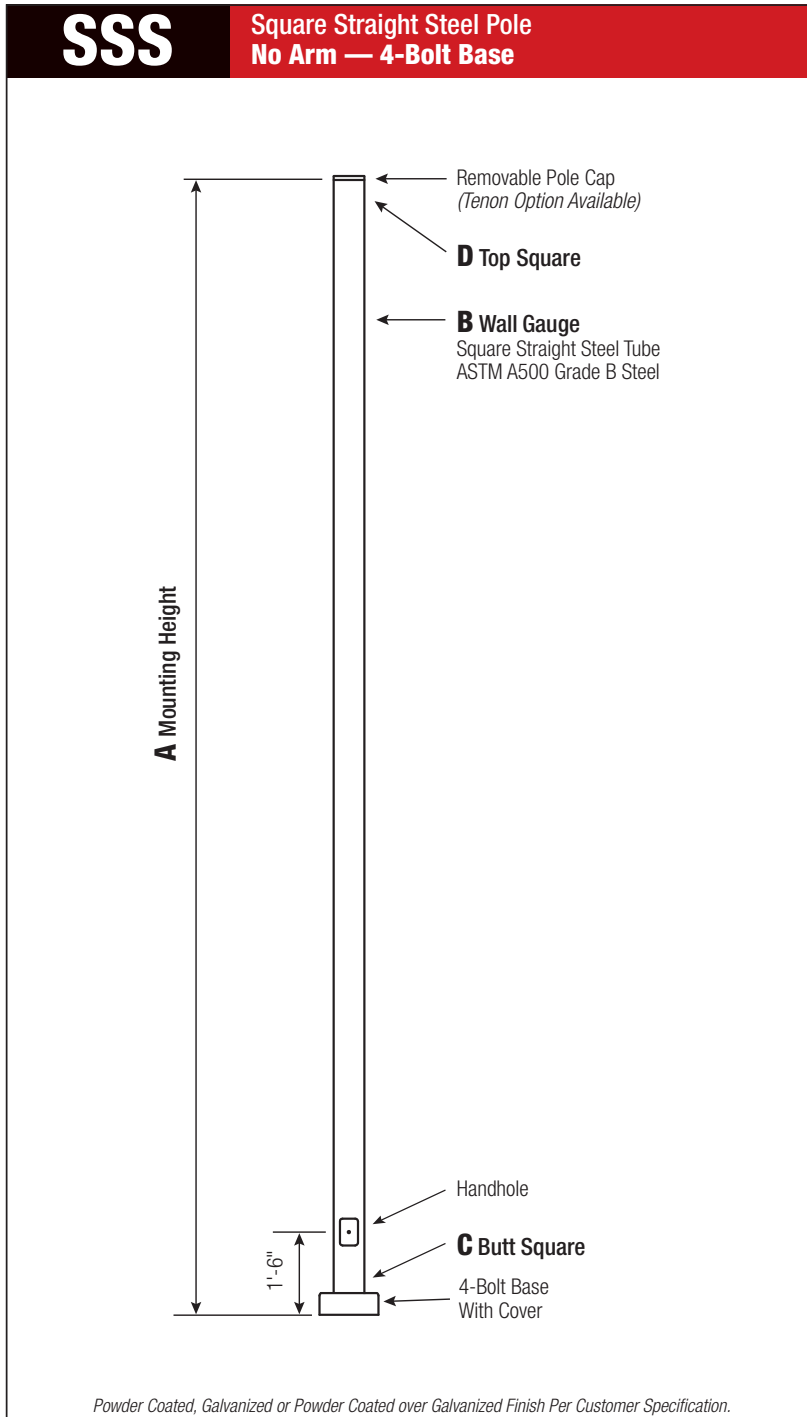
Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.





Powder Coated, Galvanized or Powder Coated over Galvanized Finish Per Customer Specification.

C Butt Sq.	D Top Sq.	F Bolt Cir. Dia.	G Base Sq.	H Bolt Proj.	I Bolt Size
4 (11 Gauge)	4	8 - 9	8	3.75	.75 x 17 x 3
4 (7 Gauge)	4	8 - 9	8	3.75	.75 x 30 x 3
5 (11 Gauge)*	5	10 - 12	11	4.875	.75 x 30 x 3
5 (7 Gauge)	5	10 - 12	11	4.875	1 x 36 x 4
6	6	11 - 13	12.5	4.875	1 x 36 x 4

*Requires the use of oversized washers (provided).

Dimensions in Inches

Pole
 Pole shaft shall be weldable-grade, cold-rolled, commercial quality carbon steel tubing conforming to ASTM A500 Grade B. Options include 11 gauge and 7 gauge. All welds shall conform to AWS D1.1 using ER70S-6 electrodes.

Base Style
 4-Bolt Steel Plate Base Flange of fabricated hot rolled carbon steel conforming to ASTM A36 or equivalent (36 ksi minimum yield) with 2-piece Base Cover and attaching hardware.

Anchorage
 Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain eight (8) Hex Nuts, four (4) Lock Washers, and eight (8) Flat Washers (all components Galvanized Steel). A paper bolt circle template will be provided.

Handhole
 Reinforced, 3" x 5" Handhole with cover, stainless steel screw and backbar. A grounding provision incorporating a tapped 1/2"-13NC hole will be provided.

Base Cover
 Square ABS plastic Base Covers are standard on all SSS poles specified in BA-Black, BM-Dark Bronze and BH-White. SSS poles specified in all other colors will be manufactured of metal materials. Custom specification of SSS square metal style Base Covers in BA, BM and BH powder coated finishes is available.

Vibration Damper
 If determined necessary by Hapco, or if specified by the customer, a first and/or second mode vibration damper will be provided.



Job Name:
NEWTON COUNTY ENRICHMENT CENTER - O&M's
Engineer: Electrical Design Consultants - Macon (Macon)

Catalog Number:
SSS25B4-4-D190-ACUITY DDBXD

Type:
OE

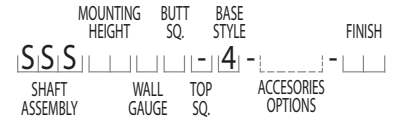
Notes:

LAI24-242157

A Mtg. Hgt.	B Wall Gauge	C Butt Sq.	TOTAL LUM. WEIGHT	MAXIMUM EPA						CATALOG NUMBER
				90	100	110	120	130	140	
10	11	4	320	25.2	20.0	18.6	15.3	12.7	10.6	SSS10B4-4-**
12	11	4	285	20.6	16.2	14.9	12.1	9.9	8.2	SSS12B4-4-**
14	11	4	255	17.0	13.2	12.1	9.7	7.8	6.3	SSS14B4-4-**
15	11	4	245	15.5	11.9	10.9	8.6	6.8	5.4	SSS15B4-4-**
15	7	4	305	23.4	18.4	17.0	13.8	11.4	9.4	SSS15D4-4-**
16	11	4	235	14.0	10.7	9.7	7.6	5.9	4.6	SSS16B4-4-**
16	7	4	290	21.5	16.8	15.5	12.5	10.2	8.4	SSS16D4-4-**
18	11	4	215	11.3	8.4	7.6	5.7	4.3	3.2	SSS18B4-4-**
18	7	4	265	18.0	13.9	12.8	10.2	8.2	6.6	SSS18D4-4-**
20	11	4	200	9.1	6.5	5.8	4.2	2.9	1.9	SSS20B4-4-**
20	11	5	235	14.1	10.3	9.2	6.8	4.9	3.4	SSS20B5-4-**
20	7	4	240	15.1	11.5	10.5	8.2	6.5	5.0	SSS20D4-4-**
20	7	5	330	26.3	20.3	18.6	14.8	11.9	9.6	SSS20D5-4-**
22	11	4	200	7.2	4.9	4.2	2.8	1.7	0.8	SSS22B4-4-**
22	11	5	215	11.4	8.0	7.1	4.9	3.2	1.9	SSS22B5-4-**
22	7	4	225	12.7	9.5	8.6	6.6	5.0	3.7	SSS22D4-4-**
22	7	5	300	22.4	17.1	15.6	12.2	9.6	7.5	SSS22D5-4-**
25	11	4	200	4.7	2.8	2.2	1.0	-	-	SSS25B4-4-**
25	11	5	200	8.0	5.1	4.3	2.4	1.0	-	SSS25B5-4-**
25	7	4	205	9.7	6.9	6.2	4.4	3.1	2.0	SSS25D4-4-**
25	7	5	260	17.7	13.2	11.9	9.0	6.7	4.9	SSS25D5-4-**
28	11	4	200	2.6	1.0	-	-	-	-	SSS28B4-4-**
28	11	5	200	5.1	2.6	1.9	-	-	-	SSS28B5-4-**
28	7	4	200	7.1	4.8	4.1	2.6	1.5	-	SSS28D4-4-**
28	7	5	235	13.9	9.9	8.8	6.3	4.3	2.7	SSS28D5-4-**
30	11	5	200	3.4	1.1	-	-	-	-	SSS30B5-4-**
30	7	4	200	5.6	3.5	2.9	1.6	-	-	SSS30D4-4-**
30	7	5	215	11.7	8.0	7.0	4.7	2.9	1.5	SSS30D5-4-**
30	7	6	275	19.2	13.7	12.2	8.7	5.9	3.8	SSS30D6-4-**
35	7	5	200	6.9	4.0	3.1	1.2	-	-	SSS35D5-4-**
35	7	6	220	12.6	8.0	6.8	3.9	1.6	-	SSS35D6-4-**
39	7	6	200	8.2	4.2	3.1	0.6	-	-	SSS39D6-4-**

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.



Catalog Number Example -

SSS 20 D 5 - 4 - BA

Square Straight Steel, 20' Mounting Height, 7 Gauge, 5" Butt Square, No Taper, 4-Bolt Base, Black Powder Coat Finish.

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25-year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

Mounting Options

Side Drill Mount

Includes removable pole cap.
NOTE: A luminaire drilling template must be supplied at time of order.

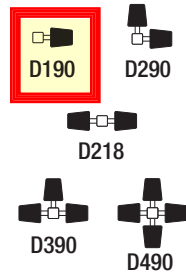


Tenon Mount

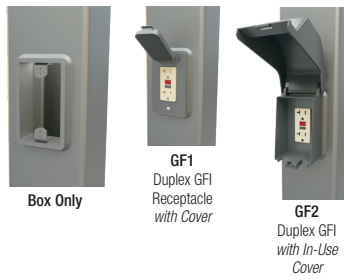
For Tenon Mount applications specify both Tenon diameter and length.



Drill Mount Options

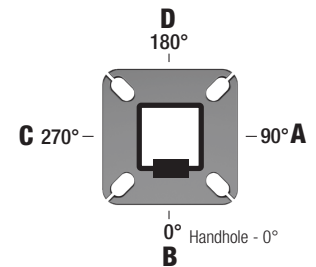


Electrical Box



Note: GFI Options must be specified in Accessories.

Pole Orientation



SSS- SQUARE STRAIGHT STEEL POLE	SSS	HEIGHT	GAUGE	BUTT Sq.	TOP Sq.	BASE STYLE	MOUNTING OPTIONS	ELECTRICAL BOX*	ACCESSORIES/OPTIONS*	FINISH
		10 = 10' 12 = 12' 14 = 14' 16 = 16' 18 = 18' 20 = 20' 22 = 22' 25 = 25' 28 = 28' 30 = 30' 35 = 35' 39 = 39'	B = 11 Gauge D = 7 Gauge	4 = 4" 5 = 5" 6 = 6"	"-" No Taper	4 = 4-Bolt Base	DRILL MOUNT D000 - No Drilling D190 - Std. "A" D290 - Std. "A" & "D" D218 - Std. "A" & "C" D390 - Std. "A", "D", & "C" D490 - Std. "A", "B", "C", & "D" DCUS - Custom*	FA - 30" Up, "D" FB - 30" Up, "B" FC - 30" Up, "A" FD - 30" Up, "C" FE - 36" Up, "D" FF - 36" Up, "B" FG - 36" Up, "A" FH - 36" Up, "C" FI - 24" Up, "D" FK - 24" Up, "A" FL - 24" Up, "C" FZ - Custom**	C12 - Threaded 1/2" Coupling** C34 - Threaded 3/4" Coupling** C10 - Threaded 1" Coupling** EHH - Extra Handhole** GF1 - Duplex GFI Receptacle (WR) with Cover GF2 - Duplex GFI (WR) with In-Use Cover LAB - Less Anchor Bolts LPC - Less Pole Cap PAB - Pre-shipped Anchor Bolts VD1 - Vib. Damper - First Mode VD2 - Vib. Damper - First Mode	POWDER COAT COLORS BA - Black Powder Coat BH - White Powder Coat BM - Dark Bronze Powder Coat BV - Dark Green Powder Coat GC - Gray Powder Coat XX - Special Colors* GALVANIZED 1Q - Galvanized Over 1C - Black PC Over Galv. 1D - White PC Over Galv. 1B - D. Bronze PC Over Galv. 1Y - D. Green PC Over Galv. 1J - Gray PC Over Galv. XX - Special PC Over Galv.*
							* GFI Receptacle Options Available (Specify in Accessories) ** Specify Number and Orientation *** Specify O.D. and Height	* Specify Height and Orientation ** Specify Location	* Add all that apply (Example: CPL-LAB-VDA) ** Specify Location	* Provide RAL # or Sample Color Chip

SSS- SQUARE STRAIGHT STEEL POLE

NO ARM

4-BOLT BASE



FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — New Construction.

Optional goof rings available for additional overlap trim coverage.

1/2"-1-1/2" ceiling thickness

25° ambient temperature

IC rated up to 1000lm

OPTICS — LEDs are binned to a 3-step MacAdam Ellipse. 55° cutoff

New construction frame approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

80CRI standard (90CRI optional)

UGR — UGR is zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg, per CIE 117-1996 Discomfort Glare in Interior Lighting. [UGR FAQ](#)

ELECTRICAL — Adjustable lumen output with four module options. Fixed lumen options also available.

MVOLT 120/277V 50/60Hz driver (0-10V & 120V Phase Dimming to 10% or 1% min dimming level)

FCC CFR Title 47 Part 15 Class A for 277V. FCC CFR Title 47 Part 15 Class B for 120V.

LUMEN MAINTENANCE — L80 at 60,000 hours

LISTINGS — Certified to US and Canadian safety standards. Damp location standard (Wet Location (WL) optional, requires covered ceiling). Some configurations are ENERGY STAR® certified, please visit www.energystar.gov for specific products. TAA compliant. UFC (3-530-01) specification compliant for power factor and THD. GSA P100 6.2.4 compliant for power quality at full output; compliant up to 2000lm at fully dimmed output. Drivers are ROHS compliant

Title 24 compliant (90CRI, up to 1000lm).

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed.

Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

PERFORMANCE DATA

LBR6 AR LSS MWD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	571	99	585	101	599	103	617	105
AL01 (750LM)	9	905	102	926	103	948	105	977	108
AL01 (1000LM)	13	1270	98	1300	100	1330	102	1372	104
AL02 (1000LM)	13	1346	108	1378	110	1410	112	1454	115
AL02 (1500LM)	19	1965	105	2011	107	2059	109	2123	111
AL02 (2000LM)	25	2476	100	2533	101	2593	103	2674	106
AL03 (2000LM)	25	2547	103	2606	105	2668	107	2751	109
AL03 (2500LM)	32	3075	98	3146	100	3221	101	3321	104
AL03 (3000LM)	38	3492	93	3573	95	3658	96	3771	99
AL04 (4000LM)	39	4180	107	4265	109	4350	112	4393	113
AL04 (4500LM)	44	4613	105	4707	107	4801	109	4848	110
AL04 (5000LM)	49	5017	102	5119	104	5221	107	5273	108

LBR6 MS MWD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	480	99	584	101	597	102	616	105
AL01 (750LM)	9	760	102	924	103	946	105	975	108
AL01 (1000LM)	13	1067	98	1297	100	1328	102	1369	104
AL02 (1000LM)	13	1131	108	1375	110	1408	112	1451	115
AL02 (1500LM)	19	1651	105	2007	106	2055	108	2118	111
AL02 (2000LM)	25	2079	99	2528	101	2588	103	2668	105
AL03 (2000LM)	25	2139	103	2601	104	2663	106	2745	109
AL03 (2500LM)	32	2583	98	3140	99	3214	101	3314	103
AL03 (3000LM)	38	2933	93	3566	94	3651	96	3764	98
AL04 (4000LM)	39	3511	90	3583	92	3654	94	3690	95
AL04 (4500LM)	44	3875	88	3954	90	4033	92	4072	93
AL04 (5000LM)	49	4214	86	4300	88	4386	90	4429	90

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical

Catalog Number
Notes
Type

LBR6 NCH

6" Open and Wallwash LED
 New Construction Downlight



New Construction



Open Trim



Wallwash Trim



battery pack



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 LBR6 NCH 10LM 40K AR LSS MWD
 MVOLT UGZ WL
 Notes:

Type:
OF
 LAI24-242157

LBR6 NCH

Module ordering

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LBR6 NCH ALO2 SWW1 AR LSS MWD MVOLT UGZ 90CRI

Series	Lumens ‡	Color temperature ‡	Reflector Color	Reflector Flange ‡	Reflector Finish
LBR6 NCH 6" New Construction	Adjustable Lumen Output	Switchable CCT	AR Clear	(blank) Self-flanged	LSS Semi-specular
LBR6WW NCH 6" New Construction Wall Wash	AL01 500/750/1000lm AL02 1000/1500/2000lm AL03 2000/2500/3000lm AL04 4000/4500/5000lm	SWW1 2700K-3000K-3500K-4000K-5000K Fixed CCT 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	BR ‡ Black painted MS ‡ Metallic Silver WR ‡ White painted TCPC ‡ Custom painted trim TRALTB ‡ RAL painted trim	TRW White painted flange TRBL Black painted flange FCPC Custom painted flange only FRALTB RAL painted flange only	
	Fixed Lumen Output 05LM 500lm 07LM 750lm 10LM 1000lm 15LM 1500lm 20LM 2000lm 25LM 2500lm 30LM 3000lm 40LM 4000lm 45LM 4500lm 50LM 5000lm				

Distribution	Voltage	Driver	Emergency ‡	Control Input ‡
MWD Medium wide (1.0 s/mh)	MVOLT	UGZ Universal dimming to 10% 0-10V; line voltage dimming (120V)	(blank) No Emergency Needed	(blank) No Control Input Needed
WD Wide (1.2s/mh)	120	UGZ1 Universal dimming to 1% 0-10V; line voltage dimming (120V)	ELR Batterypack (10W constant power) Non-T20 Compliant remote test switch Iota Emergency Transfer System	JOT Wireless room control with "Just One Touch" pairing NPS80EZ nLight™ network power/relay pack with 0-10V dimming; ER controls fixtures on emergency circuit.
WW ‡ Wallwash	277 347	DALI ‡ DALI dimming to 1% D10 Minimum dimming 10% driver for use with JOT D1 Minimum dimming 1% driver for use with JOT	ETS E10WCP Batterypack (10W constant power) Non-T20 Compliant integral test switch E10WCPR Batterypack (10W constant power) T20 Compliant remote test switch E10WRSTAR Emergency battery pack, 10W with remote test switch and Iota STAR technology	NPS80EZER nLight™ network power/relay pack with 0-10V dimming; ER controls fixtures on emergency circuit. NLTAIR2 nLight™ Air enabled NLTAIRER2 nLight™ AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection. NLTAIREM2 nLight™ AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection.

Options	
90CRI	High CRI (90+)
AT ‡	Airtight
EC1 ‡	Extended Conduit (18")
EC6 ‡	Extended Conduit (6ft)
WL ‡	Wet Location (IP55)
QDS ‡	Quick disconnect plugs
CP ‡	Chicago Plenum

NOTE: ‡ indicates option value has ordering restrictions. Please reference the Option Value Ordering Restrictions chart below.

‡ Option Value Ordering Restrictions	
Options	Restriction
Adjustable Lumens/CCT	Adjustable Lumen Output and Switchable CCT must be specified together (for example: ALO1 SWW1).
Fixed Lumens/CCT	Fixed Lumen Output and Fixed CCT must be specified together (for example: 10LM 30K).
AT	Standard for CP and IP55, not available with WW.
E10WCPR	Not available EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
E10WCP	Not available with EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, WL, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
E10WRSTAR	Not available with wet location, EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT. Top access installation or 17.5" plenum clearance required for roomside installation. Not available with integral test switch
ELR	Not available EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT.
EC1, EC6	Not Available with CP, QDS, ELR, E10WCP, or E10WCPR.
WL	Not available with WW, All CP is wet location, except WW (Damp). IP55 rated.
QDS	Must be specified for use with LBR_PFWQDS. Not available with 347V, CP, ELR, E10WCP, E10WCPR.
EC1	Not Available with CP, QDS, ELR, E10WCP, or E10WCPR.
JOT	Not available with CP, nLight options, UGZ, or DALI drivers. Max 4500 lumens. Fixed lumens and CCT only. Not available with 2000-4500lm in conjunction with batterypack.
NPS80EZ	Not available with CP, QDS, DALI, D1, OR D10 drivers. 120V OR 277V only. Not available with 347V.
NPS80EZER	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. 120V OR 277V only. Not available with 347V.
NLTAIR2	Not available with CP, QDS, DALI, D1, OR D10 drivers. See UL 924 Sequence of Operation table. Non-emergency luminaires with this option can be used as a normal power sensing device for nLight AIR devices and luminaires with EM emergency options.
NLTAIRER2	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. Not available with 347V.
NLTAIREM2	Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, D1, OR D10 drivers. See UL 924 Sequence of Operation table.
CP	Must be specified for use with LBR_PFWCP. Not available with, QDS, EC1, EC6, ELR, E10WCP, E10WCPR, 347V, JOT, NPS80EZ, NPS80EZ ER, NLTAIR2, NLTAIRER2, NLTAIREM2, D1, OR D10 drivers.
ETS	Not available with, QDS, ELR, E10WCP, E10WCPR, 347V, JOT, NPS80EZ, NPS80EZ ER, NLTAIR2, NLTAIRER2, NLTAIREM2, DALI, D1, OR D10 driver.
DALI	Not available with fixed lumens or CCT. Max 4500 lumens.
WW	Not available with WL, EL and E10WCP. Must be ordered with LBR6WW NCH.
TRW, TRBL	Available with MS and AR reflectors only.
MS, WR, BR	Not available with LSS reflector finish.
TRALTB, FRALTB	RALTB for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options.
TCPC, FCPC	CPC options for pricing only. Custom color chip needs to be sent in to your Customer Resolution specialist before order can be processed. Click HERE for more details.



LBR6 NCH

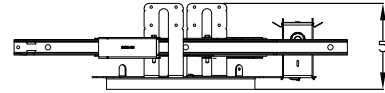
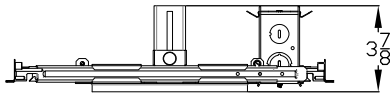
LBR6 NCH

PLENUM DEPTH TABLE				
Aperture Size/Output	Plenum Depth*	IC	Non-IC	Non-IC Marked Spacing
LBR4 500-1000 Lumen	3.44	X		
LBR4 1000-2000 Lumen	3.44		X	
LBR4 2000-3000 Lumen	-			24x24x9
LBR4 4000-5000 Lumen	-			24x24x9

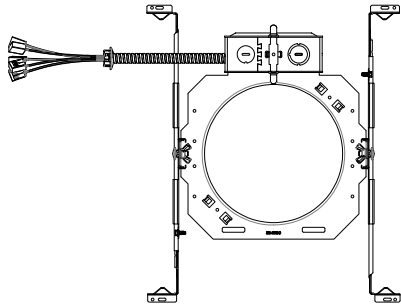
CEILING COVERAGE TABLE								
Series		Aperture	Trim Flange OD	Min ceiling opening	Ceiling Thickness	Max ceiling opening	Max Ceiling Opening with Goof Ring	Overall Goof Ring OD
LBR4	ROUND	4-1/4"	5-7/16"	4-1/2"	1/2"	5-1/8"	5-1/8"	7-1/4"
LBR4					1-1/2"		5-3/4"	

*Above unfinished 1/2" ceiling plane

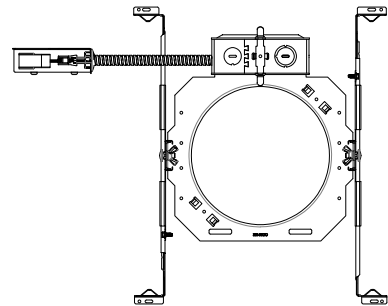
* All dimensions are inches (millimeters) unless otherwise noted.



Aperture Size	Ceiling Cutout
6 in	7-1/8"



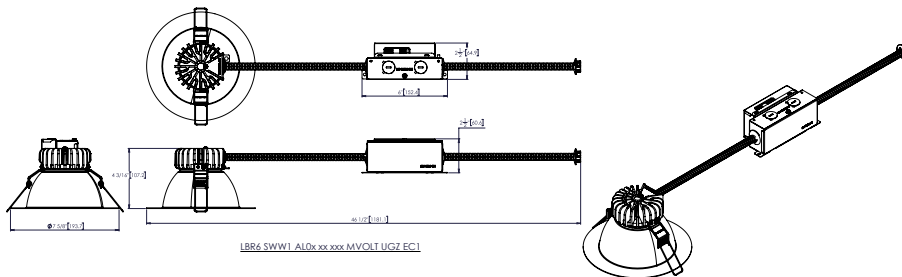
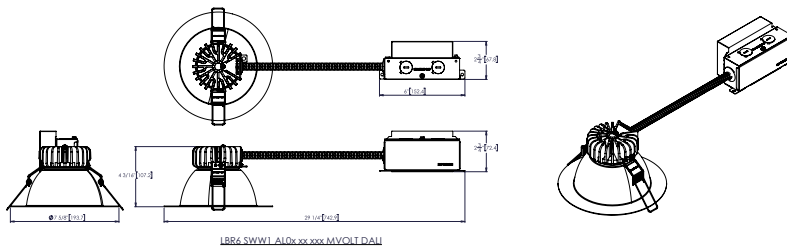
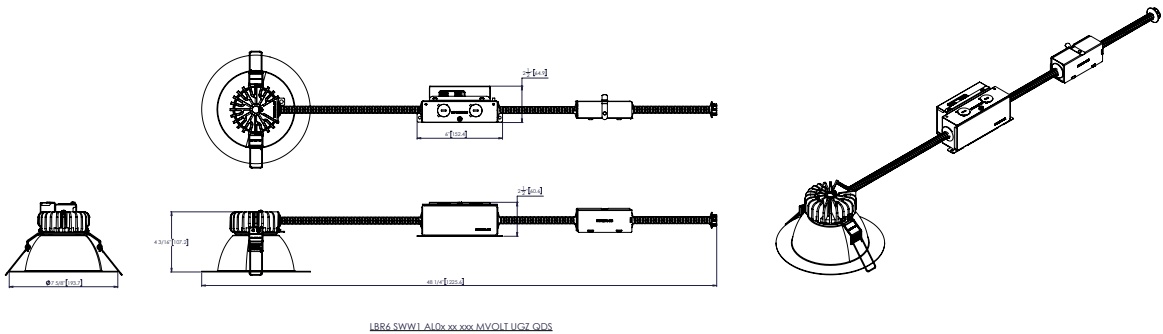
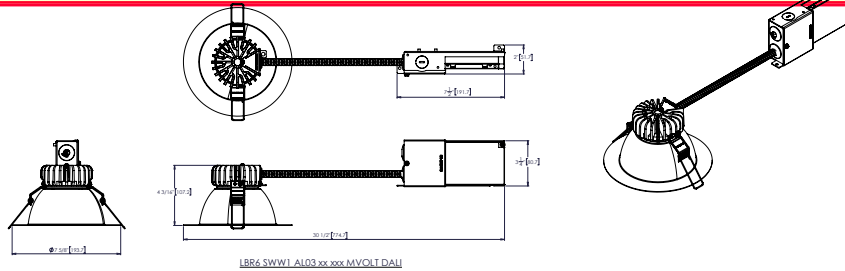
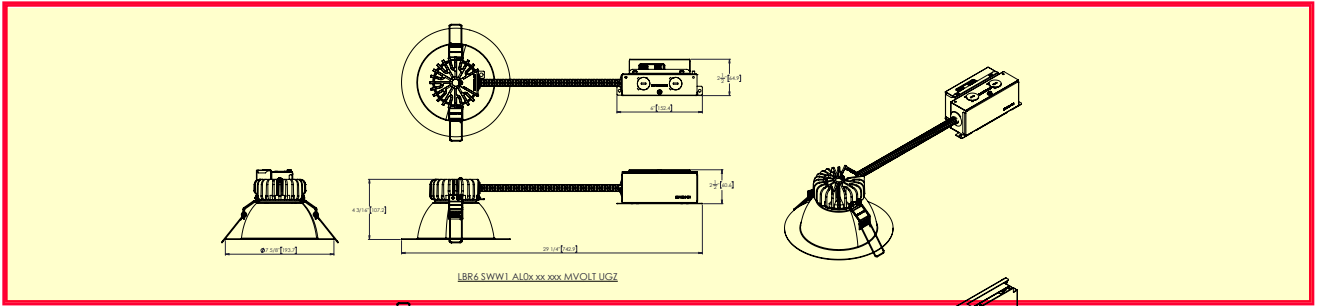
6" New Construction Frame, 18" conduit



6" New Construction Frame, QDS

LBR6 NCH

* All dimensions are inches (millimeters) unless otherwise noted.

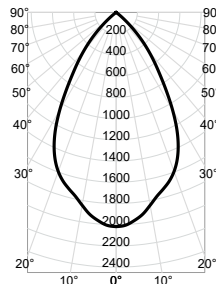


LBR6 NCH

PHOTOMETRY

Distribution Curve Distribution Data Output Data Illuminance Data at 30" Above Floor for a Single Luminaire

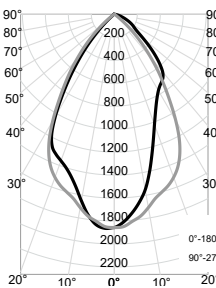
LBR6 SWW1 ALO2 AR LSS MWD MVOLT UGZ, Input Watts: 18.1, Delivered Lumens: 1970, LPW: 108.8, S/MH: 0.94, Test No: 20-518-03



CP Summary		Zonal Lumen Summary			Cone of Light			Luminance (cd/sq.m)	
0°	Zone	Lumens	% Fixture	Mounting Height	Initial FC Center Beam	Beam Diameter	Average Luminance		
0°	0° - 30°	1,292	66%	6.0	56.1	7.1	0°	142,862	
5°	0° - 40°	1,751	89%	8.0	31.5	9.5	45°	25,559	
15°	0° - 60°	1,967	100%	10.0	20.2	11.9	55°	1,074	
25°	0° - 90°	1,970	100%	12.0	14.0	14.3	65°	402	
35°	90° - 180°	0	0%	14.0	10.3	16.7	75°	246	
45°	0° - 180°	1,970	100%				85°	162	
55°		9							
65°		2							
75°		1							
85°		0							
90°		0							

Beam Angle: 61.5°
 Field Angle: 92.7°

LBR6WW SWW1 ALO2 AR LSS WW, Input Watts: 18.7, Delivered Lumens: 1981, LPW: 105.9, S/MH: 0.67, Test No: 20-518-A1



CP Summary		Zonal Lumen Summary			Luminance (cd/sq.m)	
0°	90°	Zone	Lumens	% Fixture	Average Luminance	
0°	1,857	0° - 30°	1,126	57%	0°	131,472
5°	1,740	0° - 40°	1,581	80%	45°	50,247
15°	1,265	0° - 60°	1,915	97%	55°	27,523
25°	864	0° - 90°	1,981	100%	65°	21,156
35°	719	90° - 180°	0	0%	75°	12,281
45°	502	0° - 180°	1,981	100%	85°	7,229
55°	223					
65°	126					
75°	45					
85°	9					
90°	0					

LUMEN OUTPUT MULTIPLIERS - CCT			
3000K	3500K	4000K	5000K
0.98	1.0	1.01	1.03

LUMEN OUTPUT MULTIPLIERS - FINISH	
Clear Semi-spec (AR LSS)	1.0
Metallic Silver (MS)	0.84
White Painted (WR)	1.03
Black Painted (BR)	0.60

LUMEN OUTPUT MULTIPLIERS - CRI	
80	1.0
90	0.874

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Output power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

The LPW rating is also available at Designlight Consortium.



FEATURES & SPECIFICATIONS

INTENDED USE — Suitable for applications requiring both exit sign and unit equipment. Attractive, 8" tall, streamlined design is great for above-the-door applications and other tight fits. Optional high-output version with remote lamps are ideal for emergency egress lighting. **Certain airborne contaminants can diminish integrity of acrylic and/or polycarbonate.** [Click here for Acrylic Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — Engineering-grade thermoplastic housing is impact-resistant, scratch-resistant and corrosion-proof. UL94V-0 flame rating. UV-stable resin resists discoloration from natural and man-made light sources.

Rugged unibody housing snaps together with no additional fasteners. Faceplate and back cover are interchangeable on housing. Positive snap-fit tabs hold faceplate securely, yet are easily removable for lamp compartment access. Universal, directional chevron inserts are easily removed and reinserted.

Uniform graphics illumination without shadows or hot spots. Letters are 6" high with 3/4" stroke, with 100 ft. viewing distance rating based upon UL924 standard.

LEDs mounted on primary circuit boards for sign illumination. Low-energy LED lamp in sign operates in normal (AC input) and emergency (DC input) modes.

Low-profile, integrated test switch/pilot light. Easily viewed bright red status indicator.

Unique track-and-swivel arrangement permits full range of direction of lamp head adjustment. Universal J-box mounting pattern. Tool-less access for maintenance. Conduit entry position on top of unit.

U.S. Patent No. 6,848,798; 6,499,866; 6,142,648; 5,797,673; D379,373; 5,526,251; D484,272; D473,672; 5,611,163; 5,646,502.

OPTICS — Twin LED lamp heads operate in emergency (DC input) mode with 12 series-parallel white LEDs in each head. Provides redundant light sources to ensure emergency lighting performance. The typical life of the exit LED lamp is 5 years, based on 24/7 operation.

ELECTRICAL — Dual-voltage input capability (120/277V). Edge connector on printed circuit board ensures long-term durability.

Current-limiting charger maximizes battery life and minimizes energy consumption. Provides low operating costs.

Short-circuit protection — current-limiting charger circuitry protects printed circuit board from shorts.

Thermal compensation adjusts charger output to provide optimum charge voltage relative to ambient temperature.

Regulated charge voltage maintains constant-charge voltage over a wide range of line voltages. Prevents over/undercharging that shortens battery life and reduces capacity.

Filtered charger input minimizes charge voltage ripple and extends battery life.

AC/LVD reset allows battery connection before AC power is applied and prevents battery damage from deep discharge.

Single multi-color LED indicator to display two-state charging, test activation and three-state diagnostic test. Test switch provides manual activation of 30-second diagnostic testing for on-demand visual inspection. Self-diagnostic testing for 30 seconds every 30 days, 30 minutes at 180-day interval, and 90 minutes annually. Diagnostic evaluation of LED light source, AC-to-DC transfer, charging and battery condition.

Battery: Sealed, maintenance-free nickel-cadmium battery delivers 90-minute capacity to emergency lamps. Two-state constant-current charge maximizes battery life and automatically recharges after battery discharge. Low-voltage disconnect prevents excessively deep discharge that can permanently damage the battery. Optional high-output battery to power both local and optional LED remote lamp heads simultaneously.

INSTALLATION — Universal mounting canopy for top or end mount. Back mount standard for single face only. Housing snaps to canopy with positive-locking tabs. Cam locking pin secures housing to canopy.

Easily removed mounting knockouts. Conduit entry knockout for 1/2" flexible conduit. J-box pattern on back panel.

LISTINGS — UL damp location listed standard 50°-104°F (10°-40°C). Meets UL 924, NFPA 101 (current Life Safety Code), NEC and OSHA illumination standards. Meets all applicable FCC Title 47, Part 15, Subpart B requirements.



LHQM LED

LED Lamp Head
Nickel-Cadmium Battery

HO R0



BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. (Battery is prorated). This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

† Exit Signs Certified in the CA Title 20 Appliance Efficiency Database.

CS Looking for Contractor Select readily available configurations? Click here to visit Contractor Select™ spec sheet or go to www.contractorselect.com

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: LHQM LED G

LHQM Family	LED Lamp type	Housing color	Letter color	Options		
LHQM Stencil face, single face plate with extra face plate	LED Two 1.5W/9.6V white LED	(blank) White	R Red	HO High-output Ni-cad ¹	NOM	Meets Mexican standards ²
		B Black	G Green	HO R0 High-output option, less lamp heads	NOM SALIDA	Salida signage (non-UL) ³
				SD Self-diagnostics	BAA	Buy America(n) Act Compliant

Notes

- When operating ERE SQ T remotes off of HO battery, temperature range of LHQM LED is limited to 68°-104°F (20°-40°C), with a 48-hour battery recharge time.
- Available in black or white. Consult factory for options.
- Only available in white. NOM standard.
- Only compatible with self-diagnostic option. (ex: HO SD)
- Only compatible with HO or HO R0 with SD option. See spec sheet [ELA-Q-LED](#).
- See spec sheet [ELA-WG](#).

- See spec sheet [ELA-Stemkits](#).
- See spec sheet [ERE](#). When operating ERE SQ T remotes off of HO battery, temperature range of LHQM LED is limited to 68°-104°F (20°-40°C), with a 48-hour battery recharge time.
- Not available with SD. Only compatible with HO or HO R0 option. When operating ERE SQ T remotes off of HO battery, temperature range of LHQM LED is limited to 68°-104°F (20°-40°C), with a 48-hour battery recharge time.

LHQM LED QUANTUM® Exit/Unit Combo

SPECIFICATIONS

Electrical				
Primary Circuit				
	Typical LED life ¹	Supply voltage	Max amps	Max watts
Red and green LED	>5 years	120	.05	4.3
		277	.03	4.3

BATTERY

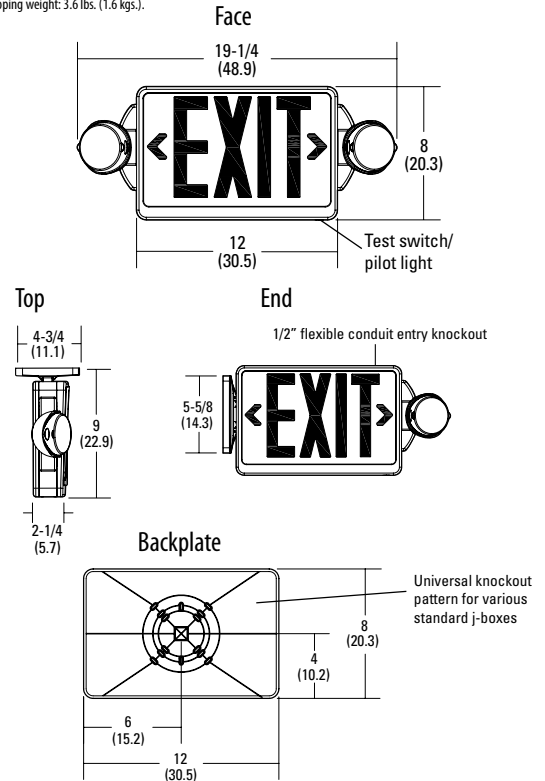
Ni-Cad				
Voltage	Typical Shelf life ²	Typical life ²	Maintenance ³	Temperature range ⁴
9.6	3 years	6-8 years	none	50-104°F (10-40°C)

- Based on 24/7 operation. The typical life of the exit LED lamp is 5 years.
- At 77°F (25°C).
- All life safety equipment, including emergency lighting path of egress, must be maintained, serviced and tested in accordance with all National Fire Protection Association and local codes. Failure to perform the required maintenance, service or testing could jeopardize the safety of occupants and will void all warranties.
- Temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity.
- Battery life is negatively impacted by many variables including temperature, charging rates, number of cycles and deep discharges due to long periods of time without AC power.

Remote Output Capacity			
Standard unit	Combo	Combo/high-output battery(HO)	Combo/high-output (HO) and no heads (RO)
NA	NA	3W	6W

MOUNTING

All dimensions are inches (centimeters).
 Shipping weight: 3.6 lbs. (1.6 kgs.).

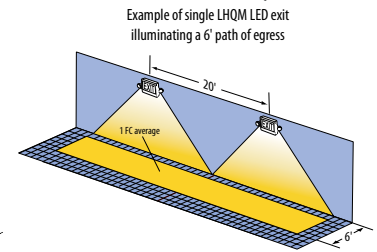
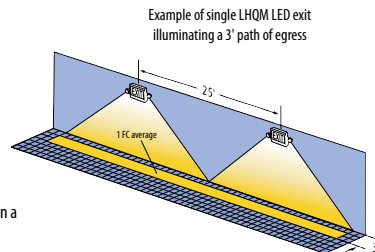
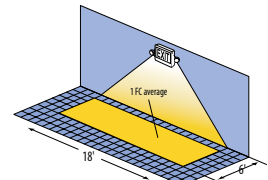
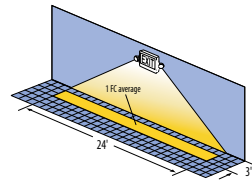


LAMP PHOTOMETRICS

QUANTUM LED SERIES – SINGLE COVERAGE

3W Total White LEDs

Using a single unit at a typical 7.5' mounting height delivers an average illuminance of 1.0 FC over a distance of 24' on a 3' path of egress and 18' on a 6' path of egress.



QUANTUM LED SERIES – MULTIPLE COVERAGE

3W Total White LEDs

Using multiple units at a typical 7.5' mounting height delivers 25' center-to-center spacing on a 3' path of egress and 20' center-to-center spacing on a 6' path of egress.

EXTENDED RUN-TIME FOR HIGH-OUTPUT EXITS

Product	Run time
LHQM LED HO (no remotes)	3.8 hours
LHQM LED HO RO (no remotes)	7.5 hours



FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for applications requiring low-profile, attractive emergency lighting with Optional normally-off or normally-on with photocell control. Provides a minimum of 90 minutes of illumination both indoors and outdoors upon loss of AC power. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate. Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.**

CONSTRUCTION — Compact, low-profile, architectural design with die-cast aluminum housing. Finishes are texturized powder coat paint for dark bronze, white, black and non-texturized for natural aluminum. Test switch indicator light and remote enabled are located on the bottom of the housing and are easily accessible and visible from the floor.

OPTICS — LEDs with L70 of 55,000 hours. Delivers 635 lumens in Normal-On and Emergency operation. Optional field configurable for wide and forward throw distribution (**U.S. Patent No. - US10236712 B2**).

Outdoor wide throw distribution: 70' (3' path of egress) at a 7.5' mounting height with 1 FC Average. 4,000K correlated color temperature (CCT). 70 CRI.

ELECTRICAL — UVOLT (120 thru 347V, 50/60hz). Current-limiting charger maximizes battery life and minimizes energy consumption to provide low operating costs. Small battery chargers Certified in the CA Title 20 Appliance Efficiency Database

Short-circuit protection — current-limiting charger circuitry protects printed circuit board from shorts. Regulated charge voltage maintains a stable charge voltage over a wide range of line voltages.

Prevents over/undercharging that shortens battery life and reduces capacity. Filtered charger input minimizes charge voltage ripple and extends battery life.

Photocell option (PEL) for normally on product in order to discontinue illumination during periods when ambient light is present. Photocell option (PEL) for normally on products allow the user to force lamp illumination by user control (external switch). When power is not connected to switched line, illumination will respond to internal daylight sensor. For switched line applications, no other types of products shall be connected on the switched leg.

Remote units (OELR) are normally off. Emergency only functionality with DC power from an external battery.

BATTERY: Sealed, maintenance-free Lithium Iron Phosphate battery.

SELF-DIAGNOSTICS AND REMOTE TEST (SDRT OPTION): Automatic 24-hour recharge after a 90-minute discharge. Advanced electrical design provides constant light output throughout the entire discharge period for non-CW batteries. (For cold weather and cold temperature applications, the light may diminish through the discharge cycle). Brownout protection is automatically switched to emergency mode when supply voltage drops below approximately 80 percent nominal of 120, 220, 277 or 347. Other input voltages may vary. AC/LVD re-set allows battery connection before AC power is applied and prevents battery damage from deep discharge.

Self-Diagnostics: Continuously monitors AC functionality. Standard derangement monitoring will indicate disconnected battery, charger failure and displays green flashing indicator light while in emergency mode. Single multi-chromatic LED indicator to display two-state charging, test activation and three-state self-diagnostics.

Self-diagnostic testing: Five minutes every 30 days and 90 minutes annually. Diagnostic evaluation of lamps, AC to DC transfer, battery charging and condition of microprocessor. Automatic test is easily postponed for eight hours by activating manual test switch or use of remote tester (RTKIT accessory).

Manual testing: Test switch and remote tester (RTKIT accessory) provides manual activation of 60-second diagnostic testing for on-demand visual inspection. 90 minute manual testing can be enabled by pressing the test switch again while in test mode.

INSTALLATION — Wall mount: typically meets 7.5' to 14' mounting height from ground or floor. Power supplied by either mounting directly to a 4" square or 4" octagon j-box (wall mount) and accepts rigid or flex conduit.

LISTINGS — UL wet location listed standard at 32-122°F (0-50°C). Unit with CW battery (cold weather) listed for -22°F to 122°F (-30° to 50°C). Remote listed for -40°F to 122°F (-40° to 50°C). Meets or exceeds all applicable requirements for UL 924, NFPA 101 (current Life Safety code), NFPA 70 (NEC), NOM (Norma Oficial Mexicana), California Energy Commission Title 20 section 1605.3 (W)(4), FCC Title 47, Part 15, Subpart B and OSHA. List and labeled to comply with Canadian Standards C22.2 No. 141-10. Meets City of Chicago Code.

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

AFFINITY®
 Premium Die-Cast Architectural Emergency Light

AFF



without photocell (white)



without photocell (natural aluminum)



with photocell (white)

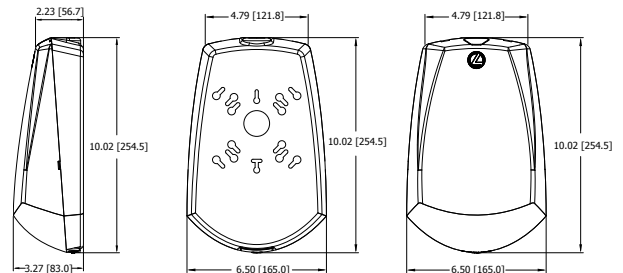


with photocell (dark bronze)

MOUNTING

All dimensions are inches (centimeters).
 Shipping weight: 3.5 lbs. (1.59 kgs.)

Length: 6 1/2 (16.51)
 Depth: 3 27/100 (8.30)
 Height: 10 (25.45)
 Weight : 3.5 lbs (1.59kg)



† Small Battery Chargers Certified in the CA Title 20 Appliance Efficiency Database.



AFF Affinity® Premium Die-Cast Architectural Emergency Light

SELF-POWERED MODELS

ORDERING INFORMATION

For the shortest lead times, configure product using **bolded options**.

Example: AFF PEL DWHGXD UVOLT LTP SDRT WT

Series	Unit Type ¹	Housing Color	Voltage	Battery Type	Automatic Testing	Optics	Options
AFF AFFINITY Premium	PEL Photocell: Normally-ON with internal battery	DWHGXD White textured DBLBXD Black textured DNAXD Natural aluminum	UVOLT 120-347VAC, 50/60Hz	LTP Lithium Iron Phosphate	SDRT Self-diagnostics remote test	WT Wide Throw	CW Cold Weather (-30 - 50C) BAA Buy America(n) Act Compliant
	OEL Normally-OFF with internal battery	DDBTXD Dark bronze textured				FCT Field configurable throw ²	

Notes
 1 AFF with internal battery is not remote capable.

REMOTE MODELS listed for -40°F to 122°F (-40° to 50°C)

ORDERING INFORMATION

For the shortest lead times, configure product using **bolded options**.

Example: AFF OELR DWHGXD WT

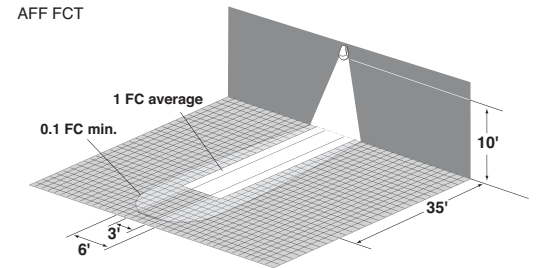
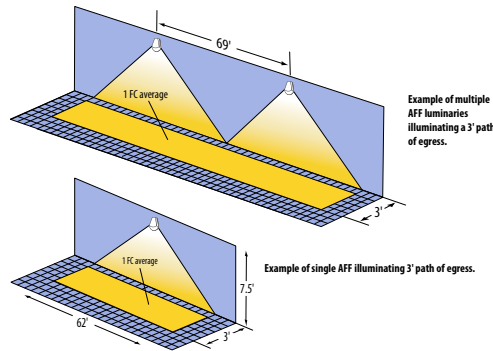
Series	Unit Type	Housing Color	Voltage	Optics	Options
AFF AFFINITY Premium	OELR Remote fixture, Normally OFF (requires external battery source)	DWHGXD White textured DBLBXD Black textured DNAXD Natural aluminum DDBTXD Dark bronze textured	(blank) Universal DC voltage (8-30VDC)	WT Wide Throw FCT Field configurable throw ¹	BAA Buy America(n) Act Compliant

Notes
 1 FCT optics ships standard in the WT (wide throw) mode. Upon installation, configuration can be changed to the FCT mode.

Accessories: Order as separate catalog number.

RTKIT Remote test kit, up to 40' away (includes goggles, laser and battery)

AFF SPACING GUIDELINES



Maximum Spacing Guidelines - AFF (WT)

Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaire		Application Notes *
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg	62'	46'	69'	53'	200' Open Space 80/50/20 reflectances
10'		48'	34'	55'	46'	
12'		28'	22'	46'	41'	
14'		6'	N/A	38'	36'	

* Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

Maximum Spacing Guidelines - AFF (FCT)

Mounting Height	Illumination Level	Single Luminaire		Application Notes *
		3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg	24'	23'	200' Open Space 80/50/20 reflectances
10'		35'	35'	
12'		37'	31'	
14'		31'	N/A	

* Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

AFF Affinity® Premium Die-Cast Architectural Emergency Light

SPECIFICATIONS

Electrical: Primary Circuit

Unit Type	Battery Type	Input Voltage(V)	Input Current(A)	Watts(W)
PEL WT	LTP	120-347	0.053-0.086	11.28
	LTP CW	120-347	0.089-0.167	20.39
PEL FCT	LTP	120-347	0.053-0.086	11.28
	LTP CW	120-347	0.089-0.167	20.39
OEL WT	LTP	120-347	0.025-0.032	2.50
	LTP CW	120-347	0.075-0.097	11.60
OEL FCT	LTP	120-347	0.025-0.032	2.50
	LTP CW	120-347	0.075-0.097	11.60
OELR WT	N/A	8-30	0.248 - 1.225	8.57*
OELR FCT	N/A	8-30	0.254 - 1.168	8.22*

*OELR watts data is in addition to the lamp heads on the product

BATTERY

Lithium Iron Phosphate					
Type	Voltage	Typical Shelf Life ¹	Typical Life ¹	Maintenance ²	Temperature range ^{3,4}
STD	12.8V	1 year	6-8 years	none	32 - 122°F (0 - 50°C)
CW	12.8V	1 year	6-8 years	none	-22 - 122°F (-30 - 50°C)

Notes

- At 77°F (25°C).
- Battery life is negatively impacted by many variables including temperature, charging rates, number of cycles and deep discharges due to long periods of time without AC power.
- All life safety equipment, including emergency lighting for path of egress must be maintained, serviced, and tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required maintenance, service, or testing could jeopardize the safety of occupants and will void all warranties.
- Temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity. See option packages for expanded temperature ranges.



FEATURES & SPECIFICATIONS

INTENDED USE — Provides a minimum of 90 minutes illumination for the rated wattage upon loss of AC power to meet and exceed code required emergency lighting. Ideal for applications requiring attractive LED unit equipment with quick installation and unparalleled performance for lower mounting heights. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — The housing is a standard white (black optional) thermoplastic with a compact and low-profile contemporary design. It is SVA flame rated, impact-resistant, scratch-resistant and corrosion proof. The UV-stable resin resists discoloration from natural and man-made light sources. There is a low-profile, integrated and back-lit test switch with an easily visible multi-color LED status indicator. The back-plate contains a universal j-box mounting pattern to facilitate ease of installation on a wide variety of j-boxes and the front housing allows tool-less access for ease of maintenance.

ELM2LF: Fixed lamp head arrangement for ease of installation and maximum path of egress aiming coverage with no aiming required for wall mount applications.

ELM2L: Unique track and swivel arrangement permits full range of direction for lamp head adjustment.

OPTICS — Both the ELM2L and ELM2LF feature two, high performance LEDs with acrylic lens[†] rated at 1.2 watts each and delivering a total of 220 lumens in a linear pattern (LP220L). The typical life of an LED is 10 years. The LED light sources typically never need to be replaced under normal conditions for normal off applications.

CCT: 5000K.

ELECTRICAL — Orderable in multiple voltages (see ordering tree for specific voltages).

Current-limiting charger maximizes battery life and minimizes energy consumption and provides low operating costs. Small battery chargers Certified in the CA Title 20 Appliance Efficiency Database.

Short-circuit protection — current-limiting charger circuitry protects printed circuit board from shorts.

Regulated charge voltage maintains constant-charge voltage over a wide range of line voltages.

Prevents over/undercharging that shortens battery life and reduces capacity. Filtered charger input minimizes charge voltage ripple and extends battery life.

BATTERY: Sealed, maintenance-free nickel-cadmium or Lithium Iron Phosphate.

Lithium Iron Phosphate battery powers both on board LEDs and up to 2.4W additional LED remote lamp heads simultaneously or offers extended run-time up to 3 hours.

Automatic 24-hour recharge after a 90-minute discharge.

Advanced electrical design provides constant light output throughout the entire discharge period.

Brownout protection is automatically switched to emergency mode when supply voltage drops below approximately 80 percent nominal of 120, 220, 277 or 347. Other input voltages may vary.

AC/LVD reset allows battery connection before AC power is applied and prevents battery damage from deep discharge.

SELF-DIAGNOSTICS and REMOTE TEST (SDRT and AELR option):

Self-Diagnostics: Continuously monitors AC functionality. Test switch and remote tester (RTKIT accessory) provide manual activation of 30-second diagnostic testing for on-demand visual inspection. Standard derangement monitoring will indicate disconnected battery, charger failure and displays green flashing indicator light while in emergency mode. Single multi-chromatic LED indicator to display two-state charging, test activation and three-state self-diagnostics.

Self-diagnostic testing: Five minutes every 30 days and 90 minutes annually. Diagnostic evaluation of lamps, AC to DC transfer, battery charging and condition of microprocessor. Automatic test is easily postponed for eight hours by activating manual test switch or use of remote tester (RTKIT accessory).

AELR option: STAR (Self-testing Automated Reporting) radio transmits monthly and annual test results and diagnostics information for automated reporting requirements.

For more information visit AcuityBrands.com/STAR

INSTALLATION — Wall mount and ceiling mount standard for ELM2L. Wall mount only for ELM2LF. Blind-mate connector ensures easy installation and safe maintenance. 7/8" entrance provision at top of unit for standard 1/2" conduit entry. Tool-less removal of front cover from back-plate for ease of installation and maintenance.

LISTINGS — UL damp location listed standard and wet location listed when used with the WPVS accessory, all at 50-104°F (10-40°C). Meets or exceeds all applicable requirements for UL 924, NFPA 101 (current Life Safety Code), NFPA 70 (NEC), NOM (Norma Oficial Mexicana), California Energy Commission Title 20 section 1605.3 (W)(4), FCC Title 47, Part 15, Subpart B and OSHA. List and labeled to comply with Canadian Standards C22.2 No. 141-10.

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America (n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

† Small Battery Chargers Certified in the CA Title 20 Appliance Efficiency Database.



Catalog Number
Notes
Type



Contemporary Commercial LED Emergency Light



ELM2L
 Aimable Optics

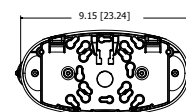
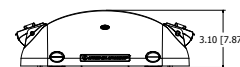
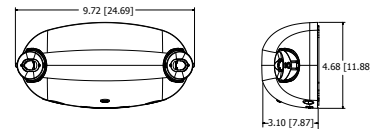
ELM2LF
 Fixed Optics

LITHIUM IRON PHOSPHATE
 Nickel Cadmium



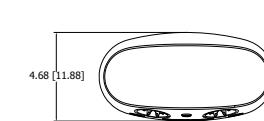
MOUNTING AND SPECIFICATIONS

All dimensions are inches (centimeters) unless otherwise indicated.



ELM2L Specifications

Length: 9.72 (24.69)
Depth: 3.10 (7.87)
Height: 4.68 (11.88)
Weight: 1.31lbs (0.59kg)



ELM2LF Specifications

Length: 9.22 (23.42)
Depth: 3.10 (7.87)
Height: 4.68 (11.88)
Weight: 1.25lbs (0.57kg)



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 ELM2L

Notes:

Type:

BUG

LAI24-242157

ELM2L_ELM2LF Quantum® Contemporary Commercial LED Emergency Light

ds Design Select options indicated by this color background.

CS Looking for Contractor Select readily available configurations? Click here to visit Contractor Select™ spec sheet or go to www.contractorselect.com

NICKEL CADMIUM BATTERY MODELS

ORDERING INFORMATION For shortest lead times, configure product using **bolded options**.

Example: ELM2LF

Series ¹	Lamp type	Housing color	Voltage	Battery type	Automatic Testing	Options
ELM2L Aimable optics	(blank) LP220L 220 lumen, 2.4 watt, linear pattern, two lamps	(blank) White	(blank) 120/277 VAC/60Hz	(blank) Nicad	(blank) None	(blank) None
ELM2LF Fixed optics		B Black	120/347 120/347 VAC/60Hz SVOLT 220-240/50-60 Hz UVOLT 120 - 347 VAC, 50/60hz		SDRT Self Diagnostics, Remote Test ²	WPVS Wet protective vandal shield ³ BAA Buy America(n) Act Compliant

Notes

- 1 ELM2L and ELM2LF with Nicad battery type not available with remote capacity.
- 2 SDRT only available with UVOLT.
- 3 WPVS breaks out and ships separately and color will match (ex: WPVS SML B). Must be ordered when using for wet location applications. Decreases delivered lumens up to 20%. See spec sheet [WPVS](#) for more information.

ds Design Select options indicated by this color background.

LITHIUM IRON PHOSPHATE BATTERY MODELS

ORDERING INFORMATION For shortest lead times, configure product using **bolded options**.

Example: ELM2LF UVOLT LTP

Series ¹	Lamp type	Housing color	Voltage	Battery type	Automatic Testing	Options
ELM2L Aimable Optics	(blank) LP220L 220 lumen, 2.4 Watt, Linear Pattern, two lamps	(blank) White	UVOLT 120 - 347 VAC, 50/60hz	LTP Lithium Iron Phosphate ¹	(blank) None	(blank) None
ELM2LF Fixed Optics		B Black			SDRT Self-diagnostics, remote test ¹ AELR Automatic Emergency Lighting Reporting ²	WPVS Wet protective vandal shield ³ BAA Buy America(n) Act Compliant

Notes

- 1 Extended run-time or remote capacity is standard. New ELMRE and ELMRW style remotes are compatible with both SDRT and non-SDRT versions (see page 3).
- 2 SDRT option required. AELR transmits monthly and annual test results and diagnostics information for automated reporting requirements. Only available with LTP battery type.
- 3 WPVS breaks out and ships separately and color will match (ex: WPVS SML B). Must be ordered when using for wet location applications. Decreases delivered lumens up to 20%. See spec sheet [WPVS](#) for more information.

Other Accessories: Order as separate catalog number.

- WPVS SML W Wet protective vandal shield (must be used for wet location applications)
- WPVS SML B Wet protective vandal shield, black (must be used for wet location applications)
- ELA WG1 Wireguard, 15" W x 13-1/2" H x 6" D (see spec sheet [ELA-WG](#))
- RTKIT Remote test kit, up to 40' away (includes goggles, laser and battery)



ELM2L mounted inside the WPVS (white)



ELM2LF mounted inside WPVS (white)

ELM2L_ELM2LF Quantum® Contemporary Commercial LED Emergency Light

SPECIFICATIONS

ELECTRICAL			
Primary Circuit			
Type	Volts	Input amps	Watts
Nicad	120	0.018	1.09
	347	0.012	1.34
Lithium Iron Phosphate	120	0.022	1.35
	347	0.014	1.64

LTP EXTENDED RUN-TIMES	
Products	Total Run-time with no remotes
ELM2L LTP	3 hours
ELM2LF LTP	3 hours

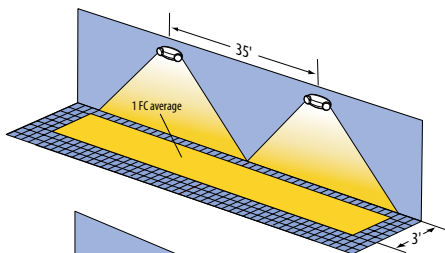
BATTERY			
UVOLT Nicad (6V), All Other Nicad (3.6V)			
Typical Shelf life ¹	Typical life ¹	Maintenance ²	Temperature Range ^{3,4}
3 years	6-8 years	none	50°-104°F (10-40°C)
Lithium Iron Phosphate (9.6V)			
Typical Shelf life ¹	Typical life ¹	Maintenance ²	Temperature Range ^{3,4}
1 years	6-8 years	none	50°-104°F (10-40°C)

Notes

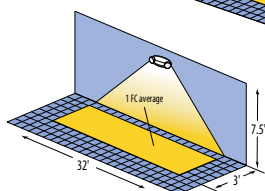
- At 77°F (25°C) ambient temperature, charge/discharge cycles and prolonged full discharge may reduce useful life.
- All life safety equipment, including emergency lighting for path of egress must be tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required testing could jeopardize the safety of occupants and will void all warranties.
- Temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity.
- Battery life is negatively impacted by many variables including temperature, charging rates, number of cycles and deep discharges due to long periods of time without AC power.

SPACING GUIDELINES

*Note: To see complete photometric report or download the .ies file for this product, visit Lithonia Lighting ELM2L or ELM2LF home page.



Example of multiple ELM2L luminaires illuminating a 3' path of egress.



Example of single ELM2L illuminating a 3' path of egress.

* Application image examples are using LP220L lamp.

Maximum Spacing Guidelines — ELM2LF						
Mounting Height	Illumination Level	Single Luminaire Coverage		Multiple Luminaire Spacing		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	32'	20'	35'	28'	100' Corridor, 8' wide, and 12' high with 80/50/20 reflectances
10'	1FC Avg ¹	20'	NA	27'	24'	

Notes:

- Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

Maximum Spacing Guidelines — ELM2L						
Mounting Height	Illumination Level	Single Luminaire Coverage		Multiple Luminaire Spacing		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	32'	24'	35'	28'	100' Corridor, 8' wide, and 12' high with 80/50/20 reflectances
10'	1FC Avg ¹	20'	14'	27'	23'	

Notes:

- Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

Job Name:

NEWTON COUNTY ENRICHMENT CENTER -
O&M's
Engineer: Electrical Design Consultants - Macon
(Macon)

Catalog Number:
WSXA PDT WH

Notes:

Type:

SO1

LAI24-242157

Catalog Number:

Date:

Project:

OVERVIEW

The WSXA Family of wall switch occupancy sensors provides simple and cost effective solutions for commercial and residential lighting control applications. All WSXA Family sensors have a stylish low profile appearance, soft-click buttons, and provide small motion detection up to 20 ft (6.10 m), making them perfect for private offices, private restrooms, closets, copy rooms, or any other small enclosed space. Additionally, all WSXA Family sensors have a patent-pending wiring method that enables them to function either with or without a neutral connection. WSXA units come pre-configured for wiring without a neutral, however if connection to neutral is required by code, contractors can convert the unit in seconds.

MULTI-WAY (MWO)

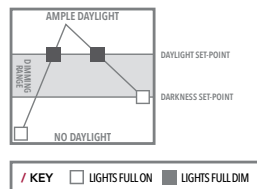
Our new WSXA MWO series allows for multi-location On/Off or 0-10 dimming up to 9 devices (2 device limit when neutral-less wiring used) on a single traveler.

FEATURES

- Single Pole devices can be programmed with Sensor Switch VLP app or traditional push button programming
- WSXA MWO can be used in conjunction with sPODMRA MWO
- Devices can be spaced up to 250 ft with MWO option
- MWO option support up to 9 additional MWO enabled devices (2 neutral-less) on a single traveler
- Compatible w/LEDs, electronic & magnetic ballasts, CFLs, & incandescents
- 100% passive detection, no potential for interference with other building systems
- Small motion detection to up to 20 ft, Large motion detection up to 36ft
- Push-button programmable without removing cover plate - adjustable time delays & operating modes
- Dual technology (PDT) utilizes PIR/Microphonics™ detection (patented)
- Device accommodates powering over ground or neutral connection (patent pending)
- Fully meets NEC 2017 Section 404.2C neutral requirements - no current leakage to ground when connected to neutral
- Line power and load wires are interchangeable - impossible to wire backwards (patented)
- Integrated Photocell (disabled by default) prevents light from turning on if sufficient daylight is present
- New aesthetic with vandal resistant lens

ADAPTIVE DAYLIGHT HARVESTING (ADH)

With Sensor Switch's Adaptive Daylight Harvesting (ADH), automatic dimming has never been more reliable - even in a wall switch. It works by establishing two state change set-points; daylight and darkness. The light level in the space will then be automatically maintained by intelligently controlling the dim level of the electric light source. Set-points can be established using the "Set Now" option or programmed using desired light levels as measured in foot candles (fc).

**Warranty**

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.

*See ordering tree for details



WSXA Series

Wall Switch Sensor



WSXA/WSXA MWO
On/Off
Single Relay



WSXA D/WSXA MWO
On/Off/Dimming
Single Relay



WSXA 2P FAN
On/Off Dual Relay





Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

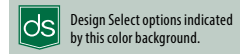
Catalog Number:
 WSXA PDT WH

Notes:

Type:

SO1

LAI24-242157



ORDERING INFORMATION

WSXA Single Pole Example: WSXA MWO PDT D WH

Series Option	Detection Mode	eldoLED	Dimming ⁷	Operating Mode ³
WSXA Wall Switch Sensor (Occupancy and Daylighting)	[blank] Passive Infrared (PIR)	[blank] none	[blank] On/Off	[blank] Automatic on (default) or Vacancy
WSXA MWO WSXA with Multi-way Operation	PDT Dual Technology	EZ ² eldoLED Driver Compatibility	D Dimming	SA Manual On (default) or Automatic On VA Vacancy ASL ^{3,4} Automatic Start Level 5VDC

Voltage	Color ⁵	Max Dim Level ^{6,7}	Min Dim Level ^{6,7}	Temp / Humidity
[blank] 120-277 VAC	WH White	[blank] 10 VDC	[blank] 0 VDC	[blank] Standard
347 347 VAC	IV Ivory GY Gray	9H 9 VDC 8H 8 VDC 7H 7 VDC	1V 1 VDC 2V 2 VDC 3V 3 VDC	4V 4 VDC 5V 5 VDC 6V 6 VDC LT Low Temp/ High Humidity

Notes:

- 1 Max Dim Level default set to 9.1VDC. Min Dim Level default set to 1.5VDC.
- 2 EZ only available with D option.
- 3 Operating Modes re-programmable via push-button except for VA version.
- 4 Not available with EZ, Max Dim, or Min Dim Level. Also requires the D option.
- 5 Matching wall plate provided for 120-277 VAC units.
- 6 Only available with D option.
- 7 Minimum order qty of 30 units for Max or Min Dim Level settings. Additional time may be required.

WSXA 2P Example: WSXA 2P FAN WH LT

Series Option	Detection Mode	Poles	Fan ²	Operating Mode ³
WSXA Wall Switch Sensor (Occupancy and Daylighting)	[blank] Passive Infrared(PIR) PDT Passive Dual Technology	2P ¹ 2 Poles	[blank] No Fan FAN Fan Operation	[blank] Pole 1 auto-on Pole 2 Manual On 2SA Both poles Manual On (default) 2VA Both poles vacancy (only)

Voltage	Run Time ⁴	Color ⁵	Temp/Humidity
[blank] 120-277 VAC	[blank] Pole 1 Lights Pole 2 Fan	WH White AL Lt. Almond	[blank] Standard
347 347 VAC	ASHRT Pole 1 Lights Pole 2 Fan, Minimum Fan Run Time per Ashrae 62.2	IV Ivory RD Red GY Gray BK Black	LT Low Temp/ High Humidity

Notes:

- 1 2P does not have VLP functionality.
- 2 If Fan Operation is selected Operating Mode must be blank.
- 3 Operating Modes re-programmable via push-button except for VA version.
- 4 Only available if 2P FAN is selected.
- 5 Matching wall plate provided for 120-277VAC Units.

SSW Example: SSW 1GNG OCC WH

Series	Number of Gangs	Mount	Color
SSW Sealed Screwless Wall-Plate	1GNG Single Gang	[blank] Standard Wall Switch OCC Occ. Wall Switch	WH White RD Red IV Ivory

WALLP

Series	Color	Multi-Pack Size
WALLP1 Screwless Wall Plate Single Gang	WH White AL Light Almond IV Ivory BK Black	M5 (5 Wall Plates)
WALLP2 Screwless Wall Plate Dual Gang	GY Gray RD Red	

Job Name:

NEWTON COUNTY ENRICHMENT CENTER -
O&M's
Engineer: Electrical Design Consultants - Macon
(Macon)

Catalog Number:
WSXA PDT WH

Notes:

Type:

SO1

LAI24-242157

SPECIFICATIONS**Electrical**

Input Ratings 120-277VAC, 50/60 Hz
347VAC, 50/60 Hz (with 347 option)

Output Ratings 120VAC, 800W, 6.7A - Tungsten, Standard Ballast, Electronic Ballast
277VAC, 1200W, 4.3A - Tungsten, Standard Ballast, Electronic Ballast
347VAC, 1500W, 4.3A - Tungsten, Standard Ballast, Electronic Ballast
120/277/347VAC, 1/4 HP - Motor

Relay Type Latching

Low Voltage Output Ratings 0-10VDC, Sinks <50mA

Standards/ Ratings Energy Management Equipment, UL916 (E167435)

Mechanical

Dimensions 2.74"H x 1.68"W x 1.63"D (70mm x 43mm x 41mm) - does not include ground strap

Mounting Single-Gang Box

Connection Type Low-Voltage Leads, Line-Voltage Leads

Environmental

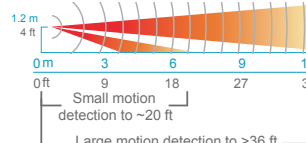
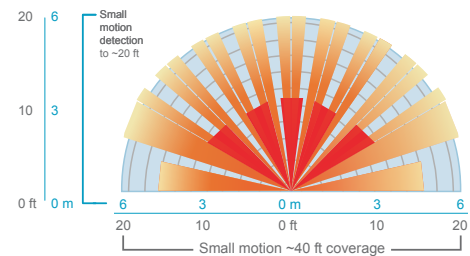
Warrantied Operating Temperature 32°F to 140°F (0°C to 60°C)

Relative Humidity Up to 90%, Non-Condensing

Standards/ Ratings RoHS

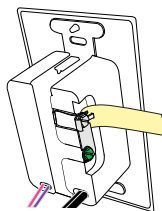
COVERAGE PATTERNS

- Small motion (e.g. hand movements) detection up to 20 ft (6.10 m), ~625 ft²
- Large motion (e.g. walking) detection greater than 36 ft (10.97 m), ~2025 ft²
- Wall-to-wall PIR coverage
- Units with -PDT (Passive Dual Technology) option (also called Microphonics) provide overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is utilized to prevent non-occupant noises from keeping the lights on.
- Tested to NEMA WD 7-2011

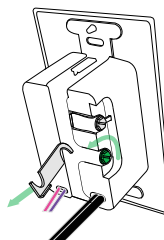
SIDE VIEW**TOP VIEW****CONVERSION FROM GROUND ONLY (NO NEUTRAL) TO NEUTRAL WIRING**

This product is pre-configured for wiring without a neutral; however, if connection to neutral is required by code, the unit easily converts in seconds.

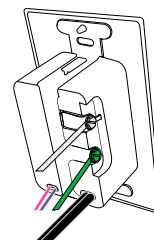
Step 1:
Remove Yellow Label



Step 2:
Loosen Screws and Remove Metal Link



Step 3:
Connect Neutral to Silver Screw and Ground to Green Screw




**STATEMENT OF LIMITED WARRANTY
 FOR ACUITY BRANDS LIGHTING, INC
 CONTROLS COMMERCIAL PRODUCTS
 09.01.2022**

Subject to the exclusions set forth below, Acuity Brands Lighting, Inc. ("Acuity") warrants its controls products to be free from defect in material and workmanship for the respective time periods set forth in the table below, from the date from shipment from Acuity's facilities (the "General Warranty"). If date of shipment is unavailable, the warranty period will be calculated from the date of manufacture. Acuity's controls products include wall stations, remotes, control devices, powerpacks, sensors, network communication gear, gateways, nodes, relay panels, dimming panels, and photocontrols ("Product(s)"). Acuity further warrants that, for one (1) year, the functionality of the firmware embedded in the Product(s) ("Product Firmware") will conform in all material respects to the Product documentation available at the start of the warranty period.

CONTROLS TABLE	
Brand or Family	Warranty Term
DTL® DLL, DSN, DCC, DBL, DIN	10 years
DTL® DP 1704 and 1707	8 years
All Other DTL®	6 years
Atrius™ Devices: Edge Gateway, Eclipse® A1000A, Eclipse® A100AT	5 years
IOTA®	
nLight® nLight® AIR nLight Eclipse™	
PowerSentry®	
Sensor Switch® Synergy™ Lighting Controls XPoint™ Wireless	
Lighting Control & Design (LC&D™) ROAM® Pathway® Connectivity Solutions	
Fresco™	2 years
Asset Tags All Other Acuity® Controls Product(s)	1 year

*The Warranty Term for nLight®, nLight® AIR, nLight Eclipse™, ROAM® and Fresco™ Products may be extended through the purchase of an Acuity Brands Control Service Plan. See <https://www.acuitybrands.com/support/technical-support/lighting-controls-support> for more information.

This Limited Warranty only covers Product function and does not cover existing building systems and/or network performance of any Product(s) or re-programming or field adjustments of any Product(s) done by anyone that has not been authorized or certified in writing by Acuity. Acuity does not warrant the security of any Product(s). Product(s) that are identified by Acuity as requiring on-site commissioning will only be covered by this Limited Warranty if commissioned by Acuity authorized personnel. Warranty coverage shall not apply to any equipment or integration services of another manufacturer used in conjunction with Acuity Product(s) or where Acuity-authorized cables are not used. This Limited Warranty only applies to the Product(s) when sold for commercial purposes and does not apply to residential product(s) provided by Acuity, all of which are governed by separate limited warranty terms.

Except as otherwise set forth herein, ballasts, lamps, emergency batteries/invertors, vandal resistant product, poles, replaceable consumables (such as batteries), computer hardware, mobile computing devices, third party gear, commissioning systems, and components specified by others are excluded from this Limited Warranty. Ultraviolet (UV) based devices that are separable from the Product (s) are warranted separately; and the terms of such warranties are located at <https://www.acuitybrands.com/support/warranty/terms-and-conditions>. Manufacturers of third-party ballasts, lamps, emergency batteries/invertors and poles incorporated into the Product(s) are solely responsible for any costs or expenses related to any claims,



Job Name:
 NEWTON COUNTY ENRICHMENT CENTER -
 O&M's
 Engineer: Electrical Design Consultants - Macon
 (Macon)

Catalog Number:
 CONTROLS

Notes:

Type:

WARRANTY

LAI24-242157




**STATEMENT OF LIMITED WARRANTY
 FOR ACUITY BRANDS LIGHTING, INC
 CONTROLS COMMERCIAL PRODUCTS
 09.01.2022**

repairs, or replacements associated with any such component(s). Applicable manufacturers shall be solely responsible for the costs related to any claims associated with any such third-party devices. Assistance with warranty claims for any such component(s), and/or copies of each applicable manufacturer's warranty, if available, may be obtained from an authorized Acuity post-sales or customer service representative. Distech Controls® and eldoLED® products are warranted separately and are not covered by this Limited Warranty.

Additionally, software (other than firmware), mobile apps, commissioning services, installation services, remote programming, and other professional services are excluded from this Limited Warranty. Services provided by Acuity are warranted separately; and the terms of such warranties are located at <https://www.acuitybrands.com/support/warranty/terms-and-conditions>. Applicable third-party service providers are solely responsible for the costs related to any claims associated with any such third-party services. Access to software and mobile apps associated with the Product(s) may be subject to the terms of an End-User License Agreement or Terms and Conditions of Use ("EULA") and, if applicable, warranty terms applicable for such software and mobile apps are set forth in the applicable EULA.

This Limited Warranty applies only when the Product(s) are installed in applications in which ambient temperatures are within the range of specified operating temperatures. Acuity will not be responsible under this Limited Warranty for any failure of the Product(s) that results from external causes such as: acts of nature, including but not limited to harmonic oscillation/winds, ice, or other related storm activity; physical damage; exposure to adverse or hazardous chemical or other substances; use of reactive cleaning agents and/or harsh chemicals to clean the Product(s); external site conditions, including but not limited to: accumulation of debris (natural or otherwise), heavy tree cover, cellular, satellite or radio interference; environmental conditions, including but not limited to: exposure to harsh, corrosive, non-condensing humidity conditions, marine or humidity conditions; vandalism; terroristic acts; fire; power failure, overheating, improper power supply, power surges or dips, and/or excessive switching; induced vibration; harmonic oscillation, or resonance associated with movement of air currents around Product(s); animal or insect activity; fault or negligence of purchaser, any end-user of the Product(s) and/or any third party not engaged by Acuity; improper or unauthorized access, use, installation, handling, storage, alteration, removal of components, testing, troubleshooting, maintenance or service; removal or interference with the tamper proof label indicating unauthorized opening of the unit; any housing, arm or gasket pierced for any reason; failure to abide by any product classifications or certifications; failure to comply with any applicable standards, codes, recommendations, product specification sheets, or instructions of Acuity; failure of the end-user to provide full and complete requested data; use of the Product(s) with products, processes or materials supplied by any end-user or third party; or any other occurrences beyond Acuity's reasonable control. Acuity also will not be responsible under this Limited Warranty for any substantial deterioration in the Product finish that is caused by failure to clean, inspect, or maintain the finish of the Product(s). If the Product(s) are used on existing foundations, roofs, buildings, anchorages or structures, the end-user is solely responsible for the structural integrity of such existing foundations, roofs, buildings, anchorages or structures and all consequences arising from their use. Adequate records of operating history, maintenance, and/or testing (as applicable) must be kept by the end-user and provided to Acuity upon request to substantiate that the Product(s) have failed to comply with the terms of this Limited Warranty. Neither polycarbonate nor acrylic material used in the Products is warranted against yellowing or cracking, as yellowing and/or cracking may naturally occur over time due to normal aging. The Product(s) are not warranted against: cosmetic problems or defects that result from normal wear and tear under ordinary use and that do not affect the performance or use of the Product(s); nor are the Products warranted against costs that may be incurred in connection with changes or modifications to the Product(s) required to accommodate site conditions and/or faulty building construction or design; or failures of Acuity Product(s) resulting from installation or use of aftermarket third party supplied products, components, materials, software, services, telecommunications equipment, networks or the Internet. Acuity does not warrant that the Product(s) meet the applicable project requirements for performance, legality, safety, security, suitability, or effectiveness for use in a particular application. In no event will Acuity be responsible for any loss resulting from any application in which the Product(s) are used including any fines or penalties resulting from illegal use. Modifications/upgrades to Product Firmware that may be required to address changes in laws or regulations are outside the scope of this Limited Warranty. Product Firmware modifications/upgrades that result in changes to functionality to the Product are also outside the scope of this Limited Warranty.

The determination of whether any Product(s) fail to comply with the terms of this Limited Warranty shall be made by Acuity in its sole discretion, with consideration given to the overall performance of the Product(s) as compared to the expected performance per the applicable spec sheet. If the Product(s) are within the Warranty Period, Acuity has received payment in full for the Product(s), and Acuity determines to its satisfaction that the Product(s) fail to comply with the terms of this Limited Warranty, Acuity, at its option, will (a) with respect to defects in material and workmanship service, repair or replace the Product(s) with the same or a functionally equivalent Product(s) or component part(s), which may differ in appearance from the original or (b) with respect to non-conformances of the Product Firmware, will make available for installation a patch to be installed by the end-user within a commercially reasonable time frame to remedy the non-conformance. If the patch is not installed within a commercially reasonable time frame, the Limited Warranty will no longer apply with respect to such non-conformances. Acuity reserves the right to utilize new, reconditioned, refurbished, repaired, or remanufactured Product(s) or parts in the warranty repair or replacement process. For purposes of clarity, this Limited Warranty does not include any removal, commissioning, programming, or reinstallation costs or expenses, including without limitation any labor costs, equipment or other expenses required to remove and/or reinstall original or replacement Product(s) and/or parts. This Limited Warranty

Submitted by Lighting Associates, Inc.		Catalog Number: CONTROLS	Type: WARRANTY
	Job Name: NEWTON COUNTY ENRICHMENT CENTER - O&M's Engineer: Electrical Design Consultants - Macon (Macon)	Notes:	LAI24-242157



**STATEMENT OF LIMITED WARRANTY
FOR ACUITY BRANDS LIGHTING, INC
CONTROLS COMMERCIAL PRODUCTS
09.01.2022**

extends only to the Product(s) as delivered to, and is for the sole and exclusive benefit of, the original end -user of the Product(s) at the original location. This Warranty may not be transferred or assigned by the original end-user.

The repair or replacement of any Product(s) or component part within the Product(s) is the sole and exclusive remedy for failure of the Product(s) to comply with the terms of this Limited Warranty and does not extend the Warranty Period. Warranty claims regarding the Product(s) must be submitted in writing within thirty (30) days of discovery of the defect or failure to an authorized Acuity post-sales or customer service representative. Product(s) or component part(s) may be required to be returned for inspection and verification of non-conformance by Acuity, but no Product(s) or component part(s) will be accepted for inspection, verification or return unless accompanied by a "return authorization number" which can be obtained only from an authorized Acuity post-sales or customer service representative. Acuity is not responsible for any costs, expenses, or damages that may occur in connection with shipment of Product(s) to Acuity, but Acuity shall bear all cost and expense incurred in connection with shipment of replacement Product(s) to the end-user so long as Acuity has sole control over all aspects of shipment, including but not limited to Acuity shipping directly to the end-user. In no event will Acuity accept any other charges related to shipment by any other party. Replacement Product(s) and/or parts provided under the terms of this Limited Warranty are warranted for the remainder of the Warranty Period as if such Product(s) and/or parts were the original components.

THE FOREGOING WARRANTY TERMS ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, AND ACUITY EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, RELATING DIRECTLY OR INDIRECTLY TO THE PRODUCT(S), WHETHER ORAL, WRITTEN, OR ARISING BY COURSE OF DEALING OR USAGE OF TRADE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO AGENT, DISTRIBUTOR OR OTHER SUPPLIER OF ACUITY PRODUCTS HAS THE AUTHORITY TO MODIFY OR AMEND THIS WARRANTY WITHOUT EXPRESS WRITTEN AUTHORIZATION FROM ACUITY.

The total liability of Acuity on any and all claims of any kind, whether in contract, warranty, tort (including negligence), strict liability or otherwise, arising out of or in connection with, or resulting from, Acuity's performance or breach of this Limited Warranty, or from Acuity's sale, delivery, resale, repair, or replacement of any Product(s) or the furnishing of any services, shall in no event exceed the purchase price allocable to the Product(s) that give rise to the claim, and any and all such liability shall terminate upon the expiration of the Warranty Period specified above. Acuity shall not be liable for damages caused by any delays involving warranty services.

IN NO EVENT SHALL ACUITY BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES, ARISING OUT OF THE SALE OR PERFORMANCE OF ANY PRODUCTS OR SERVICES, OR ANY BREACH OF WARRANTY OR OBLIGATIONS UNDER WARRANTY EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER AS THE RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER THEORY, INCLUDING WITHOUT LIMITATION LABOR OR EQUIPMENT REQUIRED TO REMOVE AND/OR REINSTALL ORIGINAL OR REPLACEMENT PARTS, LOSS OF TIME, PROFITS OR REVENUES,


LACK OR LOSS OF PRODUCTIVITY, INTEREST CHARGES OR COST OF CAPITAL, COST OF SUBSTITUTE EQUIPMENT, SYSTEMS, SERVICES OR DOWNTIME COSTS, LOSS OR CORRUPTION OF DATA, DAMAGE TO OR LOSS OF USE OF PROPERTY OR EQUIPMENT OR ANY INCONVENIENCE ARISING OUT OF ANY BREACH OF THE FOREGOING WARRANTY OR OBLIGATIONS UNDER SUCH WARRANTY.

Acuity reserves the right to modify or discontinue this Limited Warranty without notice, provided that any such modification or discontinuance will only be effective with respect to any Product(s) purchased after such modification or discontinuance. If there is any conflict or inconsistency between the English language version of this Limited Warranty and any version translated into any other language, the English language version shall prevail. Trademarks referenced are trademarks of Acuity Brands Lighting, Inc. and if marked with the © symbol are registered in the U.S. and may be registered in other countries.

This Limited Warranty shall be construed and enforced in the accordance with the laws of the State of Georgia and the applicable laws of the United States.

NOTE: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

NOTE: Acuity Brands is not a lighting specifier, and product recommendations for any lighting design project are for informational purposes only, without any warranty as to accuracy, completeness, legality for use in a particular application, or otherwise.

Submitted by Lighting Associates, Inc.		Catalog Number: CONTROLS	Type: WARRANTY
	Job Name: NEWTON COUNTY ENRICHMENT CENTER - O&M's Engineer: Electrical Design Consultants - Macon (Macon)		



STATEMENT OF LIMITED WARRANTY
 FOR ACUITY BRANDS LIGHTING, INC
 CONTROLS COMMERCIAL PRODUCTS
 09.01.2022

NOTE: The Product(s) must be returned within ten (10) days after receiving the return authorization number and the shipping box must be clearly marked with the return authorization number. Failure to follow this procedure will delay any potential warranty resolution. Product(s) returned without a valid return authorization number will either be refused or returned to sender at sender's expense. NO PRODUCT RETURNS WILL BE ACCEPTED BY ACUITY IF NOT ACCOMPANIED BY A VALID RETURN AUTHORIZATION NUMBER.


**STATEMENT OF LIMITED WARRANTY
 FOR ACUITY BRANDS LIGHTING, INC
 EMERGENCY/BATTERY
 COMMERCIAL PRODUCTS
 09.01.2022**

Subject to the exclusions set forth below, Acuity Brands Lighting, Inc. ("Acuity") warrants its emergency fixtures/electronics and/or emergency batteries ("Product(s)") to be free from defect in material and workmanship for the respective time periods set forth in the applicable table below, from the date of shipment from Acuity's facilities (the "General Warranty"). An emergency battery ("Battery"), whether sold separately, as part of the Product(s) or as part of another Acuity product, will be considered defective only if it fails to perform for a full 90 minutes during required annual testing. The Emergency Warranty applies only when (1) Product(s) or other Acuity products containing Batteries have been continuously connected to an AC input power source, or (2) Batteries sold separately have been placed in fixtures continuously connected to an AC input power source, in each case within 90 days of the date of purchase. Incandescent lamps and fuses are not warranted.

EMERGENCY/ELECTRONICS PRODUCT TABLE

Emergency/Electronics Product	Warranty Term
LED Products not specifically shown below	5 years
Non-LED Products & Hazardous Location Signage	3 years
Self-Luminous Signage	Vandal-Resistant frame: 3 years Tritium components: 10 or 20 years, depending upon option selected
Lithonia Lighting Basics	2 years
AC System (Invertor) Multiple Circuits	1 year 2 years, if factory start up
AC System (Invertor) Single Circuit <100W 100W to 550W	5 years 3 years

If an Emergency Fixture is determined to be defective during the applicable warranty period described in the table above, the sole and exclusive remedy shall be repair or replacement, as described in the remedy paragraph below.

BATTERY TABLE

Battery Type	Warranty Term
Lithonia Lighting Basics	2 years limited
Nickel-Cadmium AC System (Invertor) Single Circuit <100W	5 years limited
Nickel-Cadmium or Nickel-Metal Hydride	5 years pro-rated
Lithium Iron Phosphate	5 years pro-rated
Sealed, Lead-Acid – Unit Equipment	3 years pro-rated
Sealed, Lead-Acid – AC Inverters <1000W	10 years pro-rated
Central Invertors 750W or higher	1-year electronics 2-year electronics, if factory installed (not available w/750W) 10 or 20 years pro-rated, depending upon option selected

Notwithstanding any other potential remedy described herein, if a Battery is determined to be defective during the applicable warranty period, set forth in the table above, the sole and exclusive remedy shall be a discount toward the purchase of a replacement emergency battery as set forth in the applicable chart below.

3-year pro-rated Discount Schedule	
Time After Shipment	Replacement Cost Discount
Less than 1 year	N/A (repair or replacement only)
Greater than 1 year but less than 3 years	40% off list price at time of replacement
3 years and longer	No Discount


**STATEMENT OF LIMITED WARRANTY
 FOR ACUITY BRANDS LIGHTING, INC
 EMERGENCY/BATTERY
 COMMERCIAL PRODUCTS
 09.01.2021**
5-year pro-rated Discount Schedule

Time After Shipment	Replacement Cost Discount
Less than 3 years	N/A (repair or replacement only)
Greater than 3 years but less than 4 years	40% off list price at time of replacement
Greater than 4 years but less than 5 years	20% off list price at time of replacement
5 years and longer	No Discount

Sealed, Lead-Acid – AC Inverters <1000W 10-year pro-rated Discount Schedule

Time After Shipment	Replacement Cost Discount
Less than 3 year	N/A (repair or replacement only)
Greater than 3 years but less than 6 years	67% off list price at time of replacement
Greater than 6 years but less than 10 years	33% off list price at time of replacement
10 years and longer	No discount

Central Invertors 1000W or higher 10-year pro-rated Discount Schedule

Time After Shipment	Replacement Cost Discount
Less than 1 year	N/A (repair or replacement only)
Greater than 1 year but less than 10 years	Decrementd 10% per year. Replacement cost beginning at a 90% discount from the list price in effect at the time of replacement and decreasing 10% per year during this time period.
10 years or longer	No discount


Central Invertors 1000W or higher 20-year pro-rated Discount Schedule

Time After Shipment	Replacement Cost Discount
Less than 1 year	N/A (repair or replacement only)
Greater than 1 year but less than 10 years	Decrementd 5% per year. Replacement cost beginning at a 90% discount from the list price in effect at the time of replacement and decreasing 10% per year during this time period.
20 years or longer	No discount

Proof of Operation/Testing: Adequate records as referenced below include, but are not limited to, National Fire Protection Association (NFPA) 101–required periodic testing documentation.

This Limited Warranty only covers Product function and does not cover existing building systems and/or network performance of any Product(s) or re-programming or field adjustments of any Product(s) done by anyone that has not been authorized or certified in writing by Acuity. Acuity does not warrant the security of any Product(s). Product(s) that are identified by Acuity as requiring on-site commissioning will only be covered by this Limited Warranty if commissioned by Acuity authorized personnel. Warranty coverage shall not apply to any equipment or integration services of another manufacturer used in conjunction with Acuity Product(s) or where Acuity-authorized cables are not used. This Limited Warranty only applies to the Product(s) when sold for commercial purposes and does not apply to residential product(s) provided by Acuity, all of which are governed by separate limited warranty terms.

Except as otherwise set forth herein, ballasts, lamps, emergency batteries/invertors, vandal resistant product, poles, replaceable consumables (such as batteries), computer hardware, mobile computing devices, third party gear, commissioning systems, and components specified by others are excluded from this Limited Warranty. Ultraviolet (UV) based devices that are separable from the Product (s) are warranted separately; and the terms of such warranties are located at <https://www.acuitybrands.com/support/warranty/terms-and-conditions>. Manufacturers of third-party ballasts, lamps, emergency batteries/invertors and poles incorporated into the Product(s) are solely responsible for any costs or expenses related to any claims,

Submitted by Lighting Associates, Inc.		Catalog Number: EXITS & EMERGENCY	Type: WARRANTY
	Job Name: NEWTON COUNTY ENRICHMENT CENTER - O&M's Engineer: Electrical Design Consultants - Macon (Macon)	Notes:	LAI24-242157




**STATEMENT OF LIMITED WARRANTY
FOR ACUITY BRANDS LIGHTING, INC
EMERGENCY/BATTERY
COMMERCIAL PRODUCTS
09.01.2021**

repairs, or replacements associated with any such component(s). Applicable manufacturers shall be solely responsible for the costs related to any claims associated with any such third-party devices. Assistance with warranty claims for any such component(s), and/or copies of each applicable manufacturer's warranty, if available, may be obtained from an authorized Acuity post-sales or customer service representative. Distech Controls® and eldoLED® products are warranted separately and are not covered by this Limited Warranty.

Additionally, software (other than firmware), mobile apps, commissioning services, installation services, remote programming, and other professional services are excluded from this Limited Warranty. Services provided by Acuity are warranted separately; and the terms of such warranties are located at <https://www.acuitybrands.com/support/warranty/terms-and-conditions>. Applicable third-party service providers are solely responsible for the costs related to any claims associated with any such third-party services. Access to software and mobile apps associated with the Product(s) may be subject to the terms of an End-User License Agreement or Terms and Conditions of Use ("EULA") and, if applicable, warranty terms applicable for such software and mobile apps are set forth in the applicable EULA.

This Limited Warranty applies only when the Product(s) are installed in applications in which ambient temperatures are within the range of specified operating temperatures. Acuity will not be responsible under this Limited Warranty for any failure of the Product(s) that results from external causes such as: acts of nature, including but not limited to harmonic oscillation/winds, ice, or other related storm activity; physical damage; exposure to adverse or hazardous chemical or other substances; use of reactive cleaning agents and/or harsh chemicals to clean the Product(s); external site conditions, including but not limited to: accumulation of debris (natural or otherwise), heavy tree cover, cellular, satellite or radio interference; environmental conditions, including but not limited to: exposure to harsh, corrosive, non-condensing humidity conditions, marine or humidity conditions; vandalism; terroristic acts; fire; power failure, overheating, improper power supply, power surges or dips, and/or excessive switching; induced vibration; harmonic oscillation, or resonance associated with movement of air currents around Product(s); animal or insect activity; fault or negligence of purchaser, any end-user of the Product(s) and/or any third party not engaged by Acuity; improper or unauthorized access, use, installation, handling, storage, alteration, removal of components, testing, troubleshooting, maintenance or service; removal or interference with the tamper proof label indicating unauthorized opening of the unit; any housing, arm or gasket pierced for any reason ; failure to abide by any product classifications or certifications; failure to comply with any applicable standards, codes, recommendations, product specification sheets, or instructions of Acuity; failure of the end-user to provide full and complete requested data; use of the Product(s) with products, processes or materials supplied by any end-user or third party; or any other occurrences beyond Acuity's reasonable control. Acuity also will not be responsible under this Limited Warranty for any substantial deterioration in the Product finish that is caused by failure to clean, inspect, or maintain the finish of the Product(s). If the Product(s) are used on existing foundations, roofs, buildings, anchorages or structures, the end-user is solely responsible for the structural integrity of such existing foundations, roofs, buildings, anchorages or structures and all consequences arising from their use. Adequate records of operating history, maintenance, and/or testing (as applicable) must be kept by the end-user and provided to Acuity upon request to substantiate that the Product(s) have failed to comply with the terms of this Limited Warranty. Neither polycarbonate nor acrylic material used in the Products is warranted against yellowing or cracking, as yellowing and/or cracking may naturally occur over time due to normal aging. The Product(s) are not warranted against: cosmetic problems or defects that result from normal wear and tear under ordinary use and that do not affect the performance or use of the Product(s); nor are the Products warranted against costs that may be incurred in connection with changes or modifications to the Product(s) required to accommodate site conditions and/or faulty building construction or design; or failures of Acuity Product(s) resulting from installation or use of aftermarket third party supplied products, components, materials, software, services, telecommunications equipment, networks or the Internet. Acuity does not warrant that the Product(s) meet the applicable project requirements for performance, legality, safety, security, suitability, or effectiveness for use in a particular application. In no event will Acuity be responsible for any loss resulting from any application in which the Product(s) are used including any fines or penalties resulting from illegal use. Modifications/upgrades to Product Firmware that may be required to address changes in laws or regulations are outside the scope of this Limited Warranty. Product Firmware modifications/upgrades that result in changes to functionality to the Product are also outside the scope of this Limited Warranty.

The determination of whether any Product(s) fail to comply with the terms of this Limited Warranty shall be made by Acuity in its sole discretion, with consideration given to the overall performance of the Product(s) as compared to the expected performance per the applicable spec sheet. If the Product(s) are within the Warranty Period, Acuity has received payment in full for the Product(s), and Acuity determines to its satisfaction that the Product(s) fail to comply with the terms of this Limited Warranty, Acuity, at its option, will (a) with respect to defects in material and workmanship service, repair or replace the Product(s) with the same or a functionally equivalent Product(s) or component part(s), which may differ in appearance from the original or (b) with respect to non-conformances of the Product Firmware, will make available for installation a patch to be installed by the end-user within a commercially reasonable time frame to remedy the non-conformance. If the patch is not installed within a commercially reasonable time frame, the Limited Warranty will no longer apply with respect to such non-conformances. Acuity reserves the right to utilize new, reconditioned, refurbished, repaired, or remanufactured Product(s) or parts in the warranty repair or replacement process. For purposes of clarity, this Limited Warranty does not include any removal, commissioning, programming, or reinstallation costs or expenses, including without limitation any labor costs, equipment or other expenses required to remove and/or reinstall original or replacement Product(s) and/or parts. This Limited Warranty extends only to the Product(s) as delivered to, and is for the sole and exclusive benefit of, the original end-user of the Product(s) at the original location. This

Submitted by Lighting Associates, Inc.		Catalog Number: EXITS & EMERGENCY	Type: WARRANTY
	Job Name: NEWTON COUNTY ENRICHMENT CENTER - O&M's Engineer: Electrical Design Consultants - Macon (Macon)	Notes:	LAI24-242157



**STATEMENT OF LIMITED WARRANTY
FOR ACUITY BRANDS LIGHTING, INC
EMERGENCY/BATTERY
COMMERCIAL PRODUCTS
09.01.2021**

Warranty may not be transferred or assigned by the original end-user.

The repair or replacement of any Product(s) or component part within the Product(s) is the sole and exclusive remedy for failure of the Product(s) to comply with the terms of this Limited Warranty and does not extend the Warranty Period. Warranty claims regarding the Product(s) must be submitted in writing within thirty (30) days of discovery of the defect or failure to an authorized Acuity post-sales or customer service representative. Product(s) or component part(s) may be required to be returned for inspection and verification of non-conformance by Acuity, but no Product(s) or component part(s) will be accepted for inspection, verification or return unless accompanied by a "return authorization number" which can be obtained only from an authorized Acuity post-sales or customer service representative. Acuity is not responsible for any costs, expenses, or damages that may occur in connection with shipment of Product(s) to Acuity, but Acuity shall bear all cost and expense incurred in connection with shipment of replacement Product(s) to the end-user so long as Acuity has sole control over all aspects of shipment, including but not limited to Acuity shipping directly to the end-user. In no event will Acuity accept any other charges related to shipment by any other party. Replacement Product(s) and/or parts provided under the terms of this Limited Warranty are warranted for the remainder of the Warranty Period as if such Product(s) and/or parts were the original components.

THE FOREGOING WARRANTY TERMS ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, AND ACUITY EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, RELATING DIRECTLY OR INDIRECTLY TO THE PRODUCT(S), WHETHER ORAL, WRITTEN, OR ARISING BY COURSE OF DEALING OR USAGE OF TRADE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO AGENT, DISTRIBUTOR OR OTHER SUPPLIER OF ACUITY PRODUCTS HAS THE AUTHORITY TO MODIFY OR AMEND THIS WARRANTY WITHOUT EXPRESS WRITTEN AUTHORIZATION FROM ACUITY.

The total liability of Acuity on any and all claims of any kind, whether in contract, warranty, tort (including negligence), strict liability or otherwise, arising out of or in connection with, or resulting from, Acuity's performance or breach of this Limited Warranty, or from Acuity's sale, delivery, resale, repair, or replacement of any Product(s) or the furnishing of any services, shall in no event exceed the purchase price allocable to the Product(s) that give rise to the claim, and any and all such liability shall terminate upon the expiration of the Warranty Period specified above. Acuity shall not be liable for damages caused by any delays involving warranty services.

IN NO EVENT SHALL ACUITY BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES, ARISING OUT OF THE SALE OR PERFORMANCE OF ANY PRODUCTS OR SERVICES, OR ANY BREACH OF WARRANTY OR OBLIGATIONS UNDER WARRANTY EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER AS THE RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER THEORY, INCLUDING WITHOUT LIMITATION LABOR OR EQUIPMENT REQUIRED TO REMOVE AND/OR REINSTALL ORIGINAL OR REPLACEMENT PARTS, LOSS OF TIME, PROFITS OR REVENUES,

LACK OR LOSS OF PRODUCTIVITY, INTEREST CHARGES OR COST OF CAPITAL, COST OF SUBSTITUTE EQUIPMENT, SYSTEMS, SERVICES OR DOWNTIME COSTS, LOSS OR CORRUPTION OF DATA, DAMAGE TO OR LOSS OF USE OF PROPERTY OR EQUIPMENT OR ANY INCONVENIENCE ARISING OUT OF ANY BREACH OF THE FOREGOING WARRANTY OR OBLIGATIONS UNDER SUCH WARRANTY.

Acuity reserves the right to modify or discontinue this Limited Warranty without notice, provided that any such modification or discontinuance will only be effective with respect to any Product(s) purchased after such modification or discontinuance. If there is any conflict or inconsistency between the English language version of this Limited Warranty and any version translated into any other language, the English language version shall prevail. Trademarks referenced are trademarks of Acuity Brands Lighting, Inc. and if marked with the ® symbol are registered in the U.S. and may be registered in other countries.

This Limited Warranty shall be construed and enforced in the accordance with the laws of the State of Georgia and the applicable laws of the United States.

NOTE: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

NOTE: Acuity Brands is not a lighting specifier, and product recommendations for any lighting design project are for informational purposes only, without any warranty as to accuracy, completeness, legality for use in a particular application, or otherwise.

NOTE: The Product(s) must be returned within ten (10) days after receiving the return authorization number and the shipping box must be clearly marked with the return authorization number. Failure to follow this procedure will delay any potential warranty resolution.

Submitted by Lighting Associates, Inc.



Job Name:
NEWTON COUNTY ENRICHMENT CENTER -
O&M's
Engineer: Electrical Design Consultants - Macon
(Macon)

Catalog Number:
EXITS & EMERGENCY

Notes:


Type:
WARRANTY

LAI24-242157



**STATEMENT OF LIMITED WARRANTY
FOR ACUITY BRANDS LIGHTING, INC
EMERGENCY/BATTERY
COMMERCIAL PRODUCTS
09.01.2021**

Product(s) returned without a valid return authorization number will either be refused or returned to sender at sender's expense. NO PRODUCT RETURNS WILL BE ACCEPTED BY ACUITY IF NOT ACCOMPANIED BY A VALID RETURN AUTHORIZATION NUMBER.

Submitted by Lighting Associates, Inc.		Catalog Number: BLACKJACK	Type: WARRANTY
	Job Name: NEWTON COUNTY ENRICHMENT CENTER - O&M's Engineer: Electrical Design Consultants - Macon (Macon)	Notes:	LAI24-242157



BlackJack Lighting General Warranty

Blackjack Lighting, LLC (“Blackjack” OR “BLL”) warrants to the original purchaser only (the “Buyer”) of all Blackjack products (the “Product”) that conform to BLL’s specification and (b) is free from defects in material or workmanship. Blackjack provides a limited warranty against defects in materials or workmanship. Blackjack provides an additional limited three (3) year non-assignable warranty against defects in materials or workmanship. Blackjack provides an additional limited three (3) year non-assignable warranty against defects in materials or workmanship. Blackjack provides an additional limited three (3) year non-assignable warranty against defects in materials or workmanship. Blackjack provides an additional limited three (3) year non-assignable warranty against defects in materials or workmanship. These warranties are provided against failure to operate, provided the piece is proven to be defective. This warranty applies only under conditions of normal use in strict conformity with Blackjack supplied instructions and all applicable codes. The above warranty becomes effective from the date of purchase and is referred to collectively as the “Warranty Period”. This warranty is non-transferable.

Claims for defective product must be submitted in writing to BLL’s customer service via email to cs@blackjacklighting.com and must be received within the warranty period. Buyer will be requested to provide its original bill of sale or such other evidence showing the date of purchase and the identity of the product. BLL’s sole discretion may accept or reject. Once BLL determines that the Product is eligible for warranty, BLL will first issue a Return Goods Receipt (RGR) number and further instructions. Buyer will be required to deliver the affected Product along with bill of sale to BLL with its Return Freight Agreement (RFA) number, transportation or insurance costs required for the return delivery.

If Product is determined to be eligible under this warranty, Blackjack’s warranty obligations are limited to repair or replacement of the component. The warranty covers only the repair or replacement of the product or component itself. Blackjack has no liability for other damages (e.g., shipping, labor, removal, installation) or losses.

By way of example, the replacement in a Blackjack multi-port fixture or modular system (e.g., Quatro, Duo) of the LED module, LED transformer, or LED driver (collectively, “Light Source”) both during and after the Warranty Period is considered a standard maintenance activity. If a product is determined to be eligible under this warranty, BLL will cover the cost of providing replacement parts only for the LED Light Source and Blackjack explicitly will not cover any labor or Light Source replacement.

BLL will correct any failure of the Product or any defect in material or workmanship, with either new or used replacement parts sent to the Buyer. The Buyer may choose to repair of the Product at BLL’s expense, at a location specified by BLL, and BLL may choose to retain title to all replacement parts. If a product is determined to be eligible under this warranty, BLL will credit back to the Buyer all freight or transportation costs required for the return of the Product to conform to the warranty after a reasonable number of attempts, BLL will provide, at its option, a replacement Product(s) are warranted only for the remainder of the original warranty period.

This warranty does not apply to Products that have been modified, improperly installed, or used in conditions or for purposes other than those intended. This warranty does not warrant (a) any product, components or parts not manufactured by or distributed by BLL; (b) defects caused by failure to properly use and environment for the Product; (c) damage caused by the use of the Product for purposes other than those for which it was intended; (d) damage caused by unauthorized attachment or modification to the Product; (e) damage caused by the removal or installation of the Product; (f) damage caused by repair or attempted repair of the Product; (g) damage caused during shipping; (h) damage caused by acts of God such as fire, flood, war, or nuclear hazard; (i) damage caused by force majeure such as war, terrorism, pollution, earth movement, flood, or nuclear hazard; (j) damage caused by improper installation or misuse of the Product; or (l) product used in wet locations or harsh conditions without factory sealed connections.

In no event will BLL be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, or other legal theories. Damages that BLL will not be responsible for include, but are not limited to, loss of profits; loss of facilities or services; loss of downtime; the claims of third parties, including Buyer; and / or injury to person or property.

BLL reserves the right to provide warranty replacement with suitable substitutes that do not adversely affect the soundness or quality of the Product.

This warranty is understood to be the complete and exclusive warranty, superseding all oral or written prior representations or warranties made by Blackjack Lighting, LLC. No employee or agent of BLL or any other party is authorized to make any warranty in addition to those made in this document. This Warranty is voided for Product sold outside the U.S. and Canada.

Effective: January 1, 2021

Lifetime Warranty

Hapco warrants its aluminum pole assemblies for their lifetime to be free of defects in material and workmanship and to be free from corrosion, except those items normally consumed in service. This warranty does not cover failures or corrosion due to:

- Improper installation.
- Misapplication – product used outside of specified use.
- Damage from handling, transportation, installation, vehicular impact, abuse, or vandalism.
- Site specific wind induced or other vibration.
- Installation in soils with a pH under 5 or over 9.
- Improper grounding.

Hapco will, at its sole option, repair, replace, or credit Buyer's account for any product that does not conform to this warranty.

HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES AND BACK CHARGES.

This warranty does not include reimbursement for the expense of installation or removal of equipment, transportation, or any other expenses which may be incurred. This warranty applies to the pole assembly only and does not include anchor bolts, connecting hardware, or foundation. Authorization must be obtained from Hapco before any material is returned. This warranty excludes finishes such as powder coating, anodizing, and satin. "Lifetime" is defined as the lifetime of the products intended use. The foregoing states the Buyer's sole remedy for any breach of warranty by Hapco.

This warranty applies only to Hapco aluminum pole assemblies shipped on or after January 1st, 2011.

Hapco
 26252 Hillman Highway
 Abingdon, VA 24210
 Toll Free: 800-368-7171
 www.hapco.com

07-2016



Aluminum Finish Warranty Powder Coatings

HAPCO warrants its factory-applied powder coatings on Aluminum Poles will not fail or substantially deteriorate when the coated product is properly utilized and subjected to normal climatic exposure for a period of FIVE (5) YEARS from the date of shipment ("Warranty Period"). If during the Warranty Period, the aluminum pole exterior coating exhibits any cracking, peeling or excessive fading, Hapco will repair or replace the defective coating at its option, at no charge to the Purchaser, if the Purchaser promptly notifies Hapco in writing and furnishes proof of purchase when such failure or deterioration becomes evident.

Damage to the finish coating caused by improper handling during shipment and placement in service, or damage or failure caused by acts of God, falling objects, external forces, explosion, fire, riots, civil disturbance, acts of war, radiation, misuse or abuse in application or any other such occurrences beyond Hapco's control, is excluded.

The liability of Hapco under this warranty, or for any loss or damage arising out of or connected with the design, application, sale or use of the exterior coating, whether the claim is based on contract or negligence, shall not exceed the price allocable to the value of the original coating which gives rise to the claim and upon expiration of the Warranty Period all such liability shall terminate. Hapco shall not be liable for any special or consequential damages including, but not limited to, loss of profits or revenue, loss of use of equipment, substitute equipment cost or labor charged to remove or reinstall defective product, nor any product transportation expenses to and from Hapco's process plant if factory replacement of the defective coating is necessary. Authorization must be obtained from Hapco before any product is returned.

HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH MERCHANDISE OR FOR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LIQUIDATED DAMAGES AND BACK CHARGES.

The foregoing states the Buyer's sole remedy for any breach of warranty by Hapco.

Hapco
 26252 Hillman Highway
 Abingdon, VA 24210
 Toll Free: 800-368-7171
 www.hapco.com

07-2016



Hardware and Accessories Limited Warranty Aluminum Poles

In addition to the lifetime warranty on its aluminum pole assemblies, all additional equipment, apparatus, and parts are warranted against defects in materials and workmanship for a period of ONE (1) YEAR from the date of shipment, excepting those items normally consumed in service, unless failure is due to improper installation or misapplication.

HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH MERCHANDISE OR FOR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LIQUIDATED DAMAGES AND BACK CHARGES.

Hapco will, at its sole option, repair, replace or credit Buyer's account for any equipment or part which proves defective under its warranty provided that the Buyer notifies Hapco in writing of such defect within the appropriate warranty period. This warranty does not include reimbursement for the expense of installation, removal of equipment, transportation or any other expenses that may be incurred. Authorization must be obtained from Hapco before any material is returned.

The foregoing states the Buyer's sole remedy for any breach of warranty by Hapco.

Hapco
 26252 Hillman Highway
 Abingdon, VA 24210
 Toll Free: 800-368-7171
 www.hapco.com

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Steel Pole Warranty

Hapco warrants its steel pole assemblies to be free of defects in material and workmanship for a period of ONE (1) YEAR from the date of shipment. This warranty does not cover failures due to improper installation, misapplication (*product used outside of specified use*), improper grounding, or damage from handling, transportation, installation, vehicular impact, abuse, vandalism or excessive vibration caused by site specific wind conditions, the profile of the fixture, or other external factors.

This guarantee is limited to the repair or replacement of the material involved and does not include reimbursement for the expense of installation, removal of equipment, transportation, or any other expenses which may be incurred. Authorization must be obtained from Hapco at Abingdon, VA before any material is returned.

HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES AND BACK CHARGES.

The foregoing states the Buyer's sole remedy for any breach of warranty by Hapco.

Hapco
 26252 Hillman Highway
 Abingdon, VA 24210
 Toll Free: 800-368-7171
 www.hapco.com

07-2016



Steel Finish Warranty Powder Coatings

HAPCO warrants its factory-applied powder coatings on Steel Poles will not fail or substantially deteriorate when the coated product is properly utilized and subjected to normal climatic exposure for a period of ONE (1) YEAR from the date of shipment ("Warranty Period"). If during the Warranty Period, the steel pole exterior coating exhibits any cracking, peeling or excessive fading, Hapco will repair or replace the defective coating, at its option, at no charge to the Purchaser, if the Purchaser promptly notifies Hapco in writing and furnishes proof of purchase when such failure or deterioration becomes evident.

Damage to the finish coating caused by improper handling during shipment and placement in service, or damage or failure caused by acts of God, falling objects, external forces, explosion, fire, riots, civil disturbance, acts of war, radiation, misuse or abuse in application or any other such occurrences beyond Hapco's control, is excluded.

The liability of Hapco under this warranty, or for any loss or damage arising out of or connected with the design, application, sale or use of the exterior coating, whether the claim is based on contract or negligence, shall not exceed the price allocable to the value of the original factory applied powder coating which gives rise to the claim and upon expiration of the Warranty Period all such liability shall terminate. Hapco shall not be liable for any special or consequential damages including, but not limited to, loss of profits or revenue, loss of use of equipment, substitute equipment cost or labor charged to remove or reinstall defective product, nor any product transportation expenses to and from Hapco's process plant if factory replacement of the defective coating is necessary. Authorization must be obtained from Hapco before any product is returned.

HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES AND BACK CHARGES.

The foregoing states the Buyer's sole remedy for any breach of warranty by Hapco.

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07-2016



Hardware and Accessories Limited Warranty Steel Poles

In addition to the warranty on its steel pole assemblies, all additional equipment, apparatus, and parts are warranted against defects in materials and workmanship for a period of ONE (1) YEAR from the date of shipment, excepting those items normally consumed in service, unless failure is due to improper installation or misapplication.

HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH MERCHANDISE OR FOR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LIQUIDATED DAMAGES AND BACK CHARGES.

Hapco will, at its sole option, repair, replace or credit Buyer's account for any equipment or part which proves defective under its warranty provided that the Buyer notifies Hapco in writing of such defect within the appropriate warranty period. This warranty does not include reimbursement for the expense of installation, removal of equipment, transportation or any other expenses that may be incurred. Authorization must be obtained from Hapco before any material is returned.

The foregoing states the Buyer's sole remedy for any breach of warranty by Hapco.

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07-2016





Terms and Conditions of Sale

LumenWerx manufactures its luminaires to exact specifications. We guarantee warranties that its luminaires will be free of any defects in workmanship and materials. LumenWerx also reserves the right to modify this warranty at any time. Due to advances in technology, replacement products may have light properties deviating from the original product. This warranty is valid only to the original purchaser.

- **All LED luminaires are delivered with a 5-year/five-year warranty against defects in materials and workmanship that would cause operational failure of the luminaire, provided the following:**
 - a. The fixture must have been purchased either directly from Lumenwerx or through one of its authorized representatives.
 - b. The fixture has been installed and operated within the parameters set forth on the specification and installation guide related to that fixture. The warranty shall be deemed voided if the fixture is modified, installed incorrectly or operated in unsuitable environments.
 - c. This warranty coverage is limited to only the materials provided. Lumenwerx shall not be responsible for labour and other charges that can be deemed to be associated with or the result of this warranty coverage.
 - d. This warranty does not cover labor or equipment to remove and install fixtures or failed components. Depending on the nature of the warranty claim Lumenwerx may be required to send replacement fixtures. Should the fixture no longer be available the client will have the option for a similar replacement fixture. It shall be at the sole discretion of Lumenwerx to decide if replacement parts or fixtures are being provided.
 - e. Drivers are covered under the manufacturer's warranty.
 - f. All requests for warranty coverage must be pre-approved by Lumenwerx. Lumenwerx shall not accept any charge for repairs, labour or any other related costs without prior written approval. When applicable, Lumenwerx reserves the right to execute any warranty coverage work directly.

- **Non-LED luminaire Warranty**

Non-LED products (excluding lamps and ballasts) manufactured by LumenWerx are guaranteed against defects in material or workmanship for a period of 1 (one) year from date of shipment from factory

 - a. Drivers, ballasts and lamps (herewith known as "*components*") are covered under the warranty of their specific manufacturer as well as all other components used by LumenWerx were the component is covered by the manufacturer's warranty. Any and all claims resulting from defective components must be made directly to the service centers of the respective component manufacturers.
 - b. Lamps are supplied by others, unless noted in writing. If lamps are supplied by LumenWerx, no responsibility or liability is assumed by LumenWerx with regards to damage or breakage to either

- ▶ (T) 514-225-4304
- ▶ (F) 514-931-4862
- ▶ (W) www.lumenwerx.com
- ▶ 3737 Cote Vertu, St. Laurent, QC, Canada H4R2C9



the lamp or the fixture which may occur during transit.

- **Payment Terms**

All orders are subject to credit approval. All invoices must be paid in full within 30 days from date on invoice. Late payments will be subject to a 2% service charge per month. Delivery and manufacturing of an order on the part of LumenWerx is contingent on material availability and approved shop drawings. Invoices must be paid in full for the warranty to be valid.

- **Quotations**

Prices on quotation are valid for 30 days from the date of quote. Quoted price are valid for the specific project based on quantities, location, and terms shown. Changes or modifications to the order may require a revision to the quote.

- **Pricing**

Pricing is subject to change without notice. Orders placed on hold or delayed longer than 6 (six) months from date of quote will need to be requoted. Pricing is only valid when provided directly from LumenWerx.

- **Order Acknowledgement and Acceptance**

Orders received and accepted by LumenWerx will be acknowledged by LumenWerx by way of written receipt of order approval.

- **Cancellations**

All orders in-house with client-approved shop drawings are confirmed orders and, as such, cannot be cancelled without incurring a cancellation fee based upon materials and labor. Orders requiring custom parts may incur additional cancellation charges.

- **Shipment Dates**

While LumenWerx strives to meet all deadlines, shipment dates are only an estimate and should not be considered a guaranteed shipping date. LumenWerx shall not be held liable for any penalties or chargebacks based on actual shipment date or delays in shipping. Orders are not cancelable or returnable due to delays in shipping dates.

- **Returns – RGA & restocking fees**

LumenWerx must provide a RGA (Returned Goods Authorization) prior to any merchandise being returned. Any merchandise returned without a RGA will not be accepted. All material must be returned in its original factory packaging. Any freight charges resulting from the return of goods are the responsibility of the client and shall not be incurred or charged to LumenWerx. All returned goods are subject to a minimum restocking fee of 50%. Minimum restocking fee of \$300.00 applies to all returns.

- ▶ (T) 514-225-4304
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- ▶ (W) www.lumenwerx.com
- ▶ 3737 Cote Vertu, St. Laurent, QC, Canada H4R2C9

Job Name:NEWTON COUNTY ENRICHMENT CENTER -
O&M's
Engineer: Electrical Design Consultants - Macon
(Macon)**Catalog Number:**

LUMENWERX

Notes:

Type:**WARRANTY**

LAI24-242157



- **Freight Terms**

All deliveries are F.O.B. factory. Freight will be pre-paid by LumenWerx on all shipments with a value of \$5,000.00 net. \$5,000.00 net is based upon the net value of the shipment, not the net value of the order. Pre-paid freight is valid within the continental United States and Canada. Prepaid freight is not valid on shipments with a final destination in Alaska, Hawaii, Yukon, Nunavut or the Northwest Territories. Please contact the factory regarding these destinations in addition to international shipments. Additional charges will apply for partial, express or dedicated shipments.

- **Claims**

Any damages to products shipped by LumenWerx must be reported to the transportation company and to LumenWerx at the time it is received. The ownership of goods transfers to purchaser at the time of pick up in Montreal, Quebec. Any claims due to damage or failure in shipment, in addition to any claim of short shipment must be made to the transportation company directly. Any claim regarding missing parts, quality issues or damage in manufacturing must be made to LumenWerx within 15 days from receipt of goods.

- **Product Design**

All product design is the property of LumenWerx and is subject to change without prior notice.

- ▶ (T) 514-225-4304
- ▶ (F) 514-931-4862
- ▶ (W) www.lumenwerx.com
- ▶ 3737 Cote Vertu, St. Laurent, QC, Canada H4R2C9

Proposal Name: NEWTON COUNTY
ENRICHMENT

Quote Name: NEWTON COUNTY ENRICHMENT

Proposal #: P-240528-4515693

Quote #: Q-5050287

Addendum #: 0

Quote Date: 10/10/2024

Sales Representative: Ian Johnstone

Prepared For:

Distributor: REXEL USA INC DBA MAYER

Contractor/Installer: MOSELEY ELECTRIC CO

Consultant/Specifier: MOSELEY ELECTRIC CO

End Customer: MOSELEY ELECTRIC CO

Prepared by:

TJ Nolan

REXEL USA INC DBA MAYER

9120 Old City Pond Road

Covington, GA

tnolan@mayerelectric.com

D: 770-929-0160

Prepared By:

Mike Brown
4972 Clark Howell Highway
College Park, GA 30349
mbrown@mayerelectric.com
D:404-768-1476

Order Number: 0050952140

Proposal Name: NEWTON COUNTY ENRICHMENT

Quote Name: NEWTON COUNTY ENRICHMENT

Proposal Number: P-240528-4515693

Quote Number: Q-5050287

Quote Date: 10/10/2024

Through Addenda Number: 0

Sales Representative: Ian Johnstone

Conditions of Sale

Except as otherwise provided below, this Quotation is subject to Coordinated Project Terms. See <https://www.schneider-electric.us/en/download/document/0100PL0043>

Notwithstanding any provision to the contrary in the referenced Coordinated Project Terms or any other documentation provided in connection with this proposal, this quote is valid for 30 days. Quoted lead times are approximate and subject to change.

Schneider Electric reserves the right to amend, withdraw or otherwise alter this submission without penalty or charge as a result of any event beyond its control arising from or due to the current Covid-19 epidemic or events subsequent to this epidemic / pandemic including changes in laws, regulations, by laws or direction from a competent authority.

TABLE OF CONTENTS

Panelboards

Safety Switches

Surge Protection Devices

This Section Contains Products: Panelboards



Proposal Name: NEWTON COUNTY
ENRICHMENT
Quote Name: NEWTON COUNTY
ENRICHMENT
Order Number: 0050952140

Quote Number: Q-5050287
Quote Date: 10/10/2024

Seq #	Qty	Product Description
2	1	Designation : LA/LA2

Product Details:
1-NQ ML Panel (INTERIOR) - A-NQ Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 42kA
Feeders Series Rated w/ LG Circuit Breaker
Main Lug Only: 400A
Main Acc: Feed Thru Lugs
Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil
Bus: 400A Rated Copper: Silver/Tin Plated
CU Ground Bar
42 Circuit Interior
Type 1,Box: 56H x 20W x 5.75D
Incoming: Bottom Trim: Surface with Door
Box Cat No: MH56 Front Cat No: NC56VS
Ref. Drawing: PBA709A
Feeders:
1 - 60A/3P QOB-VH
3 - 60A/2P QOB
2 - 45A/2P QOB
3 - 40A/2P QOB
2 - 25A/2P QOB
1 - 30A/1P QOB
18 - 20A/1P QOB
Optional Features:
Standard Panel (Box Ahead),Copper Solid
Neutral,Same Height Boxes,Copper Ground
Bar
1-MH56-PANELBOARD ENCLOSURE/BOX TYPE 1 56H 20W
1-NC56VS-PANELBOARD COVER/TRIM NF TYPE 1 VS 56H
1-NQ ML Panel (INTERIOR) - B-NQ Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 42kA
Feeders Series Rated w/ LG Circuit Breaker
Main Lug Only: 400A
Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil
Bus: 400A Rated Copper: Silver/Tin Plated
CU Ground Bar
42 Circuit Interior
Type 1,Box: 56H x 20W x 5.75D
Incoming: Top Trim: Surface with Door
Box Cat No: MH56 Front Cat No: NC56VS
Ref. Drawing: PBA709A
Feeders:
42 - 20A/1P QOB
Optional Features:
Standard Panel (Box Ahead),Copper Solid
Neutral,Same Height Boxes,Copper Ground
Bar
1-MH56-PANELBOARD ENCLOSURE/BOX TYPE 1 56H 20W
1-NC56VS-PANELBOARD COVER/TRIM NF TYPE 1 VS 56H

Seq #	Qty	Product Description
3	1	Designation : LB/LB2

Product Details:
1-NQ ML Panel (INTERIOR)-NQ Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 42kA
Feeders Series Rated w/ LG Circuit Breaker
Main Lug Only: 400A
Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil
Bus: 400A Rated Copper: Silver/Tin Plated
CU Ground Bar



Proposal Name: NEWTON COUNTY
ENRICHMENT

Quote Number: Q-5050287
Quote Date: 10/10/2024

Quote Name: NEWTON COUNTY
ENRICHMENT

Order Number: 0050952140

84 Circuit Interior
Type 1,Box: 68H x 20W x 5.75D
Incoming: Bottom Trim: Surface with Door
Box Cat No: MH68 Front Cat No: NC68VS
Ref. Drawing: PBA709A
Feeders:
1 - 60A/3P QOB-VH ST
2 - 60A/3P QOB-VH
1 - 20A/3P QOB-VH
3 - 40A/2P QOB
1 - 20A/1P QOB ST
32 - 20A/1P QOB
18 - 20A/1P QOB Prepared Space
7 - 20A/1P QOB-GFI
1 - 50A/3P QOB-VH ST
1 - 25A/2P QOB
Optional Features:
Standard Panel (Box Ahead),Copper Solid
Neutral,Copper Ground Bar
1-MH68-PANELBOARD ENCLOSURE/BOX TYPE 1 68H 20W
1-NC68VS-PANELBOARD COVER/TRIM NF TYPE 1 VS 68H

Seq #	Qty	Product Description
4	1	Designation : LC

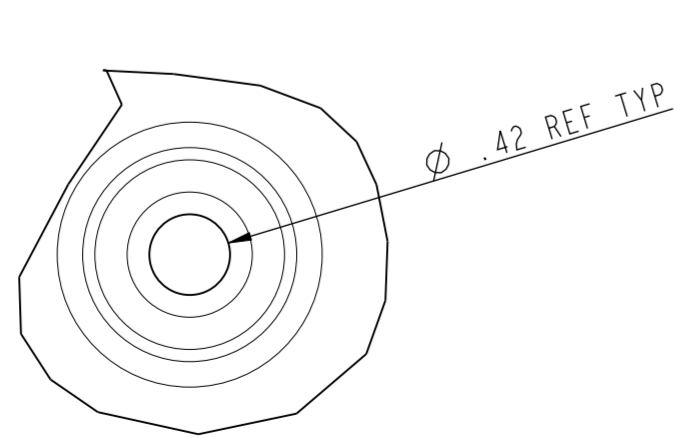
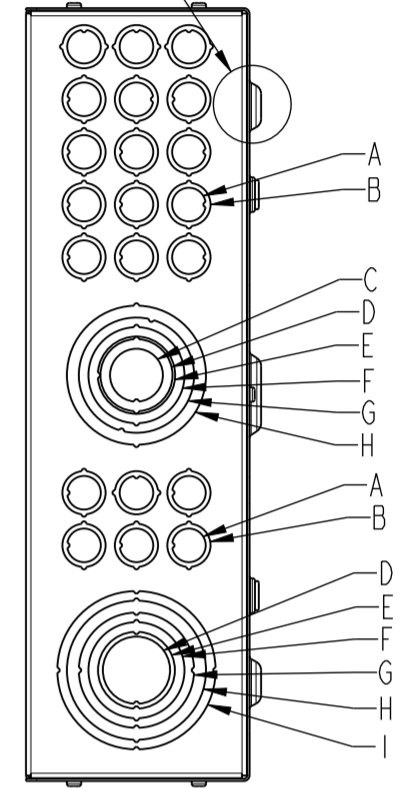
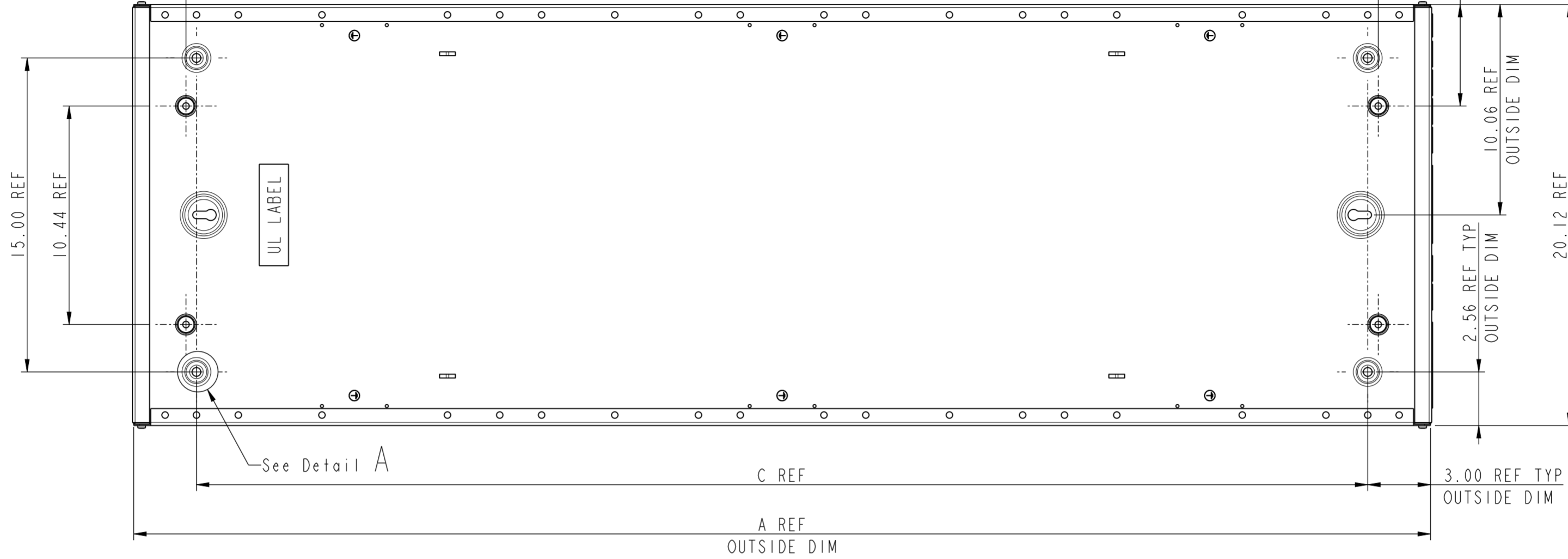
Product Details:
1-NQ ML Panel (INTERIOR)-NQ Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 42kA
Feeders Series Rated w/ LG Circuit Breaker
Main Lug Only: 400A
Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 -
350 kcmil
Bus: 400A Rated Copper: Silver/Tin Plated
CU Ground Bar
54 Circuit Interior
Type 1,Box: 56H x 20W x 5.75D
Incoming: Bottom Trim: Surface with Door
Box Cat No: MH56 Front Cat No: NC56VS
Ref. Drawing: PBA709A
Feeders:
1 - 60A/3P QOB-VH
3 - 60A/2P QOB
1 - 30A/2P QOB
25 - 20A/1P QOB
1 - 20A/2P QOB Prepared Space
1 - 45A/2P QOB
1 - 20A/2P QOB
Optional Features:
Standard Panel (Box Ahead),Copper Solid
Neutral,Copper Ground Bar
1-MH56-PANELBOARD ENCLOSURE/BOX TYPE 1 56H 20W
1-NC56VS-PANELBOARD COVER/TRIM NF TYPE 1 VS 56H

2.50 REF TYP
OUTSIDE DIM

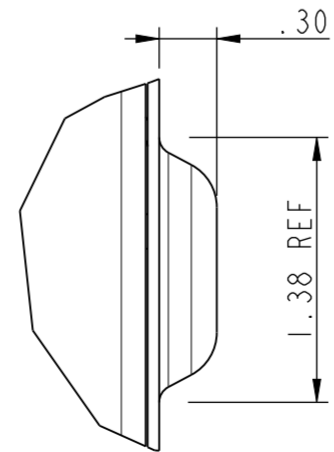
B REF

4.86 REF TYP
OUTSIDE DIM

See Detail B



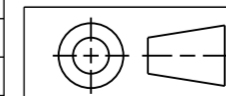
DETAIL A
SCALE 1.000



DETAIL B
SCALE 1.000

KNOCKOUTS		
SYMBOL	CONDUIT SIZE	KNOCKOUT DIAMETER
A	.50	.88
B	.75	1.12
C	1.00	1.376
D	1.25	1.75
E	1.50	2.00
F	2.00	2.50
G	2.50	3.00
H	3.00	3.62
I	3.50	4.12

REF CAT NO	A	B	C
MH26	26.00	21.00	20.00
MH32	32.00	27.00	26.00
MH38	38.00	33.00	32.00
MH44	44.00	39.00	38.00
MH50	50.00	45.00	44.00
MH56	56.00	51.00	50.00
MH62	62.00	57.00	56.00
MH68	68.00	63.00	62.00
MH74	74.00	69.00	68.00
MH80	80.00	75.00	74.00
MH86	86.00	81.00	80.00
MH92	92.00	87.00	86.00



Scale: 0.250

Technical Specification:

Units of measure: in



CUSTOMER DRAWING
NEMA 1 ENCLOSURES

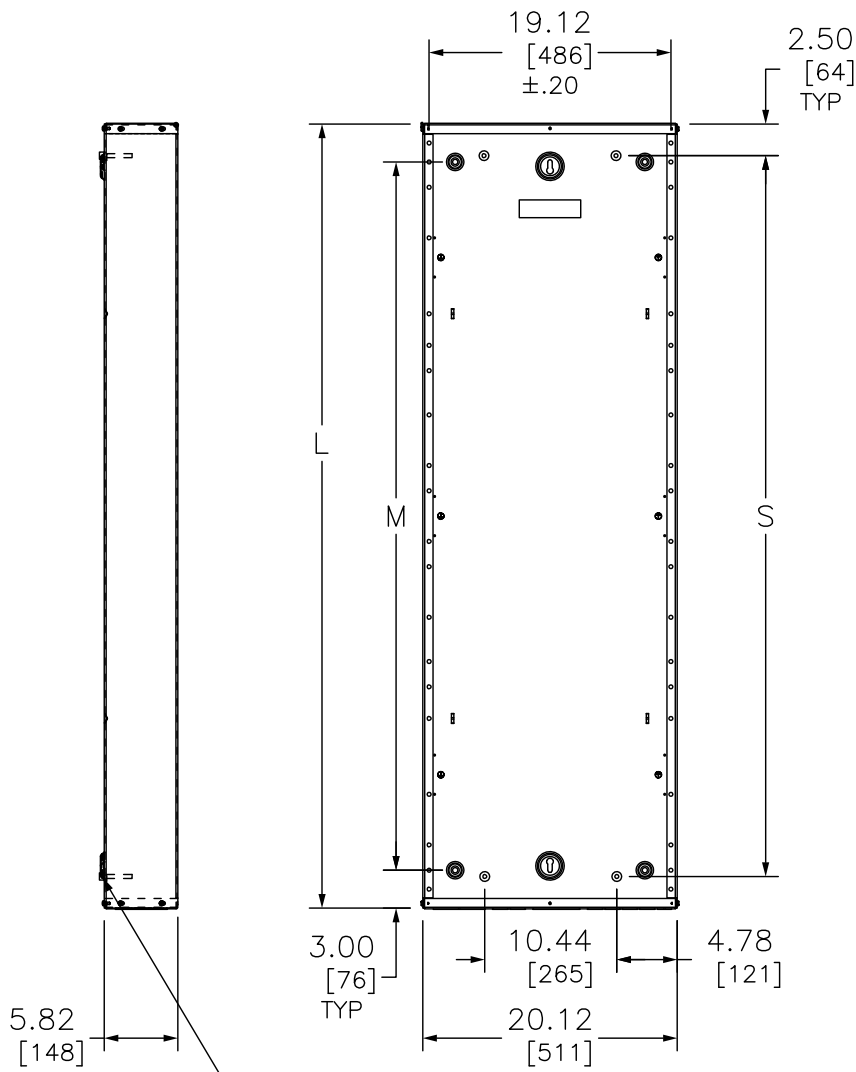
Document Number: 80116-393-5X

Doc. Rev. 00
Sheet: 1/1

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State:

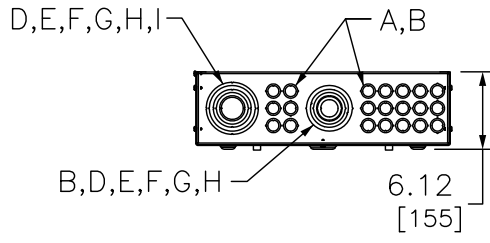
REV	DESCRIPTION	BY	DATE				
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DIMPLES ARE .30/[8] DEEP

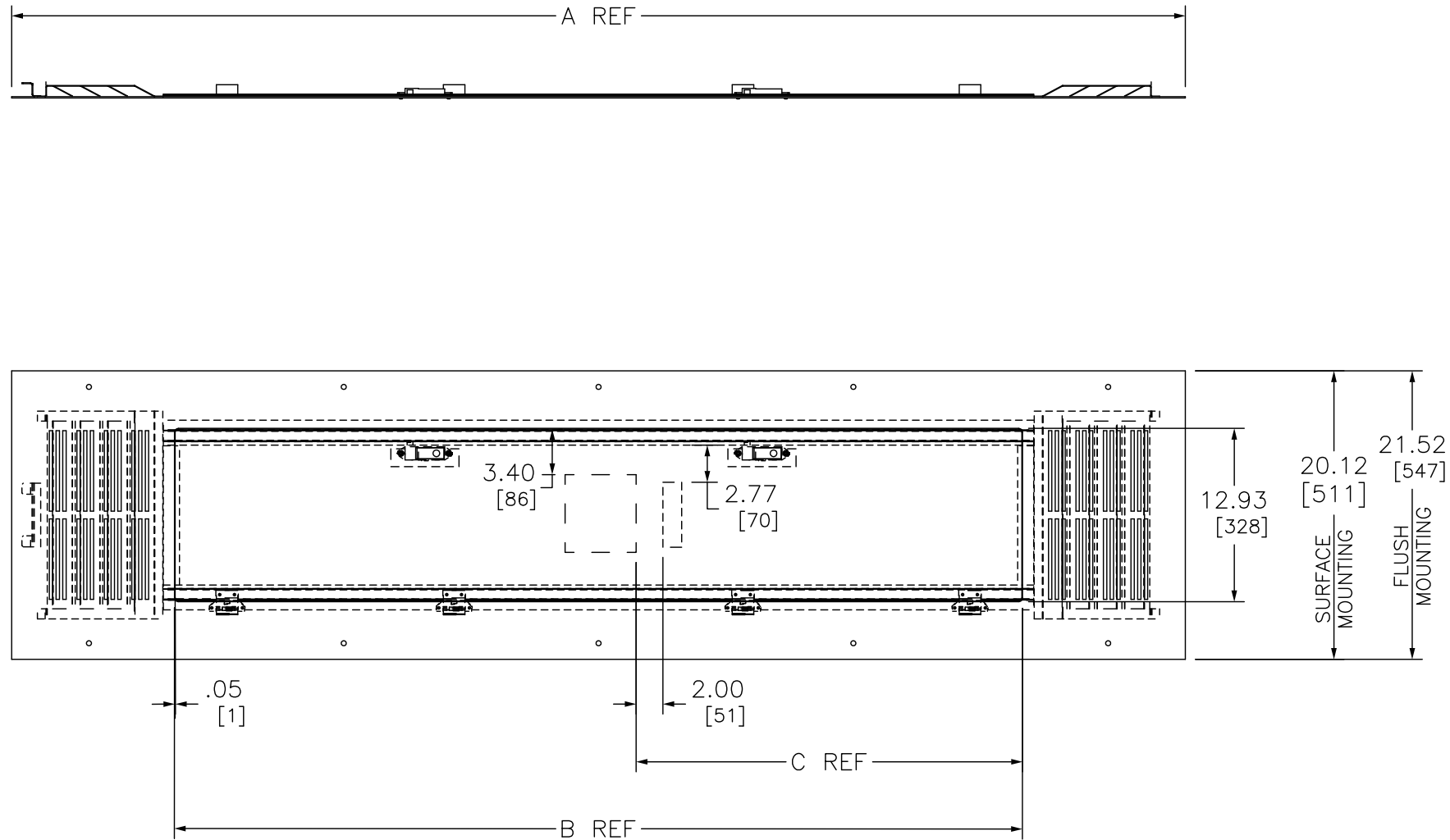
SYMBOL	KNOCKOUTS			
	CONDUIT SIZE		KNOCKOUT DIA	
	IN	MM	IN	MM
A	.50	13	.88	22
B	.75	19	1.12	28
D	1.25	32	1.75	44
E	1.50	38	2.00	51
F	2.00	51	2.50	64
G	2.50	64	3.00	76
H	3.00	76	3.62	92
I	3.50	89	4.12	105

DUAL DIMENSIONS: INCHES MILLIMETERS



REFERENCE CATALOG NO	L		S		M	
	IN	MM	IN	MM	IN	MM
MH26	26.00	660	21.00	533	20.00	508
MH32	32.00	813	27.00	686	26.00	660
MH38	38.00	965	33.00	838	32.00	813
MH44	44.00	1118	39.00	991	38.00	965
MH50	50.00	1270	45.00	1143	44.00	1118
MH56	56.00	1422	51.00	1295	50.00	1270
MH62	62.00	1575	57.00	1448	56.00	1422
MH68	68.00	1727	63.00	1600	62.00	1575
MH74	74.00	1880	69.00	1753	68.00	1727
MH80	80.00	2032	75.00	1905	74.00	1880
MH86	86.00	2184	81.00	2057	80.00	2032
MH92	92.00	2337	87.00	2210	86.00	2184

JOB NAME: ----	EQUIPMENT DESIGNATION: ----
JOB LOCATION: ----	EQUIPMENT TYPE: NEMA 1 BOXES
DRAWN BY: ----	DRAWING TYPE: ----
ENGR: ----	
DATE: JULY 2018	
DRAWING STATUS: ----	DWG# PBA600



CATALOG NUMBER	A		B		C	
	IN	MM	IN	MM	IN	MM
NC50VS	50.12	1273	27.24	692	10.82	275
NC56VS	56.12	1425	33.24	844	13.82	351
NC62VS	62.12	1578	39.24	997	16.82	427
NC68VS	68.12	1730	45.24	1149	19.82	503
NC74VS	74.12	1883	51.24	1301	22.82	580
NC80VS	80.12	2035	57.24	1454	25.82	656
NC50VF	51.52	1309	27.24	692	10.82	275
NC56VF	57.52	1461	33.24	844	13.82	351
NC62VF	63.52	1613	39.24	997	16.82	427
NC68VF	69.52	1766	45.24	1149	19.82	503
NC74VF	75.52	1918	51.24	1301	22.82	580
NC80VF	81.52	2071	57.24	1454	25.82	656
NC86VS	86.12	2187	63.24	1606	28.82	732
NC86VF	87.52	2223	63.24	1606	28.82	732
NC44VS	44.12	1121	21.24	539	7.82	199
NC44VF	45.52	1131	21.24	539	7.82	199
NC44VSL3R3	44.12	1121	21.24	539	7.82	199
NC50VSL3R3	50.12	1273	27.24	692	10.82	275
NC56VSL3R3	56.12	1425	33.24	844	13.82	351
NC62VSL3R3	62.12	1578	39.24	997	16.82	427
NC68VSL3R3	68.12	1730	45.24	1149	19.82	503
NC74VSL3R3	74.12	1883	51.24	1301	22.82	580
NC80VSL3R3	80.12	2035	57.24	1454	25.82	656
NC86VSL3R3	86.12	2187	63.24	1606	28.82	732
NC92VSL3R3	92.12	2340	69.24	1759	31.82	808
NC53VS	53.12	1349	30.24	768	12.32	313
NC53VF	54.52	1385	30.24	768	12.32	313
NC65VS	65.12	1690	42.24	1073	18.32	465
NC65VF	66.52	1680	42.24	1073	18.32	465
NC92VS	92.12	2340	69.24	1759	31.82	808
NC92VF	93.52	2375	66.24	1682	31.82	808

DUAL DIMENSIONS: INCHES
MILLIMETERS

PANELBOARD COVER
TRIM TYPE 1
SURFACE/FLUSH



DWG# PWFDS-SYTI-0167
NO.

Product data sheet

Characteristics

MH68

Panelboard enclosure box, NQ/NF, Type 1, 20in W x 68in H x 5.75in D



Product availability: Stock - Normally stocked in distribution facility

Price*: 113.00 USD



Main

Product or Component Type	Enclosure
---------------------------	-----------

Complementary

Enclosure Material	Steel
Height	68 In (1727.2 mm)
Width	20 In (508 mm)
Depth	5.75 In (146.05 mm)

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	US1PE1A07969
Discount Schedule	PE1A
GTIN	785901758099
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	5.98 In (15.2 cm)
Package 1 Width	20.12 In (51.1 cm)
Package 1 Length	68.11 In (173.0 cm)
Package weight(Lbs)	50.230 Lb(US) (22.784 kg)

Environmental data

Total lifecycle Carbon footprint	212 kg CO2 eq.
Carbon footprint of the manufacturing-phase [A1 to A3]	152.8121239606
Carbon footprint of the manufacturing-phase [A1 to A3]	153 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	6.5678358804
Carbon footprint of the distribution phase [A4]	7 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.291909917
Carbon footprint of the installation phase [A5]	0.3 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	0
REACH free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	0 kg CO2 eq.
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	No
RoHS exemption information	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	52.3982967699
Carbon footprint of the end-of-life phase [C1 to C4]	52 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Carbon footprint (kg CO2 eq, Total Life cycle)	212
Packaging made with recycled cardboard	No
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Circularity Profile	No need of specific recycling operations
Take-back	No

Contractual warranty

Warranty	18 months
----------	-----------

Product Life Status : **Commercialised**

Product data sheet

Characteristics

NC68VS

Panelboard enclosure cover, NQ/NF, Type 1, surface, ventilated, for 20in W x 68in H box



Product availability: Stock - Normally stocked in distribution facility

Price*: 948.00 USD



Main

Product or Component Type	Surface cover
Color	Gray
Cover type	Surface cover
Type of front plate	Ventilated

Complementary

Enclosure Material	Steel
Height	68.12 In (1730.25 mm)
Width	20.12 In (511.05 mm)
Tightening torque	Cover 10...12 lb.in

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	US1PE1A08352
Discount Schedule	PE1A
GTIN	785901799047
Returnability	Yes

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	2.00 In (5.08 cm)
Package 1 Width	22.00 In (55.88 cm)
Package 1 Length	70.00 In (177.8 cm)

Package weight(Lbs)	36.99 Lb(US) (16.78 kg)
Unit Type of Package 2	PAL
Number of Units in Package 2	16
Package 2 Height	40.00 In (101.6 cm)
Package 2 Width	42.00 In (106.68 cm)
Package 2 Length	72.00 In (182.88 cm)
Package 2 Weight	752.006 Lb(US) (341.104 kg)

Environmental data

California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	No
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Packaging made with recycled cardboard	No
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Circularity Profile	No need of specific recycling operations
Take-back	No

Contractual warranty

Warranty	18 months
----------	-----------

Product Life Status :	Commercialised
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Product data sheet

Characteristics

MH56

Panelboard enclosure box, NQ/NF, Type 1, 20in W x 56in H x 5.75in D



Product availability: Stock - Normally stocked in distribution facility

Price*: 113.00 USD



Main

Product or Component Type	Enclosure
---------------------------	-----------

Complementary

Enclosure Material	Steel
Height	56 In (1422.4 mm)
Width	20 In (508 mm)
Depth	5.75 In (146.05 mm)

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	US1PE1A07969
Discount Schedule	PE1A
GTIN	785901487494
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	5.91 In (15.0 cm)
Package 1 Width	20.20 In (51.3 cm)
Package 1 Length	56.18 In (142.7 cm)
Package weight(Lbs)	42.0003 Lb(US) (19.051 kg)

Environmental data

Total lifecycle Carbon footprint	177 kg CO2 eq.
Carbon footprint of the manufacturing-phase [A1 to A3]	127.7749198373
Carbon footprint of the manufacturing-phase [A1 to A3]	128 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	5.4917416326
Carbon footprint of the distribution phase [A4]	5 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.2440825066
Carbon footprint of the installation phase [A5]	0.2 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	0
REACH free of SVHC	Yes
Carbon footprint of the use phase [B2, B3, B4, B6]	0 kg CO2 eq.
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	No
RoHS exemption information	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	43.81320013
Carbon footprint of the end-of-life phase [C1 to C4]	44 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Carbon footprint (kg CO2 eq, Total Life cycle)	177
Packaging made with recycled cardboard	No
Packaging without single use plastic	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Circularity Profile	No need of specific recycling operations
Take-back	No

Contractual warranty

Warranty	18 months
----------	-----------

Product Life Status : **Commercialised**

Product data sheet

Characteristics

NC56VS

Panelboard enclosure cover, NQ/NF, Type 1, surface, ventilated, for 20in W x 56in H box



Product availability: Stock - Normally stocked in distribution facility

Price*: 786.00 USD



Main

Product or Component Type	Surface cover
Color	Gray
Cover type	Surface cover

Complementary

Enclosure Material	Steel
Height	56.12 In (1425.45 mm)
Width	20.12 In (511.05 mm)
Tightening torque	Cover 10...12 lb.in

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	US1PE1A08352
Discount Schedule	PE1A
GTIN	785901798965
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	1.50 In (3.810 cm)
Package 1 Width	21.81 In (55.397 cm)
Package 1 Length	57.72 In (146.609 cm)

Package weight(Lbs)	33.001 Lb(US) (14.969 kg)
Unit Type of Package 2	PAL
Number of Units in Package 2	16
Package 2 Height	40.00 In (101.600 cm)
Package 2 Width	42.00 In (106.680 cm)
Package 2 Length	60.00 In (152.400 cm)
Package 2 Weight	528.0009 Lb(US) (239.497 kg)

Environmental data

California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
Toxic heavy metal free	Yes
Mercury free	Yes
Sustainable packaging	No
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Packaging made with recycled cardboard	No
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Circularity Profile	No need of specific recycling operations
Take-back	No

Contractual warranty

Warranty	18 months
----------	-----------

Product Life Status : **Commercialised**

This Section Contains Products: Safety Switches

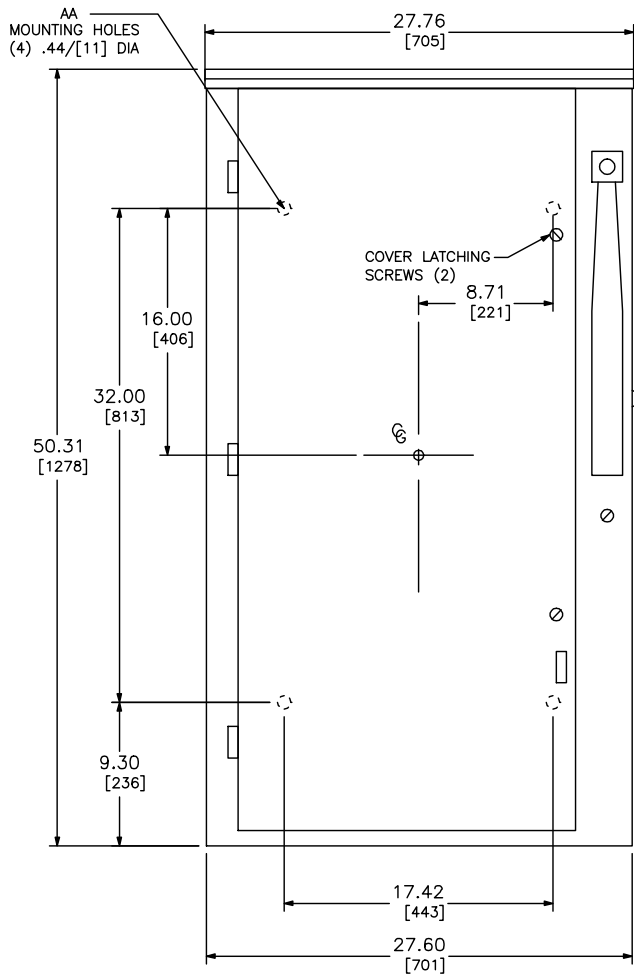


Proposal Name: NEWTON COUNTY
ENRICHMENT
Quote Name: NEWTON COUNTY
ENRICHMENT
Order Number: 0050952140

Quote Number: Q-5050287
Quote Date: 10/10/2024

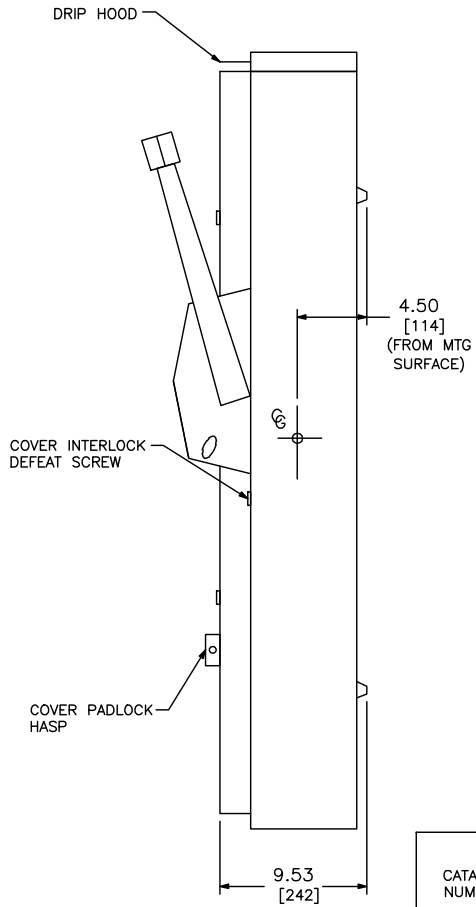
Seq #	Qty	Product Description
5	3	Designation : Product Details: H325NR-SWITCH FUSIBLE HD 240V 400A 3P NEMA 3R

Seq #	Qty	Product Description
6	6	Designation : Product Details: PKOGTA2-EQUIP GRD ASSY 240V + 600V 100-200

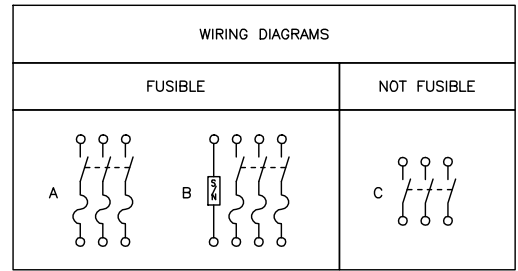


NEMA TYPE 3R
NO KNOCKOUTS

NOTES:
FINISH - GRAY BAKED ENAMEL
UL LISTED - FILE E-154828
ALL NEUTRALS - INSULATED GROUNDABLE
SUITABLE FOR USE AS SERVICE EQUIPMENT
SHORT CIRCUIT CURRENT RATINGS:
10,000 AMPERES WHEN USED WITH OR PROTECTED BY CLASS H OR K FUSES.
200,000 AMPERES WHEN USED WITH OR PROTECTED BY CLASS R FUSES HAVING
CLASS R REJECTION KITS INSTALLED OR CLASS J FUSES.



NOTE: SIDE HINGED DOOR



TERMINAL LUGS DATA

AMPERE	MAX WIRE	MIN WIRE	TYPE
400	(1) 750 KCMIL OR	(1) #1/0 AWG OR	AL OR CU
	(2) 300 KCMIL	(2) #1/0 AWG	

SEISMIC NOTES:
USE (4) 3/8" DIA GRADE 5 STEEL MOUNTING BOLTS @ HOLES AA
MAX CONFIGURED WEIGHT 179 LB FOR THE PURPOSE OF DETERMINING
SEISMIC ANCHORAGE REQUIREMENTS. FOR ALL OTHER APPLICATIONS,
CONTACT SCHNEIDER ELECTRIC.

DUAL DIMENSIONS: INCHES
MILLIMETERS

CATALOG NUMBER	VOLTAGE RATINGS	WIRING DIAG	HORSEPOWER RATINGS							
			240VAC		480VAC		600VAC		250 VDC	600 VDC
			STD	MAX	STD	MAX	STD	MAX	STD	STD
H325NR	240VAC;250VDC	B	50	125	-	-	-	-	50	-
H325R	240VAC;250VDC	A	50	125	-	-	-	50	-	
H365NR	600VAC;600VDC	B	50	125	100	250	125	350	50	50
H365R	600VAC;600VDC	A	50	125	100	250	125	350	50	50
HU365R	600VAC;600VDC	C	-	125	-	250	-	350	50	50

HEAVY DUTY SAFETY SWITCHES
VISIBLE BLADE TYPE
400 AMPERE - SERIES E5
ENCLOSURE - NEMA TYPE 3R RAINPROOF (SUFFIX R)
SEISMIC



DWG# 3455S
NO.

Product data sheet

Characteristics

H325NR

Safety switch, heavy duty, fusible, 400A, 4 wire, 3 pole, 1 neutral, 125hp, 240VAC/250VDC, NEMA 3R



Product availability: Stock - Normally stocked in distribution facility

Price*: 4322.00 USD



Main

Product or Component Type	Single Throw Safety Switch
Series name	Heavy duty
Device Application	Heavy application
Disconnecter device type	Fusible disconnect
Device Composition	Neutral (factory installed)
Number of poles	3
Line Rated Current	400 A
[Ue] rated operational voltage	250 V DC 240 V AC
NEMA degree of protection	NEMA 3R galvanized steel
Motor power hp	50 Hp at 240 V AC 50-60 Hz for 3 phase motors 125 Hp at 240 V AC 50-60 Hz for 3 phase motors 50 Hp at 250 V DC

Complementary

Short-circuit current	10 KA for H or K 200 KA for R or J
Fuse type	H or K R or J
Device mounting	Surface
Electrical Connection	Lugs
Wiring configuration	4-wire (3PH + G)
AWG gauge	AWG 1/0...750 kcmil copper or aluminium
Tightening torque	550 Lbf.In (62.1 N.m) (AWG 1/0...750 kcmil)
Depth	10.13 In (257.30 mm)
Width	27.88 In (708.15 mm)
Height	50.31 In (1277.87 mm)
Net Weight	192.02 Lb(US) (87.1 kg)

Environment

Product Certifications	UL listed file E2875
------------------------	----------------------





Ordering and shipping details

Category	US10DE100054
Discount Schedule	0DE1
GTIN	785901451440
Returnability	Yes

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	14.02 In (35.6 cm)
Package 1 Width	28.50 In (72.4 cm)
Package 1 Length	52.52 In (133.4 cm)
Package weight(Lbs)	182.999 Lb(US) (83.007 kg)

Environmental data

California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
Total lifecycle Carbon footprint	1 383 kg CO2 eq.
Carbon footprint of the manufacturing-phase [A1 to A3]	423.67726694473765
Carbon footprint of the manufacturing-phase [A1 to A3]	424 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	210.12626718880495
Carbon footprint of the distribution phase [A4]	210 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.20067124068762773
Carbon footprint of the installation phase [A5]	0.2 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	547.0206826529308
Carbon footprint of the use phase [B2, B3, B4, B6]	547 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	No
RoHS exemption information	 Yes
Carbon footprint of the end-of-life phase [C1 to C4]	201.54530622791236
Carbon footprint of the end-of-life phase [C1 to C4]	202 kg CO2 eq.
Environmental Disclosure	 Product Environmental Profile
Carbon footprint (kg CO2 eq, Total Life cycle)	1383
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Compliant with Exemptions  EU RoHS Declaration
REACH Regulation	 REACH Declaration
Halogen content performance	Halogen free plastic parts product
PVC free	Yes
Circularity Profile	No need of specific recycling operations
Take-back	No

Contractual warranty

Warranty	18 months
----------	-----------

Product Life Status : Commercialised

Product data sheet

Characteristics

PKOGTA2

Safety switch accessory, heavy duty, equipment grounding kit, E1, E3, E4-E5, F1, F5-F6



Product availability: Stock - Normally stocked in distribution facility

Price*: 55.00 USD



Main

Range of Product	Square D
Product or Component Type	Safety switch grounding bar
Series name	Heavy duty

Complementary

Line Rated Current	200 A F5[RETURN]200 A F7
AWG gauge	AWG 2/0 copper or aluminium
Tightening torque	200 Lbf.In (22.6 N.m) (AWG 10...AWG 2/0) 200 Lbf.In (22.6 N.m) (AWG 6...AWG 2/0)

Ordering and shipping details




Category	US10DE100058
Discount Schedule	0DE1
GTIN	785901432678
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	0.80 In (2.032 cm)
Package 1 Width	3.50 In (8.89 cm)
Package 1 Length	7.00 In (17.78 cm)
Package weight(Lbs)	2.240 Oz (63.503 g)
Unit Type of Package 2	CAR
Number of Units in Package 2	10
Package 2 Height	4.00 In (10.16 cm)
Package 2 Width	6.50 In (16.51 cm)

Package 2 Length	6.70 In (17.018 cm)
Package 2 Weight	27.200 Oz (771.106 g)
Unit Type of Package 3	PAL
Number of Units in Package 3	2160
Package 3 Height	40.00 In (101.6 cm)
Package 3 Width	40.00 In (101.6 cm)
Package 3 Length	48.00 In (121.92 cm)
Package 3 Weight	350.000 Lb(US) (158.757 kg)

Environmental data

California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
Mercury free	Yes
Sustainable packaging	No
RoHS exemption information	 Yes
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Compliant with Exemptions  EU RoHS Declaration
REACH Regulation	 REACH Declaration
Circularity Profile	No need of specific recycling operations
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Contractual warranty

Warranty	18 months
----------	-----------

Product Life Status : **Commercialised**

This Section Contains Products: Surge Protection Devices



Proposal Name: NEWTON COUNTY
ENRICHMENT
Quote Name: NEWTON COUNTY
ENRICHMENT
Order Number: 0050952140

Quote Number: Q-5050287
Quote Date: 10/10/2024

Seq #	Qty	Product Description
-------	-----	---------------------

1	3	Designation : Product Details: 3-SSP02XDSE20A1-XDSE T1 SPD, 208Y/120V, 3P4W, 200kA 208Y/120V 3 Phase 4 Wire, 200kA per phase UL Type 1 SPD LED Lights, Dry Contacts, Audible Alarm NEMA 4X Polycarbonate Enclosure Surge Protection Device Type: Externally Mounted System Voltage: 208Y/120V 3P 4W UL 1449 SPD Type: Line Side (UL SPD Type 1) Processed by ACE 2.0 - 03112022
---	---	--

Surgeloc™ XDSE Surge Protective Device (SPD)



Dispositivo de protección contra sobretensiones transitorias XDSE

Dispositif de protection contre les surtensions transitoires (SPD) XDSE

Instruction Bulletin / Boletín de instrucciones / Directives d'utilisation

9501
07/2018

Retain for future use. / Conservar para uso futuro. / À conserver pour usage ultérieur.



SQUARE D™

by Schneider Electric

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Precautions

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- This equipment must be effectively grounded per all applicable codes. Use an equipment-grounding conductor to connect this equipment to the power system ground.

Failure to follow these instructions will result in death or serious injury.

NOTICE

LOSS OF BRANCH CIRCUIT POWER / LOSS OF SURGE SUPPRESSION

- Perform periodic inspection of the surge protective device status indicator lights as part of the preventative maintenance schedule.
- Promptly replace the surge protective device when an alarm state exists.
- Use dry contacts to signal an alarm state to the central supervisory system for unmanned, inaccessible, or critical installations.
- Use multiple surge protective devices to achieve redundancy for critical applications.

Failure to follow these instructions can result in equipment damage.

At end-of-life conditions, Surge Protective Devices (SPDs) can lose their ability to suppress power system transient voltage spikes and attempt to draw excessive current from the line. This SPD is equipped with overcurrent and overtemperature components that will automatically disconnect the surge suppression elements from the mains should the surge suppression elements reach end of life. Tripping of the branch circuit breaker or fuse feeding the SPD can occur. Mitigate the tripping of the branch circuit breaker or fuse feeding the SPD by coordinating the surge suppression elements with the branch circuits.

⚠ CAUTION

LOSS OF SURGE SUPPRESSION

- Do not energize the surge protective device until the electrical system is completely installed, inspected and tested.
- Ensure all conductors are connected and functional.
- Verify the voltage rating of the device and system prior to energizing.
- Perform high-potential insulation testing, or any other tests where surge protective device components will be subjected to voltages higher than their rated turn-on voltage, with the neutral and surge protective device disconnected from the power source.

Failure to follow these instructions can result in injury or equipment damage.

Introduction

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- This equipment must be effectively grounded per all applicable codes. Use an equipment-grounding conductor to connect this equipment to the power system ground.

Failure to follow these instructions will result in death or serious injury.

Note: For troubleshooting, call the Surgelogic Technical Assistance Group at 1-800-577-7353.

Proper installation is imperative to maximize the XDSE SPD's effectiveness and performance. Follow the steps outlined in this instruction bulletin to ensure proper installation. Read the entire instruction bulletin before beginning the installation. These instructions are not intended to replace national or local electrical codes. Check all applicable electrical codes to verify compliance. Installation of XDSE surge suppressors must only be performed by qualified electrical personnel.

Unpacking and Preliminary Inspection

Inspect the entire shipping container for damage or signs of mishandling before unpacking the device. Remove the packing material and further inspect the device for any obvious shipping damage. If any damage is found and is a result of shipping or handling, immediately file a claim with the shipping company.

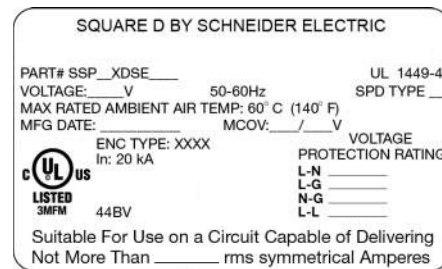
Storage

The device should be stored in a clean, dry environment. Storage temperature is -40 °F to +140 °F (-40°C to +60°C). All of the packaging materials should be left intact until the device is ready for installation.

Identification Nameplate

The identification nameplate is located on the side of the unit.

Figure 1: XDSE Nameplate Example



SPD Location Considerations

Environment

The device is designed to operate in an ambient temperature range of -4 °F to +140 °F (-20°C to +60°C) with a relative humidity of 0 to 95% non-condensing. This device has a Type 4X housing.

Audible Noise

The device background noise is negligible and does not restrict the location of the installation.

Mounting

The device has been designed to be surface mounted. An additional flushmount kit is also available if required (XDSEMKF).

Service Clearance

The service clearance should meet all applicable code requirements.

Equipment Performance

To obtain optimum surge suppression, locate the SPD as close as possible to the circuitry being surge-limited to minimize the wire length. Minimizing the wire length reduces the impedance between the circuitry and the SPD.

Refer to the Voltage Protection Rating (VPR) values on the SPD nameplate. These VPR values were obtained by testing the SPD with six-inch long leads (per UL1449). For every additional foot of wire beyond six inches, the effective VPR increases by approximately 160 volts.

Electrical

⚠ WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Confirm the surge protective device voltage rating on the module or nameplate label is not less than the operating voltage.

Failure to follow these instructions can result in death or serious injury.

Voltage Rating

Prior to mounting the SPD, verify that the device has the same voltage rating as the power distribution system in which it is installed. Compare the nameplate voltage or model number on the SPD with the nameplate of the electrical distribution equipment.

The specifier or user of the device should be familiar with the configuration and arrangement of the power distribution system in which the SPD is to be installed. The system configuration of any power distribution system is based strictly on how the secondary windings of the transformer supplying the service entrance main or load are configured. This includes whether or not the transformer windings are referenced to earth via a grounding conductor. The system configuration is not based on how any specific load or equipment is connected to a particular power distribution system. See Table 1 for the service voltage of each SPD.

Table 1: XDSE Voltage Ratings

Service Voltage	Peak Surge Current Rating Per Phase	Catalog Number ¹
120/240 V, 1 phase, 3-wire + ground	100 kA	SSP01XDSE10A
	150 kA	SSP01XDSE15A
	200 kA	SSP01XDSE20A
208Y/120 V, 3 phase, 4-wire + ground ²	100 kA	SSP02XDSE10A
	150 kA	SSP02XDSE15A
	200 kA	SSP02XDSE20A
240/120 V, 3 phase, (high-leg delta) 4-wire + ground	100 kA	SSP03XDSE10A
	150 kA	SSP03XDSE15A
	200 kA	SSP03XDSE20A
480Y/277 V, 3 phase, 4-wire + ground ³	100 kA	SSP04XDSE10A
	150 kA	SSP04XDSE15A
	200 kA	SSP04XDSE20A
480 V Delta, 3 phase, 3-wire + ground ⁴	100 kA	SSP05XDSE10A
	150 kA	SSP05XDSE15A
	200 kA	SSP05XDSE20A
240 V Delta, 3 phase, 3-wire + ground	100 kA	SSP06XDSE10A
	150 kA	SSP06XDSE15A
	200 kA	SSP06XDSE20A
600Y/347 V, 3 phase, 4-wire + ground	100 kA	SSP08XDSE10A
	150 kA	SSP08XDSE15A
	200 kA	SSP08XDSE20A
600 V Delta, 3 phase, 3 wire + ground ⁵	100 kA	SSP09XDSE10A

¹ For Type 1 systems include a "1" at the end of the catalog numbers listed above.

² 208Y/120 series also applies to the following voltage 220Y/127.

³ 480Y/277 series also applies to the following voltages 380Y/220, 400Y/230, 415Y/240.

⁴ 480 V Delta series also applies to the following voltages: 480Y/277V HRG.

⁵ 600 V Delta series also applies to the following voltages: 600Y/347V HRG.

Branch Circuit Overcurrent Protection and Disconnect Means

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Use conductors rated for the Overcurrent Protection Device (OCPD) per applicable codes.
- Use conductors rated for the application per applicable codes.

Failure to follow these instructions will result in death or serious injury.

A branch circuit Overcurrent Protection Device (OCPD) either in the form of a circuit breaker or fuse must be provided for the XDSE Type 2 device. The branch circuit OCPD should either provide or include a disconnecting means.

Since the current drawn by the XDSE device during normal operation is negligible, the XDSE device can be connected to a dedicated, separate branch circuit or connected to a suitable existing branch circuit.

When connected to a separate, dedicated branch circuit, the OCPD setting must be selected to protect the conductors feeding the XDSE device per applicable state and local building codes.

Location of Surge Protective Device (SPD)

UL 1449 Type 1 SPDs have been designed and approved for line side applications prior to the main service disconnect without supplemental overcurrent protection. Type 2 SPDs must be installed on the load side of the main Overcurrent Protective Device (OCPD). All installations should either provide or include a disconnecting means.

Type 1 SPDs can also be used in Type 2 applications (load side of OCPD). When either Type 1 or Type 2 SPDs are used on the load side, they must be installed per local codes.

Locate the SPD as close as possible to the circuit mains being surge-limited to minimize the wire length and optimize SPD performance. Avoid long wire runs so that the device will perform as intended. To reduce the impedance that the wire displays to surge currents, the phase, neutral, and ground conductors (wye and high-leg delta configurations), or phase and ground conductors (delta configurations), must be routed within the same conduit and tightly bundled or twisted together to optimize device performance. Avoid sharp bends in the conductors. See Figures 2 and 3.

Figure 2: SPD Wiring for Wye and High-Leg Delta Configurations

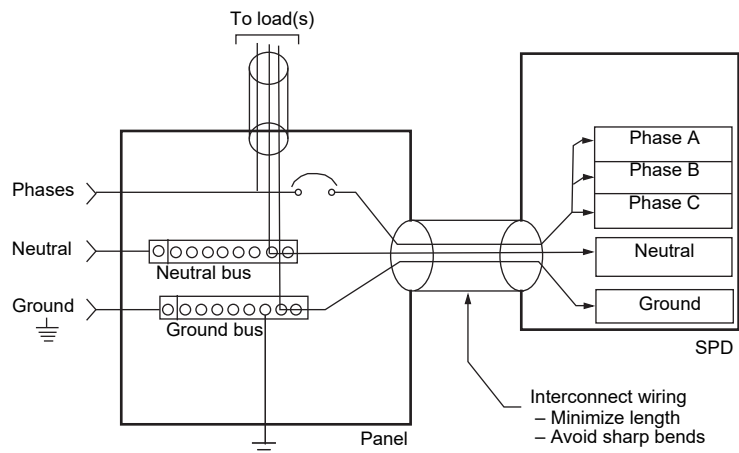
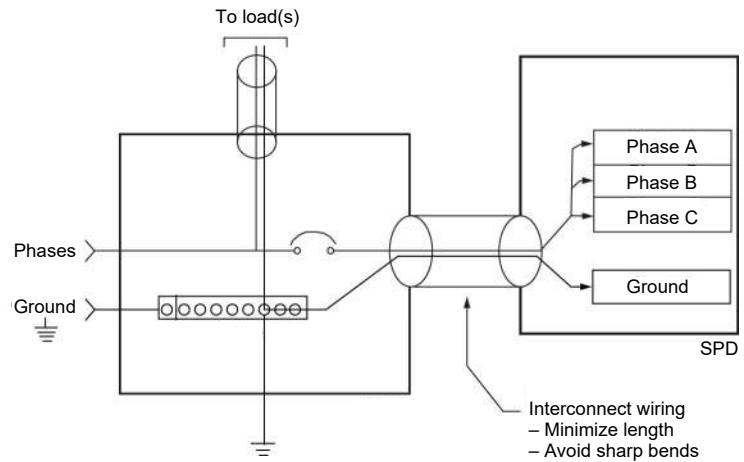


Figure 3: SPD Wiring for Delta Configurations



System Grounding

Ungrounded power systems are inherently unstable and can produce excessively high line-to-ground voltages during certain fault conditions. During these fault conditions any electrical equipment, including a surge protective device, may be subjected to voltages which exceed their designed ratings. This information is being provided to the user so that an informed decision can be made before installing any electrical equipment on an ungrounded power system.

NOTICE

LOSS OF SURGE SUPPRESSION

- Verify that the service entrance equipment is bonded to ground in accordance with all applicable codes.

Failure to follow these instructions can result in equipment damage.

The XDSE has SPD elements connected from phase to ground. It is critical that there be a robust and effective connection to the building grounding structure. The grounding connection must utilize an equipment grounding conductor run with the phase and neutral connection of the power system. Do not connect the SPD to a separate isolated ground. For best voltage suppression by the XDSE SPD, use a single-point ground system where the service entrance grounding electrode system is connected to, and bonded to, all other available electrodes, building steel, metal water pipes, driven rods, etc. (for reference, see NEC Art 250). The ground impedance measurement of the electrical system must be as low as possible and in compliance with all applicable codes for sensitive electronic and computer systems.

NOTICE

INADEQUATE RACEWAY ELECTRICAL CONTINUITY

- Install an insulated grounding conductor inside a metallic raceway when the raceway is used as an additional grounding conductor. Size the conductor in accordance with all applicable codes.
- Maintain adequate electrical continuity at all raceway connections.
- Do not use isolating bushings to interrupt a metallic raceway run.
- Do not use a separate isolated ground for the surge protective device.
- Verify proper equipment connections to the grounding system.
- Verify ground grid continuity by inspections and testing as part of a comprehensive electrical maintenance program.

Failure to follow these instructions can result in equipment damage.

Wiring

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- This equipment must be effectively grounded per all applicable codes. Use an equipment-grounding conductor to connect this equipment to the power system ground.
- Confirm the surge protective device voltage rating on the module or nameplate label is not less than the operating voltage.

Failure to follow these instructions will result in death or serious injury.

Table 2: Wiring Diagram Location¹

Wiring for:	Figure and Page
Single-phase, three-wire, grounded installation	Figure 6 on page 11
Single-phase, two-wire, + ground, delta installation	Figure 7 on page 11
Three-phase, three- or four-wire, grounded WYE installation	Figure 8 on page 12
Three-phase, three- or four-wire, high-leg delta installation	Figure 9 on page 12
Three-phase, three-wire + ground, delta installation	Figure 10 on page 12

¹ See "Dry Contacts" on page 15 for dry contact wiring.

Follow steps 1 through 7 to make wiring connections:

1. Turn off all power supplying this equipment before working on or inside any enclosure containing this equipment.
2. Confirm SPD is rated for your system by comparing voltage measurements to the Line Voltage (L-L, L-N) on the product label.
3. Identify proper location for the SPD. Locate as close as possible to the mains of the panel being surge-limited so the wires are as short as possible. Mount unit securely.

Note: The SPD must be installed in an accessible location (not within walls unless surface mounted with the XDSEMKF flush mount kit).

4. Install in accordance with national and local electrical codes and match the branch circuit Overcurrent Protection Device (OCPD) to the wire size.
5. Twist conductors 1/2 turn or more for every twelve inches of length.
6. Do not loop or coil wires. Be sure to maintain adequate wire bending space per NEC.
7. Use on solidly grounded systems unless the SPD model is designed for installation on ungrounded/HRG systems.

Note: On a high-leg delta installation, the high-leg of the power system must be connected to the B phase lug of the SPD.

⚠ WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

For outdoor installation use and appropriate weather sealing at the nipple (o-ring, sealing conduit, etc).

Failure to follow these instructions can result in death or serious injury.

Figure 4: Conduit Installation

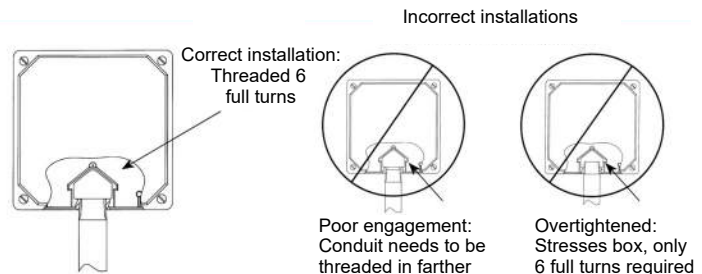
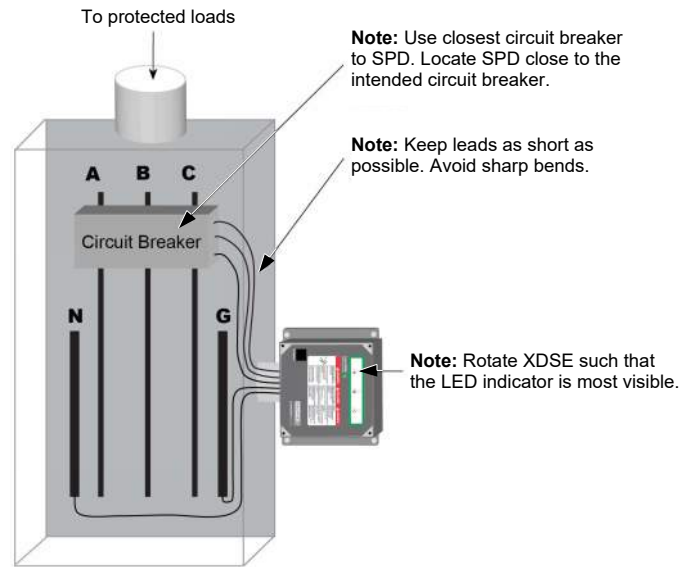


Figure 5: Typical Panel Installation



XDSE Wiring Diagrams

Figure 6: Single-Phase, Three-Wire, Grounded Installation

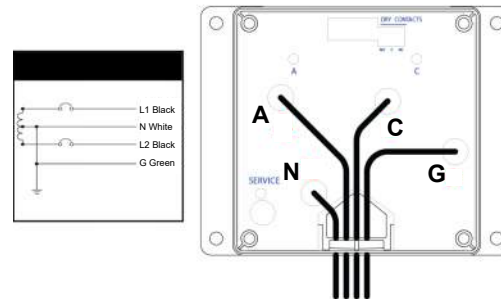
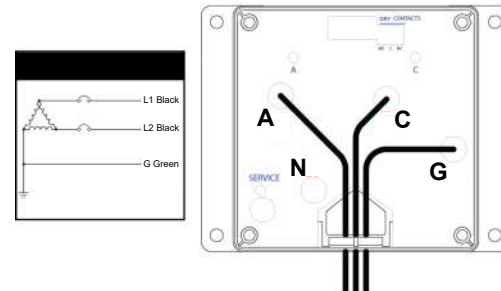
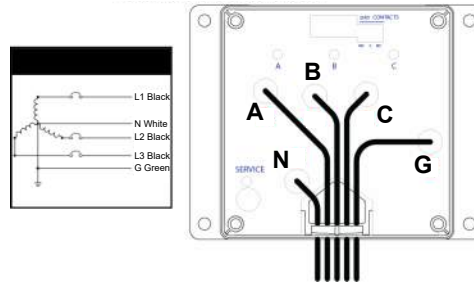


Figure 7: Single-Phase, two-Wire, Delta Installation



Note 1: The neutral conductor is not present on three-wire Wye grounded power systems. For proper operation of the SPD diagnostics on these systems, bond the neutral and ground lugs together inside the SPD.

Figure 8: Three-Phase, three- or four-Wire, Grounded WYE Installation ¹



Note 2: The high-leg of the power system must connect to the B phase lug of the SPD. The neutral conductor is not present on three-wire High-Leg Delta grounded power systems. For proper operation of the SPD diagnostics on these systems, bond the neutral and ground lugs together inside the SPD.

Figure 9: Three-Phase, three- or four-Wire, High-Leg Delta Installation ²

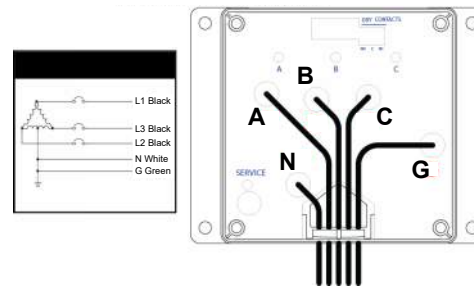
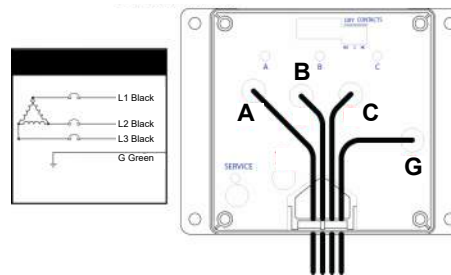


Figure 10: Three-Phase, three-Wire, Delta Installation



Installation

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- This equipment must be effectively grounded per all applicable codes. Use an equipment-grounding conductor to connect this equipment to the power system ground.

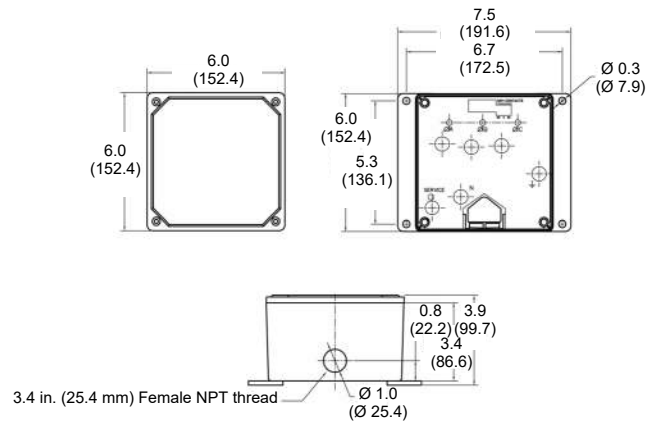
Failure to follow these instructions will result in death or serious injury.

Surface Mount Installation

Note: Mount the unit as close as possible to the protected panel.

1. Make perforations on the wall according to the screw holes located on the enclosure. See Figure 11. (Rotate dimensions 90° as appropriate depending on orientation).
2. Configure the electrical conductor and conduit connection consistent with the installation instructions on pages 9 through 13.
3. Install faceplate/cover, applying a torque of 5 lb-in (0.5 N•m) to the four screws, prior to energizing and testing the unit.

Figure 11: General Dimensions

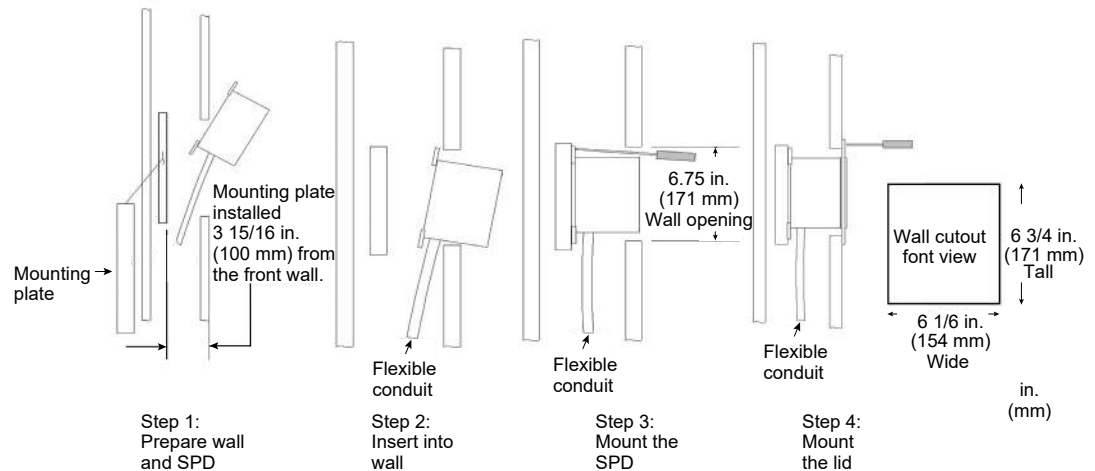


Flush Mount Installation

Note: Mount the unit as close as possible to the protected panel.

1. Create a wall opening 6 3/4 in. x 6 1/16 in. and 3 15/16 in. of clearance. See Figure 12. (Rotate dimensions 90° as appropriate depending on orientation).
2. Configure an appropriate backing plate inside the wall cavity 3 15/16 inches from the wall face such that the unit will be supported from its back.
3. Configure the electrical conductor and conduit connection consistent with the installation instructions on pages 9 through 13. Preplan connections such that they are completed prior to fastening the unit to the backing plate.
4. Install faceplate/cover, applying a torque of 5 lb-in (0.5 N•m) to the four screws, prior to energizing and testing the unit.

Figure 12: Flush Mount



Note: Supplemental instructions for deep wall mounting (walls over 4 in. (101 mm) thick) using the enclosed mounting feet.

Operation

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- This equipment must be effectively grounded per all applicable codes. Use an equipment-grounding conductor to connect this equipment to the power system ground.

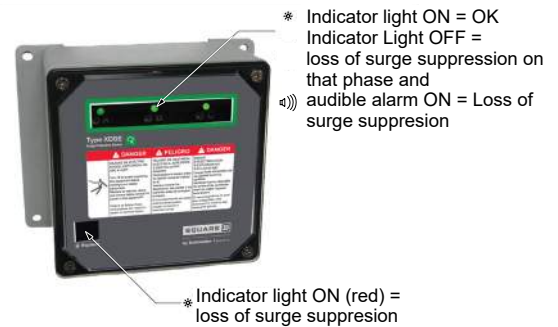
Failure to follow these instructions will result in death or serious injury.

LED Status Indicators

Diagnostic LEDs are located on the front of the XDSE SPD device. They operate as follows:

- Verify that all phase voltages are present. If any of the LEDs are not illuminated, the device may not be installed correctly. Check the power supply and service voltage. Upon energizing the SPD, check the LED status.
- If all of the LEDs are illuminated, surge suppression is operating.
- If one or more LEDs are not illuminated, there is a loss of surge suppression on that phase.
- If an inoperative condition occurs the device must be replaced by qualified electrical personnel.

Figure 13: Diagnostic Operation



Audible Alarm

The audible alarm does not have a silence switch. Silence the alarm by removing power from the SPD. The alarm indicates that the device needs replacement by qualified electrical personnel.

Dry Contacts

⚠ CAUTION
INADEQUATE DRY CONTACT USE
Do not supply more than 24 V dc / 24 V ac and no more than a current of 2 A.
Failure to follow these instructions can result in injury or equipment damage.

The XDSE series SPD device is provided with dry contacts. The unpowered state shall be closed between the common wire and the normally closed wire. This is also the alarm condition. The opposite state, closed between the common wire and the normally open wire, indicates that power is on to the unit and that no alarm condition exists (See Table 3). These dry contact leads can be used for remote indication of the SPD operating status to a computer interface board or emergency management system. Also, these dry contact leads are designed to work with the SPD remote monitor option described in the following section.

The dry contacts are designed for a maximum voltage of 24 V dc / 24 V ac and a maximum current of 2 A. Higher energy applications may require additional relay implementation outside the SPD. Damage to the SPD's relay caused by use with energy levels in excess of those discussed in this instruction bulletin are not covered by warranty. For application questions, call the Surgelogic Technical Assistance Group at (800) 577-7353.

Table 3: Dry Contact Configuration

Dry Contact Terminal	Power off or Alarm Condition	Power on and no Alarm Condition
N/O (Normally Open)	Open	Closed
COM Common	Common	Common
N/C Normally Closed	Closed	Open

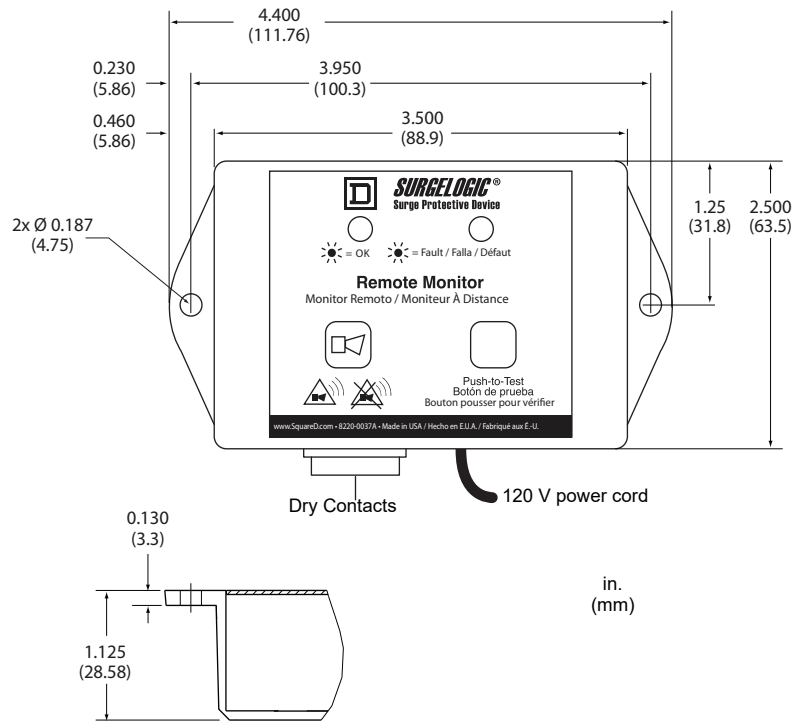
Remote Monitor Option

The remote monitor option has two LEDs, one red and one green, and an audible alarm with an enable/disable switch. Normal status is a lit green LED, and no audible alarm. To test the integrity of the remote monitor, press the push-to-test switch. The green LED will turn off, the red LED will turn on, and the alarm will sound, if the alarm is enabled. Releasing the switch will complete the test; the red LED will turn off, the green LED will turn on and the alarm will shut off.

If suppression on any phase is lost, the green LED will turn off, the red LED will illuminate and an alarm will sound. The audible alarm can be silenced by pushing the alarm enable/disable/test switch. The alarm will silence and the green alarm LED will not be lit. The red LED will continue to be illuminated until the inoperative condition has been cleared.

The remote monitor includes a 120 V ac to 12 V dc adapter with a six-foot power cord. Connections are made to the XDSE SPD diagnostic panel with the twenty-four inch (61 cm) dry contact leads (provided). To extend the remote monitor further (up to 1,000 ft. (305 m), use an additional length of solid or stranded 22 to 14 AWG wire (not provided).

Figure 14: Remote Monitor Option (TVS12RMU)



Preventive Maintenance

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- This equipment must be effectively grounded per all applicable codes. Use an equipment-grounding conductor to connect this equipment to the power system ground.

Failure to follow these instructions will result in death or serious injury.

Inspect the SPD periodically to maintain reliable system performance and continued transient voltage surge suppression. During this inspection, check the state of the display LED status indicators.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

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Surgeloc™ XDSE Surge Protective Device (SPD)



Dispositivo de protección contra sobretensiones transitorias XDSE

Dispositif de protection contre les surtensions transitoires (SPD) XDSE

Instruction Bulletin / Boletín de instrucciones / Directives d'utilisation

9501
07/2018

Retain for future use. / Conservar para uso futuro. / À conserver pour usage ultérieur.



SQUARE D™

by Schneider Electric

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Precauciones

⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad en trabajos eléctricos establecidas por su Compañía, consulte la norma NFPA 70E, NOM-029-STPS o CSA Z462.
- Solamente el personal eléctrico calificado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desconecte todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar la desenergización del equipo.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- Este equipo deberá estar correctamente conectado a tierra de acuerdo con los códigos aplicables. Utilice un conductor de conexión a tierra del equipo para conectar este último a la tierra del sistema de alimentación.

El incumplimiento de estas instrucciones podrá causar la muerte o lesiones serias.

AVISO

PÉRDIDA DE ALIMENTACIÓN DEL CIRCUITO DERIVADO / PÉRDIDA DE SUPRESIÓN DE SOBRETENSIONES TRANSITORIAS.

- Realice inspecciones periódicas a las luces indicadoras de estado del dispositivo de protección contra sobretensiones transitorias como parte del programa de mantenimiento preventivo.
- De inmediato sustituya el dispositivo de protección contra sobretensiones transitorias cuando se active una alarma.
- Utilice contactos secos para emitir una señal de alarma al sistema de supervisión central en las instalaciones no supervisadas por personal, difíciles de acceder, o críticas.
- Utilice múltiples dispositivos de protección contra sobretensiones transitorias para obtener redundancia en las aplicaciones críticas.

El incumplimiento de estas estas instrucciones puede causar daño al equipo.

Cuando llegan al fin de su vida útil, los dispositivos de protección contra sobretensiones transitorias (SPD) pueden perder su habilidad de suprimir parásitos de tensión transitorios en el sistema de alimentación e intentar extraer corriente excesiva de la línea. Este SPD está equipado con componentes de sobrecorriente y sobrecalentamiento que desconectarán automáticamente los elementos de supresión de sobretensiones transitorias provenientes de la línea principal en caso de que lleguen al fin de su vida útil. Es posible que el fusible o interruptor automático derivado que alimenta al SPD se dispare. Modere el disparo del interruptor automático derivado o fusible que alimenta al SPD coordinando los elementos de supresión de sobretensiones transitorias con los circuitos derivados.

⚠ PRECAUCIÓN

PÉRDIDA DE SUPRESIÓN DE SOBRETENSIONES TRANSITORIAS

- No energice el dispositivo de protección contra sobretensiones transitorias sino hasta que el sistema eléctrico haya sido completamente instalado, inspeccionado y probado.
- Asegúrese de que todos los conductores estén conectados y funcionando.
- Verifique la tensión nominal del dispositivo y del sistema antes de energizar.
- Realice las pruebas de rigidez dieléctrica al aislamiento, o cualquier otra prueba donde los componentes del dispositivo de protección contra sobretensiones transitorias vayan a ser sometidos a tensiones más altas que la tensión nominal de conexión, con el neutro y el dispositivo SPD desconectados de la fuente de alimentación.

El incumplimiento de estas estas instrucciones puede causar lesiones serias o daño al equipo.

Introducción

⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad en trabajos eléctricos establecidas por su Compañía, consulte la norma NFPA 70E, NOM-029-STPS o CSA Z462.
- Solamente el personal eléctrico calificado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desconecte todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar la desenergización del equipo.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- Este equipo deberá estar correctamente conectado a tierra de acuerdo con los códigos aplicables. Utilice un conductor de conexión a tierra del equipo para conectar este último a la tierra del sistema de alimentación.

El incumplimiento de estas estas instrucciones podrá causar la muerte o lesiones serias.

Nota: Para obtener asistencia de diagnóstico de problemas, póngase en contacto con el grupo de asistencia técnica Surgelogic llamando al 1-800-577-7353 (en EUA).

La instalación apropiada es fundamental para maximizar la efectividad y el rendimiento del SPD XDSE. Siga los pasos delineados en este boletín de instrucciones para asegurarse de obtener una instalación correcta. Lea todas las instrucciones de este boletín antes de comenzar la instalación. Estas instrucciones no deberán utilizarse como un sustituto del código nacional eléctrico de los EUA (NEC), NOM-001-SEDE ni de los códigos locales. Revise todos los códigos eléctricos correspondientes y asegúrese de que cumple con ellos. La instalación de los dispositivos de protección contra sobretensiones transitorias XDSE deberá realizarla solamente personal eléctrico calificado.

Desempaque e inspección preliminar

Realice una inspección visual de la caja de embalaje para ver si encuentra daños o indicaciones de un manejo inadecuado del equipo antes de desempacarlo. Retire el material de embalaje y revise el equipo para ver si encuentra daños obvios causados durante el envío. Si encuentra algún daño causado durante el envío o debido al manejo inadecuado, notifique de inmediato a la compañía de transporte.

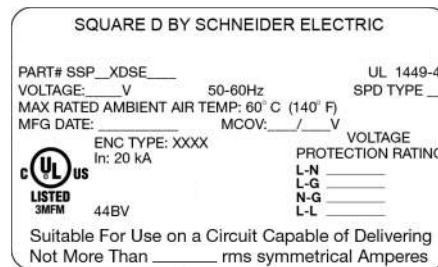
Almacenamiento

Almacene el dispositivo en un lugar seco y limpio. Temperatura ambiente de almacenamiento: -40 °C a +60 °C (-40 °F a +140 °F). No deseche el material de embalaje sino hasta después de haber instalado el equipo.

Placa de datos

La placa de datos se encuentra situada en el costado de la unidad.

Figura 1: Ejemplo de una placa de datos del XDSE



Consideraciones para la ubicación del SPD

Medio ambiente

Este dispositivo ha sido diseñado para funcionar en temperaturas ambientales de -20 °C a +60 °C (-4 °F a +140 °F), con humedad relativa de 0 a 95% sin condensación. El gabinete del dispositivo es de tipo 4X.

Ruido audible

El ruido de fondo del dispositivo es insignificante y no es un elemento limitante de la ubicación de instalación.

Montaje

El dispositivo ha sido diseñado para ser montado sobre una superficie. Se encuentra disponible un kit de montaje para empotrar adicional (XDSEMKF), si es necesario.

Espacio libre necesario para realizar servicios de mantenimiento

El espacio libre necesario para realizar servicios de mantenimiento debe cumplir con todos los requisitos de los códigos correspondientes.

Rendimiento del equipo

Para obtener una supresión óptima de transitorios, coloque el SPD lo más cerca posible de los circuitos protegidos para minimizar la longitud de los cables. Al minimizar la longitud del cable se reduce la impedancia entre los circuitos y el SPD.

Consulte los valores de nivel de protección (VPR) en la placa de datos del SPD. Estos valores VPR fueron obtenidos probando el SPD con conductores de 6 pulgadas de largo de acuerdo con la norma UL1449: Por cada 1 pie adicional de cable de más de 6 pulgadas, el valor VPR efectivo aumenta aproximadamente 160 volts.

Especificaciones eléctricas

⚠ ADVERTENCIA

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

Confirme que la tensión nominal del dispositivo de protección contra sobretensiones transitorias, especificada en el módulo o la placa de datos, no sea menos que la tensión de funcionamiento.

El incumplimiento de estas estas instrucciones puede causar la muerte o lesiones graves.

Tensión nominal

Antes de montar el SPD, asegúrese de que el dispositivo tenga la misma tensión nominal que la red de distribución eléctrica en que esté instalado. Compare la tensión especificada en la placa de datos o número de modelo en el SPD con la placa de datos del equipo de distribución eléctrica.

La persona encargada de proporcionar las especificaciones o el usuario del dispositivo deberá estar familiarizado con la configuración y la disposición de la red de energía en la que se instalará el SPD. La configuración del sistema de cualquier red de distribución eléctrica está basada rigurosamente en la configuración de los devanados secundarios del transformador que suministran a la carga o entrada principal de acometida. Inclusive si los devanados del transformador están conectados o no a tierra a través de un conductor de puesta a tierra. Sin embargo, la configuración de la red no está basada en la conexión de ninguna carga o equipo específico de una red de distribución eléctrica particular. Consulte la tabla 1 para conocer la tensión de acometida de cada SPD.

Tabla 1: Tensiones nominales del XDSE

Tensión de acometida	Corriente nominal máxima por fase debido a las sobretensiones	Número de catálogo ¹
120/240 V, 1 fase, 3 hilos + tierra	100 kA	SSP01XDSE10A
	150 kA	SSP01XDSE15A
	200 kA	SSP01XDSE20A
208Y/120 V, 3 fases, 4 hilos + tierra ²	100 kA	SSP02XDSE10A
	150 kA	SSP02XDSE15A
	200 kA	SSP02XDSE20A
240/120 V, 3 fases (conexión en delta con extremo alto) 4 hilos + tierra	100 kA	SSP03XDSE10A
	150 kA	SSP03XDSE15A
	200 kA	SSP03XDSE20A
480Y/277 V, 3 fases, 4 hilos + tierra ³	100 kA	SSP04XDSE10A
	150 kA	SSP04XDSE15A
	200 kA	SSP04XDSE20A
Conexión en delta de 480 V, 3 fases, 3 hilos + tierra ⁴	100 kA	SSP05XDSE10A
	150 kA	SSP05XDSE15A
	200 kA	SSP05XDSE20A
Conexión en delta de 240 V, 3 fases, 3 hilos + tierra	100 kA	SSP06XDSE10A
	150 kA	SSP06XDSE15A
	200 kA	SSP06XDSE20A

Tabla 1: Tensiones nominales del XDSE (continuación)

Tensión de acometida	Corriente nominal máxima por fase debido a las sobretensiones	Número de catálogo ¹
600Y/347 V, 3 fases, 4 hilos + tierra	100 kA	SSP08XDSE10A
	150 kA	SSP08XDSE15A
	200 kA	SSP08XDSE20A
Conexión en delta de 600 V, 3 fases, 3 hilos + tierra ⁵	100 kA	SSP09XDSE10A

¹ Para los sistemas tipo 1 incluya un "1" al final de los números de catálogo enumerados anteriormente.

² La serie 208Y/120 también es aplicable para la tensión de 220Y/127.

³ La serie 480Y/277 también es aplicable para las tensiones de 380Y/220, 400Y/230, 415Y/240.

⁴ 480 V en delta es también aplicable para las siguientes tensiones: 480Y/277V HRG (conectado a tierra con alta resistencia).

⁵ 600 V en delta es también aplicable para las siguientes tensiones: 600Y/347V HRG (conectado a tierra con alta resistencia).

Protección contra sobrecorrientes del circuito derivado y dispositivo de desconexión

⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice conductores apropiados para el dispositivo de protección contra sobrecorrientes (DPCS) según los códigos correspondientes.
- Utilice conductores apropiados para la aplicación según los códigos correspondientes.

El incumplimiento de estas estas instrucciones podrá causar la muerte o lesiones serias.

Un dispositivo de protección contra sobrecorriente (DPCS) del circuito derivado ya sea un interruptor automático o fusible, debe ser provisto para el dispositivo XDSE tipo 2. El DPCS del circuito derivado deberá proporcionar o incluir un dispositivo de desconexión.

Puesto que la corriente consumida por el dispositivo XDSE durante un funcionamiento normal es insignificante, el dispositivo XDSE puede ser conectado a un circuito derivado dedicado separado, o bien, conectado a un circuito derivado apropiado existente.

Cuando está conectado a un circuito derivado dedicado separado, el ajuste del DPCS debe ser seleccionado para proteger los conductores que alimentan al dispositivo XDSE según los códigos de construcción locales y estatales aplicables.

Ubicación del dispositivo de protección contra sobretensiones transitorias (SPD)

Los SPD UL 1449 tipo 1 han sido diseñados y aprobados para aplicaciones del lado de línea adelante de la desconexión de acometida principal sin protección contra sobrecorriente adicional. Los SPD tipo 2 deben ser instalados en el lado de carga del dispositivo de protección contra sobrecorriente principal (OCPD). Todas las instalaciones deben proporcionar o incluir un medio de desconexión.

Los SPD tipo 1 también se pueden utilizar en aplicaciones de tipo 2 (lado de carga del OCPD). Cuando los SPD de tipo 1 o tipo 2 se utilizan en el lado de carga, éstos deben ser instalados según los códigos locales.

Coloque el SPD lo más cerca posible a la red eléctrica del circuito que se está protegiendo con sobretensión transitoria limitada para minimizar la longitud del cable y optimizar el funcionamiento del SPD. Evite tendidos largos de cable para que el equipo funcione correctamente. Para reducir la impedancia que los conductores ofrecen a las sobrecorrientes transitorias, los conductores de fase, neutro y puesta a tierra (configuraciones en delta con extremo alto y estrella), o conductores de fase y tierra (configuraciones en delta) deberán ser enrutados dentro del mismo tubo conduit y amarrarse o trenzarse fuertemente para optimizar el funcionamiento del dispositivo. Evite doblar los conductores en ángulo recto. Vea las figuras 2 y 3.

Figura 2: Alambrado del SPD para las configuraciones en delta con extremo alto y en estrella

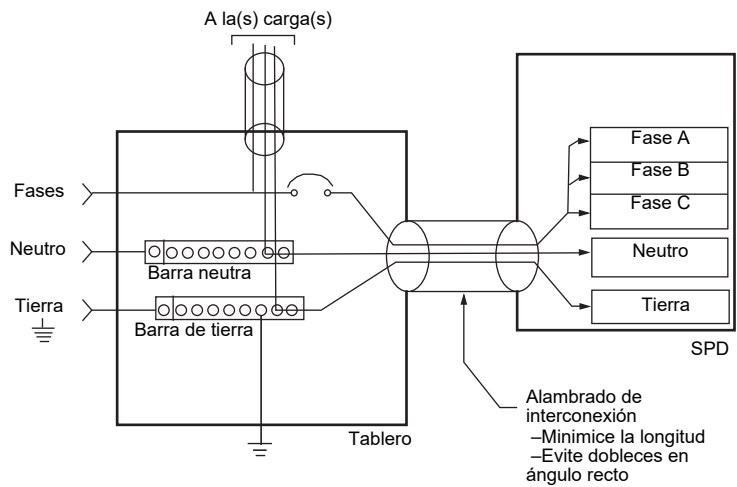
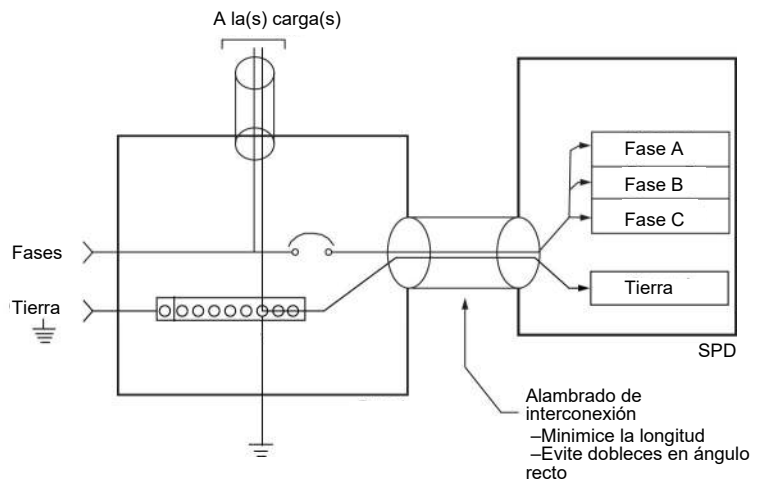


Figura 3: Alambrado del SPD para las configuraciones en delta



Conexión a tierra del sistema

Los sistemas de alimentación no conectados a tierra son inherentemente inestables y pueden producir tensiones de línea a tierra excesivamente altas durante ciertas condiciones de falla. Durante estas condiciones de falla cualquier equipo eléctrico, incluyendo un dispositivo de protección contra sobretensiones transitorias, puede someterse a tensiones que excedan sus valores nominales designados. Esta información es

suministrada al usuario para que tome una decisión informada antes de instalar cualquier equipo eléctrico en un sistema de alimentación sin conexión a tierra.

AVISO

PÉRDIDA DE SUPRESIÓN DE SOBRETENSIONES TRANSITORIAS

- Asegúrese de que el equipo de acometida esté conectado a tierra de acuerdo con todos los códigos y normas correspondientes.

El incumplimiento de estas estas instrucciones puede causar daño al equipo.

El XDSE tiene elementos del SPD conectados de fase a tierra. Es fundamental que exista una conexión robusta y eficaz a la estructura de tierra del edificio. La conexión de puesta a tierra debe utilizar un tendido de conductores de puesta a tierra del equipo con la conexión de fase y neutro del sistema de alimentación. No conecte el SPD a una tierra aislada separada. Para obtener una mejor supresión de tensión del SPD XDSE, utilice un sistema de conexión a tierra de un solo punto en el que el sistema de electrodos de puesta a tierra de acometida esté conectado y unido a todos los demás electrodos disponibles, a elementos de acero del edificio, tubería de agua de metal, varillas de accionamiento, etc. (consulte el NEC Art 250 para obtener referencias). La medición de impedancia de conexión a tierra del sistema eléctrico debe ser lo más baja posible y deberá cumplir con todos los códigos aplicables adecuados para el equipo electrónico sensible y sistemas de computadoras.

AVISO

CONTINUIDAD ELÉCTRICA INADECUADA DE LA CANALIZACIÓN

- Instale un conductor de puesta a tierra aislado dentro de una canalización metálica cuando ésta se utiliza como un conductor de puesta a tierra adicional. Elija el tamaño de conductor de acuerdo con lo establecido en las normas y los códigos aplicables.
- Mantenga una continuidad eléctrica adecuada en todas las conexiones de la canalización.
- No utilice pasamuros aislados para interrumpir un tendido de canalización metálica.
- No utilice una conexión a tierra aislada separada para el dispositivo de protección contra sobretensiones transitorias.
- Revise las conexiones al equipo y asegúrese de que esté correctamente conectado al sistema de puesta a tierra.
- Verifique la continuidad de la red de distribución del sistema de puesta a tierra realizando inspecciones y pruebas como parte de un programa completo de servicio de mantenimiento eléctrico.

El incumplimiento de estas estas instrucciones puede causar daño al equipo.

Alambrado

⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad en trabajos eléctricos establecidas por su Compañía, consulte la norma NFPA 70E, NOM-029-STPS o CSA Z462.
- Solamente el personal eléctrico calificado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desconecte todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar la desenergización del equipo.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- Este equipo deberá estar correctamente conectado a tierra de acuerdo con los códigos aplicables. Utilice un conductor de conexión a tierra del equipo para conectar este último a la tierra del sistema de alimentación.
- Confirme que la tensión nominal del dispositivo de protección contra sobretensiones transitorias, especificada en el módulo o la placa de datos, no sea menos que la tensión de funcionamiento.

El incumplimiento de estas estas instrucciones podrá causar la muerte o lesiones serias.

Tabla 2: Ubicación del diagrama de alambrado¹

Alambrado para:	Figura y página
Instalación con conexión a tierra de una fase, tres hilos	Vea la figura 6 en la página 12
Instalación con conexión en delta de una fase, dos hilos + tierra	Vea la figura 7 en la página 12
Instalación en estrella con conexión a tierra de tres fases, 3 ó 4 hilos	Vea la figura 8 en la página 12
Instalación en delta con extremo alto de 3 fases, 3 ó 4 hilos	Vea la figura 9 en la página 12
Instalación en delta de tres fases, tres hilos + tierra	Vea la figura 10 en la página 13

¹ Consulte la página 16 para obtener detalles del alambrado de los contactos secos.

Siga los pasos 1 a 7 para realizar las conexiones de alambrado:

1. Desenergice el equipo antes de realizar cualquier trabajo dentro o fuera del gabinete que contiene este equipo.
2. Asegúrese de que el SPD sea adecuado para su sistema comparando las mediciones de tensión en la tensión de línea (L-L, L-N), especificadas en la etiqueta del producto.
3. Identifique la ubicación apropiada para el SPD. Colóquelo lo más cerca posible a la red eléctrica del tablero que se está protegiendo para que los conductores sean lo más corto posible. Sujete la unidad firmemente.

Nota: El SPD debe instalarse en una ubicación accesible (no dentro de paredes a menos que haya sido montado en superficie con el kit de montaje para empotrar XDSEMKF).

4. Realice la instalación de acuerdo con lo especificado en el Código nacional eléctrico de EUA (NEC), NOM-001-SEDE y otros códigos locales, y utilice un dispositivo de protección contra sobrecorriente (DPCS) del circuito derivado apropiado para el tamaño de conductor.
5. Tuerza los conductores ½ vuelta o más por cada 12 pulgadas de longitud.
6. No haga bucles ni enrolle los cables. Asegúrese de mantener un espacio adecuado para el doblar de los cables según las especificaciones del NEC y NOM-001-SEDE.
7. Utilice sólo en sistemas sólidamente conectados a tierra a menos que el SPD (según el modelo) haya sido diseñado para su instalación en sistemas HRG (conectado a tierra con alta resistencia)/sin conexión a tierra.

Nota: En una instalación delta con extremo alto, el extremo alto del sistema de alimentación deberá conectarse a la zapata de la fase B del SPD.

⚠ ADVERTENCIA

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

Para su instalación en el exterior utilice un sello impermeable adecuado en la boquilla (anillo "O", tubo conduit sellador, etc.).

El incumplimiento de estas estas instrucciones puede causar la muerte o lesiones graves.

Figura 4: Instalación del tubo conduit

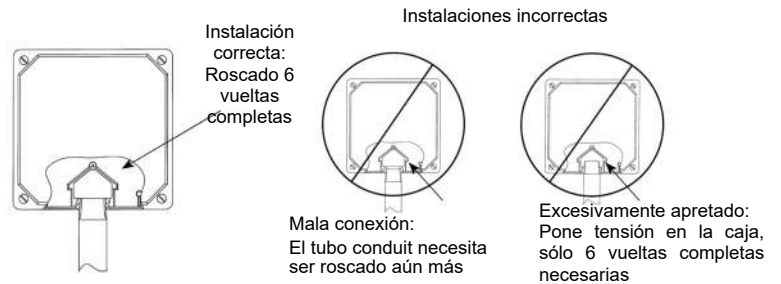
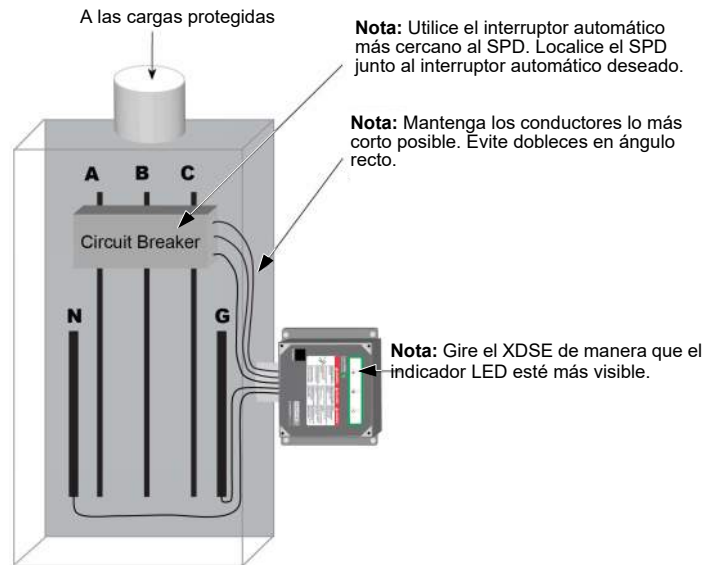


Figura 5: Instalación típica del tablero



Diagramas de alambrado del XDSE

Figura 6: Instalación con conexión a tierra de una fase, tres hilos

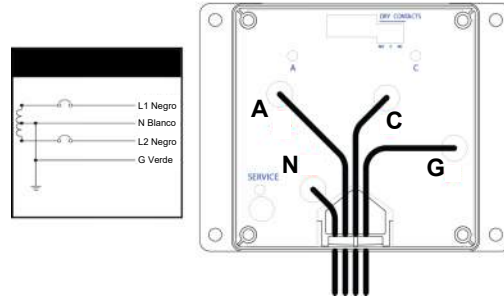


Figura 7: Instalación con conexión en delta de una fase, dos hilos

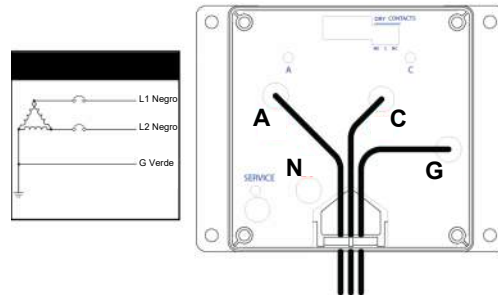
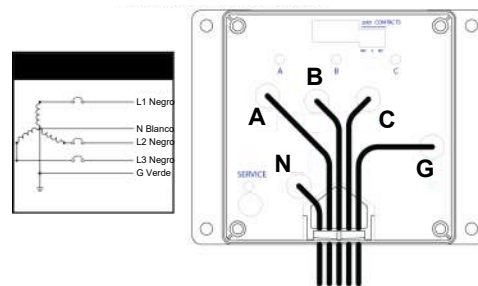


Figura 8: Instalación en estrella con conexión a tierra de tres fases, 3 ó 4 hilos ¹



Nota 1: Los sistemas de alimentación con conexión a tierra en estrella de tres hilos no tienen conductor de neutro. Para obtener el diagnóstico de funcionamiento apropiado del SPD en estos sistemas, conecte juntos el neutro y las zapatas de tierra dentro del SPD.

Nota 2: El extremo alto del sistema de alimentación debe conectarse a la zapata de la fase B del SPD. Los sistemas de alimentación con conexión a tierra en delta con extremo alto de tres hilos no tienen conductor de neutro. Para obtener el diagnóstico de funcionamiento apropiado del SPD en estos sistemas, conecte juntos el neutro y las zapatas de tierra dentro del SPD.

Figura 9: Instalación en delta con extremo alto de 3 fases, 3 ó 4 hilos ²

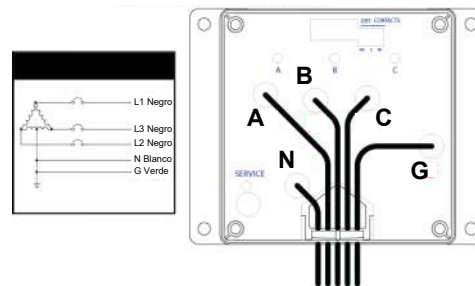
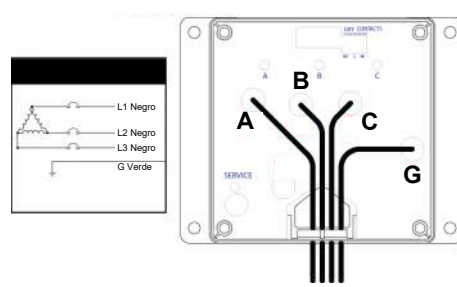


Figura 10: Instalación en delta de tres fases, 3 hilos



Instalación

⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad en trabajos eléctricos establecidas por su Compañía, consulte la norma NFPA 70E, NOM-029-STPS o CSA Z462.
- Solamente el personal eléctrico calificado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desconecte todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar la desenergización del equipo.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- Este equipo deberá estar correctamente conectado a tierra de acuerdo con los códigos aplicables. Utilice un conductor de conexión a tierra del equipo para conectar este último a la tierra del sistema de alimentación.

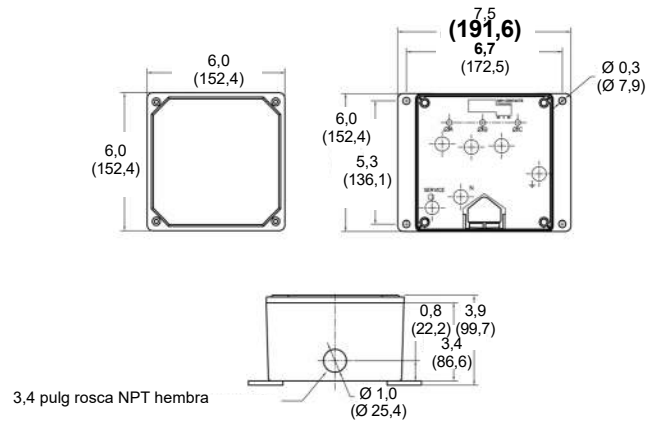
El incumplimiento de estas estas instrucciones puede causar la muerte o lesiones serias.

Instalación de montaje para sobreponer

Nota: Monte la unidad lo más cerca posible al tablero protegido.

1. Realice perforaciones en la pared según los agujeros de los tornillos situados en el gabinete. Vea la figura 11. (Gire 90° como sea apropiado, según la orientación).
2. Configure las conexiones de tubo conduit y los conductores eléctricos de acuerdo con las instrucciones de instalación en las páginas 9 a 13.
3. Instale la placa frontal/cubierta, aplicando un par de 5 lbs-pulg (0,5 N•m) a los cuatro tornillos, antes de energizar y probar la unidad.

Figure 11 : Dimensiones generales

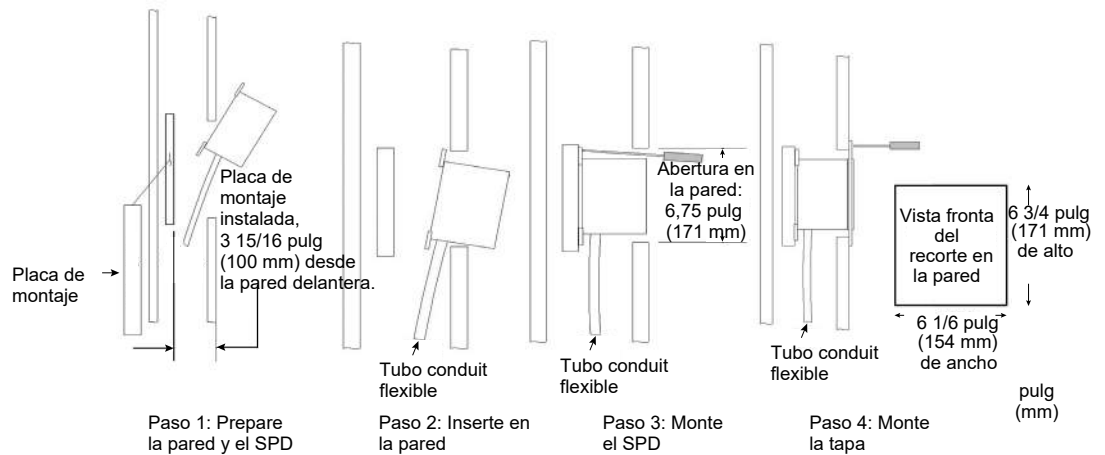


Instalación de montaje para empotrar

Nota: Monte la unidad lo más cerca posible al tablero protegido.

1. Haga una abertura en la pared de 6 3/4 pulg x 6 1/16 pulg (171 mm x 154 mm) y un espacio libre de 3 15/16 pulg (100 mm). Vea la figura 12. (Gire 90° como sea apropiado, según la orientación).
2. Instale una contraplaca dentro de la abertura de la pared de 3 15/16 pulg (100 mm) desde la parte delantera de la pared de manera que la unidad tenga soporte desde la parte posterior.
3. Configure las conexiones de tubo conduit y los conductores eléctricos de acuerdo con las instrucciones de instalación en las páginas 9 a 13. Prepare las conexiones de manera que estén finalizadas antes de sujetar la unidad a la contraplaca.
4. Instale la placa frontal/cubierta, aplicando un par de 5 lbs-pulg (0,5 N•m) a los cuatro tornillos, antes de energizar y probar la unidad.

Figure 12 : Montaje para empotrar



Nota: Instrucciones complementarias para montaje en pared profunda (paredes de más de 4 pulgadas (101 mm) de grueso usando las patas de montaje incluidas.

Funcionamiento

⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad en trabajos eléctricos establecidas por su Compañía, consulte la norma NFPA 70E, NOM-029-STPS o CSA Z462.
- Solamente el personal eléctrico calificado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desconecte todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar la desenergización del equipo.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- Este equipo deberá estar correctamente conectado a tierra de acuerdo con los códigos aplicables. Utilice un conductor de conexión a tierra del equipo para conectar este último a la tierra del sistema de alimentación.

El incumplimiento de estas estas instrucciones puede causar la muerte o lesiones serias.

Indicadores de estado LED

Los LED de diagnóstico están situados en la parte frontal del SPD XDSE y funcionan de la siguiente manera:

- Verifique que todas las tensiones de fase estén presentes. Si alguno de los LED no se ilumina, es posible que el dispositivo no esté instalado correctamente. Verifique la fuente de alimentación y la tensión de acometida. Al energizar el SPD, revise el estado de los LED.
- Si todos los LED están iluminados, la supresión de sobretensiones transitorias está funcionando.
- Si uno o más LED no están iluminados, se ha perdido la supresión de sobretensiones transitorias en esa fase.
- Si se produce una condición inoperante, el dispositivo debe ser sustituido por personal eléctrico especializado.

Figura 13: Diagnóstico de funcionamiento



Alarma audible

La alarma audible no tiene un interruptor de silencio. Silencie la alarma retirando la alimentación del SPD. La alarma es una indicación para el personal eléctrico especializado de la necesidad de sustituir el dispositivo.

Contactos secos

⚠ PRECAUCIÓN

USO INADECUADO DE LOS CONTACTOS SECOS

No suministre más de 24 Vcd / 24 V~ ni tampoco una corriente de más de 2 A.

El incumplimiento de estas estas instrucciones puede causar lesiones serias o daño al equipo.

El SPD serie XDSE viene con contactos secos. El estado desenergizado debe estar cerrado entre el conductor común y el conductor normalmente cerrado. Esto es también la condición de alarma. El estado opuesto, cerrado entre el conductor común y el conductor normalmente abierto, indica que la unidad está energizada y que no existe ninguna condición de alarma (consulte la tabla 3). Estos conductores de contactos secos se utilizan para proporcionar información remota sobre el estado de funcionamiento del SPD a una tarjeta de interfaz con la computadora, o bien, a un sistema de gestión de emergencia. Asimismo, estos conductores de contactos secos han sido diseñados para funcionar con la opción de monitor remoto del SPD, descrita en la siguiente sección.

Estos contactos han sido diseñados para resistir una tensión máxima de 24 Vcd / 24 V~ y una corriente máxima de 2 A. Es posible que las aplicaciones que necesiten mayor energía tengan que agregar un relevador adicional fuera del SPD. Daños al relevador del SPD causados por niveles de energía mayores que los valores sugeridos en este boletín de instrucciones no están cubiertos por la garantía. Si tiene alguna pregunta con respecto a la aplicación, póngase en contacto con el grupo de asistencia técnica Surgelogic llamando al (800) 577-7353 (en EUA).

Tabla 3: Configuración de los contactos secos

Terminal del contacto seco	Desenergizado o condición de alarma	Energizado y sin condición de alarma
N/A (normalmente abierto)	Abierto	Cerrado
COM Común	Común	Común
N/C Normalmente cerrado	Cerrado	Abierto

Opción de monitor remoto

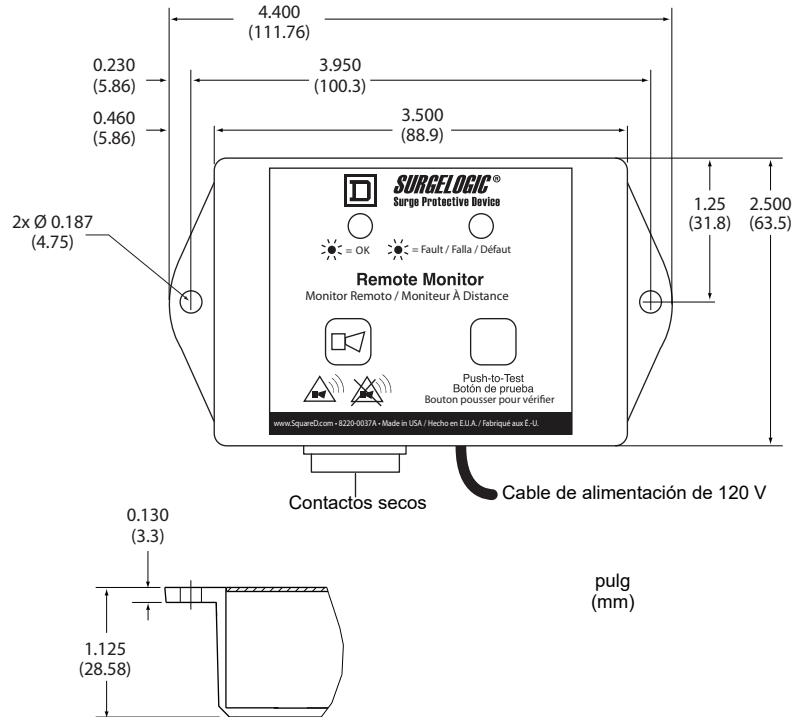
La opción de monitor remoto tiene dos LED, uno rojo y el otro verde, así como una alarma audible con un conmutador de activación/desactivación. Durante un estado normal, el LED verde estará iluminado y no sonará la alarma. Para probar la integridad del monitor remoto, presione el botón de prueba. El LED verde se apagará, el LED rojo se iluminará y la alarma sonará, si ésta está activada. Al soltar el botón de prueba terminará la prueba; el LED rojo se apagará, el LED verde se iluminará y la alarma se apagará.

Si se llegase a perder la supresión en alguna fase; el LED verde se apagará, el LED rojo se iluminará y la alarma sonará. La alarma audible se puede apagar presionando el conmutador de activación/desactivación/prueba. La alarma dejará de sonar y el LED verde designado para la alarma no se iluminará. El LED rojo continuará iluminado hasta que se restablezca la condición de inoperabilidad.

El monitor remoto incluye un adaptador de 120 V~ a 12 Vcd con un cable de alimentación de 6 pies. Las conexiones al tablero de diagnóstico del

SPD XDSE se realizan con los conductores de los contactos secos de 24 pulgadas (610 mm), incluidos. Para extender el monitor remoto aún más (hasta 1 000 pies [305 m]), emplee un conductor sólido o trenzado adicional de tamaño 22 a 14 AWG, no incluido.

Figura 14: Monitor remoto opcional (TVS12RMU)



ESPAÑOL

Servicio de mantenimiento preventivo

ESPAÑOL

⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad en trabajos eléctricos establecidas por su Compañía, consulte la norma NFPA 70E, NOM-029-STPS o CSA Z462.
- Solamente el personal eléctrico calificado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desconecte todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar la desenergización del equipo.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- Este equipo deberá estar correctamente conectado a tierra de acuerdo con los códigos aplicables. Utilice un conductor de conexión a tierra del equipo para conectar este último a la tierra del sistema de alimentación.

El incumplimiento de estas estas instrucciones puede causar la muerte o lesiones serias.

Realice una inspección visual periódica al SPD para mantener un funcionamiento confiable del sistema y una supresión continua de sobretensiones transitorias. Durante esta inspección, revise el estado de los indicadores LED de la pantalla.

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9501, 07/2018

Surgellogic™ XDSE Surge Protective Device (SPD)



Dispositivo de protección contra sobretensiones transitorias XDSE

Dispositif de protection contre les surtensions transitoires (SPD) XDSE

Instruction Bulletin / Boletín de instrucciones / Directives d'utilisation

9501
07/2018

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by Schneider Electric

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Précautions

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

- Portez un équipement de protection personnelle (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Coupez toutes les alimentations à cet appareil avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Remplacez tous les dispositifs, les portes et les couvercles avant de mettre l'appareil sous tension.
- Cet appareil doit être effectivement mis à la terre selon tous les codes en vigueur. Utilisez un conducteur de m.à.l.t. d'appareil pour raccorder celui-ci à la terre du système d'alimentation.

Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

AVIS

PERTE D'ALIMENTATION DU CIRCUIT DE DÉRIVATION/PERTE DE SUPPRESSION DES SURTENSIONS TRANSITOIRES

- Effectuez une inspection périodique des voyants d'état du dispositif de protection contre les surtensions transitoires comme partie du programme d'entretien préventif.
- Remplacez promptement le dispositif de protection contre les surtensions transitoires en présence d'un état d'alarme.
- Utilisez des contacts secs pour signaler un état d'alarme au système de surveillance central pour les installations sans intervention humaine, inaccessibles ou critiques.
- Utilisez plusieurs dispositifs de protection contre les surtensions transitoires pour obtenir une redondance pour les applications critiques.

Si ces directives ne sont pas respectées, cela peut entraîner des dommages matériels.

Dans les conditions de fin de vie utile, les dispositifs de protection contre les surtensions transitoires (SPD) peuvent perdre leur capacité pour supprimer les surtensions transitoires du système d'alimentation et essayer de consommer un courant de ligne excessif. Ce SPD est muni des composants de surintensité et surchauffe qui déconnectent automatiquement du secteur les éléments de suppression de surtensions transitoires si ces éléments atteignent la fin de leur vie utile. Un déclenchement du fusible ou disjoncteur de dérivation alimentant le SPD peut se produire. Modérer le déclenchement du disjoncteur de dérivation ou du fusible qui alimente le SPD en coordonnant les éléments de suppression des surtensions avec les circuits de dérivation.

Introduction

⚠ ATTENTION

PERTE DE SUPPRESSION DES SURTENSIONS TRANSITOIRES

- Ne mettez pas le dispositif de protection contre les surtensions transitoires sous tension avant que le système électrique soit complètement installé, inspecté, essayé.
- Assurez-vous que tous les conducteurs sont raccordés et fonctionnels.
- Vérifiez la tension nominale du dispositif et du système avant de mettre sous tension.
- Effectuez un essai d'isolation à potentiel élevé ou tous autres essais où des composants du dispositif de protection contre les surtensions transitoires seront soumis à des tensions supérieures à leur tension nominale de mise sous tension, avec le neutre et le dispositif SPD déconnectés de la source d'alimentation.

Si ces directives ne sont pas respectées, cela peut entraîner des blessures ou des dommages matériels.

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

- Portez un équipement de protection personnelle (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Coupez toutes les alimentations à cet appareil avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Remplacez tous les dispositifs, les portes et les couvercles avant de mettre l'appareil sous tension.
- Cet appareil doit être effectivement mis à la terre selon tous les codes en vigueur. Utilisez un conducteur de m.à.l.t. d'appareil pour raccorder celui-ci à la terre du système d'alimentation.

Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

REMARQUE : Pour les besoins de dépannage, appeler le groupe d'assistance technique Surgelogic au 1-800-577-7353 (É.-U.).

Une bonne installation est impérative pour obtenir l'efficacité et le rendement maximaux du SPD XDSE. Suivre les points indiqués dans ces directives d'utilisation afin d'assurer une installation correcte. Lire les directives d'utilisation en entier avant de commencer l'installation. Ces directives ne sont pas destinées à remplacer les codes d'électricité nationaux ou locaux. Consulter tous les codes d'électricité en vigueur pour vérifier la conformité. L'installation des dispositifs de protection contre les surtensions transitoires XDSE ne doit être effectuée que par des électriciens qualifiés.

Déballage et inspection préliminaire

Inspecter entièrement l'emballage d'expédition pour détecter d'éventuels dommages ou signes de mauvaise manutention avant de débiller le dispositif. Retirer les matériaux d'emballage et inspecter encore le dispositif afin de s'assurer qu'il n'a subi aucune détérioration au cours du transport. En cas de dommages résultant du transport ou de la manutention, remplir immédiatement un bordereau de réclamation destiné à l'entreprise de transport.

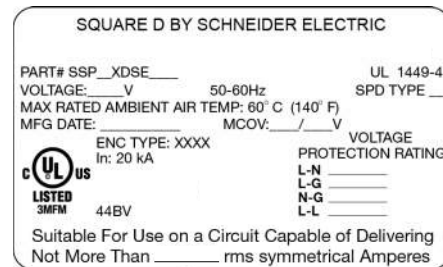
Entreposage

Le dispositif doit être entreposé dans un endroit propre et sec. La température d'entreposage est de -40 à +60°C (-40 à +140 °F). Tous les matériaux d'emballage doivent être conservés intacts jusqu'à ce que le dispositif soit prêt à être installé.

Plaque signalétique d'identification

La plaque signalétique se trouve sur le côté de l'unité.

Figure 1 : Exemple de plaque signalétique du XDSE



Considérations sur l'emplacement du SPD

Environnement

Le dispositif est conçu pour fonctionner dans une gamme de températures ambiantes de -20 à +60°C (-4 à +140 °F) avec une humidité relative de 0 à 95 % sans condensation. Ce dispositif est muni d'un coffret de type 4X.

Bruit audible

Le bruit de fond du dispositif est négligeable et ne limite pas l'emplacement d'installation.

Montage

Le dispositif a été conçu pour un montage en surface. Un kit de montage encastré (XDSEMKF) est également disponible si requis.

Dégagement pour l'entretien

Le dégagement pour l'entretien doit répondre à toutes les exigences des codes en vigueur.

Rendement de l'appareil

Pour obtenir la suppression optimale des surtensions transitoires, placer le SPD aussi près que possible du circuit concerné afin de réduire au minimum la longueur du fil. La réduction au minimum de la longueur du fil diminue l'impédance entre le circuit et le SPD.

Se reporter aux valeurs du niveau de protection en tension (VPR) indiquées sur la plaque signalétique du SPD. Ces valeurs VPR ont été obtenues en essayant le SPD avec des conducteurs d'une longueur de 6 po (selon UL1449). Pour chaque pied (305 mm) de longueur de fil ajoutée au-delà de 6 pouces (152 mm), le VPR efficace augmente d'environ 160 volts.

Caractéristiques électriques

⚠ AVERTISSEMENT

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

Assurez-vous que la tension nominale du dispositif de protection contre les surtensions transitoires sur le module ou la plaque signalétique n'est pas inférieure à la tension de fonctionnement.

Si ces directives ne sont pas respectées, cela peut entraîner la mort ou des blessures graves.

Tension nominale

Avant de monter le SPD, vérifiez s'il possède la même tension nominale que le système de distribution d'alimentation dans lequel il est installé. Comparez la tension de la plaque signalétique ou le numéro de modèle sur le SPD avec la plaque signalétique de l'appareil de distribution électrique.

Le spécificateur ou utilisateur du dispositif doit être familier avec la configuration et l'agencement du système de distribution d'alimentation dans lequel un SPD doit être installé. La configuration d'un système de distribution d'alimentation est strictement basée sur la façon dont les bobinages secondaires du transformateur assurant l'alimentation du secteur ou de la charge d'entrée de service sont configurés. Ceci oblige à déterminer si les bobinages du transformateur sont ou non reliés à la terre par un conducteur de m.à.l.t. La configuration du système n'est pas basée sur la façon dont une charge ou un appareil spécifique est raccordé à un système de distribution d'alimentation particulier. Voir le tableau 1 pour la tension de service de chaque SPD.

Tableau 1 : Tensions nominales du XDSE

Tension de service	Courant nominal de surtension de crête par phase	N° de catalogue ¹
120/240 V, monophasée, 3 fils + terre	100 kA	SSP01XDSE10A
	150 kA	SSP01XDSE15A
	200 kA	SSP01XDSE20A
208Y/120 V, triphasée, 4 fils + terre ²	100 kA	SSP02XDSE10A
	150 kA	SSP02XDSE15A
	200 kA	SSP02XDSE20A
240/120 V, triphasée (sommet du triangle) 4 fils + terre	100 kA	SSP03XDSE10A
	150 kA	SSP03XDSE15A
	200 kA	SSP03XDSE20A
480Y/277 V, triphasée, 4 fils + terre ³	100 kA	SSP04XDSE10A
	150 kA	SSP04XDSE15A
	200 kA	SSP04XDSE20A
480 V en triangle, triphasée, 3 fils + terre ⁴	100 kA	SSP05XDSE10A
	150 kA	SSP05XDSE15A
	200 kA	SSP05XDSE20A
240 V en triangle, triphasée, 3 fils + terre	100 kA	SSP06XDSE10A
	150 kA	SSP06XDSE15A
	200 kA	SSP06XDSE20A

Tableau 1 : Tensions nominales du XDSE (suite)

Tension de service	Courant nominal de surtension de crête par phase	N° de catalogue ¹
600Y/347 V, triphasée, 4 fils + terre	100 kA	SSP08XDSE10A
	150 kA	SSP08XDSE15A
	200 kA	SSP08XDSE20A
600 V en triangle, triphasée, 3 fils + terre ⁵	100 kA	SSP09XDSE10A

¹ Pour les systèmes type 1 ajouter un « 1 » à la fin du numéro de catalogue indiqué ci-dessus.

² La série 208Y/120 s'applique aussi à la tension 220Y/127.

³ La série 480Y/277 s'applique aussi aux tensions suivantes : 380Y/220, 400Y/230, 415Y/240

⁴ 480 V en triangle s'applique également aux tensions suivantes : 480Y/277V HRG (haute résistance).

⁵ 600 V en triangle s'applique également aux tensions suivantes : 600Y/347V HRG (haute résistance).

Protection contre les surintensités du circuit de dérivation et moyen de déconnexion

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

- Utilisez des conducteurs de valeur nominale adéquate pour le dispositif de protection contre les surintensités (OCPD) selon les codes en vigueur.
- Utilisez des conducteurs de valeur nominale adéquate pour l'application selon les codes en vigueur.

Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

Un dispositif de protection contre les surintensités (OCPD) d'un circuit de dérivation, sous la forme d'un disjoncteur ou d'un fusible, doit être fourni pour le dispositif XDSE Type 2. L'OCPD d'un circuit de dérivation doit procurer ou inclure un moyen de déconnexion.

Du fait que le courant consommé par le dispositif XDSE durant un fonctionnement normal est négligeable, le dispositif XDSE peut être raccordé à un circuit de dérivation dédié séparé ou à un circuit de dérivation existant adéquat.

Lorsque le dispositif XDSE est raccordé à un circuit de dérivation dédié séparé, le réglage de l'OCPD doit être choisi de façon à protéger les conducteurs qui alimentent le dispositif XDSE selon les codes de la construction locaux en vigueur.

Emplacement du dispositif de protection contre les surtensions transitoires (SPD)

Les SPD, UL 1449 type 1, ont été conçus et approuvés pour les applications côté ligne avant le sectionneur de service principal sans protection supplémentaire contre les surintensités. Les SPD type 2 doivent être installés sur le côté charge du dispositif de protection contre les surintensités (OCPD) principal. Toutes les installations doivent fournir ou comprendre un moyen de déconnexion.

Les SPD type 1 peuvent être également utilisés dans les applications de type 2 (côté charge du OCPD). Lorsque des SPD type 1 ou type 2 sont utilisés sur le côté charge, ils doivent être installés selon les codes locaux.

Placer le SPD aussi près que possible du circuit de secteur à protéger contre les surtensions transitoires afin de minimiser la longueur de fil et de maximiser le rendement du SPD. Éviter les longs cheminements de fils de façon à ce que le dispositif fonctionne comme prévu. Pour réduire l'impédance que le fil affiche aux courants de surtension, les conducteurs des phases, du neutre et de m.à.l.t. (systèmes en sommet du triangle et en étoile) ou les conducteurs des phases et de m.à.l.t. (système en triangle) doivent être acheminés dans le même conduit et groupés ou torsadés ensemble de façon serrée pour optimiser le rendement du dispositif. Éviter les courbures accentuées sur les conducteurs. Voir les figures 2 et 3.

Figure 2 : Câblage du SPD pour les configurations en étoile et sommet du triangle

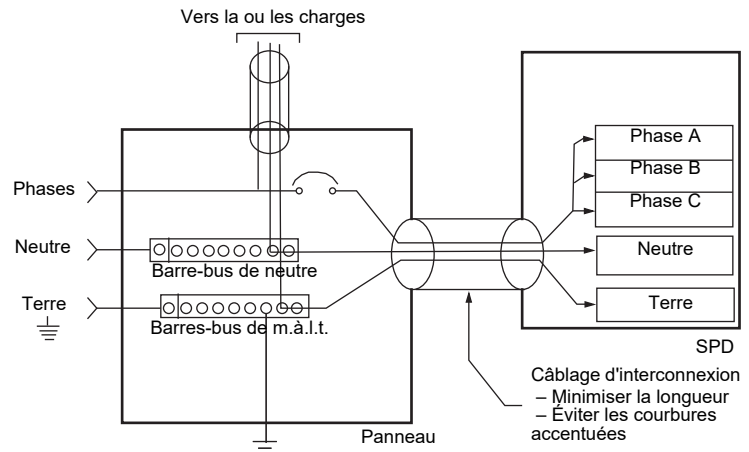
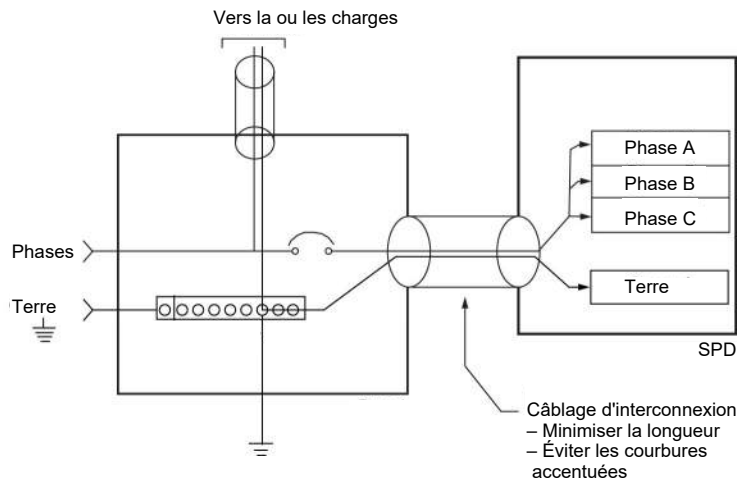


Figure 3 : Câblage du SPD pour les configurations sommet du triangle



Mise à la terre du système

Les systèmes d'alimentation sans mise à la terre (systèmes flottants) sont, par inhérence, instables et peuvent produire des tensions phase-terre excessivement hautes pendant certaines conditions de défaut. Pendant ces conditions de défaut, tout appareillage électrique, y compris un dispositif de protection contre les surtensions, peut être soumis à des tensions qui dépassent ses capacités nominales. Ces informations sont fournies à

l'utilisateur de sorte qu'une décision fondée puisse être prise avant d'installer un appareillage électrique sur un système d'alimentation non mis à la terre (systèmes flottants).

AVIS

PERTE DE SUPPRESSION DES SURTENSIONS TRANSITOIRES

- Vérifiez si l'appareil d'entrée de service est relié à la terre conformément à tous les codes en vigueur.

Si ces directives ne sont pas respectées, cela peut entraîner des dommages matériels.

Le dispositif XDSE possède des éléments du SPD raccordés de la phase à la terre. Il est essentiel qu'il existe un raccordement robuste et efficace à la structure de m.à.l.t. de l'immeuble. Le raccordement de m.à.l.t. doit utiliser un conducteur de m.à.l.t. d'appareil acheminé avec le raccordement de phase et de neutre du système d'alimentation. Ne pas raccorder le SPD à une terre isolée séparée. Pour assurer la meilleure suppression des tensions par le SPD XDSE, utiliser un système de m.à.l.t. à un seul point, où le système d'électrode de m.à.l.t. de l'entrée de service est raccordé et mise à la masse à toutes les autres électrodes disponibles, à l'acier de l'immeuble, aux tuyaux métalliques d'eau, aux tiges guidées, etc. (pour référence, voir le NEC Art. 250 [É.-U.]). Pour les systèmes électroniques et informatiques sensibles, la mesure de l'impédance de la m.à.l.t. du système électrique doit être aussi faible que possible et conforme à tous les codes en vigueur.

AVIS

CONTINUITÉ ÉLECTRIQUE INADÉQUATE DE LA CANALISATION

- Installez un conducteur de m.à.l.t. isolé à l'intérieur d'une canalisation métallique lorsque la canalisation est utilisée comme conducteur de m.à.l.t. supplémentaire. Choisir le calibre du conducteur conformément à tous les codes en vigueur.
- Maintenez une continuité électrique adéquate à tous les raccordements de la canalisation.
- N'employez pas de manchons d'isolation pour interrompre l'acheminement d'une canalisation métallique.
- N'utilisez pas une m.à.l.t. isolée séparée pour le dispositif de protection contre les surtensions.
- Vérifiez si les raccordements du matériel au système de m.à.l.t. sont adéquats.
- Vérifiez la continuité de la grille de m.à.l.t. par des inspections et des essais faisant partie d'un programme d'entretien électrique complet.

Si ces directives ne sont pas respectées, cela peut entraîner des dommages matériels.

Câblage

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

- Portez un équipement de protection personnelle (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Coupez toutes les alimentations à cet appareil avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Remplacez tous les dispositifs, les portes et les couvercles avant de mettre l'appareil sous tension.
- Cet appareil doit être effectivement mis à la terre selon tous les codes en vigueur. Utilisez un conducteur de m.à.l.t. d'appareil pour raccorder celui-ci à la terre du système d'alimentation.
- Assurez-vous que la tension nominale du dispositif de protection contre les surtensions transitoires sur le module ou la plaque signalétique n'est pas inférieure à la tension de fonctionnement.

Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

Tableau 2 : Emplacement des schémas de câblage¹

Câblage pour :	Figure et page
Installation mise à la terre, monophasée à 3 fils	Voir la figure 6 à la page 12
Installation en triangle, monophasée à 2 fils + terre	Voir la figure 7 à la page 12
Installation en étoile mise à la terre, triphasée à 3 ou 4 fils	Voir la figure 8 à la page 12
Installation en sommet de triangle triphasée, à 3 ou 4 fils	Voir la figure 9 à la page 12
Installation en triangle, triphasée à 3 fils + terre	Voir la figure 10 à la page 13

¹ Se reporter à la section « Contacts secs » à la page 16 pour les directives de câblage.

Suivre les points 1 à 7 pour effectuer les raccordements de câblage.

1. Couper toute alimentation vers cet appareil avant de travailler sur ou à l'intérieur du coffret contenant cet appareil.
2. S'assurer que le SPD est de la valeur nominale convenant à votre système en comparant les mesures de tension à la tension de ligne (L-L, L-N) sur l'étiquette du produit.
3. Identifier l'emplacement approprié pour le SPD. Le placer aussi près que possible du secteur du panneau à protéger contre les surtensions transitoires de sorte que les fils soient aussi courts que possible. Monter l'unité en toute sécurité.

Remarque : Le SPD doit être installé dans un endroit accessible (non à l'intérieur de murs à moins d'être monté en surface à l'aide du kit de montage encastré XDSEMKF).

4. Installer conformément aux codes de l'électricité nationaux et locaux et en faisant correspondre le dispositif de protection contre les surintensités (OCPD) du circuit de dérivation au calibre des fils.
5. Torsader les conducteurs de 1/2 tour ou plus pour chaque 12 po de longueur.
6. Ne pas faire de boucles et ne pas enrouler les fils. Prendre soin de maintenir l'espace de courbure des fils adéquat selon le NEC (É.-U.).

7. Utiliser sur des systèmes directement m.à.l.t. à moins que le modèle de SPD ne soit conçu pour une installation sur des systèmes non mis à la terre/HRG (haute résistance).

Remarque : Sur une installation au sommet du triangle, le sommet du système d'alimentation doit être raccordé à la cosse de la phase B du SPD.

⚠ AVERTISSEMENT

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

Pour les installations à l'extérieur, utilisez un scellement approprié à l'abri des intempéries au niveau du raccord (joint torique, conduit d'étanchéité, etc).

Si ces directives ne sont pas respectées, cela peut entraîner la mort ou des blessures graves.

Figure 4 : Installation du conduit

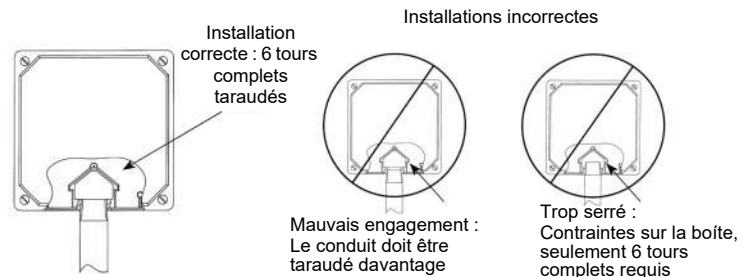
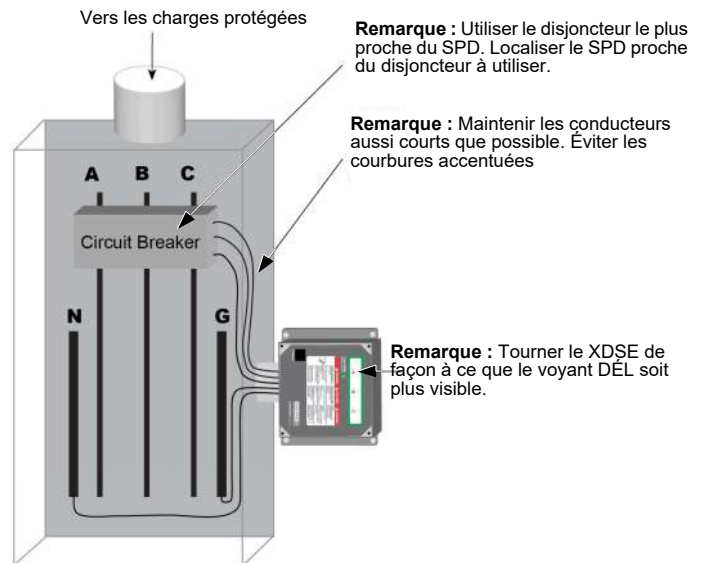


Figure 5 : Installation typique du panneau



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Schéma de câblage du XDSE

Figure 6 : Installation mise à la terre, monophasée à 3 fils

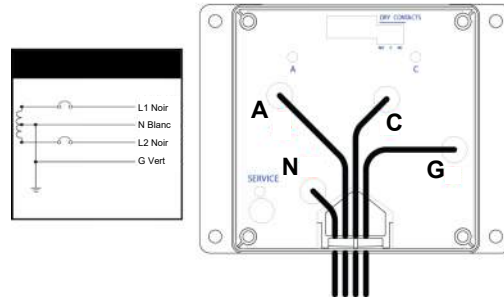


Figure 7 : Installation en triangle, monophasée à 2 fils

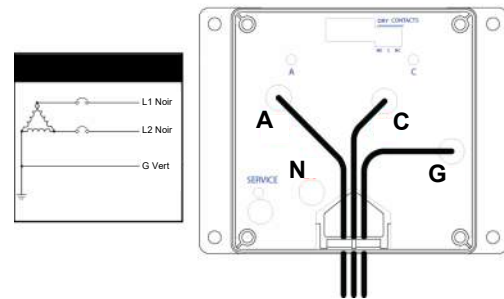


Figure 8 : Installation en étoile mise à la terre, triphasée à 3 ou 4 fils¹

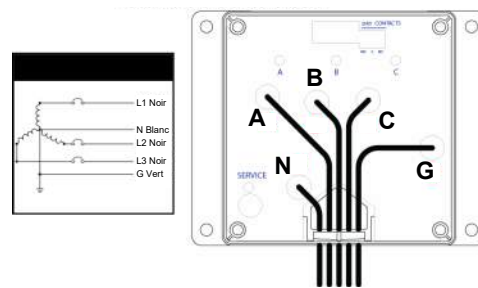
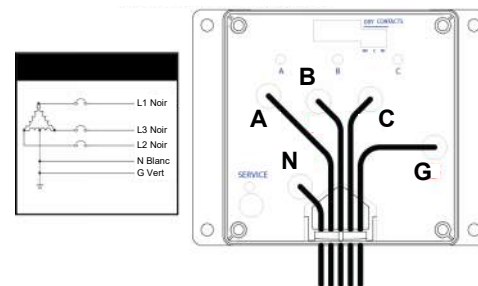


Figure 9 : Installation en sommet de triangle triphasée, à 3 ou 4 fils²



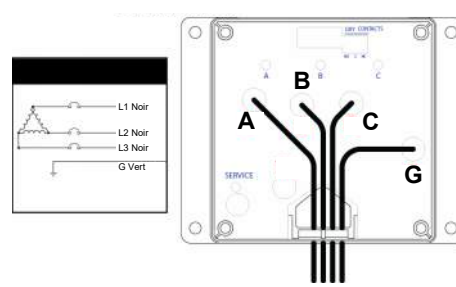
Remarque 1 : Le conducteur de neutre n'est pas présent sur les systèmes d'alimentation en étoile mis à la terre à 3 fils.

Pour le bon fonctionnement des diagnostics du SPD sur ces systèmes, grouper le neutre et les cosses de la terre à l'intérieur du SPD.

Remarque 2 : Le sommet du système d'alimentation doit être raccordé à la cosse de la phase B du SPD.

Le conducteur de neutre n'est pas présent sur les systèmes d'alimentation en sommet de triangle mis à la terre à 3 fils. Pour le bon fonctionnement des diagnostics du SPD sur ces systèmes, grouper le neutre et les cosses de la terre à l'intérieur du SPD.

Figure 10 : Installation en triangle, triphasée à 3 fils



Installation

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

- Portez un équipement de protection personnelle (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Coupez toutes les alimentations à cet appareil avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Remplacez tous les dispositifs, les portes et les couvercles avant de mettre l'appareil sous tension.
- Cet appareil doit être effectivement mis à la terre selon tous les codes en vigueur. Utilisez un conducteur de m.à.l.t. d'appareil pour raccorder celui-ci à la terre du système d'alimentation.

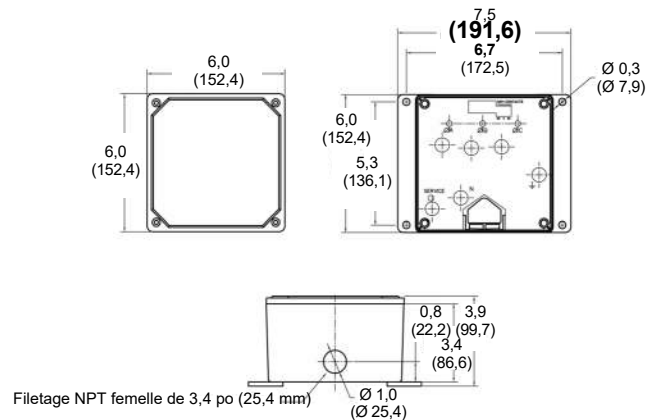
Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

Montage en surface

REMARQUE : Monter l'unité aussi près que possible du panneau protégé.

1. Percer des trous dans le mur correspondant aux trous de vis existant sur le coffret. Voir la figure 11. (Tourner les dimensions de 90° autant que de besoin selon l'orientation).
2. Configurer le raccordement du conduit et du conducteur électrique de façon compatible avec les directives d'installation aux pages 9 à 13.
3. Installer la plaque frontale/le couvercle, en appliquant un couple de serrage de 5 lb-po (0,5 N•m) aux quatre vis, avant de mettre l'unité sous tension et de l'essayer.

Figure 11 : Dimensions générales

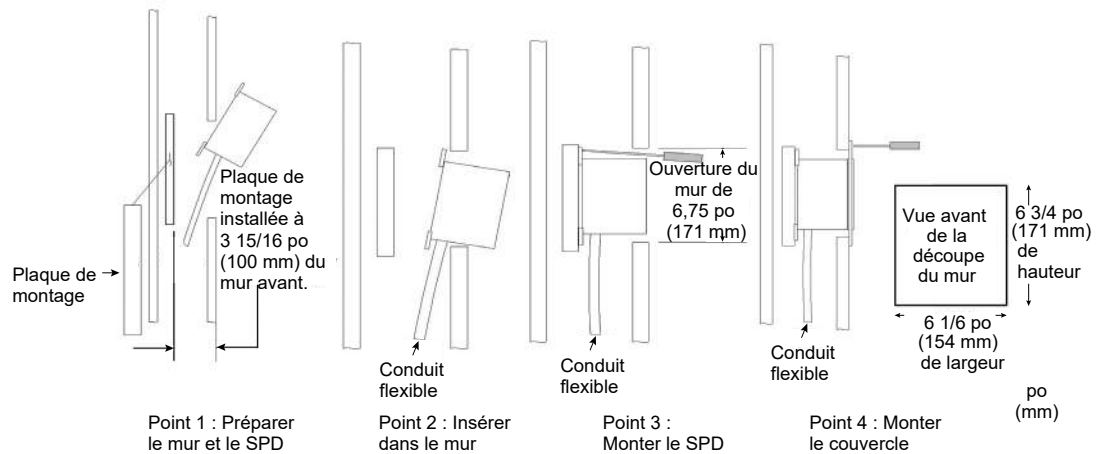


Installation encastrée

REMARQUE : Monter l'unité aussi près que possible du panneau protégé.

1. Créer une ouverture dans le mur de 6 3/4 po x 6 1/16 po (171 x 154 mm) et d'un dégagement de 3 15/16 po (100 mm). Voir la figure 12. (Tourner les dimensions de 90° autant que de besoin selon l'orientation).
2. Configurer une plaque de protection à l'intérieur de la cavité murale, de 3 15/16 po (100 mm) à partir de la face du mur de façon à ce que l'unité soit soutenue par l'arrière.
3. Configurer le raccordement du conduit et du conducteur électrique de façon compatible avec les directives d'installation aux pages 9 à 13. Planifier les raccordements au préalable de façon à ce qu'ils soient terminés avant de fixer l'unité à la plaque de protection.
4. Installer la plaque frontale/le couvercle, en appliquant un couple de serrage de 5 lb-po (0,5 N•m) aux quatre vis, avant de mettre l'unité sous tension et de l'essayer.

Figure 12 : Montage encastré



Remarque : Directives supplémentaires pour un montage mural en profondeur (dans des murs de plus de 4 po [101 mm] d'épaisseur à l'aide des pieds de montage inclus).

Fonctionnement

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

- Portez un équipement de protection personnelle (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Coupez toutes les alimentations à cet appareil avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Remplacez tous les dispositifs, les portes et les couvercles avant de mettre l'appareil sous tension.
- Cet appareil doit être effectivement mis à la terre selon tous les codes en vigueur. Utilisez un conducteur de m.à.l.t. d'appareil pour raccorder celui-ci à la terre du système d'alimentation.

Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

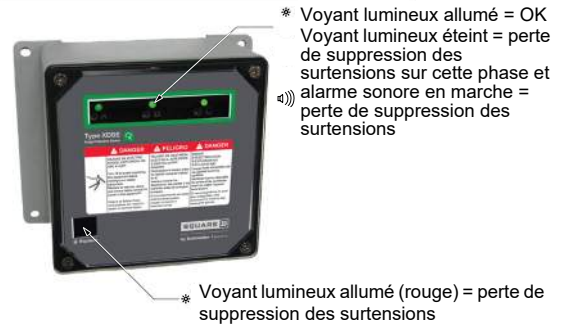
Indicateurs d'état DÉL

Les DÉL de diagnostic sont placées sur l'avant du SPD XDSE. Elles fonctionnent de la manière suivante :

- Vérifier si toutes les tensions de phases sont présentes. Si des LÉD ne sont pas allumées, le dispositif n'est sans doute pas installé correctement. Vérifier l'alimentation et la tension de service. À la mise sous tension du SPD, vérifier l'état des DÉL.
- Si toutes les DÉL sont allumées, le dispositif de protection contre les surtensions fonctionne.
- Si une ou plusieurs DÉL ne sont pas allumées, il y a une perte de suppression des surtensions transitoires sur la phase correspondante.

- Si une condition de non fonctionnement se produit, le dispositif doit être remplacé par un électricien qualifié.

Figure 13 : Diagnostic de fonctionnement



Alarme sonore

L'alarme sonore ne possède pas d'interrupteur d'arrêt (mise au silence). Arrêter l'alarme en mettant le SPD hors tension. L'alarme indique que le dispositif a besoin d'être remplacé par un électricien qualifié.

Contactes secs

⚠ ATTENTION

USAGE INADÉQUAT DES CONTACTS SECS

Ne fournissez pas une alimentation supérieure à 24 Vcc / 24 Vca et pas un courant supérieur à 2 A.

Si ces directives ne sont pas respectées, cela peut entraîner des blessures ou des dommages matériels.

Le SPD de la série XDSE est fourni avec des contacts secs. L'état hors tension est fermé entre le fil commun et le fil normalement fermé. Ceci est également la condition d'alarme. L'état opposé, fermé entre le fil commun et le fil normalement ouvert, indique que l'unité est sous tension et qu'il n'existe aucune condition d'alarme (voir le tableau 3). Ces conducteurs des contacts secs peuvent être utilisés pour l'indication à distance de l'état de fonctionnement du SPD à une carte d'interface d'ordinateur ou à un système de gestion des urgences. En outre, ces fils de contacts secs sont conçus pour fonctionner avec l'option de moniteur à distance du SPD décrite dans la section suivante.

Les contacts sont conçus pour une tension maximale de 24 Vcc / 24 Vca et un courant maximum de 2 A. Les applications d'une énergie plus élevée peuvent exiger l'incorporation de relais supplémentaires à l'extérieur du SPD. Les dommages occasionnés au relais du SPD par l'utilisation de niveaux d'énergie qui dépassent ceux indiqués dans ces directives d'utilisation ne sont pas couverts par la garantie. Pour les questions d'application, appeler le groupe d'assistance technique Surgelogic au 800-577-7353 (É.-U.).

Tableau 3 : Configuration des contacts secs

Bornes des contacts secs	Hors tension ou condition d'alarme	Sous tension et pas de condition d'alarme
N/O (Normalement ouvert)	Ouvert	Fermé
COM Commun	Commun	Commun
N/F Normalement fermé	Fermé	Ouvert

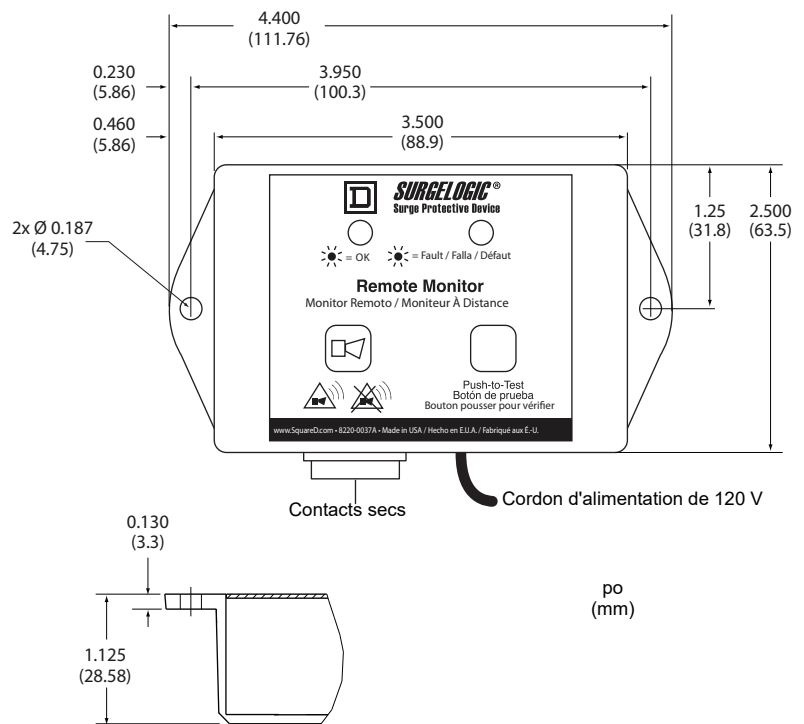
Option de moniteur à distance

L'option de moniteur à distance possède deux DÉL, une rouge et une verte, et une alarme sonore munie d'un interrupteur d'activation/désactivation. L'état normal est une DÉL verte allumée et pas d'alarme sonore. Pour essayer l'intégrité du moniteur à distance, appuyer sur le bouton pousser-pour-vérifier. La DÉL verte s'éteint, la DÉL rouge s'allume et l'alarme retentit, si elle est activée. Relâcher le bouton termine l'essai; la DÉL rouge s'éteindra, la DÉL verte s'allumera et l'alarme s'arrêtera.

Si la suppression sur n'importe quelle phase est perdue, la DÉL verte s'éteindra, la DÉL rouge s'allumera et une alarme retentira. L'alarme sonore peut être mise au silence en appuyant sur l'interrupteur d'activation/désactivation/essai. L'alarme s'arrêtera et la DÉL verte d'alarme ne s'allumera pas. La DÉL rouge reste allumée jusqu'à ce que la condition de non fonctionnement soit corrigée.

Le moniteur à distance comprend un adaptateur de 120 Vca à 12 Vcc avec un cordon d'alimentation de 6 pieds. Les raccordements sont faits au panneau de diagnostics du SPD XDSE par des fils conducteurs des contacts secs de 24 po (610 mm) (fournis). Pour éloigner davantage le moniteur à distance (jusqu'à 1 000 pi [305 m]), utiliser une longueur complémentaire de fil rigide ou toronné de calibre 22 à 14 AWG (non fourni).

Figure 14 : Option de moniteur à distance (TVS12RMU)



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Entretien préventif

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU ÉCLAIR D'ARC ÉLECTRIQUE

- Portez un équipement de protection personnelle (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Coupez toutes les alimentations à cet appareil avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Remplacez tous les dispositifs, les portes et les couvercles avant de mettre l'appareil sous tension.
- Cet appareil doit être effectivement mis à la terre selon tous les codes en vigueur. Utilisez un conducteur de m.à.l.t. d'appareil pour raccorder celui-ci à la terre du système d'alimentation.

Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

Inspecter le SPD périodiquement pour que le rendement du système reste fiable et assure la suppression continue des surtensions transitoires. Durant cette inspection, vérifier la condition des indicateurs d'état des DÉL d'affichage.

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Du fait que les normes, caractéristiques et conceptions peuvent changer, demander confirmation que l'information contenue dans cette publication est à jour.

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9501, 07/2018

NQ/NQM Panelboards and QONQ Load Centers

Class 1640
80043-712-06, Rev. 08

What's in This Document

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Appendix 1: Specifications.....	17
Appendix 2: Accessory Kits	37

Safety Information

Read these instructions carefully and examine the equipment to become familiar with the device before attempting to install, operate, service, or maintain it. The following special messages may appear throughout this user guide or on the equipment to warn of hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

NOTE: Provides additional information to clarify or simplify a procedure.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Electrical equipment should be transported, stored, installed, and operated only in the environment for which it is designed.

Introduction

This bulletin contains instructions for installing Square D™ brand NQ circuit breaker panelboards and QONQ load centers. These panelboards and load centers are Underwriters Laboratories (cULus) listed and accept QO™ and QOB branch circuit breakers.

NOTE: For technical support on the installation of this panelboard, contact the Schneider Electric Customer Information Center at 1-888-778-2733.

NOTE: See the labels on the equipment for rating and safety information. Additional equipment labels are provided with this document.

Safety Precautions

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462 or local equivalent.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Read and understand this entire instruction bulletin and the included NEMA PB 1.1 standards publication before installing, operating, or maintaining this equipment.
- Local codes vary, but are adopted and enforced to promote safe electrical installations. A permit may be needed to do electrical work, and some codes may require an inspection of the electrical work.
- Replace all devices, doors, and covers before turning on power to this equipment.
- Do not allow petroleum based paints, solvents, or sprays to contact the nonmetallic parts of this product.

Failure to follow these instructions will result in death or serious injury.



WARNING: This product can expose you to chemicals including Nickel compounds, which are known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Installation

This section provides instructions for the following NQ panelboard and QONQ load center procedures:

- Interior Mounting for Square D Brand Enclosures, page 5.
- Neutral Bonding Strap/Cable Installation, page 8.
- QO and QOB Circuit Breaker Installation and Removal, page 12.
- Circuit Breaker Reset Instructions, page 15.
- Deadfront Preparation, page 16.

Interior Mounting for Square D Brand Enclosures

A separate standards publication, titled “General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less” (NEMA PB1.1), has been provided with this equipment. Familiarize yourself with the content of this document before proceeding with any of the following procedures.

If you did not receive a copy of this document, or if you have any questions regarding this equipment, contact your local distributor or Schneider Electric representative.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Ensure all field connections are properly tightened.
- Do not over torque or under torque connections. Refer to the torque information label provided on the panelboard before tightening connections.

Failure to follow these instructions will result in death or serious injury.

To properly mount and install the NQ panelboard or QONQ load center interior, please refer to the NEMA PB 1.1 standards publication, and follow the instructions below for either [Surface Mounting \(Enclosure](#)

Mounted on Wall), page 6 or Flush Mounting (Enclosure Recessed in Wall), page 6.

Surface Mounting (Enclosure Mounted on Wall)

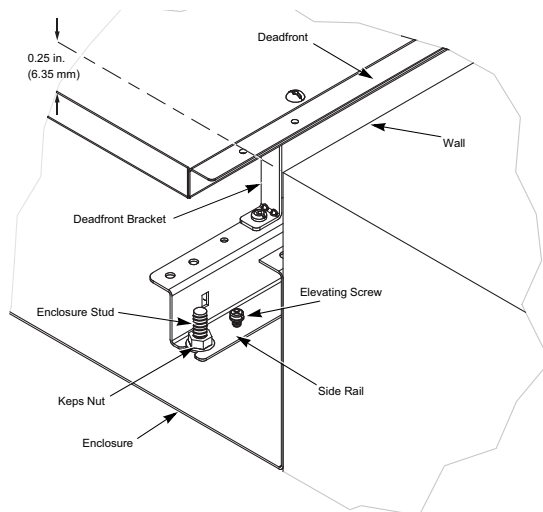
1. Mount the enclosure as instructed in the NEMA PB 1.1 standards publication.
2. Remove the deadfront from the deadfront brackets.
3. Install the interior as described below:
 - a. Set the interior on the enclosure studs. An elevating screw is not required (See Interior Mounting for Square D Brand Enclosures, page 5).
 - b. Tighten the Keps nuts against the interior side rails until the rails are against the back of the enclosure.
4. Based on the application and adopted installation code, a Neutral Bonding Strap and Line Side Barrier may be required. See the Neutral Bonding Strap/Cable Installation, page 8 and Appendix 2: Accessory Kits, page 37.
5. Apply equipment labels (located in the bag assembly) as directed by the instructions on the back of the equipment label sheet. Please consult local codes and standards.
6. Remount the deadfront after wiring.

Flush Mounting (Enclosure Recessed in Wall)

1. Mount the enclosure as instructed in the NEMA PB 1.1 standards publication.
2. Remove the deadfront from the deadfront brackets.

3. Install the interior as described below:
 - a. Thread the (4) 10-32 x 0.875 in. self-tapping, elevating screws provided with the flush trim into the side rails.
 - b. Set the interior on the enclosure studs (see [Interior Mounting of Square D Brand Enclosures](#), page 7). Place the keps nuts onto the enclosure studs, but do not tighten.
 - c. Adjust the screws so that the lip of the deadfront is approximately 0.25 inches (6.35 mm) from the wall line.
 - d. Tighten the keps nuts against the side rails.
4. Based on the application and adopted installation code, a Neutral Bonding Strap and Line Side Barrier may be required. Please consult local codes and standards. See the [Neutral Bonding Strap/ Cable Installation](#), page 8 and [Appendix 2: Accessory Kits](#), page 37.
5. Apply equipment labels (located in the bag assembly) as directed by the instructions on the back of the equipment label sheet.
6. Remount the deadfront after wiring.

Figure 1 - Interior Mounting in Square D Brand Enclosures



Neutral Bonding Strap/Cable Installation

Based on the application and the adopted installation code, a line side barrier and neutral bonding strap may be required.

To properly bond the neutral to the panelboard, follow the instructions for either 100 or 250 A Maximum NQ Panelboards, or 400 or 600 A Maximum NQ Panelboards and QONQ Load Centers, page 10.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462 or local equivalent.
- Turn off all power supplying this equipment before working on or inside equipment.
- The neutral bonding strap/cable should be used only when the panelboard is installed as service entrance equipment.
- Do not mix the mounting screws with the deadfront screws.

Failure to follow these instructions will result in death or serious injury.

NOTE: Refer to Line Side Barrier and Neutral Bonding Strap Kits, page 40 for information.

NOTE: The terms “neutral bonding strap” and “neutral bonding cable”, describe the components which meet the requirements for a “neutral bonding conductor”. These are equivalent terms.

100 or 250 A Maximum NQ Panelboards

To install a neutral bonding strap on NQ panelboards with mains rated up to 225 A (with main lugs or main circuit breaker), or up to 250 A with a factory assembled main circuit breaker, refer to *Bonding Strap Installation—100 or 250 A Maximum NQ Panelboards*, page 10, and follow the instructions below.

1. Align the bonding strap on the side rail, as pictured.

NOTE: For some applications, it may be necessary to remove the lug (not pictured) before installing the bonding strap.

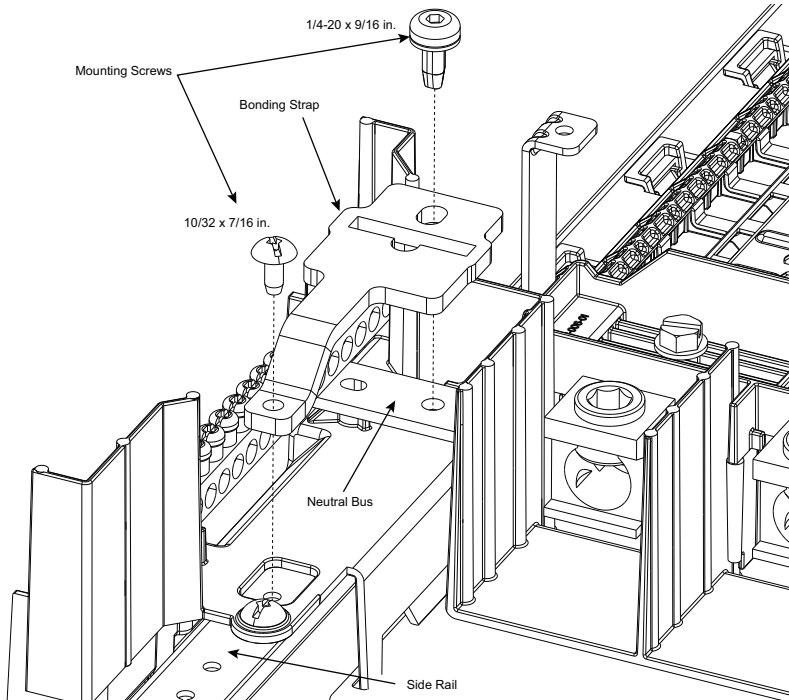
2. Insert the two mounting screws, as pictured. Tighten the 10-32 screw to 10–12 lb.-in. (1.1–1.4 N•m) and the 1/4-20 to 25–30 lb.-in. (2.8–3.4 N•m).

NOTE: Lug mounting screws are provided in the bonding strap bag assembly.

- a. If the lug was removed in step 1 above, reinstall it on top of the bonding strap. Tighten the 10-32 screw to 10–12 lb.-in. (1.1–1.4 N•m) and the 1/4-20 to 25–30 lb.-in. (2.8–3.4 N•m).
- b. Use 1/4-20 x 9/16 in. screw in mounting for 100/225 A interiors with no options. Refer to note C and D for other options.
- c. Use the 1/4-20 x 11/16 in. lug mounting screw on applications with feed-through lug, sub-feed lug, sub-feed circuit breaker, or 200% neutral applications.
- d. Use the 1/4-20 x 7/8 in. lug mounting screw on applications with 200% neutrals and with feed-through lugs, sub-feed lugs, or sub-feed circuit breakers.

Figure 2 - Bonding Strap Installation—100 or 250 A Maximum NQ Panelboards

NOTE: For bonding strap lug options, refer to C and D for the correct length of the 1/4-20 screw.



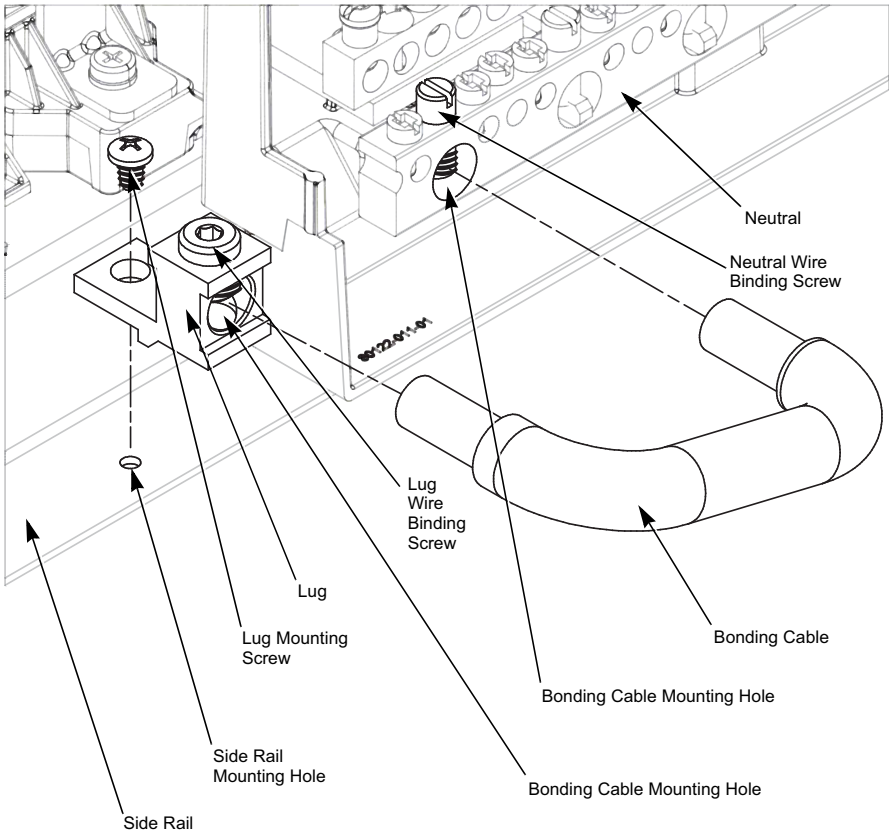
400 or 600 A Maximum NQ Panelboards and QONQ Load Centers

To install a neutral bonding cable on a 400 or 600 A maximum NQ panelboard and QONQ load center, refer to *Bonding Cable Installation — 400 or 600 A Maximum NQ Panelboards and QONQ Load Centers*, page 11, and follow the instructions below.

1. Align the lug on the side rail mounting hole, as pictured.

2. Tighten the lug mounting screw against the side rail to 10–12 lb.-in. (1.1–1.4 N•m).
3. Align the bonding cable, as pictured, and insert it into the lug and neutral mounting holes.
4. Tighten both the lug wire binding screw and the neutral wire binding screw to 45–50 lb.-in. (5.1–5.6 N•m).

Figure 3 - Bonding Cable Installation — 400 or 600 A Maximum NQ Panelboards and QONQ Load Centers



QO and QOB Circuit Breaker Installation and Removal

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462 or local equivalent.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- All unused spaces must be filled with filler plates.
- Replace all devices, doors, and covers before turning on power to this equipment.
- Use only Square D™ and Schneider Electric™ brand circuit breakers and accessories. This equipment is designed and tested by Schneider Electric to performance levels which meet applicable regulatory standards.
- Ensure all field connections are properly tightened.
- Do not over torque or under torque connections. Refer to the torque information label provided on the panelboard before tightening connections.

Failure to follow these instructions will result in death or serious injury.

QO and QOB Circuit Breaker Installation

Refer to QO and QOB Circuit Breaker Installation and Removal, page 14, for the following instructions:

1. Turn OFF all power to the panelboard.
2. Turn the circuit breaker OFF.
3. Remove the deadfront.
4. Snap the wire terminal end of the circuit breaker onto the mounting rail.
5. Engage the branch connector.

For QO Circuit Breakers: Push inward until the plug-on jaws fully engage the branch connector.

For QOB Circuit Breakers: Push inward until the circuit breaker connector is centered on the branch connector mounting hole. Engage the screw into the branch connector hole and tighten it to the torque values shown on the interior wiring and torque diagram.

6. Install the load wire.
7. Reinstall the deadfront.
8. Install a filler plate in all branch circuit breaker spaces not used.

QO and QOB Circuit Breaker Removal

Refer to QO and QOB Circuit Breaker Installation and Removal, page 14, for the following instructions:

1. Turn OFF all power to the panelboard.
2. Remove the deadfront.
3. Remove the load wire.

4. Disengage the branch connector.

For QO Circuit Breakers:

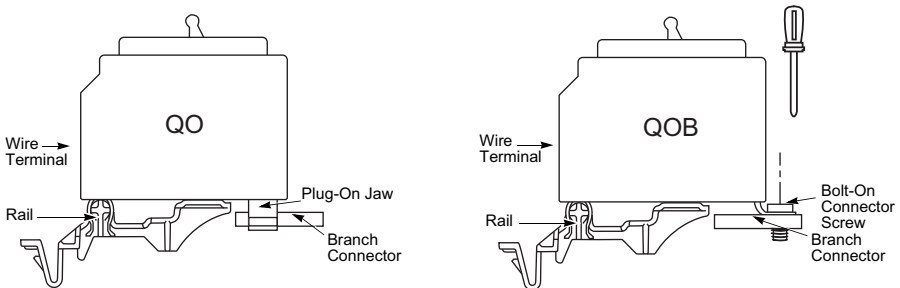
Pull outward until the plug-on jaws fully disengage the branch connector.

For QOB Circuit Breakers:

Loosen the screw in the circuit breaker connector and pull the circuit breaker off of the branch connector.

5. Remove the wire terminal end of the circuit breaker from the mounting rail.
6. Reinstall the deadfront.
7. Install a filler plate in all branch circuit breaker spaces not used.

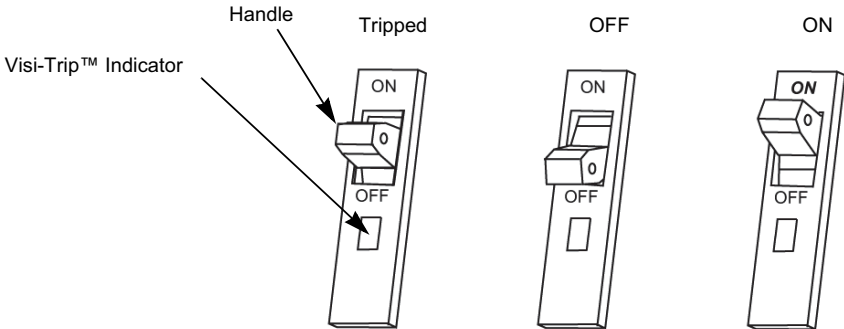
Figure 4 - QO and QOB Circuit Breaker Installation and Removal



Circuit Breaker Reset Instructions

If the circuit breaker is tripped, the handle will be at the mid-position between ON and OFF. To reset the circuit breaker, push the handle to the OFF position, then to the ON position.

Figure 5 - Circuit Breaker Handle Positions



NOTE: When the circuit breaker has tripped, the handle assumes a center position and the red Visi-Trip indicator appears in a window in the circuit breaker case. The red Visi-Trip indicator is only visible when the circuit breaker has tripped.

Deadfront Preparation

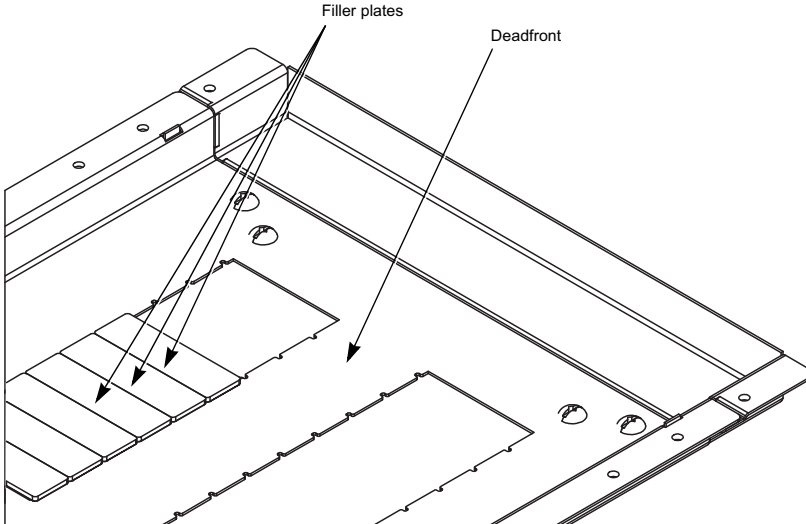
⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462 or local equivalent.
- Before energizing the panelboard, all unused spaces must be filled with filler plates.
- Replace all devices, doors, and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

Figure 6 - Deadfront Diagram



NOTE: The back of the deadfront lists the catalog number for the corresponding compatible filler plates.

Appendix 1: Specifications

Typical Wiring

Additional information is provided on the panelboard. See the main circuit breaker rating, if used.

Table 1 - Panelboard Typical Wiring

Voltage AC	1-Phase Panelboards		3-Phase Panelboards	
	Phase	Wires	Phase	Wires
208Y/120	—	—	3	4
120/240	1	3	—	—
240 ¹	1	2	3	4
240 ²	1	3	—	—
240/120 ³	—	—	3	4 Delta

1. For this system, the neutral is not used and only circuit breakers rated 240 Vac minimum should be used. Do not use circuit breakers rated 120 V or 120/240 Vac.
2. For a grounded "B" phase system, only circuit breakers rated 240 Vac minimum should be used. Do not use circuit breakers rated 120 V or 120/240 Vac.
3. When wiring for a delta system, phases "A" and "C" must be 120 V to neutral, phase "B" 208 V to neutral. Connect only circuit breakers rated 240 Vac minimum. Do not use circuit breakers rated 120 V or 120/240 V to "B" phase.

Integral Main or Sub-Feed

PowerPacT H-, J-, L-, and Q-Frame; LA, LH, QO(B)(VH)

Figure 7 - NQ/NQM 100–225 A Main Lugs or 100–225 A Main Circuit Breaker Diagram

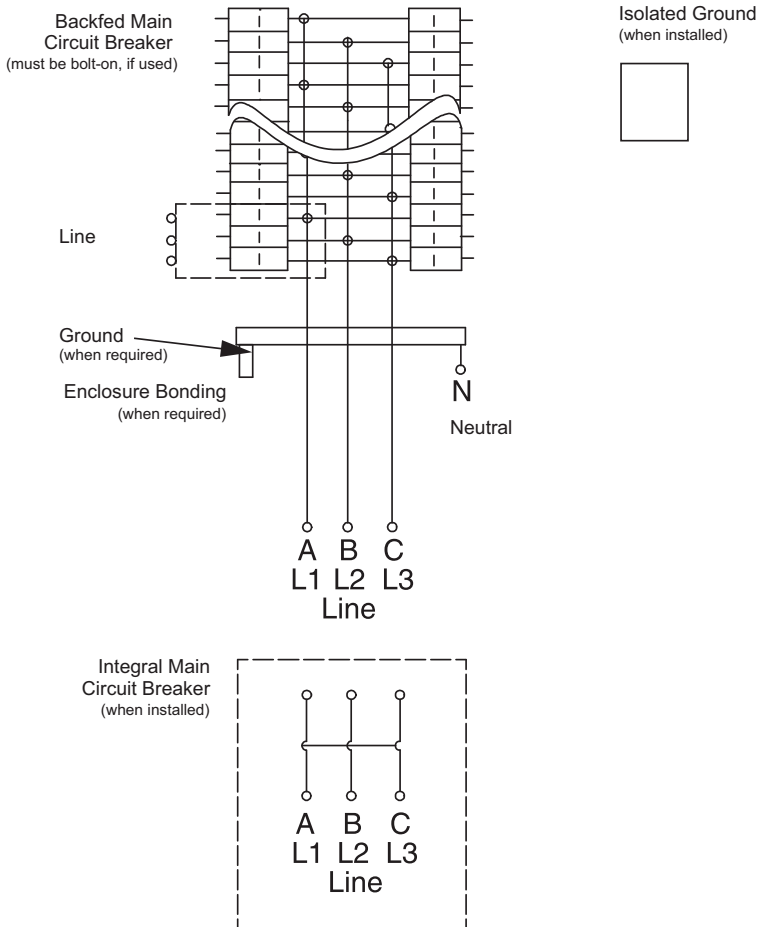


Figure 8 - NQ Panelboard or QONQ Load Center 400–600 A Main Lugs or Main Circuit Breaker with or without Feed-Through Lugs Diagram

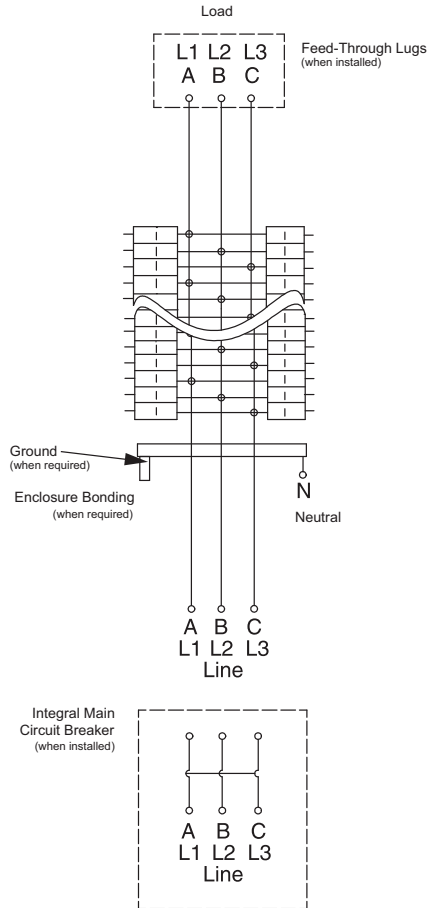


Figure 9 - NQ Panelboard or QONQ Load Center 400–600 A Main Circuit Breaker with Feed-Through Lugs or Sub-Feed Circuit Breakers

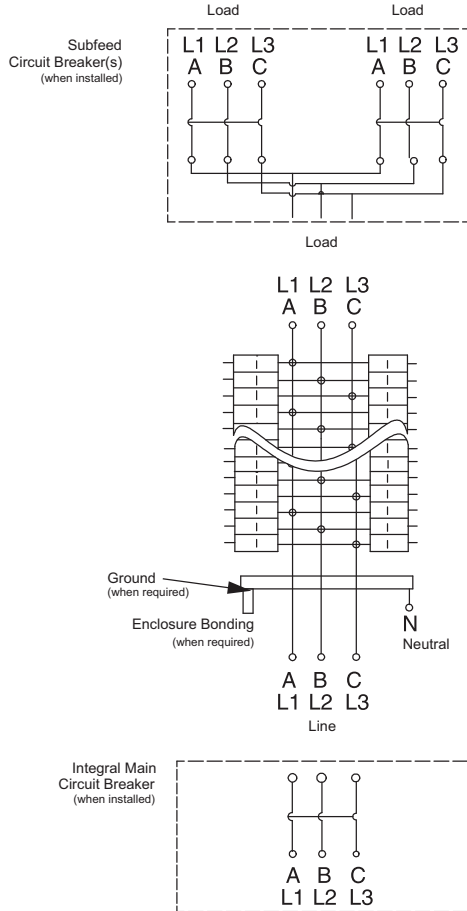
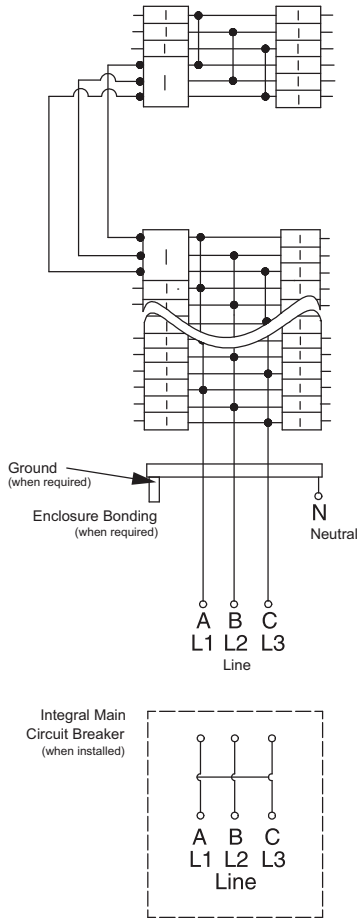


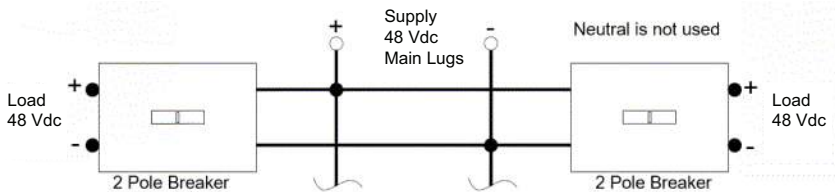
Figure 10 - Typical NQ Panelboard with Split Bus Diagram



Suitable for use on 48 Vdc Maximum Systems

For use on 48 Vdc Maximum Ungrounded Systems Only. Use only Type QO(B), 2 pole, 10–60 A branch, or branch fed main, circuit breakers with suffix 5272 that are rated for 48 Vdc maximum. Short Circuit Current Rating is limited to 5 kA when used on a 48 Vdc system.

For vertically mounted main and sub-feed circuit breakers use only H-, J-, and LA/LH-Frame circuit breakers. Short Circuit Current Rating is limited to 20 kA (H-, J-Frame), 10 kA (LA-Frame), and 50 kA (LH-Frame) when used on a 48 Vdc system.



Panelboard Ratings

Refer to local codes and standards for more information. The series rated system label is located in the bag assembly.

Series Connected Circuit Breaker Ratings (RMS Symmetrical)

- Series Ratings listed at higher system voltages apply to lower system voltages (Example: 240 3P/3W covers 208Y/120 3P/4W).
- Short circuit tests are conducted at 100–105% of the maximum rated voltage of the panelboard.
- “MC” denotes Mission Critical circuit breakers.
- Where LG is shown, LJ and LL can be used.
- Unless otherwise noted, main circuit breakers can be applied at the maximum available amperage rating.
- Suffixes HID, SWD, and SWN may also be applied to the applicable branch circuit breakers shown below.
- Where QO(B) circuit breakers are shown below, QO(B)H, QO(B)VH, and QH(B) circuit breakers may also be used.
- Two-pole CAFI circuit breakers cannot be used on three-phase systems.

Table 2 - Max. System Voltage AC: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
18,000	LA/LH MC	QO(B)	15–30 A	15–30 A	—
22,000	QO(B) VH QOB-VH	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
25,000	QD	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
	QO(B) DF	15–20 A	—	—	
	ED	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	BD, HD, JD, LG	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
	BD, HD, JD, LG	QO(B) CAFI	15–20 A	15–20 A	—
QO(B) DF		15–20 A	—	—	
42,000	LA, MA	QO(B)	15–30 A	15–30 A	—

Table 2 - Max. System Voltage AC: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
65,000	QG	QO(B)	15–70 A	15–125 A	—
		QO(B) VH	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	EG	QO(B)	15–70 A	15–125 A	—
	EG	QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) EPE	—	—	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	BG, HG, JG, LG	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—

Table 2 - Max. System Voltage AC: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
100,000	QJ	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	EJ	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
	EJ	QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	BJ, HJ, JJ	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	LJ	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) GFI	—	15–60 A	—
		QO(B) EPD	—	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—

Table 2 - Max. System Voltage AC: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
125,000	HL, JL	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
200,000	HR, JR	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
	HR, JR	QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—

Table 3 - Max. System Voltage AC: 240 1P/2W

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
25,000	QD, BD, HD, JD, LG	QO(B) H	—	15–100 A	—
42,000	LA, MA	QDL	—	70–225 A	—
65,000	QG, BG, HG, JG, LG	QO(B) H	—	15–100 A	—
100,000	BJ, HJ, JJ, LJ	QO(B) H	—	15–100 A	—
125,000	HL, JL	QO(B) H	—	15–100 A	—

Table 4 - Max. System Voltage AC: 208Y/120 3P/4W

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
18,000	LA/LH MC	QO(B)	—	—	15–30 A
22,000	QO(B) VH, QOB-VH	QO(B) GFI	—	—	15–50 A

Table 4 - Max. System Voltage AC: 208Y/120 3P/4W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
25,000	QD, ED, FD, BD, HD, JD	QO(B) GFI	—	—	15–50 A
	LG	QO(B) GFI	—	—	15–30 A
65,000	QG, EG, BG, HG, JG	QO(B) GFI	—	—	15–50 A
	LG	QO(B) GFI	—	—	15–30 A
100,000	QJ	QO(B)	—	—	15–30 A
		QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) GFI	—	—	15–50 A
		QO(B) EPD	—	—	15–50 A
	QO(B) EPE	—	—	15–50 A	
	EJ, BJ, HJ, JJ	QO(B) GFI	—	—	15–50 A

Table 5 - Max. System Voltage AC: 240/120 3P/4W, 240 3P/3W

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
22,000	QOB VH QOB-VH	QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
25,000	QD	QO(B)	—	—	15–30 A
	QD	QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	ED	QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	BD, HD, JD	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	LG	QO(B)	—	—	15–30 A
		QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) EPD	—	—	15–30 A
		QO(B) EPE	—	—	15–30 A
	42,000	LA, MA	QDL	—	—
QO(B) VH			—	—	15–30 A
MG		QOB-VH	—	—	110–150 A

Table 5 - Max. System Voltage AC: 240/120 3P/4W, 240 3P/3W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges				
		Type	1-Pole	2-Pole	3-Pole	
65,000	QG	QO(B)	—	—	15–30 A	
		QO(B) VH	—	—	15–100 A	
	QG	QOB-VH	—	—	110–150 A	
		QO(B) PL	—	—	15–30 A	
	EG	QO(B)	—	—	15–100 A	
		QOB-VH	—	—	110–125 A	
		QO(B) EPD	—	—	15–50 A	
		QO(B) EPE	—	—	15–50 A	
	BG, HG, JG	QO(B)	—	—	15–100 A	
		QOB-VH	—	—	110–150 A	
		QO(B) PL	—	—	15–30 A	
		QO(B) EPD	—	—	15–50 A	
		QO(B) EPE	—	—	15–50 A	
	LG	QO(B)	—	—	15–30 A	
		QO(B) VH	—	—	15–100 A	
		QOB-VH	—	—	110–150 A	
		QO(B) EPD	—	—	15–30 A	
		QO(B) EPE	—	—	15–30 A	
	100,000	EJ	QO(B)	—	—	15–100 A
			QOB-VH	—	—	110–125 A
QO(B) EPD			—	—	15–50 A	
QO(B) EPE			—	—	15–50 A	
BJ, HJ, JJ		QO(B)	—	—	15–100 A	
		QOB-VH	—	—	110–150 A	
		QO(B) PL	—	—	15–30 A	
		QO(B) EPD	—	—	15–50 A	
		QO(B) EPE	—	—	15–50 A	
LJ		QO(B)	—	—	15–30 A	
		QO(B) VH	—	—	15–100 A	
		QOB-VH	—	—	110–150 A	

Table 5 - Max. System Voltage AC: 240/120 3P/4W, 240 3P/3W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
125,000	HL, JL	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–150 A
	HL, JL	QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
200,000	HR, JR	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–150 A

Table 6 - Max. System Voltage AC: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/3W

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
42,000	400 A Max. Class T3 Fuses	QO(B) VH	15–70 A	15–125 A	—
65,000	400 A Max. Class J Fuses	QO(B) VH	15–70 A	15–125 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	400 A Max. Class T6 Fuses	QO(B) VH	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
100,000	200 A Max. Class T3 Fuses	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—

Table 6 - Max. System Voltage AC: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/3W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
200,000	200 A Max. Class T6 or J Fuses	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
	400 A Max. Class T3 Fuses	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—

Table 7 - Max. System Voltage AC: 208Y/120 3P/4W

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
65,000	400 A Max. Class J	QO(B) GFI	—	—	15–50 A
100,000	200 A Max. Class T3	QO(B) GFI	—	—	15–50 A
200,000	200 A Max. Class T6 or J Fuses	QO(B) GFI	—	—	15–50 A
	400 A Max. Class T3 Fuses	QO(B) GFI	—	—	15–50 A

Table 8 - Max. System Voltage AC: 240/120 3P/4W, 240 3P/3W

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
50,000	600 A Max. Class T3 Fuses	QO(B) VH	—	—	15–30 A
65,000	400 A Max. Class J Fuses	QO(B) VH	—	—	15–100 A
	400 A Max. Class T6 Fuses	QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
100,000	200 A Max. Class T3 Fuses	QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A

Table 8 - Max. System Voltage AC: 240/120 3P/4W, 240 3P/3W (Continued)

Max. Short Circuit Current Rating	Square D Brand Integral or Remote Main Circuit Breakers and Remote Main Fuses	Square D Brand Branch Circuit Breaker Catalog Designation and Allowable Ampere Ranges			
		Type	1-Pole	2-Pole	3-Pole
200,000	200 A Max. Class T6 or J Fuses	QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	400 A Max. Class T3 Fuses	QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A

NOTE: In the following table, Type includes AFI, CAFI, EPD, and GFI Circuit Breakers.

Table 9 - NQ Panel Mission Critical Breaker Selectivity

Maximum SCCR (RMS Symmetrical)	Integral or Remote Main Circuit Breakers	Branch Circuit Breakers			
		Type	1-Pole	2-Pole	3-Pole
Fully Rated and Selective to 10 kA at 208Y/120 Vac or at 240/120 Vac	J-W, 250 A L-W, 250 A	QOB	10–70	10–125	10–125
		QOB-H			
		QOB-VH			
		QH			
Series Rated and Selective to 12 kA at 208Y/120 Vac or at 240/120 Vac	J-W, 250 A	QOB	10–70	10–125	10–60
		QOB-H			
		QOB-VH			
		QH			
Series Rated and Selective to 15 kA at 208Y/120 Vac or at 240/120 Vac	J-W, 250 A	QOB	10–60	10–60	10–30
		QOB-H			
		QOB-VH			
		QH			

Table 9 - NQ Panel Mission Critical Breaker Selectivity (Continued)

Maximum SCCR (RMS Symmetrical)	Integral or Remote Main Circuit Breakers	Branch Circuit Breakers			
		Type	1-Pole	2-Pole	3-Pole
Series Rated and Selective to 18 kA at 208Y/120 Vac or at 240/120 Vac	J-W, 250 A	QOB	10-30	10-30	—
		QOB-H			
		QOB-VH			
		QH			
	L-W, 250 A	QOB	10-60	10-60	10-60
		QOB-H			
		QOB-VH			
		QH			
Series Rated and Selective to 30 kA at 208Y/120 Vac or at 240/120 Vac	L-W, 400 A L-W, 600 A	QOB	15-70	15-150	15-150
		QOB-H			
		QOB-VH			
		QH			

Table 10 - Short Circuit Current Rating⁴ for Main Lug Interiors with Sub-Feed or Feed-Through Lugs

Maximum System Voltage AC	Maximum Current Rating	Branch Circuits ⁵	Application	Adder ⁶	Maximum Short Circuit Current Rating ⁷		
240	100	18, 30	SFL and FTL	—	10,000		
	225	30, 42, 54, 72, 84, 96	SFL	6 in. (152.4 mm)			
		42	FTL	—			
		30, 54, 72, 84, 96		6 in. (152.4 mm)			
	400	30, 42, 54, 72, 84	SFL	—	25,000		
				96	—	10,000	
		400	30, 84	FTL	—	25,000	
					96	—	10,000
					42, 54, 72	6 in. (152.4 mm)	25,000
		600	30, 42, 54, 72, 84	FTL	12 in. (304.8 mm)	25,000	
	96		10,000				

CE Marking

- Interiors with the “CE” mark meet the IEC 61439-1 and IEC 61439-2 standards.
- Main lug interiors with the “CE” mark have been tested to withstand 10,000 RMS symmetrical amperes for 30 cycles.
- Interiors with the “CE” mark are only approved for use with QOXD or QOBXD branch circuit breakers which carry the “CE” mark.

4. This rating applies to main lug interiors, equipped with sub-feed or feed-through lugs, where the device feeding the interior is unknown or not a Square D brand device. Use of a Square D brand main circuit breaker ahead of these lugs will result in a rating equal to the rating of the circuit breaker. Short circuit tests are conducted at 100–105% of the maximum rated voltage of the panelboard.

5. 96 circuits with SPD has 84 usable branch circuits.

6. The adder is the additional length of the enclosure.

7. RMS symmetrical amperes, for three cycles.

QO2150VH, QO2175VH and QO2200VH Restrictions

NOTICE

HAZARD OF EQUIPMENT DAMAGE

- Do not install QO2150(VH), QO2175(VH) or QO2200(VH) in seismic applications.
- Do not install QO2150(VH), QO2175(VH) or QO2200(VH) in three phase system applications.
- Do not install more than a total of four QO2175(VH) or QO2200(VH) on NEMA 1 enclosures.
- Do not install more than one QO2175(VH) or QO2200(VH) in NEMA 3R Vented Weatherproof enclosures.
- Do not install QO2150(VH), QO2175(VH) or QO2200(VH) adjacent to each other.
- Do not install in un-vented weatherproof enclosures (3R/5/12, 4/4X).
- For QO2175(VH) and QO2200(VH) circuit breakers install three-point latch trims.

Failure to follow these instructions can result in equipment damage.

Leave at least four circuit spaces of blank fillers or circuit breakers of 125 A or lower before another QO2150(VH), QO2175(VH) or QO2200(VH) is installed.

Place QO2150(VH), QO2175(VH) and QO2200(VH) next to line end, on the right side for top incoming applications.

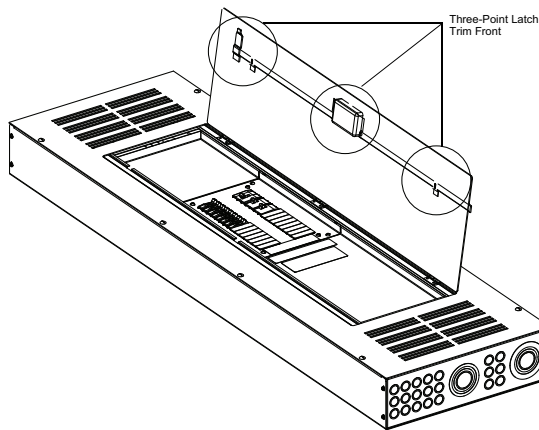
Place QO2150(VH), QO2175(VH) and QO2200(VH) next to line end, on the left side for bottom incoming applications.

QO2150(VH), QO2175(VH) and QO2200(VH) for single phase applications only.

Table 11 - Three-Point Latch Trim Fronts—Catalog Number⁸

Type	Surface Mounted	Flush Mounted
Standard	NC50VS3P	NC50VF3P
	NC56VS3P	NC50VF3P
	NC62VS3P	NC62VF3P
	NC68VS3P	NC68VF3P
	NC74VS3P	NC74VF3P
	NC80VS3P	NC80VF3P
	NC86VS3P	NC86VF3P
	NC92VS3P	NC92VF3P
Hinged	NC62VS3PHR	NC62VF3PHR
	NC68VS3PHR	NC68VF3PHR
	NC74VS3PHR	NC74VF3PHR
	NC80VS3PHR	NC80VF3PHR
	NC86VS3PHR	NC86VF3PHR
	NC92VS3PHR	NC92VF3PHR

Figure 11 - Three-Point Latch Trim Front



8. V=Vented, HR=Hinged Right, 3P=Three Point.

Appendix 2: Accessory Kits

An assortment of field-installable accessory kits are available for NQ panelboards:

- Equipment Ground Bar Kits
- Oversized Neutral Lug Kits for 100–600 A Panelboards
- Sub-Feed Lug Kits for 100–400 A Panelboards
- Main Lug Kits
 - Mechanical Lug Kits—Aluminum
 - Mechanical Lug Kits—Copper
 - Versa-Crimp Compression Lug Kits—Aluminum
 - Versa-Crimp Compression Lug Kits—Copper
- Line Side Barrier and Neutral Bonding Strap Kits

Equipment Ground Bar Kits

Equipment ground bar kits, suitable for copper or aluminum wire, meet the grounding needs of NQ panelboards and QONQ load centers.

Table 12 - Equipment Ground Bar Kits Specifications

Panelboard		Use Ground Bar Kit Catalog Number	
Branch Circuit	Mains Rating	Aluminum ⁹	Copper ¹⁰
1–42	600 A Maximum	(1) PK27GTA	(1) PK27GTACU
54–84		(2) PK27GTA	(2) PK27GTACU



Ground bar mounting locations are identified by the ground symbol stamped into the back wall of the enclosure.

9. Aluminum bars suitable for 60°C or 75°C Copper or Aluminum conductors.

10. Copper bars suitable for 60°C or 75°C Copper conductors.

Oversized Neutral Lug Kits for 100–600 A Panelboards

Oversized neutral lug kits are available for applications where termination conductors of 3 AWG or larger are required for the neutral.

Table 13 - Oversized Neutral Lug Kits for 100–600 A Panelboard Specifications

Circuit Breaker Rating	Kit Catalog Number	Wire Size Al/Cu (mm ²)
70 A	QO70AN	(1) #12–#2 AWG Al ([1] 3.3–33.6) (1) #14–#4 AWG Cu ([1] 2.1–21.2)
80–100 A	NQ100AN	(1) #14–2/0 AWG Al/Cu ([1] 2.1–67.4)
80–120 A	Q1100AN	(1) #4–1/0 AWG Al/Cu ([1] 21.2–53.5)
110–150 A	Q1150AN ¹¹	(1) #1–2/0 AWG Al/Cu ([1] 42.4–67.4)
175–200 A	NQ200AN	(1) #4 AWG–300 kcmil Al/Cu ([1] 21.2–152)

Sub-Feed Lug Kits for 100–400 A Panelboards

Sub-feed main lugs are available for 100, 225, or 400 A applications.

Table 14 - Sub-Feed Lug Kits for 100–400 A Panelboards Specifications

Main Amps	Kit Catalog Number	Maximum Circuits
100	NQSFL1	18, 30
225	NQSFL2	30 ¹² , 42 ¹² , 54 ¹² , 72 ¹² , 84 ¹²
400	NQSFL4	30, 42, 54, 72, 84

11. Use Only use 1/0 (53.5 mm²) copper wire for 150 A branch circuit breaker applications.

12. These panels require an additional 6 inches (152.4 mm) for the box and trim, for proper wire bending space.

Main Lug Kits

Table 15 - Mechanical Lug Kits — Aluminum

Panelboard Amps	Kit Catalog Number	Wire Size Al/Cu (mm ²)
100	Standard	#6–2/0 AWG (13.3–67.43 mm ²)
225	Standard	#6 AWG–350 kcmil (13.3–177.3 mm ²)
400	Standard	(1) 1/0 AWG–750 kcmil (2) 1/0 AWG–350 kcmil ([1] 53.48–380 mm ²) ([2] 53.48–177.3 mm ²)
600	Standard	(2) 1/0 AWG–750 kcmil ([2] 53.48–380 mm ²)
	NQALM6A	(3) #6 AWG–250 kcmil ([3] 13.3–127 mm ²)

Table 16 - Mechanical Lug Kits — Copper

Panelboard Amps	Kit Catalog Number	Wire Size Al/Cu (mm ²)
100	NQCUM1	#6–2/0 AWG (13.3–67.43 mm ²)
225	NQCUM2	#6 AWG–250 kcmil (13.3–127 mm ²)
400	NQCUM4	(1) 1/0 AWG–750 kcmil (2) 1/0 AWG–350 kcmil
600	NQCUM6	([1] 53.48–380 mm ²) ([2] 53.48–177.3 mm ²)

Table 17 - Versa-Crimp™ Compression Lug Kits — Aluminum

Panelboard Amps	Kit Catalog Number	Wire Size Al/Cu (mm ²)	Crimp Tool
100	NQALV1	#8–1/0 AWG (8.36–53.48 mm ²)	VC6 (All)
225	NQALV2	#4 AWG–300 kcmil (21.15–152 mm ²)	
400	NQALV4	(2) 2/0 AWG–500 kcmil ([2] 67.43–253.4 mm ²)	VC6–3, VC6–FT
600	NQALV6		

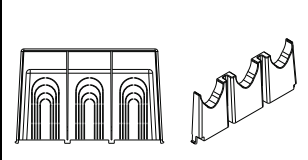
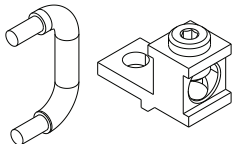
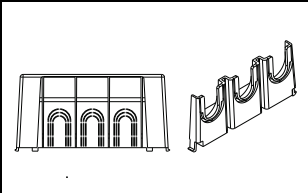
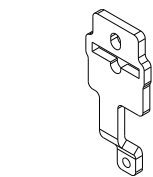
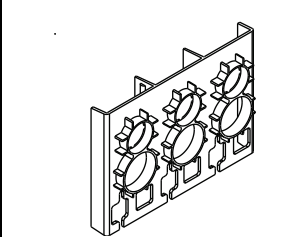
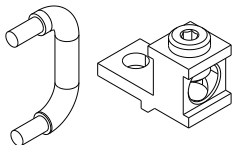
Table 18 - Versa-Crimp™ Compression Lug Kits — Copper

Panelboard Amps	Kit Catalog Number	Wire Size Al/Cu (mm ²)	Crimp Tool
100	NQCUV1	#6–1/0 AWG (13.30–53.48 mm ²)	VC6 (All), VC7 (All)
225	NQCUV2	2/0 AWG–300 kcmil (67.43–152 mm ²)	VC6-3, VC7, VC6-FT, VC7-FT
400	NQCUV4	400–750 kcmil (202.7–380 mm ²)	VC6-FT, VC7–FT, VC8
600	NQCUV6	(2) 250–500 kcm ([2] 126.7–253.4 mm ²)	VC6-3, VC7, VC6-FT, VC7-FT

Line Side Barrier and Neutral Bonding Strap Kits

Based on the application and the adopted installation code, a Line Side Barrier and Neutral Bonding Strap may be required. Select the appropriate barrier from the table below, based upon the main circuit breaker.

Table 19 - Line Side Barrier and Neutral Bonding Strap Kits

Catalog Number	Contents		Description
	Line Lug Cover	Neutral Bonding Strap	
NQLALLC			NQ LA/LH Line Lug Cover and Neutral Bonding Strap and Lug
NQJQLLC			NQ PowerPac™ H/J/Q Line Lug Cover and Neutral Bonding Strap
NQPPLLC			PowerPacT L Line Lug Cover and Neutral Bonding Strap and Lug

Tableros NQ/NQM y centros de carga QONQ

Clase 1640
80043-712-06, Rev. 08

Qué Contiene este Documento

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Información de seguridad

Asegúrese de leer detenidamente estas instrucciones y examine el equipo para familiarizarse con él antes de instalarlo, hacerlo funcionar o prestarle servicio de mantenimiento. Los siguientes mensajes especiales pueden aparecer en esta guía del usuario o en el equipo para advertirle sobre peligros o para llamar su atención sobre cierta información que clarifica o simplifica un procedimiento.

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La adición de cualquiera de estos símbolos a una etiqueta de seguridad de “Peligro” o “Advertencia” indica la existencia de un peligro eléctrico que podrá causar lesiones personales si no se siguen las instrucciones.



Este es el símbolo de alerta de seguridad. Se usa para avisar sobre peligros de lesiones personales. Respete todos los mensajes de seguridad con este símbolo para evitar posibles lesiones o la muerte.

PELIGRO

PELIGRO indica una situación de peligro que, si no se evita, **podrá causar** la muerte o lesiones serias.

ADVERTENCIA

ADVERTENCIA indica una situación peligrosa que, si no se evita, **puede causar** la muerte o lesiones graves.

PRECAUCIÓN

PRECAUCIÓN indica una situación peligrosa que, si no se evita, **puede causar** lesiones menores o moderadas.

AVISO

AVISO se usa para abordar prácticas no relacionadas con lesiones físicas.

NOTA: Proporciona información adicional para clarificar o simplificar un procedimiento.

Observe que

Solamente el personal calificado con especialización en electricidad deberá instalar, hacer funcionar y prestar servicios de mantenimiento al equipo eléctrico. Schneider Electric no asume responsabilidad alguna por las consecuencias que surjan de la utilización de este material.

Una persona calificada es aquella que tiene destreza y conocimiento técnico relacionado con la construcción, instalación y funcionamiento del equipo eléctrico; asimismo, esta persona ha recibido capacitación sobre seguridad con la cual puede reconocer y evitar los riesgos involucrados.

Los equipos eléctricos deben transportarse, almacenarse, instalarse y operarse únicamente en el entorno para el que fueron diseñados.

Introducción

Este boletín contiene instrucciones para instalar tableros de interruptores automáticos y centros de carga QONQ de la marca Square D™. Estos tableros y centros de carga están homologados por Underwriters Laboratories (cULus) y admiten interruptores automáticos de derivación QO™ y QOB.

NOTA: Para obtener asistencia técnica sobre la instalación de este tablero, comuníquese con el Centro de información al cliente de Schneider Electric llamando al 1-888-778-2733.

NOTA: Consulte en las etiquetas del equipo los valores nominales y la información de seguridad. Junto con este documento se facilitan etiquetas adicionales para los equipos.

Precauciones de seguridad

PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARCO ELÉCTRICO

- Utilice el equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad para trabajos eléctricos. Consulte las normas NFPA 70E, NOM-029-STPS o CSA Z462, o sus equivalentes locales.
- Solo el personal capacitado en electricidad deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desenergice todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar que el equipo esté desenergizado.
- Lea y comprenda todo este boletín de instrucciones y la publicación de normas NEMA PB 1.1 incluida antes de instalar, operar o realizar el mantenimiento de este equipo.
- Los códigos locales varían, se aceptan y hacen cumplir para fomentar la seguridad en instalaciones eléctricas. Es posible que necesite un permiso para realizar el trabajo eléctrico y, en algunos casos, algunos códigos pueden requerir una inspección del trabajo eléctrico efectuado.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- No permita que superficies no metálicas de este producto entren en contacto con pintura, solventes o rocíos basados en derivados del petróleo.

El incumplimiento de estas instrucciones tendrá como resultado la muerte o lesiones graves.



ADVERTENCIA: Este producto puede exponerlo a químicos, incluidos compuestos de níquel, que son conocidos por el estado de California como causantes de cáncer, y Bisfenol A (BPA), que es conocido por el estado de California como causante de defectos de nacimiento u otros daños reproductivos. Para obtener más información, visite www.P65Warnings.ca.gov.

Instalación

Esta sección proporciona instrucciones para los siguientes procedimientos del tablero NQ y del centro de carga QONQ:

- Montaje interior para gabinetes de la marca Square D, página 5.
- Instalación del cable/correa de conexión neutra, página 8.
- Instalación y extracción de interruptores automáticos QO y QOB, página 14.
- Instrucciones de restablecimiento del interruptor automático, página 17.
- Preparación del frente muerto, página 18.

Montaje interior para gabinetes de la marca Square D

Con este equipo se ha suministrado una publicación de normas separada, titulada "Instrucciones generales para la correcta instalación, operación y mantenimiento de tableros de distribución de 600 voltios o menos" (NEMA PB1.1). Familiarícese con el contenido de este documento antes de proceder con cualquiera de los siguientes procedimientos.

Si no ha recibido una copia de este documento o si tiene alguna pregunta sobre este equipo, póngase en contacto con su distribuidor local o representante de Schneider Electric.

PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O ARCO ELÉCTRICO

- Asegúrese de que todas las conexiones de campo estén correctamente apretadas.
- No apriete demasiado ni de manera insuficiente las conexiones. Antes de apretar las conexiones, consulte la etiqueta de información sobre el apriete indicado en el cuadro de distribución.

El incumplimiento de estas instrucciones tendrá como resultado la muerte o lesiones graves.

Para montar e instalar correctamente el interior del tablero NQ o del centro de carga QONQ, consulte la publicación de normas NEMA PB 1.1 y siga las instrucciones que se indican a continuación para cualquiera de los dos casos, ya sea Montaje en superficie (gabinete montado en la pared), página 6 o Montaje empotrado (gabinete empotrado en la pared), página 6.

Montaje en superficie (gabinete montado en la pared)

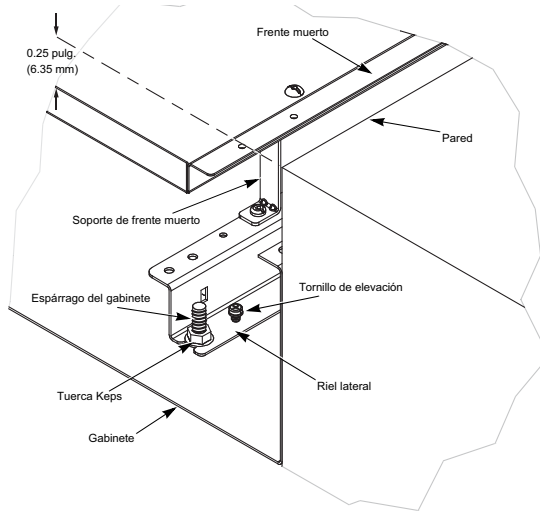
1. Monte el gabinete según las instrucciones de la publicación de normas NEMA PB 1.1.
2. Retire el frente muerto de los soportes del frente muerto.
3. Instale el interior como se describe a continuación:
 - a. Coloque el interior sobre los montantes del gabinete. No es necesario un tornillo elevador (consulte Montaje interior para gabinetes de la marca Square D, página 5).
 - b. Apriete las tuercas Keps contra los rieles laterales interiores hasta que los rieles queden contra la parte posterior del gabinete.
4. Según la aplicación y el código de instalación que adopte, puede ser necesaria una correa de conexión neutra y una barrera lateral de línea. Consulte Instalación del cable/correa de conexión neutra, página 8 y Anexo 2: Kits de accesorios, página 41.
5. Coloque las etiquetas del equipo (situadas en el conjunto de la bolsa) siguiendo las instrucciones del reverso de la hoja de etiquetas del equipo. Consulte los códigos y normas locales.
6. Vuelva a montar el frente muerto después del cableado.

Montaje empotrado (gabinete empotrado en la pared)

1. Monte el gabinete según las instrucciones de la publicación de normas NEMA PB 1.1.

2. Retire el frente muerto de los soportes del frente muerto.
3. Instale el interior como se describe a continuación:
 - a. Enrosque los (4) tornillos elevadores autorroscantes 10-32 x 0,875 in suministrados con la moldura a ras en los rieles laterales.
 - b. Coloque el interior sobre los montantes del gabinete (consulte *Montaje interior de gabinetes de la marca Square D, página 8*). Coloque las tuercas Keps en los espárragos del gabinete, pero no las apriete.
 - c. Ajuste los tornillos de modo que el labio del frente muerto quede aproximadamente a 6,35 mm (0,25 in) de la línea de la pared.
 - d. Apriete las tuercas Keps contra las barandillas laterales.
4. Según la aplicación y el código de instalación que adopte, puede ser necesaria una correa de conexión neutra y una barrera lateral de línea. Consulte los códigos y normas locales. Consulte *Instalación del cable/correa de conexión neutra, página 8 y Anexo 2: Kits de accesorios, página 41*.
5. Coloque las etiquetas del equipo (situadas en el conjunto de la bolsa) siguiendo las instrucciones del reverso de la hoja de etiquetas del equipo.
6. Vuelva a montar el frente muerto después del cableado.

Figura 1 - Montaje interior en gabinetes marca Square D



Instalación del cable/correa de conexión neutra

En función de la aplicación y del código de instalación adoptado, puede ser necesaria una barrera en el lado de la línea y una correa de conexión neutra.

Para conectar correctamente el neutro al tablero, siga las instrucciones para Tableros NQ de 100 o 250 A máximo, o Tableros NQ y centros de carga QONQ de 400 o 600 A máximo, página 11.

⚠ PELIGRO**PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O
DESTELLO POR ARCO ELÉCTRICO**

- Utilice el equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad para trabajos eléctricos. Consulte las normas NFPA 70E, NOM-029-STPS o CSA Z462 o sus equivalentes locales.
- Desenergice todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- La correa/cable de conexión neutra solo debe utilizarse cuando el tablero se instala como equipo de entrada de servicio.
- No mezcle los tornillos de montaje con los tornillos del frente muerto.

El incumplimiento de estas instrucciones tendrá como resultado la muerte o lesiones graves.

NOTA: Consulte Kits de barrera lateral de línea y correa de conexión neutra, página 45 para obtener información.

NOTA: Los términos "correa de conexión neutra" y "cable de conexión neutra" describen los componentes que cumplen los requisitos de un "conductor de conexión neutra". Son términos equivalentes.

Tableros NQ de 100 o 250 A máximo

Para instalar una correa de conexión neutra en tableros NQ con redes de hasta 225 A (con zapatas principales o interruptor automático principal), o hasta 250 A con un interruptor automático principal montado en fábrica, consulte *Instalación de la correa de conexión: 100 o 250 A máximo en tableros NQ*, página 11 y siga las siguientes instrucciones.

1. Alinee la correa de conexión en el riel lateral, como se muestra en la figura.

NOTA: Para algunas aplicaciones, puede ser necesario retirar la zapata (no aparece en la imagen) antes de instalar la correa de conexión.

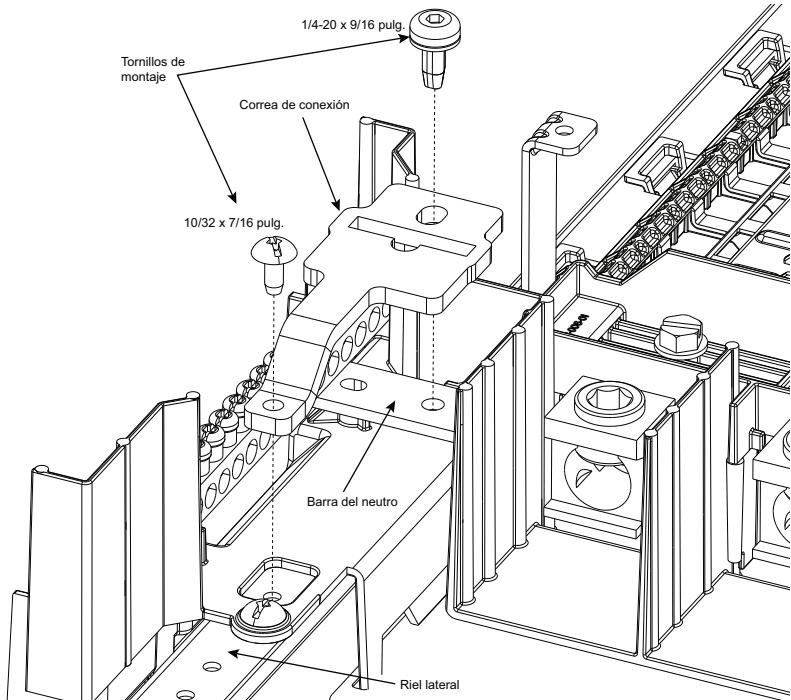
2. Inserte los dos tornillos de montaje, como se muestra en la imagen. Apriete el tornillo de 10-32 a 10-12 lb.-in. (1,1-1,4 N·m) y los tornillos de 1/4-20 a 25-30 lb.-in. (2,8-3,4 N·m).

NOTA: Los tornillos de montaje de la zapata se incluyen en el conjunto de la bolsa de la correa de conexión.

- a. Si la zapata se retiró en el paso 1 anterior, vuelva a instalarla en la parte superior de la correa de conexión. Apriete el tornillo de 10-32 a 10-12 lb.-in. (1,1-1,4 N·m) y los tornillos de 1/4-20 a 25-30 lb.-in. (2,8-3,4 N·m).
- b. Utilice un tornillo de 1/4-20 x 9/16 in en el montaje para interiores 100/225 A sin opciones. Consulte las notas C y D para conocer otras opciones.
- c. Utilice el tornillo de montaje de zapatas de 1/4-20 x 11/16 in en aplicaciones con zapatas de paso, zapatas de subalimentación, interruptores automáticos de subalimentación o aplicaciones con un neutro al 200 %.
- d. Utilice el tornillo de montaje de la zapata de 1/4-20 x 7/8 in en aplicaciones con neutros al 200 % y con zapatas de alimentación de paso, zapatas de alimentación secundaria o interruptores automáticos de alimentación secundaria.

Figura 2 - Instalación de la correa de conexión: tableros NQ de 100 o 250 A máximo

NOTA: Para las opciones de zapatas de correa de conexión, consulte C y D para conocer la longitud correcta del tornillo 1/4-20.

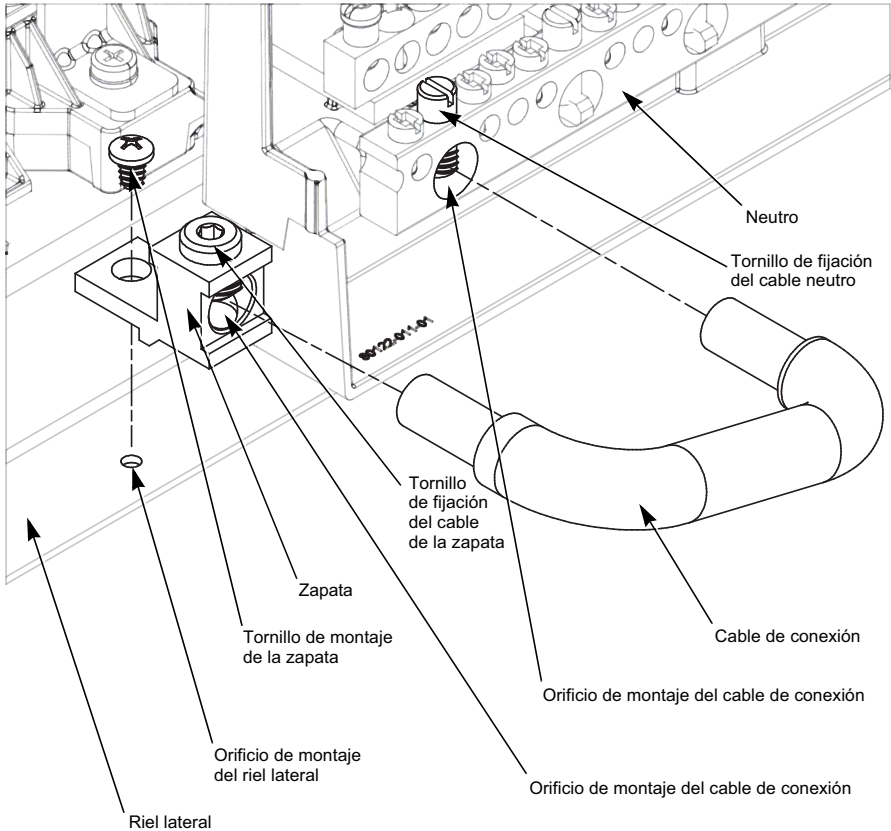


Tableros NQ y centros de carga QONQ de 400 o 600 A máximo

Para instalar un cable conexión neutra en un tablero NQ de 400 o 600 A máximo y en un centro de carga QONQ, consulte *Instalación del cable de conexión: tableros NQ y centros de carga QONQ de 400 o 600 A máximo*, página 13 y siga las instrucciones que se indican a continuación.

1. Alinee la zapata en el orificio de montaje del riel lateral, como se muestra en la imagen.
2. Apriete el tornillo de montaje de la zapata contra el riel lateral a 10-12 lb.-in. (1,1-1,4 N·m).
3. Alinee el cable de conexión, tal como se muestra en la imagen, e insértelo en los orificios de montaje de la zapata y el neutro.
4. Apriete los tornillos de sujeción de los conductores de zapatas y los tornillos de sujeción de los conductores de neutro a 45-50 lb. -in. (5,1-5,6 N·m).

Figura 3 - Instalación del cable de conexión: tableros NQ y centros de carga QONQ de 400 o 600 A máximo



Instalación y extracción de interruptores automáticos QO y QOB

PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARCO ELÉCTRICO

- Utilice el equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad para trabajos eléctricos. Consulte las normas NFPA 70E, NOM-029-STPS o CSA Z462, o sus equivalentes locales.
- Solo el personal capacitado en electricidad deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desenergice todas las fuentes de alimentación del equipo antes de realizar cualquier trabajo dentro o fuera de él.
- Siempre utilice un dispositivo detector de tensión de valor nominal adecuado para confirmar que el equipo esté desenergizado.
- Todos los espacios no utilizados deben rellenarse con placas de relleno.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.
- Utilice solo interruptores automáticos™ y accesorios de las marcas™ Square D y Schneider Electric. Este equipo ha sido diseñado y probado por Schneider Electric con niveles de rendimiento que cumplen las normas regulatorias aplicables.
- Asegúrese de que todas las conexiones de campo estén correctamente apretadas.
- No apriete demasiado ni de manera insuficiente las conexiones. Antes de apretar las conexiones, consulte la etiqueta de información sobre el apriete indicado en el cuadro de distribución.

El incumplimiento de estas instrucciones tendrá como resultado la muerte o lesiones graves.

Instalación de interruptores automáticos QO y QOB

Consulte Instalación y extracción de interruptores automáticos QO y QOB, página 16 para las siguientes instrucciones:

1. Desconecte toda la alimentación del tablero.
2. Desactive el interruptor automático.
3. Quite el frente muerto.
4. Encaje el extremo del terminal del cable del interruptor automático en el riel de montaje.
5. Enganche el conector de derivación.

Para interruptores automáticos QO: Empuje hacia adentro hasta que las mordazas enchufables se acoplen completamente al conector de derivación.

Para interruptores automáticos QOB: Empuje hacia dentro hasta que el conector del interruptor automático quede centrado en el orificio de montaje del conector de derivación. Enganche el tornillo en el orificio del conector de derivación y apriételo a los valores de torque indicados en el diagrama interior de cableado y torque.

6. Instale el cable de carga.
7. Vuelva a instalar el frente muerto.
8. Instale una placa de relleno en todos los espacios de interruptores automáticos de derivación no utilizados.

Extracción de interruptores automáticos QO y QOB

Consulte Instalación y extracción de interruptores automáticos QO y QOB, página 16 para las siguientes instrucciones:

1. Desconecte toda la alimentación del tablero.
2. Quite el frente muerto.
3. Extraiga el cable de carga.

4. Desenganche el conector de derivación.

Para interruptores automáticos QO:

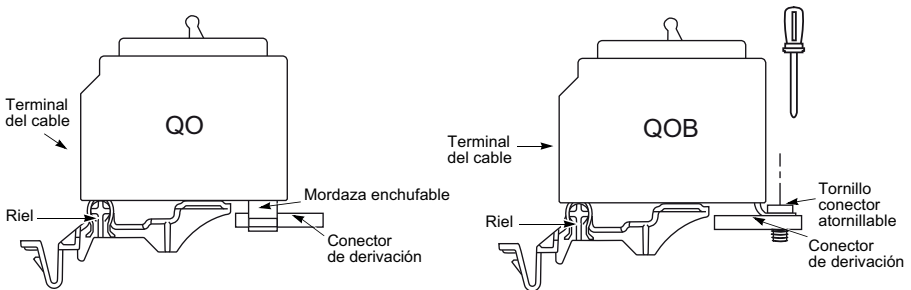
Jale hacia afuera hasta que las garras de enchufe desenganchen completamente el conector de derivación.

Para interruptores automáticos QOB:

Afloje el tornillo del conector del interruptor automático y extraiga el interruptor automático del conector de derivación.

5. Retire el extremo del terminal de alambre del interruptor automático del riel de montaje.
6. Vuelva a instalar el frente muerto.
7. Instale una placa de relleno en todos los espacios de interruptores automáticos de derivación no utilizados.

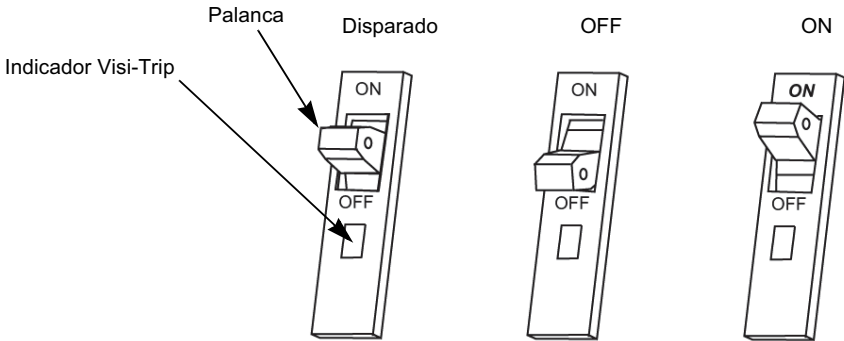
Figura 4 - Instalación y extracción de interruptores automáticos QO y QOB



Instrucciones de restablecimiento del interruptor automático

Si se dispara el interruptor automático, la palanca estará en la posición intermedia entre ON y OFF. Para restablecer el interruptor automático, empuje la palanca a la posición OFF y, a continuación, a la posición ON.

Figura 5 - Posiciones de la palanca del interruptor automático



NOTA: Cuando el interruptor automático se ha disparado, la palanca adopta una posición central y el indicador rojo Visi-Trip aparece en una ventana de la caja del interruptor automático. El indicador rojo Visi-Trip solo es visible cuando se dispara el interruptor automático.

Preparación del frente muerto

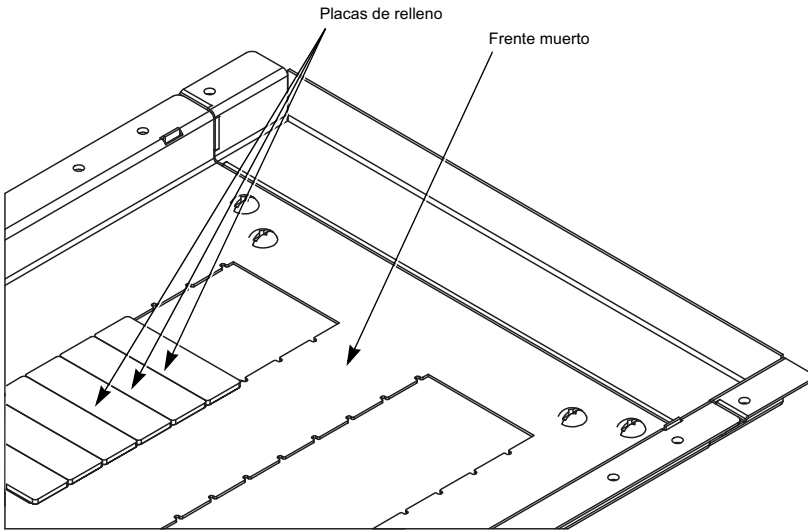
PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARCO ELÉCTRICO

- Utilice el equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad para trabajos eléctricos. Consulte las normas NFPA 70E, NOM-029-STPS o CSA Z462, o sus equivalentes locales.
- Antes de energizar el tablero, todos los espacios no utilizados deben rellenarse con placas de relleno.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.

El incumplimiento de estas instrucciones tendrá como resultado la muerte o lesiones graves.

Figura 6 - Diagrama del frente muerto



NOTA: En la parte posterior del frente muerto figura el número de catálogo de las placas de relleno compatibles correspondientes.

Anexo 1: Especificaciones

Cableado habitual

En el tablero encontrará información adicional. Consulte la capacidad del interruptor automático principal, si se utiliza.

Tabla 1 - Cableado habitual del tablero

Tensión de la CA	Tableros de 1 fase		Tableros de 3 fase	
	Fase	Cables	Fase	Cables
208Y/120	—	—	3	4
120/240	1	3	—	—
240 ¹	1	2	3	4
240 ²	1	3	—	—
240/120 ³	—	—	3	4 Delta

1. Para este sistema, no se utiliza el neutro y solo deben emplearse interruptores automáticos de 240 Vca como mínimo. No utilice interruptores automáticos de 120 V o 120/240 Vca.
2. Para un sistema de fase "B" conectado a tierra, solo deben utilizarse interruptores automáticos de 240 Vca como mínimo. No utilice interruptores automáticos de 120 V o 120/240 Vca.
3. Cuando se cablea para un sistema delta, las fases "A" y "C" deben ser de 120 V a neutro, la fase "B" de 208 V a neutro. Conecte solo interruptores automáticos de 240 Vca como mínimo. No utilice interruptores automáticos de 120 V o 120/240 V a fase "B".

Figura 8 - Tablero NQ o centro de carga QONQ de 400-600 A o interruptor automático principal con o sin diagrama de zapatas de paso

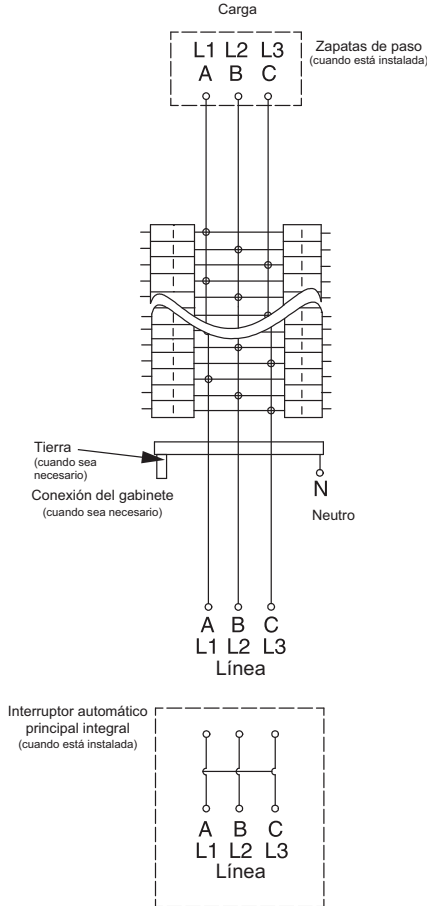


Figura 9 - Tablero NQ o centro de carga QONQ Interruptor automático principal de 400-600 A con zapatas de alimentación de paso o interruptores automáticos de alimentación secundaria

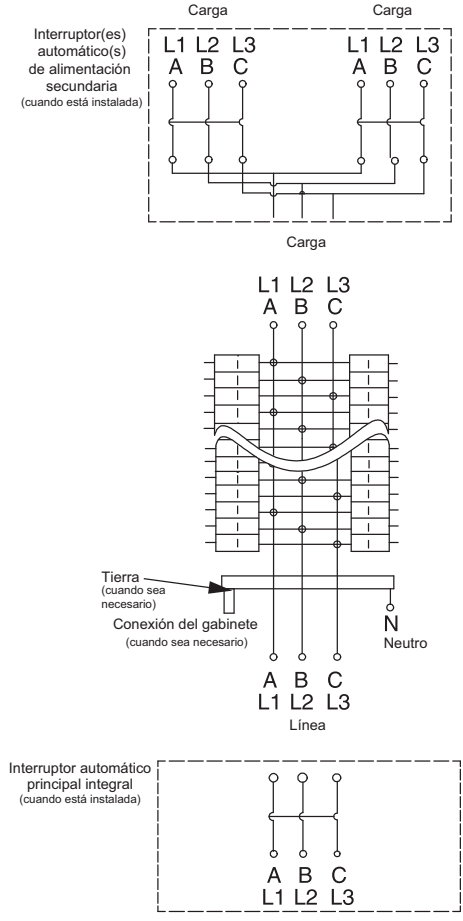
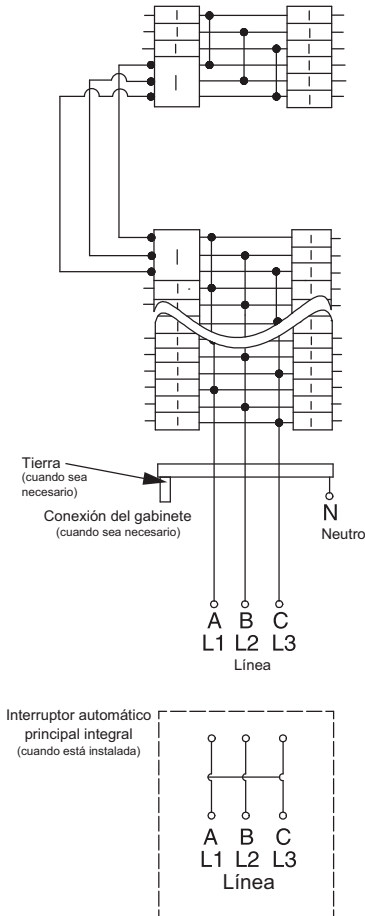


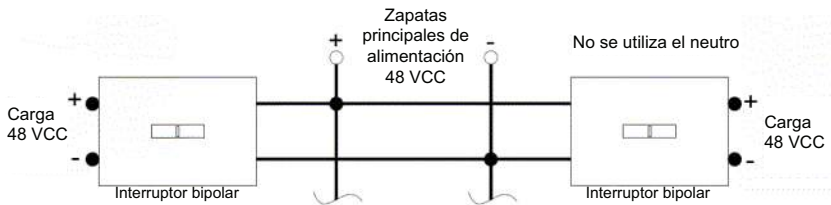
Figura 10 - Tablero NQ habitual con diagrama de barra partida



Adecuado para su uso en sistemas de un máximo de 48 VCC

Para uso exclusivo en sistemas sin conexión a tierra de un máximo de 48 VCC. Utilice únicamente interruptores automáticos de tipo QO (B) bipolares, derivados, de 10 A - 60 A o principales de alimentación derivada, con sufijo 5272, que estén clasificados para un máximo de 48 VCC. La corriente nominal de cortocircuito está limitada a 5 kA cuando se lo utiliza en un sistema de 48 VCC.

Para los interruptores automáticos principales y de subalimentación montados verticalmente, use solo interruptores automáticos de marcos H, J y LA/LH. La corriente nominal de cortocircuito está limitada a 20 kA (marco H, J), 10 kA (marco LA) y 50 kA (marco LH) cuando se lo usa en un sistema de 48 VCC.



Clasificación de tableros eléctricos

Consulte los códigos y normas locales para obtener más información. La etiqueta del sistema nominal de serie se encuentra en el conjunto de la bolsa.

Valores nominales de los interruptores automáticos conectados en serie (RMS simétrico)

- Las clasificaciones de serie que figuran con tensiones de sistema más elevadas se aplican para tensiones de sistema más bajas (ejemplo: 240 3P/3W abarca 208Y/120 3P/4W).
- Las pruebas de cortocircuito se realizan al 100-105 % de la tensión nominal máxima del tablero.
- "MC" significa interruptores automáticos de misión crítica.
- El tipo LG mostrado puede sustituirse por LJ y LL.
- A menos que se indique lo contrario, los interruptores automáticos principales pueden aplicarse al amperaje máximo disponible.

- Los sufijos HID, SWD y SWN pueden aplicarse también a los interruptores automáticos de derivación correspondientes que se muestran a continuación.
- Los interruptores automáticos QO(B) que se muestran a continuación pueden sustituirse por los interruptores automáticos QO(B)H, QO(B)VH y QH(B).
- En los sistemas trifásicos no se pueden usar interruptores automáticos CAFI bipolares.

Tabla 2 - Máxima tensión CA del sistema: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
18,000	LA/LH MC	QO(B)	15–30 A	15–30 A	—
22,000	QO(B) VH QOB-VH	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—

Tabla 2 - Máxima tensión CA del sistema: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W (Continuación)

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
25,000	QD	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	ED	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	BD, HD, JD, LG	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
	BD, HD, JD, LG	QO(B) CAFI	15-20 A	15-20 A	—
QO(B) DF		15-20 A	—	—	
42,000	LA, MA	QO(B)	15-30 A	15-30 A	—

Tabla 2 - Máxima tensión CA del sistema: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W (Continuación)

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
65,000	QG	QO(B)	15-70 A	15-125 A	—
		QO(B) VH	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	EG	QO(B)	15-70 A	15-125 A	—
	EG	QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) EPE	—	—	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	BG, HG, JG, LG	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—

Tabla 2 - Máxima tensión CA del sistema: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W (Continuación)

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
100,000	QJ	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	EJ	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
	EJ	QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	BJ, HJ, JJ	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	LJ	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) GFI	—	15-60 A	—
		QO(B) EPD	—	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
QO(B) DF		15-20 A	—	—	

Tabla 2 - Máxima tensión CA del sistema: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/4W (Continuación)

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
125,000	HL, JL	QO(B)	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15–30 A	15–60 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
200,000	HR, JR	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
	HR, JR	QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—

Tabla 3 - Máxima tensión CA del sistema: 240 1P/2W

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
25,000	QD, BD, HD, JD, LG	QO(B) H	—	15–100 A	—
42,000	LA, MA	QDL	—	70–225 A	—
65,000	QG, BG, HG, JG, LG	QO(B) H	—	15–100 A	—
100,000	BJ, HJ, JJ, LJ	QO(B) H	—	15–100 A	—
125,000	HL, JL	QO(B) H	—	15–100 A	—

Tabla 4 - Máxima tensión CA del sistema: 208Y/120 3P/4W

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
18,000	LA/LH MC	QO(B)	—	—	15–30 A
22,000	QO(B) VH, QOB-VH	QO(B) GFI	—	—	15–50 A

Tabla 4 - Máxima tensión CA del sistema: 208Y/120 3P/4W (Continuación)

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
25,000	QD, ED, FD, BD, HD, JD	QO(B) GFI	—	—	15–50 A
	LG	QO(B) GFI	—	—	15–30 A
65,000	QG, EG, BG, HG, JG	QO(B) GFI	—	—	15–50 A
	LG	QO(B) GFI	—	—	15–30 A
100,000	QJ	QO(B)	—	—	15–30 A
		QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) GFI	—	—	15–50 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	EJ, BJ, HJ, JJ	QO(B) GFI	—	—	15–50 A

Tabla 5 - Máxima tensión CA del sistema: 240/120 3P/4W, 240 3P/3W

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
22,000	QOB VH QOB-VH	QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
25,000	QD	QO(B)	—	—	15–30 A
	QD	QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	ED	QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	BD, HD, JD	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	LG	QO(B)	—	—	15–30 A
		QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) EPD	—	—	15–30 A
		QO(B) EPE	—	—	15–30 A
	42,000	LA, MA	QDL	—	—
QO(B) VH			—	—	15–30 A
MG		QOB-VH	—	—	110–150 A

**Tabla 5 - Máxima tensión CA del sistema: 240/120 3P/4W, 240 3P/3W
(Continuación)**

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
65,000	QG	QO(B)	—	—	15–30 A
		QO(B) VH	—	—	15–100 A
	QG	QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
	EG	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–125 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	BG, HG, JG	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	LG	QO(B)	—	—	15–30 A
		QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) EPD	—	—	15–30 A
		QO(B) EPE	—	—	15–30 A

**Tabla 5 - Máxima tensión CA del sistema: 240/120 3P/4W, 240 3P/3W
(Continuación)**

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
100,000	EJ	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–125 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	BJ, HJ, JJ	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
	LJ	QO(B)	—	—	15–30 A
		QO(B) VH	—	—	15–100 A
		QOB-VH	—	—	110–150 A
125,000	HL, JL	QO(B)	—	—	15–100 A
	HL, JL	QOB-VH	—	—	110–150 A
		QO(B) PL	—	—	15–30 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A
200,000	HR, JR	QO(B)	—	—	15–100 A
		QOB-VH	—	—	110–150 A

Tabla 6 - Máxima tensión CA del sistema: 120/240 1P/3W, 208Y/120 3P/4W, 240/120 3P/3W

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
42,000	Fusibles de clase T3 de 400 A máx.	QO(B) VH	15–70 A	15–125 A	—
65,000	Fusibles de clase J de 400 A máx.	QO(B) VH	15–70 A	15–125 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
	Fusibles de clase T6 de 400 A máx.	QO(B) VH	15–70 A	15–125 A	—
		QOB-VH	—	150 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
100,000	Fusibles de clase T3 de 200 A máx.	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
		QO(B) AFI	15–20 A	—	—
		QO(B) CAFI	15–20 A	15–20 A	—
		QO(B) DF	15–20 A	—	—
200,000	Fusibles de clase T6 o J de 200 A máx.	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—
	Fusibles de clase T3 de 400 A máx.	QO(B)	15–70 A	15–125 A	—
		QO(B) GFI	15–30 A	15–60 A	—
		QO(B) EPD	15–30 A	15–60 A	—

Tabla 7 - Máxima tensión CA del sistema: 208Y/120 3P/4W

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
65,000	Fusibles de clase J de 400 A máx.	QO(B) GFI	—	—	15–50 A
100,000	Fusibles de clase T3 de 200 A máx.	QO(B) GFI	—	—	15–50 A

Tabla 7 - Máxima tensión CA del sistema: 208Y/120 3P/4W (Continuación)

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
200,000	Fusibles de clase T6 o J de 200 A máx.	QO(B) GFI	—	—	15–50 A
	Fusibles de clase T3 de 400 A máx.	QO(B) GFI	—	—	15–50 A

Tabla 8 - Máxima tensión CA del sistema: 240/120 3P/4W, 240 3P/3W

Corriente nominal de cortocircuito máxima	Interruptores automáticos principales y fusibles principales remotos de la marca Square D	Designación del catálogo de interruptores automáticos de derivación de la marca Square D y rangos de amperaje permitidos			
		Tipo	1 polo	2 polos	3 polos
50,000	Fusibles de clase T3 de 600 A máx.	QO(B) VH	—	—	15–30 A
65,000	Fusibles de clase J de 400 A máx.	QO(B) VH	—	—	15–100 A
	Fusibles de clase T6 de 400 A máx.	QO(B) VH	—	—	15–100 A
100,000	Fusibles de clase T3 de 200 A máx.	QOB-VH	—	—	110–150 A
		QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
200,000	Fusibles de clase T6 o J de 200 A máx.	QO(B) EPE	—	—	15–50 A
		QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
	Fusibles de clase T3 de 400 A máx.	QO(B) EPE	—	—	15–50 A
		QO(B)	—	—	15–100 A
		QO(B) EPD	—	—	15–50 A
		QO(B) EPE	—	—	15–50 A

NOTA: En la siguiente tabla, Tipo incluye los interruptores automáticos AFI, CAFI, EPD y GFI.

Tabla 9 - Selectividad de interruptores de misión crítica del panel NQ

SCCR máxima (RMS simétrica)	Interruptores automáticos principales integrales o remotos	Interruptores automáticos de derivación			
		Tipo	1 polo	2 polos	3 polos
Totalmente nominal y selectivo hasta 10 kA a 208Y/120 Vca o a 240/120 Vca	J-W, 250 A L-W, 250 A	QOB	10-70	10-125	10-125
		QOB-H			
		QOB-VH			
		QH			
Serie nominal y selectiva a 12 kA a 208Y/120 Vca o a 240/120 Vca	J-W, 250 A	QOB	10-70	10-125	10-60
		QOB-H			
		QOB-VH			
		QH			
Serie nominal y selectiva a 15 kA a 208Y/120 Vca o a 240/120 Vca	J-W, 250 A	QOB	10-60	10-60	10-30
		QOB-H			
		QOB-VH			
		QH			
Serie nominal y selectiva a 18 kA a 208Y/120 Vca o a 240/120 Vca	J-W, 250 A	QOB	10-30	10-30	—
		QOB-H			
		QOB-VH			
		QH			
	L-W, 250 A	QOB	10-60	10-60	10-60
		QOB-H			
		QOB-VH			
		QH			
Serie nominal y selectiva a 30 kA a 208Y/120 Vca o a 240/120 Vca	L-W, 400 A L-W, 600 A	QOB	15-70	15-150	15-150
		QOB-H			
		QOB-VH			
		QH			

Tabla 10 - Corriente nominal de cortocircuito⁴ para interiores de tomas principales con tomas de alimentación secundaria o de paso

Máxima tensión CA del sistema	Corriente nominal máxima	Circuitos de derivación ⁵	Aplicaciones	Sumando ⁶	Corriente nominal de cortocircuito máxima ⁷
240	100	18, 30	SFL y FTL	—	10,000
	225	30, 42, 54, 72, 84, 96	SFL	152.4 mm (6 in)	
		42	FTL	—	
		30, 54, 72, 84, 96		152.4 mm (6 in)	
	400	30, 42, 54, 72, 84	SFL	—	25,000
		96		—	10,000
		30, 84	FTL	—	25,000
		96		—	10,000
		42, 54, 72		152.4 mm (6 in)	25,000
	600	30, 42, 54, 72, 84	FTL	304.8 mm (12 in)	25,000
		96		10,000	

Marcado CE

- Los interiores con la marca "CE" cumplen las normas IEC 61439-1 e IEC 61439-2.
- Los interiores de las zapatas principales con la marca "CE" han sido probados para soportar 10,000 amperios simétricos RMS durante 30 ciclos.
- Los interiores con la marca "CE" solo están aprobados para su uso con interruptores automáticos de derivación QOXD o QOBXD que lleven la marca "CE".

- Esta clasificación se aplica a los interiores de zapatas principales, equipados con zapatas de alimentación secundaria o de paso, en los que el dispositivo que alimenta el interior es desconocido o no es un dispositivo de la marca Square D. El uso de un interruptor automático principal de la marca Square D delante de estas zapatas dará como resultado una clasificación igual a la clasificación del interruptor automático. Las pruebas de cortocircuito se realizan al 100-105 % de la tensión nominal máxima del tablero.
- 96 circuitos con SPD tienen 84 circuitos derivados utilizables.
- El sumando es la longitud adicional del gabinete.
- Amperes simétricos RMS, durante tres ciclos..

Restricciones QO2150VH, QO2175VH y QO2200VH

AVISO

PELIGRO DE DAÑO AL EQUIPO

- No instale QO2150(VH), QO2175(VH) o QO2200(VH) en aplicaciones sísmicas.
- No instale QO2150(VH), QO2175(VH) o QO2200(VH) en aplicaciones de sistemas trifásicos.
- No instale más de un total de cuatro QO2175(VH) o QO2200(VH) en gabinetes NEMA 1.
- No instale más de un QO2175(VH) o QO2200(VH) en gabinetes NEMA 3R ventilados resistentes impermeables.
- No instale QO2150(VH), QO2175(VH) o QO2200(VH) uno al lado del otro.
- No instale en gabinetes impermeables sin ventilación (3R/5/12, 4/4X).
- Para los interruptores automáticos QO2175(VH) y QO2200(VH) instale molduras de cierre de tres puntos.

El incumplimiento de estas instrucciones podría provocar daños en el equipo.

Deje al menos cuatro espacios de circuito de relleno en blanco o interruptores automáticos de 125 A o inferiores antes de instalar otro QO2150(VH), QO2175(VH) o QO2200(VH).

Coloque QO2150(VH), QO2175(VH) y QO2200(VH) junto al final de línea, en el lado derecho para aplicaciones de entrada superior.

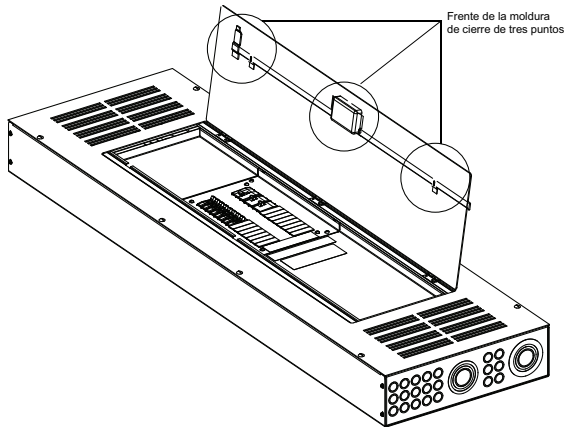
Coloque QO2150(VH), QO2175(VH) y QO2200(VH) junto al final de línea, en el lado izquierdo para aplicaciones de entrada inferior.

QO2150(VH), QO2175(VH) y QO2200(VH) solo para aplicaciones monofásicas.

Tabla 11 - Molduras con pestillo de tres puntos: número de catálogo⁸

Tipo	Montaje en superficie	Montaje empotrado
Estándar	NC50VS3P	NC50VF3P
	NC56VS3P	NC50VF3P
	NC62VS3P	NC62VF3P
	NC68VS3P	NC68VF3P
	NC74VS3P	NC74VF3P
	NC80VS3P	NC80VF3P
	NC86VS3P	NC86VF3P
	NC92VS3P	NC92VF3P
Con bisagras	NC62VS3PHR	NC62VF3PHR
	NC68VS3PHR	NC68VF3PHR
	NC74VS3PHR	NC74VF3PHR
	NC80VS3PHR	NC80VF3PHR
	NC86VS3PHR	NC86VF3PHR
	NC92VS3PHR	NC92VF3PHR

8. V=Ventado, HR=Articulado derecho, 3P=Tres puntos.

Figura 11 - Frente con pestillo de tres puntos

Anexo 2: Kits de accesorios

Los tableros NQ disponen de una amplia gama de kits de accesorios instalables en el lugar de trabajo:

- Kits de barra a tierra del equipo
- Kits de zapatas de neutro sobredimensionadas para tableros de 100-600 A
- Kits de zapatas de alimentación secundaria para tableros de 100-400 A
- Kits de zapatas principales
 - Kits de zapatas mecánicas: aluminio
 - Kits de zapatas mecánicas: cobre
 - Kits de zapatas de compresión Versa-Crimp: aluminio
 - Kits de zapatas de compresión Versa-Crimp: cobre
- Kits de barrera lateral de línea y correa de conexión neutra

Kits de barra a tierra del equipo

Los kits de barras a tierra para equipos, aptos para cable de cobre o aluminio, satisfacen las necesidades de puesta a tierra de los tableros NQ y los centros de carga QONQ.

Tabla 12 - Especificaciones de los kits de barras a tierra para equipos

Tablero		Utilizar el número de catálogo del kit de barra a tierra	
Circuito de derivación	Valor nominal de red	Aluminio ⁹	Cobre ¹⁰
1-42	600 A máximo	(1) PK27GTA	(1) PK27GTACU
54-84		(2) PK27GTA	(2) PK27GTACU



Las ubicaciones de montaje de la barra a tierra se identifican mediante el símbolo de tierra estampado en la pared posterior del gabinete.

Kits de zapatas de neutro sobredimensionadas para tableros de 100-600 A

Los kits de zapatas de neutro sobredimensionadas están disponibles para aplicaciones en las que se requieren conductores de terminación de 3 AWG o más para el neutro.

Tabla 13 - Especificaciones de los kits de zapatas de neutro sobredimensionadas para tableros de 100-600 A

Valor nominal del interruptor automático	Número de catálogo del kit	Calibre del cable Al/Cu(mm) ²
70 A	QO70AN	(1) #12-#2 AWG Al ([1] 3,3-33,6) (1) #14-#4 AWG Cu ([1] 2,1-21,2)
80-100 A	NQ100AN	(1) #14-2/0 AWG Al/Cu ([1] 2,1-67,4)
80-120 A	Q1100AN	(1) #4-1/0 AWG Al/Cu ([1] 21,2-53,5)

9. Barras de aluminio adecuadas para conductores de cobre o aluminio de 60°C o 75°C.
10. Barras de cobre adecuadas para conductores de cobre o aluminio de 60°C o 75°C.

Tabla 13 - Especificaciones de los kits de zapatas de neutro sobredimensionadas para tableros de 100-600 A (Continuación)

Valor nominal del interruptor automático	Número de catálogo del kit	Calibre del cable Al/Cu(mm) ²
110–150 A	Q1150AN ¹¹	(1) #1–2/0 AWG Al/Cu ([1] 42,4–67,4)
175-200 A	NQ200AN	(1) #4 AWG–300 kcmil Al/Cu ([1] 21,2–152)

Kits de zapatas de alimentación secundaria para tableros de 100-400 A

Las zapatas principales de alimentación secundaria están disponibles para aplicaciones de 100, 225 o 400 A.

Tabla 14 - Especificaciones de los kits de zapatas de subalimentación para los tableros de 100 a 400 A

Amperajes principales	Número de catálogo del kit	Circuitos máximos
100	NQSFL1	18, 30
225	NQSFL2	30 ¹² , 42 ¹² , 54 ¹² , 72 ¹² , 84 ¹²
400	NQSFL4	30, 42, 54, 72, 84

Kits de zapatas principales

Tabla 15 - Kits de zapatas mecánicas — Aluminio

Amperaje de tablero	Número de catálogo del kit	Calibre del cable Al/Cu(mm) ²
100	Estándar	# 6-2/0 AWG (13,3-67,43 mm ²)
225	Estándar	#6 AWG–350 kcmil (13,3–177,3 mm ²)

- Usar solo cable de cobre 1/0 (53,5 mm²) para aplicaciones de interruptores automáticos de derivación de 150 A.
- Estos paneles requieren un espacio adicional de 152,4 mm (6 pulgadas) para la caja y la moldura, con el fin de disponer de un espacio adecuado para doblar los cables.

Tabla 15 - Kits de zapatas mecánicas — Aluminio (Continuación)

Amperaje de tablero	Número de catálogo del kit	Calibre del cable Al/Cu(mm ²)
400	Estándar	(1) 1/0 AWG–750 kcmil (2) 1/0 AWG–350 kcmil ([1] 53,48-380 mm ²) ([2] 53,48-177,3 mm ²)
		(2) 1/0 AWG–750 kcmil ([2] 53,48–380 mm ²)
600	Estándar	(2) 1/0 AWG–750 kcmil ([2] 53,48–380 mm ²)
	NQALM6A	(3) #6 AWG–250 kcmil ([3] 13,3–127 mm ²)

Tabla 16 - Kits de zapatas mecánicas — Cobre

Amperaje de tablero	Número de catálogo del kit	Calibre del cable Al/Cu(mm ²)
100	NQCUM1	# 6-2/0 AWG (13,3-67,43 mm ²)
225	NQCUM2	#6 AWG-250 kcmil (13,3-127 mm ²)
400	NQCUM4	(1) 1/0 AWG–750 kcmil (2) 1/0 AWG–350 kcmil
600	NQCUM6	([1] 53,48–380 mm ²) ([2] 53,48–177,3 mm ²)

Tabla 17 - Versa-Crimp™ Kits de zapatas de compresión — Aluminio

Amperaje de tablero	Número de catálogo del kit	Calibre del cable Al/Cu(mm ²)	Herramienta de prensado
100	NQALV1	# 8-1/0 AWG (8,36-53,48 mm ²)	VC6 (Todos)
225	NQALV2	#4 AWG-300 kcmil (21,15-152 mm ²)	
400	NQALV4	(2) 2/0 AWG-500 kcmil ([2] 67,43-253,4 mm ²)	VC6–3, VC6–FT
600	NQALV6		

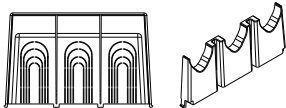
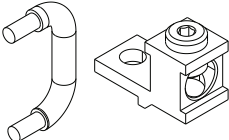

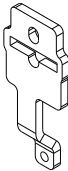
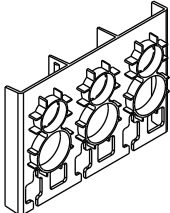
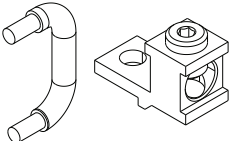
Tabla 18 - Versa-Crimp™ Kits de zapatas de compresión — Cobre

Amperaje de tablero	Número de catálogo del kit	Calibre del cable Al/Cu(mm ²)	Herramienta de prensado
100	NQCUV1	# 6-1/0 AWG (13,30-53,48 mm ²)	VC6 (Todos), VC7 (Todos)
225	NQCUV2	2/0 AWG–300 kcmil (67,43–152 mm ²)	VC6-3, VC7, VC6-FT, VC7–FT
400	NQCUV4	400–750 kcmil (202,7–380 mm ²)	VC6-FT, VC7–FT, VC8
600	NQCUV6	(2) 250–500 kcm ([2] 126,7–253,4mm ²)	VC6-3, VC7, VC6-FT, VC7–FT

Kits de barrera lateral de línea y correa de conexión neutra

En función de la aplicación y del código de instalación adoptado, puede ser necesaria una barrera lateral de línea y una correa de conexión neutra. Seleccione la barrera adecuada de la siguiente tabla, en función del interruptor automático principal.

Tabla 19 - Kits de barrera lateral de línea y correa de conexión neutra

Número de catálogo	Contenido		Descripción
	Cubierta de la zapata de línea	Correa de conexión neutra	
NQLALLC			Cubierta de la zapata de línea NQ LA/LH y correa y zapata de conexión neutra
NQHJQLLC			NQ PowerPacT™ Cubierta de zapatas de línea H/J/Q y Correa de conexión neutra
NQPPLLC			Cubierta de la zapata de línea PowerPacT L y correa y zapata de conexión neutra

Panneaux de distribution NQ/NQM et centres de charge QONQ

Classe 1640
80043-712-06, Rev. 08

Contenu de ce document

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Informations de sécurité

Lire attentivement ces directives et examiner l'appareillage pour vous familiariser avec son fonctionnement avant d'effectuer son installation ou son entretien. Les messages spéciaux suivants peuvent apparaître dans le présent manuel ou sur l'appareil pour avertir l'utilisateur de dangers potentiels ou pour attirer l'attention sur des informations qui clarifient ou simplifient une procédure.



L'ajout d'un de ces deux symboles à une étiquette de sécurité de « Danger » ou d'« Avertissement » indique qu'un danger électrique existe et qu'il peut entraîner des blessures corporelles si les directives ne sont pas respectées.



Ceci est le symbole d'alerte de sécurité. Il est utilisé pour vous alerter de dangers de blessures corporelles potentielles. Veuillez vous conformer à tous les messages de sécurité qui suivent ce symbole pour éviter une blessure ou la mort.

DANGER

DANGER indique une situation de danger imminent qui, si elle n'est pas évitée **entraînera** la mort ou des blessures graves.

AVERTISSEMENT

AVERTISSEMENT indique une situation de danger potentiel qui, si elle n'est pas évitée, **peut entraîner** la mort ou des blessures graves.

ATTENTION

ATTENTION indique une situation de danger potentiel qui, si elle n'est pas évitée, **peut entraîner** des blessures mineures ou modérées.

AVIS

AVIS est utilisé pour commenter des pratiques sans rapport avec les blessures physiques.

REMARQUE: Fournit des renseignements complémentaires pour clarifier ou simplifier une procédure.

Veillez noter

Seul du personnel qualifié doit effectuer l'installation, l'utilisation, l'entretien et la maintenance du matériel électrique. Schneider Electric

n'assume aucune responsabilité des conséquences éventuelles découlant de l'utilisation de cette documentation.

Une personne qualifiée est une personne disposant de compétences et de connaissances dans le domaine de la construction et du fonctionnement des équipements électriques et installations et ayant bénéficié d'une formation de sécurité afin de reconnaître et d'éviter les risques encourus.

L'équipement électrique doit être transporté, entreposé, installé et utilisé exclusivement dans l'environnement pour lequel il a été conçu.

Introduction

Ces directives décrivent la procédure d'installation des panneaux de distribution à disjoncteurs NQ Square D™ et des centres de charge QONQ. Ces panneaux de distribution et centres de charge sont homologués par Underwriters Laboratories (cULus) et compatibles avec les disjoncteurs de dérivation QO™ et QOB.

REMARQUE: Pour obtenir une assistance technique sur l'installation de ce panneau de distribution, contactez le centre d'informations à la clientèle de Schneider Electric au 1-888-778-2733 (É.-U.).

REMARQUE: Reportez-vous aux étiquettes apposées sur l'appareil pour les informations de sécurité et les caractéristiques nominales. Des étiquettes d'équipement supplémentaires sont fournies avec ce document.

Mesures de sécurité

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC

- Portez un équipement de protection individuelle (EPI) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462, ou un équivalent local de la norme.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet équipement.
- Coupez toutes les alimentations à cet équipement avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Il est impératif de lire et de comprendre entièrement ces directives d'utilisation ainsi que les normes NEMA PB 1.1 incluses avant de procéder à l'installation, à l'utilisation et à l'entretien de cet équipement.
- Les codes locaux varient mais sont adoptés et appliqués pour assurer des installations électriques sécuritaires. Il peut être nécessaire d'obtenir un permis pour exécuter des travaux sur des circuits électriques et certains codes peuvent exiger que le travail électrique accompli soit inspecté.
- Remettez en place tous les dispositifs, les portes et les couvercles avant de mettre l'équipement sous tension.
- Évitez que les peintures, les solvants ou les vaporisateurs à base de pétrole ne viennent en contact avec les pièces non métalliques de ce produit.

Le fait de ne pas suivre ces instructions entraînera des blessures graves, voire mortelles.



AVERTISSEMENT: Ce produit peut vous exposer à des produits chimiques, notamment des composés de nickel, reconnus par l'État de Californie comme pouvant causer le cancer, et du bisphénol A (BPA), reconnu par l'État de Californie comme pouvant causer des anomalies congénitales ou d'autres troubles de la reproduction. Pour plus d'informations, consulter www.P65Warnings.ca.gov.

Installation

Cette section fournit des instructions pour les procédures suivantes concernant les panneaux de distribution NQ et les centres de charge QONQ:

- Montage d'intérieur pour armoires Square D, page 5.
- Installation de la bride ou du câble de liaison du neutre, page 8.
- Installation et dépose des disjoncteurs QO et QOB, page 13.
- Instructions de réarmement du disjoncteur, page 16.
- Préparation de l'écran isolant, page 17.

Montage d'intérieur pour armoires Square D

Une publication de normes séparée, intitulée « General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less » [Instructions générales pour l'installation, l'utilisation et l'entretien des panneaux de distribution de tension 600 V ou moins] (NEMA PB1.1), est fournie avec cet équipement. Familiarisez-vous avec le contenu de ce document avant de suivre l'une des procédures suivantes.

Si vous n'avez pas reçu une copie de ce document, ou si vous avez des questions concernant l'équipement, contactez votre distributeur local ou votre représentant Schneider Electric.

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC

- S'assurer que tous les raccordements sur site sont correctement serrés.
- Ne pas serrer les raccordements au-delà ou en deçà de la plage de couple spécifiée. Se reporter à l'étiquette d'information sur les couples de serrage apposée sur le tableau de distribution avant de serrer les raccordements.

Le fait de ne pas suivre ces instructions entrainera des blessures graves, voire mortelles.

Pour monter et installer correctement l'intérieur de panneau de distribution NF ou de centre de charge QONQ, reportez-vous à la publication de normes NEMA PB 1.1 et suivez les instructions ci-dessous pour les procédures Montage en surface (armoire montée sur un mur), page 6 ou Montage encastré (armoire encastrée dans le mur), page 7.

Montage en surface (armoire montée sur un mur)

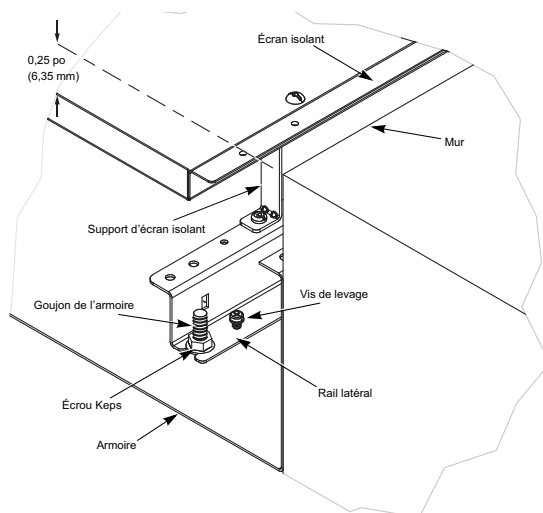
1. Montez l'armoire comme indiqué dans la publication des normes NEMA PB 1.1.
2. Retirez l'écran isolant de ses supports.
3. Installez l'intérieur comme décrit ci-dessous :
 - a. Placez l'intérieur sur les goujons de l'armoire. La vis de levage n'est pas nécessaire (voir Montage d'intérieur pour armoires Square D, page 5).
 - b. Serrez les écrous Keps contre les rails latéraux intérieurs jusqu'à ce que les rails soient contre le fond de l'armoire.
4. En fonction de l'application et du code d'installation adopté, une bride de fixation au neutre et une barrière côté ligne peuvent être nécessaires. Voir les sections Installation de la bride ou du câble de liaison du neutre, page 8 et Annexe 2 : Kits d'accessoires, page 40.

5. Appliquez les étiquettes d'équipement (placées dans le sachet) en suivant les instructions figurant au dos de la feuille d'étiquettes d'équipement. Reportez-vous aux codes et normes en vigueur localement.
6. Remontez l'écran isolant une fois le câblage réalisé.

Montage encastré (armoire encastrée dans le mur)

1. Montez l'armoire comme indiqué dans la publication des normes NEMA PB 1.1.
2. Retirez l'écran isolant de ses supports.
3. Installez l'intérieur comme décrit ci-dessous :
 - a. Vissez dans les rails latéraux les (4) vis de levage autotaraudeuses 10-32 × 0,875 po fournies avec la façade encastrée.
 - b. Placez l'intérieur sur les goujons de l'armoire (voir Montage d'intérieur pour armoires Square D, page 8). Placez les écrous Keps sur les goujons de l'armoire, mais sans les serrer.
 - c. Ajustez les vis de sorte que la lèvre de l'écran isolant soit à environ 6,35 mm (0,25 po) de la ligne du mur.
 - d. Serrez les écrous Keps contre les rails latéraux.
4. En fonction de l'application et du code d'installation adopté, une bride de fixation au neutre et une barrière côté ligne peuvent être nécessaires. Reportez-vous aux codes et normes en vigueur localement. Voir les sections Installation de la bride ou du câble de liaison du neutre, page 8 et Annexe 2 : Kits d'accessoires, page 40.
5. Appliquez les étiquettes d'équipement (placées dans le sachet) en suivant les instructions figurant au dos de la feuille d'étiquettes d'équipement.
6. Remontez l'écran isolant une fois le câblage réalisé.

Figure 1 - Montage à l'intérieur des armoires Square D



Installation de la bride ou du câble de liaison du neutre

En fonction de l'application et du code d'installation adopté, une barrière côté ligne et une bride de fixation au neutre peuvent être nécessaires.

Pour établir correctement la liaison du neutre au panneau de distribution, suivez les instructions des sections **Panneaux de distribution NQ jusqu'à 100 ou 250 A** ou **Panneaux de distribution NQ jusqu'à 400 ou 600 A** et centres de charge QONQ, page 11.

⚠ DANGER**RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC**

- Portez un équipement de protection individuelle (EPI) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462, ou un équivalent local de la norme.
- Coupez toutes les alimentations à cet équipement avant d'y travailler.
- La bride de fixation ou le câble de liaison du neutre ne doivent être utilisés que lorsque le panneau de distribution est installé comme équipement d'entrée de service.
- Veillez à ne pas mélanger les vis de montage avec les vis de l'écran isolant.

Le fait de ne pas suivre ces instructions entrainera des blessures graves, voire mortelles.

REMARQUE: Reportez-vous à la section Kits de barrières côté ligne et de brides de fixation au neutre, page 44 pour plus d'informations.

REMARQUE: Les termes « bride de fixation au neutre » et « câble de liaison du neutre » décrivent les composants qui répondent aux exigences d'un « conducteur de liaison du neutre ». Ces termes sont équivalents.

Panneaux de distribution NQ jusqu'à 100 ou 250 A

Pour installer une bride de fixation au neutre sur des panneaux de distribution NQ avec un courant secteur nominal jusqu'à 225 A (avec cosses principales ou disjoncteur principal) ou jusqu'à 250 A (avec un disjoncteur principal assemblé en usine), reportez-vous à la section Installation de la bride de fixation – Panneaux de distribution NQ jusqu'à 100 ou 250 A, page 11 et suivez les instructions ci-dessous.

1. Alignez la bride de fixation sur le rail latéral, comme illustré.

REMARQUE: Pour certaines applications, il peut être nécessaire de retirer la cosse (non illustrée) avant d'installer la bride de fixation.

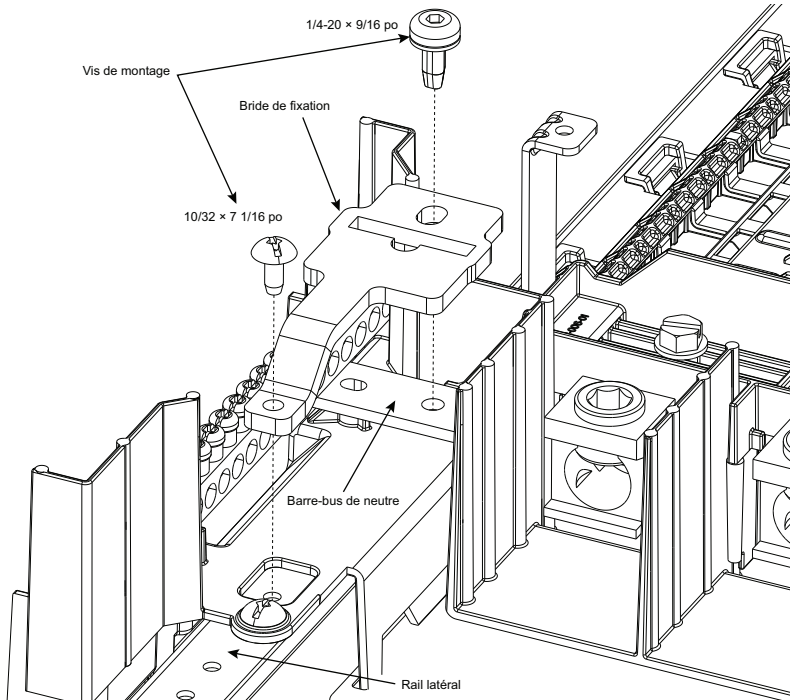
2. Insérez les deux vis de montage, comme illustré. Serrez la vis de 10-32 à un couple de 10-12 lb-po. (1,1-1,4 N•m) et la vis 1/4-20 à 25-30 lb-po. (2,8-3,4 N•m).

REMARQUE: Les vis de montage des cosses sont fournies dans le sachet de la bride de fixation.

- a. Si la cosse a été retirée à l'étape 1 ci-dessus, réinstallez-la par-dessus la bride de fixation. Serrez la vis de 10-32 à un couple de 10-12 lb-po. (1,1-1,4 N•m) et la vis 1/4-20 à 25-30 lb-po. (2,8-3,4 N•m).
- b. Utilisez une vis 1/4-20 × 9/16 po pour le montage des intérieurs 100/225 A sans options. Voir les notes C et D pour les autres options.
- c. Utilisez la vis de montage de cosse 1/4-20 x 11/16 po dans les applications avec cosse traversante, cosse secondaire, disjoncteur secondaire ou neutre à 200 %.
- d. Utilisez la vis de montage de cosse 1/4-20 × 7/8 po dans les applications avec neutre à 200 % et cosses traversantes, cosses secondaires ou disjoncteurs secondaires.

Figure 2 - Installation d'une bride de fixation – Panneaux NQ jusqu'à 100 ou 250 A

REMARQUE: Pour les options de cosses de liaison, reportez-vous à C et D pour la longueur correcte de la vis 1/4-20.

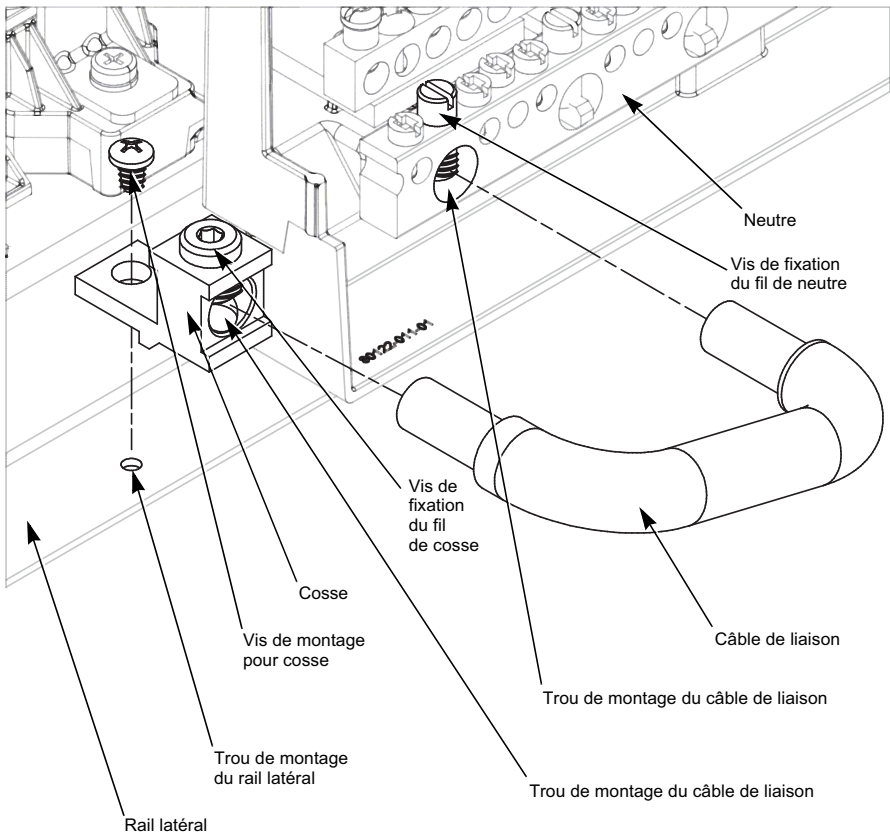


Panneaux de distribution NQ jusqu'à 400 ou 600 A et centres de charge QONQ

Pour installer un câble de liaison du neutre sur un panneau de distribution NQ jusqu'à 400 ou 600 A et un centre de charge QONQ, reportez-vous à la section Installation du câble de liaison – Panneaux de distribution NQ jusqu'à 400 ou 600 A et centres de charge QONQ, page 12 et suivez les instructions ci-dessous.

1. Alignez la cosse sur le trou de montage du rail latéral, comme illustré.
2. Serrez la vis de montage de la cosse contre le rail latéral à 10-12 lb-po. (1.1–1.4 N•m).
3. Alignez le câble de liaison, comme illustré, et insérez-le dans les trous de montage de la cosse et du neutre.
4. Serrez la vis de fixation du fil de cosse et la vis de fixation du fil neutre à 45-50 lb-po. (5.1-5.6 N•m).

Figure 3 - Installation du câble de liaison – Panneaux de distribution NQ jusqu'à 400 ou 600 A et centres de charge QONQ



Installation et dépose des disjoncteurs QO et QOB

⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC

- Portez un équipement de protection individuelle (EPI) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462, ou un équivalent local de la norme.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet équipement.
- Coupez toutes les alimentations à cet équipement avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour vous assurer que l'alimentation est coupée.
- Comblez tous les espaces inutilisés à l'aide de plaques d'obturation.
- Remettez en place tous les dispositifs, les portes et les couvercles avant de mettre l'équipement sous tension.
- Utilisez uniquement les disjoncteurs et accessoires des marques Square D™ et Schneider Electric™. Cet équipement est conçu et testé par Schneider Electric selon des niveaux de performance conformes aux normes applicables.
- S'assurer que tous les raccordements sur site sont correctement serrés.
- Ne pas serrer les raccordements au-delà ou en deçà de la plage de couple spécifiée. Reportez-vous à l'étiquette d'information sur les couples de serrage apposée sur le tableau de distribution avant de serrer les raccordements.

Le fait de ne pas suivre ces instructions entraînera des blessures graves, voire mortelles.

Installation des disjoncteurs QO et QOB

Reportez-vous à la section Installation et dépose des disjoncteurs QO et QOB, page 15 pour les instructions suivantes :

1. Coupez toutes les alimentations du panneau de distribution.
2. Mettez le disjoncteur en position OFF.
3. Retirez l'ensemble de l'écran isolant.
4. Emboîtez l'extrémité de la borne de fil du disjoncteur sur le rail de montage.
5. Engagez le connecteur de dérivation.

Pour les disjoncteurs QO : Poussez vers l'intérieur jusqu'à ce que les mâchoires enfichables s'engagent complètement dans le connecteur de dérivation.

Pour les disjoncteurs QOB : Poussez vers l'intérieur jusqu'à ce que le connecteur du disjoncteur soit centré sur le trou de montage du connecteur de dérivation. Engagez la vis dans le trou du connecteur de dérivation et serrez au couple indiqué sur le schéma de câblage et de serrage de l'intérieur.

6. Installez le câble de charge.
7. Réinstallez l'écran isolant.
8. Installez une plaque d'obturation dans tous les espaces pour disjoncteur de dérivation non utilisés.

Dépose des disjoncteurs QO et QOB

Reportez-vous à la section Installation et dépose des disjoncteurs QO et QOB, page 15 pour les instructions suivantes :

1. Coupez toutes les alimentations du panneau de distribution.
2. Retirez l'ensemble de l'écran isolant.
3. Retirez le fil de charge.

4. Dégagez le connecteur de dérivation.

Pour les disjoncteurs QO :

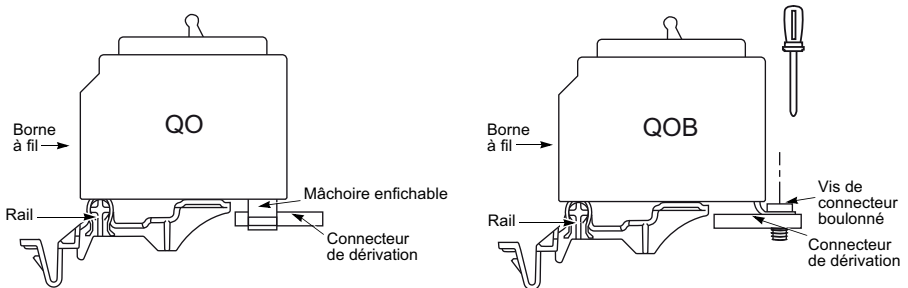
Tirez vers l'extérieur jusqu'à ce que les mâchoires enfichables se dégagent complètement du connecteur de dérivation.

Pour les disjoncteurs QOB :

Desserrez la vis dans le connecteur du disjoncteur et retirez le disjoncteur du connecteur de dérivation.

5. Retirez l'extrémité de la borne du câble du disjoncteur du rail de montage.
6. Réinstallez l'écran isolant.
7. Installez une plaque d'obturation dans tous les espaces pour disjoncteur de dérivation non utilisés.

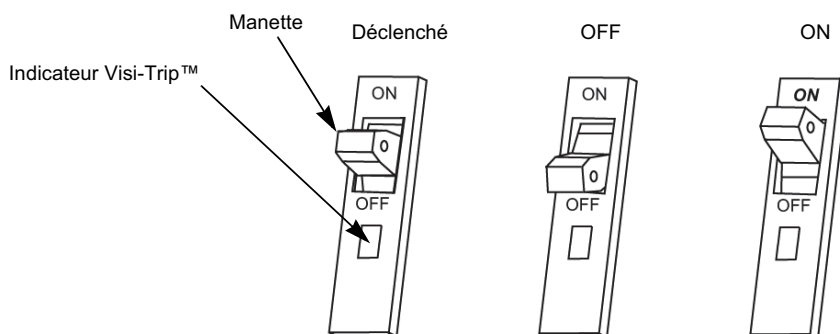
Figure 4 - Installation et dépose des disjoncteurs QO et QOB



Instructions de réarmement du disjoncteur

Si le disjoncteur est déclenché, la poignée sera en position médiane entre ON et OFF. Pour réarmer le disjoncteur, poussez la poignée en position OFF, puis en position ON.

Figure 5 - Positions de la poignée du disjoncteur



REMARQUE: Lorsque le disjoncteur s'est déclenché, la poignée prend une position centrale et l'indicateur rouge Visi-Trip apparaît dans la fenêtre du boîtier du disjoncteur. L'indicateur rouge Visi-Trip n'est visible que lorsque le disjoncteur s'est déclenché.

Préparation de l'écran isolant

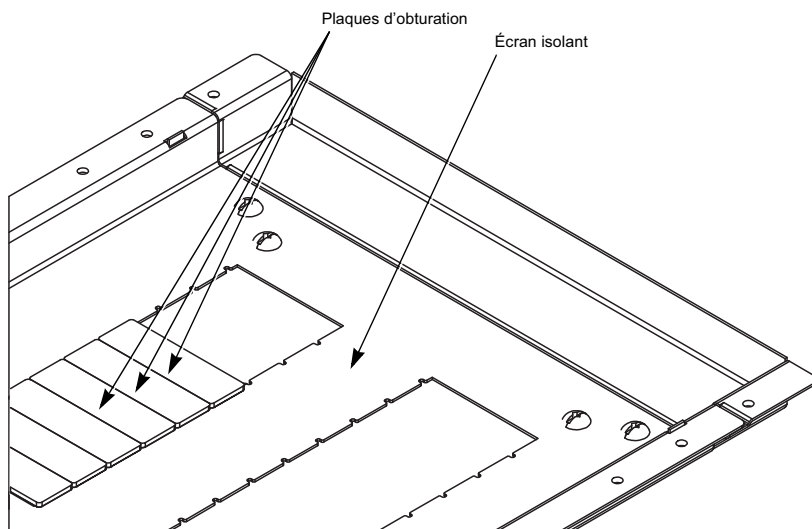
⚠ DANGER

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC

- Portez un équipement de protection individuelle (EPI) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E, NOM-029-STPS ou CSA Z462, ou un équivalent local de la norme.
- Avant de mettre le panneau de distribution sous tension, comblez tous les espaces inutilisés à l'aide de plaques d'obturation.
- Remettez en place tous les dispositifs, les portes et les couvercles avant de mettre l'équipement sous tension.

Le fait de ne pas suivre ces instructions entrainera des blessures graves, voire mortelles.

Figure 6 - Diagramme de l'écran isolant



REMARQUE: Le dos de l'écran isolant indique le numéro de catalogue des plaques d'obturation compatibles correspondantes.

Annexe 1 : Spécifications

Câblage typique

Des informations supplémentaires sont fournies sur le panneau de distribution. Voir la valeur nominale du disjoncteur principal, s'il est utilisé.

Tableau 1 - Câblage typique du panneau de distribution

Tension CA	Panneaux de distribution monophasés		Tableaux de distribution triphasés	
	Phase	Fils	Phase	Fils
208Y/120	—	—	3	4
120/240	1	3	—	—
240 ¹	1	2	3	4
240 ²	1	3	—	—
240/120 ³	—	—	3	4 Triangle

1. Pour ce système, le neutre n'est pas utilisé et seuls des disjoncteurs de 240 V CA minimum doivent être utilisés. N'utilisez pas de disjoncteurs de 120 V ou 120/240 V CA.
2. Pour un système de phase B mis à la terre, seuls des disjoncteurs de 240 V CA minimum doivent être utilisés. N'utilisez pas de disjoncteurs de 120 V ou 120/240 V CA.
3. Lors du câblage d'un système en triangle, la tension simple entre les phases A et C et le neutre doit être de 120 V, et la tension simple entre la phase B et le neutre doit être de 208 V. Ne connectez que des disjoncteurs d'une valeur nominale de 240 V CA minimum. N'utilisez pas de disjoncteurs de 120 V ou de 120/240 V sur la phase B.

Disjoncteur principal intégré ou secondaire

PowerPacT à châssis H, J, L et Q; LA, LH, QO(B)(VH)

Figure 7 - Schéma de cosses principales NQ/NQM 100-225 A ou de disjoncteur principal 100-250 A

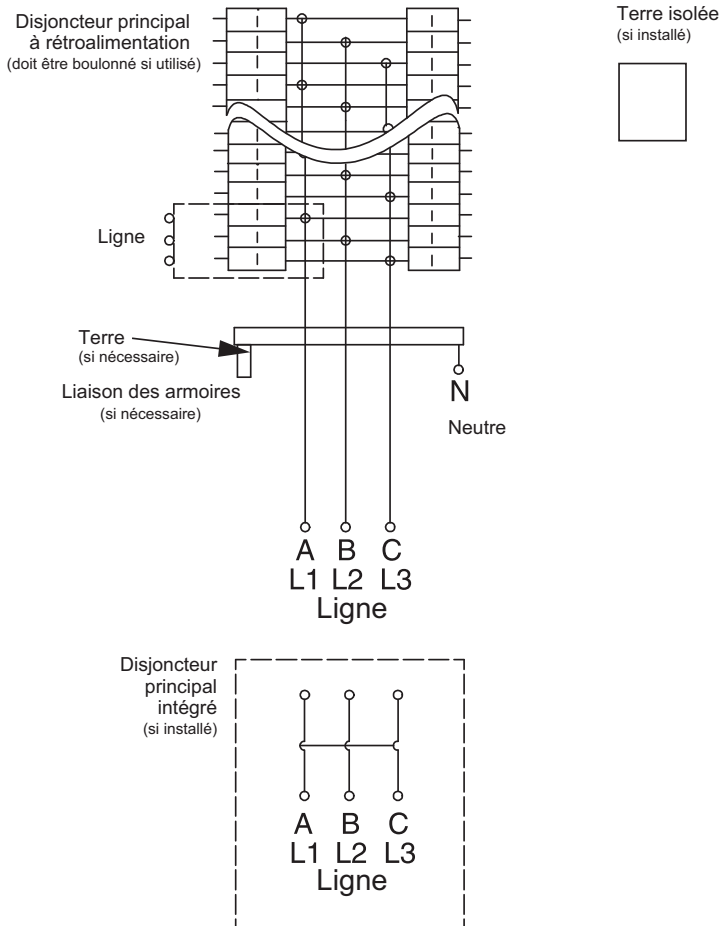


Figure 8 - Schéma de cosses principales ou disjoncteur principal (avec ou sans cosses traversantes) NF 400-600 A pour panneaux de distribution NQ ou centre de charge QONQ

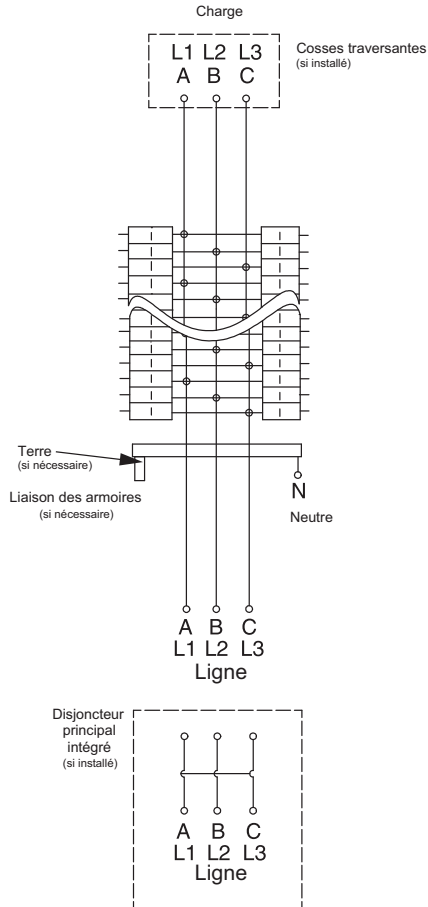


Figure 9 - Disjoncteurs principaux NF 400-600 A pour panneaux de distribution NQ ou centres de charge QONQ avec cosses traversantes ou disjoncteurs secondaires

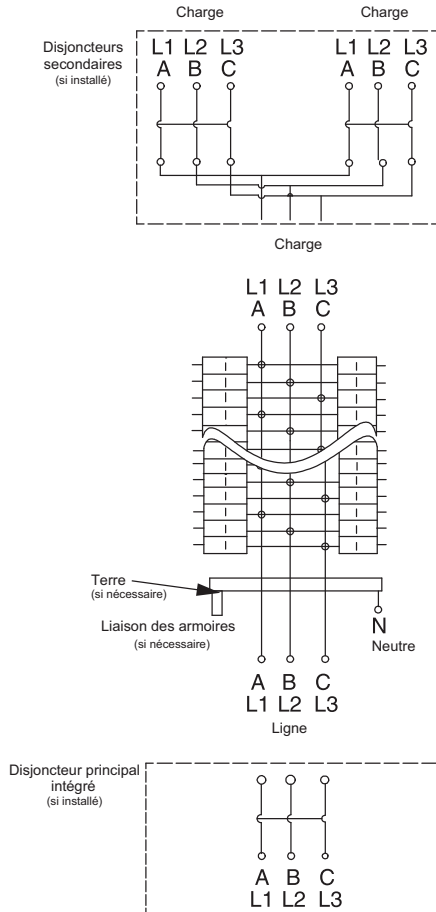
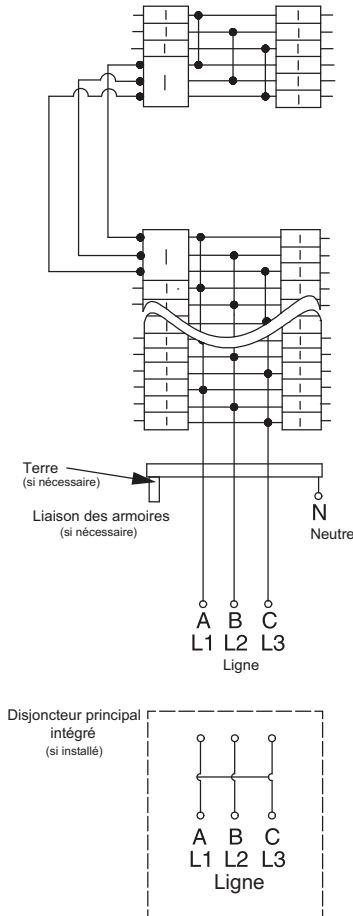


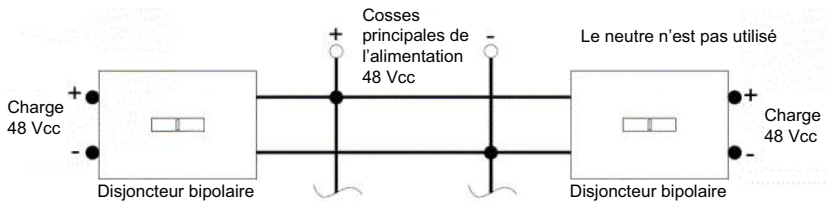
Figure 10 - Schéma typique d'un panneau de distribution NQ avec bus divisé



Convient aux systèmes de 48 Vcc maximum

Pour une utilisation avec des systèmes non mis à la terre 48 Vcc maximum uniquement. Utiliser uniquement des disjoncteurs principaux de dérivation ou à alimentation par dérivation de type QO(B), bipolaires, 10-60 A, avec le suffixe 5272, prévus pour une alimentation de 48 Vcc maximum. Le courant nominal de court-circuit est limité à 5 kA pour une utilisation dans un réseau de 48 Vcc.

Pour les disjoncteurs d'alimentation principale et secondaire montés verticalement, utiliser uniquement des disjoncteurs à châssis H, J et LA/LH. Le courant nominal de court-circuit est limité à 20 kA (châssis H, J), 10 kA (châssis LA) et 50 kA (châssis LH) pour une utilisation dans un réseau de 48 Vcc.



Valeurs nominales du panneau de distribution

Consultez les codes et normes en vigueur localement pour plus d'informations. L'étiquette pour un système qualifié pour utilisation en série se trouve dans le sachet.

Courant nominal de court-circuit pour des disjoncteurs raccordés en série (valeurs symétriques efficaces)

- Les valeurs nominales des séries indiquées pour des tensions plus élevées s'appliquent à des tensions plus basses (Exemple : 240 3P/3F couvre 208Y/120 3P/4F).
- Les essais de court-circuit sont effectués à 100-105 % de la tension nominale max. du panneau de distribution.
- « MC » désigne des disjoncteurs critiques.
- Lorsque LG est indiqué, LJ et LL peuvent être utilisés.

- Sauf indication contraire, les disjoncteurs principaux peuvent s'appliquer à l'intensité nominale max. disponible.
- Les suffixes HID, SWD et SWN peuvent également s'appliquer aux disjoncteurs de dérivation appropriés figurant ci-dessous.
- Lorsque les disjoncteurs QO(B) sont indiqués ci-dessous, les disjoncteurs QO(B)H, QO(B)VH et QH(B) peuvent également être utilisés.
- Les disjoncteur bipolaires CAFI ne peuvent pas être utilisés sur les systèmes triphasés.

Tableau 2 - Tension max. du système CA : 120/240 1P/3F, 208Y/120 3P/4F, 240/120 3P/4F

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
18 000	LA/LH MC	QO(B)	15-30 A	15-30 A	—
22 000	QO(B) VH QOB-VH	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—

Tableau 2 - Tension max. du système CA : 120/240 1P/3F, 208Y/120 3P/4F, 240/120 3P/4F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
25 000	QD	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	ED	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	BD, HD, JD, LG	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
	BD, HD, JD, LG	QO(B) CAFI	15-20 A	15-20 A	—
QO(B) DF		15-20 A	—	—	
42 000	LA, MA	QO(B)	15-30 A	15-30 A	—

Tableau 2 - Tension max. du système CA : 120/240 1P/3F, 208Y/120 3P/4F, 240/120 3P/4F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
65 000	QG	QO(B)	15-70 A	15-125 A	—
		QO(B) VH	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	EG	QO(B)	15-70 A	15-125 A	—
	EG	QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) EPE	—	—	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	BG, HG, JG, LG	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—

Tableau 2 - Tension max. du système CA : 120/240 1P/3F, 208Y/120 3P/4F, 240/120 3P/4F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
100 000	QJ	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	EJ	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
	EJ	QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	BJ, HJ, JJ	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	LJ	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) GFI	—	15-60 A	—
		QO(B) EPD	—	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
QO(B) DF		15-20 A	—	—	

Tableau 2 - Tension max. du système CA : 120/240 1P/3F, 208Y/120 3P/4F, 240/120 3P/4F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
125 000	HL, JL	QO(B)	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) PL	15-30 A	15-60 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
200 000	HR, JR	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
	HR, JR	QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—

Tableau 3 - Tension max. du système CA : 240 1P/2F

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
25 000	QD, BD, HD, JD, LG	QO(B) H	—	15-100 A	—
42 000	LA, MA	QDL	—	70-225 A	—
65 000	QG, BG, HG, JG, LG	QO(B) H	—	15-100 A	—
100 000	BJ, HJ, JJ, LJ	QO(B) H	—	15-100 A	—
125 000	HL, JL	QO(B) H	—	15-100 A	—

Tableau 4 - Tension max. du système CA : 208Y/120 3P/4F

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
18 000	LA/LH MC	QO(B)	—	—	15-30 A
22 000	QO(B) VH, QOB-VH	QO(B) GFI	—	—	15-50 A

Tableau 4 - Tension max. du système CA : 208Y/120 3P/4F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripholaire
25 000	QD, ED, FD, BD, HD, JD	QO(B) GFI	—	—	15-50 A
	LG	QO(B) GFI	—	—	15-30 A
65 000	QG, EG, BG, HG, JG	QO(B) GFI	—	—	15-50 A
	LG	QO(B) GFI	—	—	15-30 A
100 000	QJ	QO(B)	—	—	15-30 A
		QO(B) VH	—	—	15-100 A
		QOB-VH	—	—	110-150 A
		QO(B) PL	—	—	15-30 A
		QO(B) GFI	—	—	15-50 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A
	EJ, BJ, HJ, JJ	QO(B) GFI	—	—	15-50 A

Tableau 5 - Tension max. du système CA : 240/120 3P/4F, 240 3P/3F

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripholaire
22 000	QOB VH QOB-VH	QO(B)	—	—	15-100 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A
25 000	QD	QO(B)	—	—	15-30 A
	QD	QO(B) VH	—	—	15-100 A
		QOB-VH	—	—	110-150 A
		QO(B) PL	—	—	15-30 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A
	ED	QO(B)	—	—	15-100 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A
	BD, HD, JD	QO(B)	—	—	15-100 A
		QOB-VH	—	—	110-150 A
		QO(B) PL	—	—	15-30 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A
	LG	QO(B)	—	—	15-30 A
		QO(B) VH	—	—	15-100 A
		QOB-VH	—	—	110-150 A
		QO(B) EPD	—	—	15-30 A
		QO(B) EPE	—	—	15-30 A
	42 000	LA, MA	QDL	—	—
QO(B) VH			—	—	15-30 A
MG		QOB-VH	—	—	110-150 A

Tableau 5 - Tension max. du système CA : 240/120 3P/4F, 240 3P/3F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles				
		Type	Unipolaire	Bipolaire	Tripholaire	
65 000	QG	QO(B)	—	—	15-30 A	
		QO(B) VH	—	—	15-100 A	
	QG	QOB-VH	—	—	110-150 A	
		QO(B) PL	—	—	15-30 A	
	EG	QO(B)	—	—	15-100 A	
		QOB-VH	—	—	110-125 A	
		QO(B) EPD	—	—	15-50 A	
		QO(B) EPE	—	—	15-50 A	
	BG, HG, JG	QO(B)	—	—	15-100 A	
		QOB-VH	—	—	110-150 A	
		QO(B) PL	—	—	15-30 A	
		QO(B) EPD	—	—	15-50 A	
		QO(B) EPE	—	—	15-50 A	
	LG	QO(B)	—	—	15-30 A	
		QO(B) VH	—	—	15-100 A	
		QOB-VH	—	—	110-150 A	
		QO(B) EPD	—	—	15-30 A	
		QO(B) EPE	—	—	15-30 A	
	100 000	EJ	QO(B)	—	—	15-100 A
			QOB-VH	—	—	110-125 A
QO(B) EPD			—	—	15-50 A	
QO(B) EPE			—	—	15-50 A	
BJ, HJ, JJ		QO(B)	—	—	15-100 A	
		QOB-VH	—	—	110-150 A	
		QO(B) PL	—	—	15-30 A	
		QO(B) EPD	—	—	15-50 A	
		QO(B) EPE	—	—	15-50 A	
LJ		QO(B)	—	—	15-30 A	
		QO(B) VH	—	—	15-100 A	
		QOB-VH	—	—	110-150 A	

Tableau 5 - Tension max. du système CA : 240/120 3P/4F, 240 3P/3F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Triolaire
125 000	HL, JL	QO(B)	—	—	15-100 A
	HL, JL	QOB-VH	—	—	110-150 A
		QO(B) PL	—	—	15-30 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A
200 000	HR, JR	QO(B)	—	—	15-100 A
		QOB-VH	—	—	110-150 A

Tableau 6 - Tension max. du système CA : 120/240 1P/3F, 208Y/120 3P/4F, 240/120 3P/3F

Max. nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Triolaire
42 000	Fusibles classe T3 400 A max.	QO(B) VH	15-70 A	15-125 A	—
65 000	Fusibles classe J 400 A max.	QO(B) VH	15-70 A	15-125 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
	Fusibles classe T6 400 A max.	QO(B) VH	15-70 A	15-125 A	—
		QOB-VH	—	150 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—
100 000	Fusibles de classe T3 200 A max.	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
		QO(B) AFI	15-20 A	—	—
		QO(B) CAFI	15-20 A	15-20 A	—
		QO(B) DF	15-20 A	—	—

Tableau 6 - Tension max. du système CA : 120/240 1P/3F, 208Y/120 3P/4F, 240/120 3P/3F (Suite)

Max. nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
200 000	Fusibles classe T6 ou J 200 A max.	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—
	Fusibles de classe T3 400 A max.	QO(B)	15-70 A	15-125 A	—
		QO(B) GFI	15-30 A	15-60 A	—
		QO(B) EPD	15-30 A	15-60 A	—

Tableau 7 - Tension max. du système CA : 208Y/120 3P/4F

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
65 000	400 A max. Classe J	QO(B) GFI	—	—	15-50 A
100 000	200 A max. Classe T3	QO(B) GFI	—	—	15-50 A
200 000	Fusibles de classe T6 ou J 200 A max.	QO(B) GFI	—	—	15-50 A
	400 A max. Fusibles classe T3	QO(B) GFI	—	—	15-50 A

Tableau 8 - Tension max. du système CA : 240/120 3P/4F, 240 3P/3F

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripolaire
50 000	600 A max. Fusibles classe T3	QO(B) VH	—	—	15-30 A
65 000	400 A max. Fusibles classe J	QO(B) VH	—	—	15-100 A
		QO(B) VH	—	—	15-100 A
	400 A max. Fusibles classe T6	QOB-VH	—	—	110-150 A
100 000	200 A max. Fusibles classe T3	QO(B)	—	—	15-100 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A

Tableau 8 - Tension max. du système CA : 240/120 3P/4F, 240 3P/3F (Suite)

Courant nominal de court-circuit max.	Disjoncteurs principaux intégrés ou à distance et fusibles principaux à distance Square D	Désignation catalogue des disjoncteurs de dérivation Square D et plages d'intensité admissibles			
		Type	Unipolaire	Bipolaire	Tripholaire
200 000	Fusibles classe T6 ou J 200 A max.	QO(B)	—	—	15-100 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A
	Fusibles de classe T3 400 A max.	QO(B)	—	—	15-100 A
		QO(B) EPD	—	—	15-50 A
		QO(B) EPE	—	—	15-50 A

REMARQUE: Dans le tableau suivant, « Type » comprend les disjoncteurs AFI, CAFI, EPD et GFI.

Tableau 9 - Sélectivité des disjoncteurs critiques pour panneaux NQ

Courant nominal de court-circuit maximum (symétrique efficace)	Disjoncteurs principaux intégrés ou à distance	Disjoncteurs de dérivation			
		Type	Unipolaire	Bipolaire	Tripholaire
Entièrement calibré et sélectif jusqu'à 10 kA à 208Y / 120 Vac ou à 240/120 Vac	J-W, 250 A L-W, 250 A	QOB	10 à 70	10 à 125	10 à 125
		QOB-H			
		QOB-VH			
		QH			
Convient au raccordement en série et sélectif jusqu'à 12 kA à 208Y/120 V CA ou à 240/120 V CA	J-W, 250 A	QOB	10 à 70	10 à 125	10 à 60
		QOB-H			
		QOB-VH			
		QH			
Convient au raccordement en série et sélectif jusqu'à 15 kA à 208Y/120 V CA ou à 240/120 V CA	J-W, 250 A	QOB	10 à 60	10 à 60	10-30
		QOB-H			
		QOB-VH			
		QH			

Tableau 9 - Sélectivité des disjoncteurs critiques pour panneaux NQ (Suite)

Courant nominal de court-circuit maximum (symétrique efficace)	Disjoncteurs principaux intégrés ou à distance	Disjoncteurs de dérivation			
		Type	Unipolaire	Bipolaire	Tripolaire
Convient au raccordement en série et sélectif jusqu'à 18 kA à 208Y/120 V CA ou à 240/120 V CA	J-W, 250 A	QOB	10-30	10-30	—
		QOB-H			
		QOB-VH			
		QH			
	L-W, 250 A	QOB	10 à 60	10 à 60	10 à 60
		QOB-H			
		QOB-VH			
		QH			
Convient au raccordement en série et sélectif jusqu'à 30 kA à 208Y/120 V CA ou à 240/120 V CA	L-W, 400 A L-W, 600 A	QOB	15 à 70	15 à 150	15 à 150
		QOB-H			
		QOB-VH			
		QH			

Tableau 10 - Courant nominal de court-circuit⁴ pour les intérieurs de cosses principales avec cosses d'alimentation secondaire ou traversantes

Tension de système CA maximale	Courant nominal maximal	Circuits de dérivation ⁵	Application	Additionneur ⁶	Courant nominal de court-circuit max. ⁷	
240	100	18, 30	SFL et FTL	—	10000	
	225	30, 42, 54, 72, 84, 96	SFL	152,4 mm (6 po)		
			FTL	—		
		30, 54, 72, 84, 96		152,4 mm (6 po)		
	400	30, 42, 54, 72, 84	SFL	—	25 000	
				96	—	10000
		30, 84	FTL	—	25 000	
				96	—	10000
				42, 54, 72	152,4 mm (6 po)	25 000
		600	30, 42, 54, 72, 84	FTL	304,8 mm (12 po)	
			96			10000

Marquage CE

- Les intérieurs portant la marque « CE » sont conformes aux normes CEI 61439-1 et CEI 61439-2.
- L'intérieur à cosses principales portant la marque « CE » a été testé pour résister à une intensité de 10 000 A RMS symétrique pendant 30 cycles.
- Les intérieurs portant la marque « CE » ne sont autorisés que pour une utilisation avec les disjoncteurs de dérivation QOXD ou QOBXD qui portent la marque « CE ».

4. Cette classification s'applique aux intérieurs à cosses principales, équipés de cosses secondaires ou traversantes, lorsque le dispositif alimentant l'intérieur est inconnu ou n'est pas un dispositif Square D. Utilisé en amont de ces cosses, un disjoncteur principal Square D permet d'obtenir une puissance égale à celle du disjoncteur. Les essais de court-circuit sont effectués à 100-105 % de la tension nominale max. du panneau de distribution.
5. La configuration à 96 circuits avec dispositif de protection contre les surtensions (SPD) a 84 circuits de dérivation utilisables.
6. L'additionneur est la longueur supplémentaire de l'armoire.
7. Ampères symétriques efficaces, pour trois cycles.

Restrictions QO2150VH, QO2175VH et QO2200VH

AVIS

RISQUE DE DOMMAGES MATÉRIELS

- Ne pas installer les unités QO2150(VH), QO2175(VH) ou QO2200(VH) dans des applications parasismiques.
- Ne pas installer les unités QO2150(VH), QO2175(VH) ou QO2200(VH) dans des applications de réseau triphasé.
- Ne pas installer plus de quatre QO2175(VH) ou QO2200(VH) au total sur des armoires NEMA 1.
- Ne pas installer plus d'un QO2175(VH) ou QO2200(VH) dans des armoires étanches ventilées NEMA 3R.
- Ne pas installer les unités QO2150(VH), QO2175(VH) ou QO2200(VH) les unes à côté des autres.
- Ne pas installer dans des armoires étanches non ventilées (3R/5/12, 4/4X).
- Pour les disjoncteurs QO2175(VH) et QO2200(VH), installer des façades à verrouillage en trois points.

Le fait de ne pas suivre ces instructions peut endommager l'équipement.

Laisser au moins quatre espaces vides pour plaques d'obturation vides ou disjoncteurs de 125 A ou moins avant d'installer un autre QO2150(VH), QO2175(VH) ou QO2200(VH).

Placer les unités QO2150(VH), QO2175(VH) et QO2200(VH) à côté de l'extrémité de la ligne, à droite pour les applications à arrivée par le haut.

Placer les unités QO2150(VH), QO2175(VH) et QO2200(VH) à côté de l'extrémité de la ligne, à gauche pour les applications à arrivée par le bas.

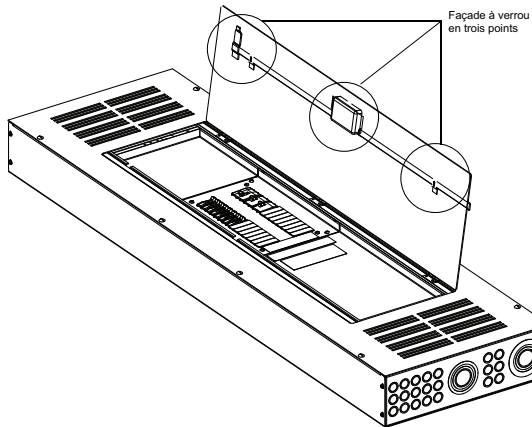
Unités QO2150(VH), QO2175(VH) et QO2200(VH) pour les applications monophasées uniquement.

Tableau 11 - Façades à verrouillage en trois points – Numéro de catalogue⁸

Type	Montage en surface	Montage encastré
Norme	NC50VS3P	NC50VF3P
	NC56VS3P	NC50VF3P
	NC62VS3P	NC62VF3P
	NC68VS3P	NC68VF3P
	NC74VS3P	NC74VF3P
	NC80VS3P	NC80VF3P
	NC86VS3P	NC86VF3P
	NC92VS3P	NC92VF3P
À charnière	NC62VS3PHR	NC62VF3PHR
	NC68VS3PHR	NC68VF3PHR
	NC74VS3PHR	NC74VF3PHR
	NC80VS3PHR	NC80VF3PHR
	NC86VS3PHR	NC86VF3PHR
	NC92VS3PHR	NC92VF3PHR

8. V=Ventilé, HR=Charnière à droite, 3P=Trois points.

Figure 11 - Façade à verrou en trois points



Annexe 2 : Kits d'accessoires

Un assortiment de kits d'accessoires à installer sur place est disponible pour les panneaux NQ :

- Kits de barres de m.à.l.t.
- Kits de cosses de neutre surdimensionnées pour panneaux de 100-600 A
- Kits de cosses secondaires pour panneaux de distribution 100-400 A
- Kit de cosses principales
 - Kits de cosses mécaniques en aluminium
 - Kits de cosses mécaniques en cuivre
 - Kits de cosses à sertir Versa-Crimp en aluminium
 - Kits de cosses à sertir Versa-Crimp en cuivre
- Kits de barrières côté ligne et de brides de fixation au neutre

Kits de barres de m.à.l.t.

Les kits de barres de m.à.l.t. de l'équipement, adaptés aux fils de cuivre ou d'aluminium, répondent aux besoins de mise à la terre des panneaux NQ et des centres de charge QONQ.

Tableau 12 - Spécifications des kits de barre de mise à la terre de l'équipement

Panneau de distribution		Utiliser le numéro de catalogue du kit de barres de m.à.l.t.	
Circuit de dérivation	Calibre Du Réseau	Aluminium ⁹	Cuivre ¹⁰
1 à 42	600 A maximum	(1) PK27GTA	(1) PK27GTACU
54 à 84		(2) PK27GTA	(2) PK27GTACU



Les emplacements de montage de la barre de m.à.l.t. sont identifiés par le symbole de terre estampé sur la paroi arrière de l'armoire.

Kits de cosses de neutre surdimensionnées pour panneaux de 100-600 A

Des kits de cosses de neutre surdimensionnés sont disponibles pour les applications où des conducteurs de terminaison 3 AWG ou plus sont nécessaires pour le neutre.

Tableau 13 - Spécifications des kits de cosses de neutre surdimensionnées pour panneaux de 100-600 A

Calibre du disjoncteur	Numéro de catalogue du kit	Calibre de câble Al/Cu (mm ²)
70 A	QO70AN	(1) #12-#2 AWG Al ([1] 3,3-33,6) (1) #14-#4 AWG Cu ([1] 2,1-21,2)
80-100 A	NQ100AN	(1) 14 - 2/0 AWG Al/Cu ([1] 2,1-67,4)
80-120 A	Q1100AN	(1) 4 - 1/0 AWG Al/Cu ([1] 21,2-53,5)

9. Barres en aluminium adaptées aux conducteurs en cuivre ou en aluminium à 60 °C ou à 75 °C.
10. Barres en cuivre adaptées aux conducteurs en cuivre à 60 °C ou à 75 °C.

Tableau 13 - Spécifications des kits de cosses de neutre surdimensionnées pour panneaux de 100-600 A (Suite)

Calibre du disjoncteur	Numéro de catalogue du kit	Calibre de câble Al/Cu (mm ²)
110-150 A	Q1150AN ¹¹	(1) 1 – 2/0 AWG Al/Cu ([1] 42,4–67,4)
175-200 A	NQ200AN	(1) 4 AWG – 300 kcmil Al/Cu ([1] 21,2–152)

Kits de cosses secondaires pour panneaux de distribution 100-400 A

Les cosses principales secondaires sont disponibles pour les applications 100, 225 ou 400 A.

Tableau 14 - Spécifications des kits de cosses secondaires pour panneaux de distribution 100-400 A

Courant nominal (A)	Numéro de catalogue du kit	Nombre max. de circuits
100	NQSFL1	18, 30
225	NQSFL2	30 ¹² , 42 ¹³ , 54 ¹² , 72 ¹² , 84 ¹²
400	NQSFL4	30, 42, 54, 72, 84

Kit de cosses principales

Tableau 15 - Kits de cosses mécaniques – Aluminium

Courant nominal (A) du panneau	Numéro de catalogue du kit	Calibre de câble Al/Cu (mm ²)
100	Standard	#6 – 2/0 AWG (13,3 – 67,43 mm ²)
225	Standard	6 AWG – 350 kcmil (13,3–177,3 mm ²)

- N'utilisez que du fil de cuivre N° 0 (26,7 mm²) pour les applications à disjoncteur de dérivation de 150 A.
- Avec ces panneaux, réservez un espace supplémentaire de 152,4 mm (6 po) pour le boîtier et la façade afin de pouvoir courber les fils.
- Avec ces panneaux, réservez un espace supplémentaire de 152,4 mm (6 po) pour le boîtier et la façade afin de pouvoir courber les fils.

Tableau 15 - Kits de cosses mécaniques – Aluminium (Suite)

Courant nominal (A) du panneau	Numéro de catalogue du kit	Calibre de câble Al/Cu (mm ²)
400	Standard	(1) 1/0 AWG – 750 kcmil (2) 1/0 AWG–350 kcmil ([1] 53,48 – 380 mm ²) ([2] 53,48 – 177,3 mm ²)
		(2) 1/0 AWG – 750 kcmil ([2] 53,48 – 380 mm ²)
600	Standard	(2) 1/0 AWG – 750 kcmil ([2] 53,48 – 380 mm ²)
	NQALM6A	(3) 6 AWG – 250 kcmil ([3] 13,3–127 mm ²)

Tableau 16 - Kits de cosses mécaniques – Cuivre

Courant nominal (A) du panneau	Numéro de catalogue du kit	Calibre de câble Al/Cu (mm ²)
100	NQCUM1	#6 – 2/0 AWG (13,3 – 67,43 mm ²)
225	NQCUM2	6 AWG – 250 kcmil (13,3–127 mm ²)
400	NQCUM4	(1) 1/0 AWG – 750 kcmil (2) 1/0 AWG – 350 kcmil
600	NQCUM6	([1] 53,48 – 380 mm ²) ([2] 53,48–177,3 mm ²)

Tableau 17 - Kits de cosses à sertir Versa-Crimp™ – Aluminium

Courant nominal (A) du panneau	Numéro de catalogue du kit	Calibre de câble Al/Cu (mm ²)	Outil de sertissage
100	NQALV1	8 – 1/0 AWG (8,36–53,48 mm ²)	VC6 (Tous)
225	NQALV2	#4 AWG – 300 kcmil (21,15 – 152 mm ²)	
400	NQALV4	(2) 2/0 AWG – 500 kcmil ([2] 67,43 – 253,4 mm ²)	VC6–3, VC6–FT
600	NQALV6		

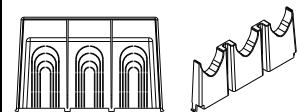
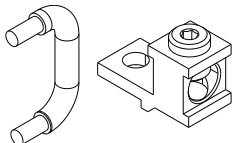

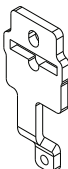
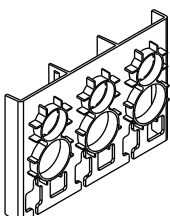
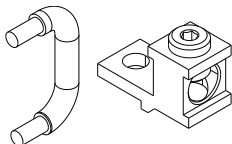
Tableau 18 - Kits de cosses à sertir™ Versa-Crimp – Cuivre

Courant nominal (A) du panneau	Numéro de catalogue du kit	Calibre de câble Al/Cu (mm ²)	Outil de sertissage
100	NQCUV1	#6 – 1/0 AWG (13,30 – 53,48 mm ²)	VC6 (Tous), VC7 (Tous)
225	NQCUV2	2/0 AWG – 300 kcmil (67,43–152 mm ²)	VC6-3, VC7, VC6-FT, VC7–FT
400	NQCUV4	400 – 750 kcmil (202,7 – 380 mm ²)	VC6-FT, VC7–FT, VC8
600	NQCUV6	(2) 250 – 500 kcmil ([2] 126,7–253,4 mm ²)	VC6-3, VC7, VC6-FT, VC7–FT

Kits de barrières côté ligne et de brides de fixation au neutre

En fonction de l'application et du code d'installation adopté, une barrière côté ligne et une bride de fixation au neutre peuvent être nécessaires. Sélectionnez la barrière appropriée dans le tableau ci-dessous, en fonction du disjoncteur principal.

Tableau 19 - Kits de barrières côté ligne et de brides de fixation au neutre

N° de catalogue	Contenu		Description
	Couvercle de cosses de ligne	Bride de fixation au neutre	
NQLALLC			Couvercle de cosses de ligne NQ LA/LH, bride de fixation au neutre et cosse
NQHJQLLC			Couvercle de cosse de ligne™ NQ PowerPacT H/J/Q et bride de fixation au neutre
NQPPLLC			Couvercle de cosses de ligne PowerPact L, bride de fixation au neutre et cosse



30–1200 A Safety Switches Maintenance Instructions

Instrucciones de servicio de mantenimiento para los interruptores de seguridad de 30 a 1 200 A

Directives d'entretien pour interrupteurs de sécurité, 30 à 1 200 A

Retain for future use. / Conservar para uso futuro. / À conserver pour usage ultérieur.

Class
Clase
Classe
3100

INTRODUCTION

Safety switches are properly lubricated at the factory. However, periodic cleaning and lubrication may be required. The maintenance interval between lubrications depends on the amount of switch usage and the ambient operating conditions. The maximum maintenance interval should not exceed one year for mechanical or current-carrying parts.

For additional information, refer to publication NFPA-70B, "Recommended Practice for Electrical Equipment Maintenance".

Unusual Performance Conditions

Contact Square D for information regarding performance under unusual conditions. Examples of unusual conditions are shown in Table 1 below:

INTRODUCCIÓN

Los interruptores de seguridad han sido lubricados correctamente en la fábrica; sin embargo, es necesario realizar limpieza y lubricación periódicamente. El intervalo de servicio de mantenimiento entre lubricaciones depende del uso del interruptor y de las condiciones ambientales de funcionamiento. El intervalo de servicio de mantenimiento máximo no debe exceder un año para las piezas mecánicas o conductoras de corriente.

Si desea obtener información adicional, consulte la publicación NFPA-70B, "Recommended Practice for Electrical Equipment Maintenance" (prácticas recomendadas de servicio de mantenimiento para el equipo eléctrico).

Condiciones de funcionamiento poco comunes

Póngase en contacto con Square D para obtener información con respecto al funcionamiento de este equipo bajo condiciones poco comunes. La tabla 1 muestra ejemplos de condiciones poco comunes:

INTRODUCTION

Les interrupteurs de sécurité sont lubrifiés de façon appropriée à l'usine. Toutefois, un nettoyage et une lubrification périodiques peuvent être nécessaires. L'intervalle d'entretien entre les lubrifications dépend de la fréquence d'utilisation de l'interrupteur et des conditions ambiantes de fonctionnement. L'intervalle d'entretien maximum ne doit pas dépasser un an pour les pièces mécaniques ou porteuses de courant.

Pour avoir d'autres renseignements, se reporter à la publication NFPA-70B, « Recommended Practice for Electrical Equipment Maintenance » (Pratique recommandée pour l'entretien des appareils électriques).

Conditions de performance inhabituelles

Contactez Square D pour avoir des informations sur la performance dans des conditions inhabituelles. Des exemples de conditions inhabituelles sont données au tableau 1 ci-dessous :

Table / Tabla / Tableau 1 : Unusual Conditions / Condiciones poco comunes / Conditions inhabituelles

• Ambient temperatures below -22 °F (-30 °C) or above 104 °F (40 °C) /	• Temperatura ambiente inferior a -30 °C (-22 °F) o superior a 40 °C (104 °F) /	• Températures ambiantes inférieures à -30 °C (-22 °F) ou supérieures à 40 °C (104 °F)
• Altitudes over 6600 ft (2012 m) /	• Altitudes de más de 2 012 m (6 600 pies) /	• Altitudes dépassant 2 012 m (6 600 pieds)
• Corrosive or explosive environments /	• Entornos corrosivos o explosivos /	• Environnements corrosifs ou explosifs
• Abnormal vibration, shock, or tilting /	• Vibración, sacudidas o inclinaciones anormales /	• Vibrations, chocs ou inclinaison anormaux
• Unusual operating duties /	• Servicio de funcionamiento poco común /	• Facteurs de fonctionnement inhabituels

⚠ DANGER / PELIGRO / DANGER**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Never operate energized switch with door open.
- Turn off switch before removing or installing fuses or making load side connections.
- Always use a properly rated voltage sensing device at all line and load fuse clips to confirm switch is off.
- Turn off power supplying switch before doing any other work on or inside switch.
- Do not use renewable link fuses in fused switches.

Failure to follow these instructions will result in death or serious injury.

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad eléctrica establecidas por su Compañía, consulte la norma 70E de NFPA.
- Solamente el personal eléctrico especializado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Nunca haga funcionar el interruptor energizado con la puerta abierta.
- Desconecte el interruptor antes de retirar o instalar los fusibles o realizar las conexiones del lado de carga.
- Siempre utilice un dispositivo detector de tensión nominal adecuado en todos los clips para fusibles en los lados de línea y carga para confirmar la desenergización del interruptor.
- Desenergice el interruptor antes de realizar cualquier otro trabajo dentro o fuera de él.
- No use fusibles renovables en los interruptores fusibles.

El incumplimiento de estas instrucciones podrá causar la muerte o lesiones serias.

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC

- Portez un équipement de protection personnelle (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Ne faites jamais fonctionner l'interrupteur sous tension avec la porte ouverte.
- Mettez l'interrupteur hors tension avant d'enlever ou d'installer des fusibles ou de faire des raccordements sur le côté charge.
- Utilisez toujours un dispositif de détection de tension ayant une valeur nominale appropriée sur tous les porte-fusibles du côté ligne et charge pour s'assurer que l'interrupteur soit hors tension.
- Coupez l'alimentation de l'interrupteur avant d'y faire tout autre travail.
- N'utilisez pas de fusibles renouvelables dans les interrupteurs à fusibles.

Si ces directives ne sont pas respectées, cela entraînera la mort ou des blessures graves.

ANNUAL MAINTENANCE PROCEDURES

1. Turn off power supplying the switch before performing any work on or inside the switch.
2. Open the switch blades by moving the operating handle to the OFF (O) position.
3. Lock out or tag the switch, per local procedures.
4. Open the enclosure door.
5. Always use a properly rated voltage sensing device at all line and load-side lugs (terminals) to confirm power is off.

NOTE: Do not remove any parts from the switch or operating mechanism unless specifically instructed to do so in the following procedures. Vacuum any loose material from inside the switch. Wipe internal parts and the inside of the enclosure with a damp, lint-free cloth.

6. Visually inspect the switch for loose parts or hardware:
 - a. Retighten the hardware as needed. Refer to the wiring diagram.
 - b. Do not re-energize the switch if any worn or damaged parts are found. Replace them before re-energizing the switch.

PROCEDIMIENTOS DE SERVICIOS DE MANTENIMIENTO ANUALES

1. Desenergice el interruptor antes de realizar cualquier trabajo dentro o fuera de él.
2. Abra las cuchillas del interruptor moviendo la palanca de funcionamiento a la posición de abierto (O).
3. Bloquee o etiquete el interruptor de acuerdo con los procedimientos locales.
4. Abra la puerta del gabinete.
5. Siempre utilice un dispositivo detector de tensión nominal adecuado en todas las zapatas (terminales) del lado de línea y carga para confirmar la desenergización del equipo.

NOTA: No retire ninguna pieza del interruptor ni del mecanismo de funcionamiento a no ser que se le indique eso específicamente en los siguientes procedimientos. aspire el material suelto que se encuentra dentro del interruptor. Limpie las piezas internas y el interior del gabinete con una tela húmeda sin pelusas.

6. Realice una inspección visual al interruptor para ver si encuentra piezas o herrajes sueltos:
 - a. Vuelva a apretar los herrajes a medida que sea necesario. Consulte el diagrama de cableado.
 - b. No vuelva a energizar el interruptor si encuentra piezas desgastadas o dañadas; sustitúyalas antes de volver a energizar el interruptor.

PROCÉDURES D'ENTRETIEN ANNUEL

1. Couper l'alimentation de l'interrupteur avant d'effectuer tout travail sur ou à l'intérieur de l'interrupteur.
2. Ouvrir les lames de l'interrupteur en plaçant la manette de fonctionnement sur la position d'ARRÊT (O).
3. Verrouiller ou étiqueter l'interrupteur, selon les procédures locales.
4. Ouvrir la porte du coffret.
5. Toujours utiliser un dispositif de détection de tension à valeur nominale appropriée sur toutes les cosses (bornes) du côté ligne et charge pour s'assurer que l'interrupteur est hors tension.

REMARQUE : Ne retire aucune pièce de l'interrupteur ou du mécanisme de fonctionnement sauf en cas d'instruction précise de le faire dans les procédures suivantes. Évacuer à l'aspirateur tous corps étrangers se trouvant à l'intérieur de l'interrupteur. Essuyer les pièces internes et l'intérieur du coffret à l'aide d'un chiffon mouillé, non pelucheux.

6. Inspecter visuellement l'interrupteur pour voir s'il y a des pièces ou de la quincaillerie desserrée :
 - a. Resserrer la quincaillerie au besoin. Se reporter au schéma de câblage.
 - b. Ne pas remettre l'interrupteur sous tension en présence de pièces usées ou abîmées. Les remplacer avant de remettre l'interrupteur sous tension.

Parts Removal

1. Remove the arc supressor(s) or arc shield(s) from the switches by loosening the fastener(s) holding the suppressor(s) / shield(s) in place. See Figures 1 and 2.

Desmontaje de piezas

1. Retire el o los supresores o protectores de arco de los interruptores aflojando los sujetadores que los sostienen en su lugar. Ve a las figuras 1 y 2.

Démontage des pièces

1. Retirer le ou les supresseurs ou blindages d'arc des interrupteurs en desserrant les attaches qui les maintiennent en place. Voir les figures 1 et 2.

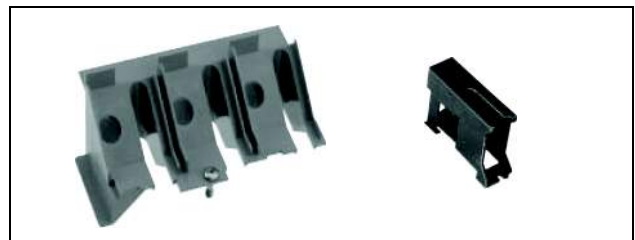
CAUTION / PRECAUCIÓN / ATTENTION

HAZARD OF EQUIPMENT DAMAGE	PELIGRO DE DAÑO AL EQUIPO	RISQUE DE DOMMAGES MATÉRIELS
<p>Do not disassemble the switch line base assembly or remove the blade rotor when cleaning the line-side jaw or the switch blade. See Figure 3 on page 4.</p> <p>Failure to follow this instruction can result in equipment damage.</p>	<p>No desmonte el ensamble de la base de línea del interruptor o retire el rotor de cuchilla al limpiar la mordaza del lado de línea o la cuchilla del interruptor, vea la figura 3 en la página 4.</p> <p>El incumplimiento de esta instrucción puede causar daño al equipo.</p>	<p>Ne démontez pas l'assemblage de la base de ligne de l'interrupteur ou ne retirez pas le rotor à lame lorsque vous nettoyez la mâchoire côté ligne ou la lame de l'interrupteur. Voir la figure 3 à la page 4.</p> <p>Si cette précaution n'est pas respectée, cela peut entraîner des dommages matériels.</p>
<ol style="list-style-type: none"> 2. Remove old grease and other contaminants from the line-side jaws and switchblades with a clean, lint-free cloth. If the lubricant has dried, remove it with CRC®-type HF Contact Cleaner, or equivalent, sprayed on a cloth. 3. Relubricate the cleaned areas with a thin film of Dow Corning® BG20 grease only. <i>NOTE: Do not substitute any other lubricant. Other lubricants may not be suitable for electrical applications and could alter the performance of the switch. Dow Corning BG20 is available from Square D (part number SWLUB).</i> 4. Exercise the operating mechanism to ensure proper operation by opening and closing the switch five times with the door closed. Open the switch blades. 	<ol style="list-style-type: none"> 2. Retire la grasa vieja y otros contaminantes de la mordaza del lado de línea y cuchillas del interruptor con una tela limpia sin pelusas. Si el lubricante se ha secado, retírelo con un limpiador de contacto CRC® tipo HF o uno equivalente, rociado en un pedazo de tela. 3. Vuelva a lubricar las áreas limpiadas con una capa delgada de grasa Dow Corning® BG20 solamente. <i>NOTA: No utilice otro tipo de lubricante; es posible que no sean adecuados para aplicaciones eléctricas y pueden alterar el funcionamiento del interruptor. La grasa Dow Corning BG20 se encuentra disponible de Square D (número de pieza SWLUB).</i> 4. Realice una prueba al mecanismo de funcionamiento y asegúrese de que funciona correctamente abriendo y cerrando el interruptor cinco veces con la puerta cerrada. Abra las cuchillas del interruptor. 	<ol style="list-style-type: none"> 2. Retirer toute graisse ancienne et autres polluants des mâchoires côté ligne et des lames de l'interrupteur à l'aide d'un chiffon propre et non pelucheux. Si le lubrifiant a séché, l'enlever avec un nettoyant pour contact CRC® de type HF ou l'équivalent, vaporisé sur un chiffon. 3. Relubrifier les zones propres avec une fine pellicule de graisse Dow Corning® BG20 uniquement. <i>REMARQUE : Ne substituer aucun autre lubrifiant. D'autres lubrifiants pourraient ne pas convenir pour des applications électriques et pourraient altérer le fonctionnement de l'interrupteur. Le Dow Corning BG20 est disponible chez Square D (n° de pièce SWLUB).</i> 4. Manœuvrer le mécanisme de fonctionnement pour s'assurer qu'il fonctionne correctement, en ouvrant et fermant l'interrupteur cinq fois avec la porte fermée. Ouvrir les lames de l'interrupteur.

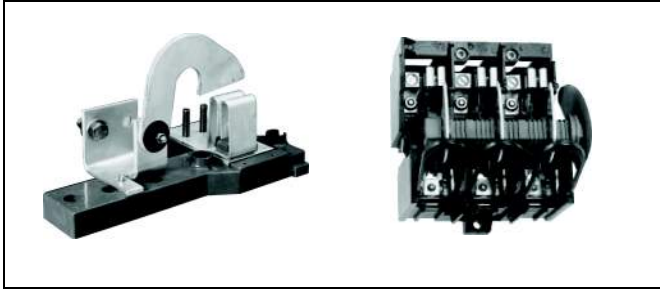
FIG. 1 : Examples of Arc Suppressors / Ejemplos de supresores de arco / Exemples de supresseurs d'arc



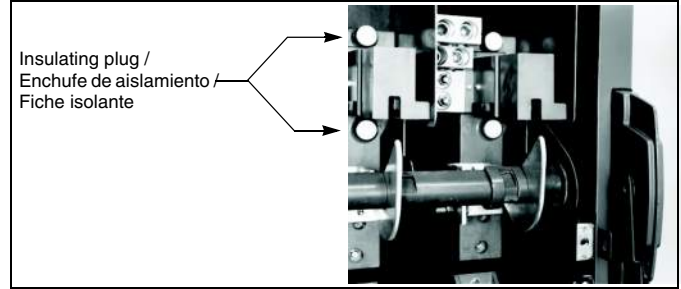
FIG. 2 : Examples of Arc Shields / Ejemplos de protectores de arco / Exemples de blindages d'arc



**FIG. 3 : Examples of Line Base Assemblies /
Ejemplos de ensambles de la base de línea /
Exemples d'assemblages de la base de ligne**



**FIG. 4 : Insulating Plugs on Pole Unit /
Enchufes de aislamiento en la unidad de polos /
Fiches isolantes sur l'unité polaire**



Parts Replacement

1. Reinstall the arc suppressor(s) or arc shield(s) according to the torque values in Table 2.
2. Ensure that the two insulating plugs in each phase (400–1200 A only) are firmly seated. See Figure 4.

Colocación de piezas

1. Vuelva a instalar el o los supresores o protectores de arco de acuerdo con los valores de par de apriete mostrados en la tabla 2.
2. Asegúrese de que los dos enchufes de aislamiento en cada fase (de 400 a 1 200 A solamente) estén bien apoyados, vea la figura 4.

Remise en place des pièces

1. Réinstaller le ou les supresseurs ou blindages d'arc conformément aux valeurs de couple indiquées au tableau 2.
2. S'assurer que les deux fiches isolantes de chaque phase (400 à 1 200 A seulement) sont bien en place. Voir la figure 4.

**Table / Tabla / Tableau 2 : Arc Suppressor Screw Torque Values /
Valores de par de apriete del tornillo del supresor de arco /
Valeurs de couple de serrage des vis des supresseurs d'arc**

Switch Type / Tipo de interruptor / Type d'interrupteur	Torque Value / Valor de par de apriete / Valeur de couple
30–100 A	5–10 lb-in / lbs-pulg / lb-po (0,57–1,13 N•m)
200 A, F Series / Serie F / Série F	10–20lb-in / lbs-pulg / lb-po (1,13–2,26 N•m)
200 A, E Series / Serie E / Série E	20–25 lb-in / lbs-pulg / lb-po (2,26–2,83 N•m)
400–800 A General Duty / 400 a 800 A de uso general / 400 à 800 A, universel	20–25 lb-in / lbs-pulg / lb-po (2,26–2,83 N•m)
400–1200 A Heavy Duty / 400 a 1 200 A de uso pesado / 400 à 1 200 A, service intensif	30–40 lb-in / lbs-pulg / lb-po (3,39–4,52 N•m)

RE-ENERGIZE THE SWITCH

1. Close and latch the door.
2. Turn off all downstream loads.
3. Turn on power supplying the switch.
4. Turn on the switch.
5. Turn on all downstream loads.

RE-ENERGIZACIÓN DEL INTERRUPTOR

1. Cierre y ponga seguro a la puerta.
2. Desconecte todas las cargas descendentes.
3. Energice el interruptor.
4. Coloque el interruptor en la posición de cerrado (I).
5. Conecte todas las cargas descendentes.

REMISE DE L'INTERRUPTEUR SOUS TENSION

1. Fermer la porte de l'interrupteur.
2. Mettre hors tension toutes les charges en aval.
3. Mettre l'interrupteur sous tension.
4. Mettre l'interrupteur en position de marche (I).
5. Mettre sous tension toutes les charges en aval.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

Solamente el personal especializado deberá instalar, hacer funcionar y prestar servicios de mantenimiento al equipo eléctrico. Schneider Electric no asume responsabilidad alguna por las consecuencias emergentes de la utilización de este material.

Seul un personnel qualifié doit effectuer l'installation, l'utilisation, l'entretien et la maintenance du matériel électrique. Schneider Electric n'assume aucune responsabilité des conséquences éventuelles découlant de l'utilisation de cette documentation.

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