

Submittal Transmittal Letter



To:

Stephen Otis
WTA, Inc
One Village Drive, Suite 500
Abilene, TX 79606

Date: 8/29/20

BY: Macon Building

Copies To:

Tony Cannon
Troy Davis

From:

Jim Macon Building Contractor, Inc.
662 Highland Drive
Altamonte Springs, FL 32701
State License # CGC1522841

Project:

Verizon Generators Radiator Replacement
7701 E. Telecom Parkway
Temple Terrace, FL 33673

Transmit:

- Attached
- Under Separate Cover

Via:

- Overnight Delivery
- Mail
- E-Mail
- Courier
- Fax
- Other

For:

- Approval / Action
- Information
- Use As Requested
- Comment
- Distribution
- Other

The Following:

- Drawings
- Specifications
- Digital Files
- Submittals
- Other

Includes the Following:

Description	Format	Page #	Date
Electrical Gear Submittals	PDF	22	8/29/20

Comments:

WTA, INC.

SHOP DRAWING / SUBMITTAL REVIEW

REVIEWED REVIEWED WITH CHANGES NOTED
 REVISE AND RESUBMIT REJECTED

SUBMITTAL WAS REVIEWED FOR DESIGN CONFORMITY AND GENERAL CONFORMANCE TO CONTRACT DOCUMENTS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATION DIMENSIONS AT JOBSITE FOR TOLERANCE, CLEARANCE, QUANTITIES, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH OTHER TRADES AND FULL COMPLIANCE WITH CONTRACT DOCUMENTS

By:  Date: 8/28/20

Jim Macon Building Contractor, Inc.
Altamonte Springs, FL 32701

- APPROVED
- APPROVED AS NOTED
- NOT APPROVED
- REVISE AND RE-SUBMIT

REVIEWED AS AN AID TO THE CONTRACTOR ONLY. CONTRACTOR IS NOT RELIEVED OF RESPONSIBILITY FOR FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

DATE: 08.31.2020 BY: Mark Martinez

Southern Electric Submittals Verizon Data Center Building G

August 17 2020



Graybar Electric. Company Inc.





Submittals:

Gear X

Fixtures

Job: VERIZON DATA CENTER BUILDING G

Location: TEMPLE TERRACE, FL

Contractor: SOUTHERN ELECTRIC OF TAMPA

Engineer: GRINER & ASSOC

Architect:

Graybar Contact: Craig Powell

Date: JANUARY 3, 2014

Reference:

Notes:



SQUARE D

SWITCHGEAR

Proposal Name: VERIZON BLDG G

Quote Name: VERIZON BLDG G

Proposal #: P-200626-1694237

Quote #: Q-1831114

Addendum #: 0

Quote Date:

Sales Representative: Steven Bagan

Prepared For:

Contractor/Installer: SOUTHERN ELECTRIC-TAMPA

Prepared by:

Craig Powell

GRAYBAR ELECT CO 5818836

Senior Sales Representative

4949 Tampa West Boulevard

Tampa,FL

craig.powell@graybar.com

D: 813-259-4100

M: 813-917-0868

Prepared For: SOUTHERN ELECTRIC-TAMPA

Quote Number: Q-1831114

Quote Date:

At your request, and based upon the information you have provided, we are pleased to submit the following proposal for VERIZON BLDG G: VERIZON BLDG G. We appreciate this opportunity to demonstrate our capabilities, and we are excited to work with you to implement this solution.

With over 150 years of electrical distribution experience, Schneider Electric provides the highest quality equipment, built upon best-in-class technology, and installed by experienced professionals. Our experience with high-profile, mission-critical facilities makes us a trusted resource for flexible, dependable, and secure environments.

Prepared By:

Craig Powell

GRAYBAR ELECT CO 5818836

Senior Sales Representative

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Quote Name: VERIZON BLDG G

Proposal Number: P-200626-1694237

Quote Number: Q-1831114

Through Addenda Number: 0

Sales Representative: Steven Bagan

Conditions of Sale

This Quotation is subject to Coordinated Project Terms. See <https://www.schneider-electric.us/en/download/document/0100PL0043>

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.

Clarifications and Exceptions

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Safety Switches

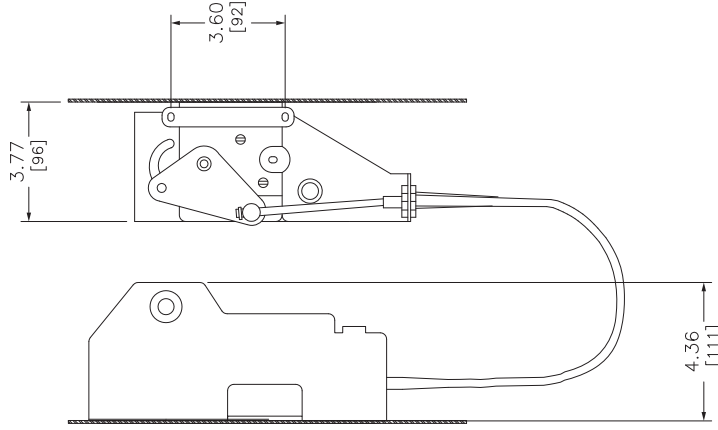
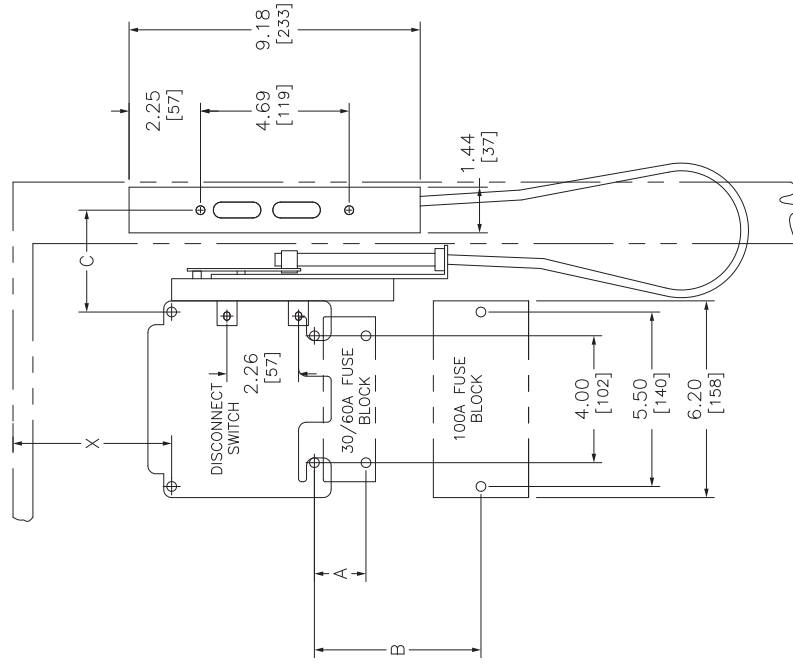
This Section Contains Products: Safety Switches

Seq #	Qty	Product Description
1	16	Designation :

Product Details

16-H361DS-UL LISTED DEVICE
Enclosure Type: Type 4/4X/5
Stainless Steel Options: Standard (304)
Interrupting Rating (AIR): 200kA
Fuse Capability: Class R
Max System Voltage: 600 VAC
Switch Current Rating: 30 Amp
Number of Switching Poles: 3 Pole No Neutral
Fuse Kits: Class R Fuse Kit Field or Factory
Installed: Field
Processed by ACE 2.0 - 04172018
16-RFK03H-KIT CLASS R FUSE REJECTION

WIRE BENDING SPACE DIMENSION X IS
2.50 FOR 30A & 60A DEVICES (#2 WIRE),
AND 5.12 FOR 100A DEVICES (#0 WIRE).
REFER TO NEC 430-10.



COMPATIBLE SWITCH AND FUSE TYPES

SWITCH TYPE	MAXIMUM VOLTAGE	FUSE TYPE CLASS	CLASS R FUSE KIT	DIMENSION	
				A	B
TCN30	—	UNFUSED	—	—	—
TCF30	30A, 250V	H, K, R	RFK03	1.625 [41]	—
	30A, 600V	H, K, R	RFK06	4.25 [108]	—
TCF33	30A, 600V	J	—	1.625 [41]	—
	60A, 250V	H, K, R	RFK06	2.25 [57]	—
TDN60	—	UNFUSED	—	—	—
	60A, 250V	H, K, R	RFK06	2.25 [57]	—
	30A, 600V	J	—	1.625 [41]	—
TDF60	30A, 600V	H, K, R	RFK06	4.25 [108]	—
TDF63	60A, 600V	H, K, R	RFK06H	4.75 [121]	—
	60A, 600V	J	—	1.625 [41]	—
TEN10	—	UNFUSED	—	—	—
	100A, 250V	H, K, R	RFK10	—	3.25 [83]
	100A, 600V	H, K, R	RFK10	—	5.25 [133]
TEF10	100A, 600V	J	—	—	3.25 [83]

TYPE	CABLE LENGTH	MAXIMUM BOX DEPTH	MAXIMUM DISTANCE FROM TOP RIGHT MOUNTING HOLE TO UPPER MOUNTING HOLE FOR HANDLE OPERATOR (DIM C)	
			MINIMUM C	MAXIMUM C
CFT30	36"	24"	1"	4"
CFT50	60"	36"	16"	24"
CFT10	120"	36"	4 FEET	5 FEET

NOTE: BEND RADIUS IN CABLE MUST NEVER BE LESS THAN 6 INCHES. ELECTRICAL CLEARANCES MUST BE MAINTAINED BETWEEN CABLE AND LIVE ELECTRICAL PARTS.

Catalog Number: 9422-CFT30, CFT50, CFT10
 Ratings: —
 UL File/Guide: E52369/WHY2
 CSA File/Guide: LR44199/321107
 Meets Standards: —
 Weight: 6.8 lbs
 Wire Size: —
 Terminal torque: —
 Mounting Hwd.: (4) #10 screws

DUAL DIMENSIONS: INCHES
MILLIMETERS

DISCONNECT SWITCH CABLE MECHANISM NEMA



by Schneider Electric

DWG# 9422CFT30
NO.

Square D Safety Switches

Power isolation solutions for daily activities and emergencies



Make the most of your energySM

by Schneider Electric

Square D Safety Switches



Setting the standard for performance, quality, and reliability in today's commercial and industrial applications

First introduced in 1907, Square D™ by Schneider Electric™ safety switches have a long history of leadership in safety and performance. Since then, Schneider Electric has pioneered many innovations to help maximize the lifetime value of your safety switches.

Safety switches play a crucial role in today's commercial and industrial settings. They isolate power in daily activities and provide an effective way to interrupt power in an emergency. Two primary applications for safety switches are as a lockout on sight disconnect and as a circuit isolation device.



Square D safety switches are designed to outperform other switches in a wide range of demanding applications.

Key Customer Applications			
	Sight Disconnect for Motors*	Branch Circuit Protection	Service Entrance
Industrial Facilities	X	X	
Retail Construction	X	X	X
Water Wastewater	X	X	X
Data Centers	X	X	
Automotive	X	X	
Packaging	X	X	
Pharmaceutical, Food, Beverage	X	X	
Commercial OEM	X	X	

* Occupational Safety and Health Administration (OSHA) compliance.

Performance



Three Times the Life – Three Times the Value

The performance of safety switches is important to the safe and profitable operation of many industrial settings. In addition, requirements from organizations such as OSHA have increased the use of safety switches in many commercial and industrial facilities.

The useful life of a safety switch is less than two years based on NEMA® KS-1 life test requirements, in lockout/tag out applications where a switch is operated just once per hour, 24 hours a day, seven days a week. For switches in these high-use applications, durability is key.

Square D safety switches provide significantly higher levels of mechanical endurance than NEMA KS-1 require. This translates to improved reliability in a production environment. In fact, the standard for the design life of Square D F-Series safety switches is a **minimum of three times the NEMA requirement**. No competitor comes close to the performance offered by Square D safety switches.

Designed for the Best Performance

A key performance benefit of the Square D safety switch is its ability to break load. A locked motor can draw six to eight times motor full-load current. In an emergency situation, it's important to have a switch with enhanced load break capability. A key element of Square D safety switches is their blade and jaw construction designs built to easily manage heavy motor loads and arc interruptions.

Potential Cost Avoidance Due to Square D Switch Life				
Operations of switch/ 8-hour shift	Operations per year in 24/7 environment	Life of Square D switch in years ⁽¹⁾	Life of competitive switch in years ⁽¹⁾	Cost avoidance by using Square D ⁽²⁾
1	1,095	45.7	13.7	\$190
2	2,190	22.8	6.8	\$380
3	3,285	15.2	4.6	\$570
4	4,380	11.4	3.4	\$760
5	5,475	9.1	2.7	\$950

⁽¹⁾ Life determination based on 50,000 operations for Square D F-Series 30 A and 15,000 operations for competition. Actual number of operations will vary based upon electrical load, duty cycle, and environmental conditions.

⁽²⁾ Does not include cost of lost productivity. Switch cost replacement: labor = 2 hour @ \$45/hour cost of switch @ \$100. Maximum usable life of switch assumed to be 20 years.

Quality

Safety First

Square D safety switches are, above all else, built to increase safety. Visible blades are an important feature, and they must be visible in real-world conditions to visually verify that the downstream circuit is de-energized. Our switch blades are easily visible, even in the less-than-ideal lighting conditions where electrical equipment is often installed.

An optional view window adds another degree of safety through visual verification of switch position without the need to open the door.

In addition, the design of the Square D safety switch includes an oversized arc suppressor, a key feature in the ability of the switch to break the load by effectively attenuating the arc for a clean interruption.

Designed for Long-Term Durability

Rugged construction and corrosion protection provide the industry's longest lasting switches. Galvannealed steel in all single-throw Type 3R and 12 enclosures provides superior corrosion protection. Type 4X seam-welded enclosures help extend equipment life by providing excellent environmental and corrosion protection without the use of a silicone sealer, which can be incompatible with some manufacturing processes.

Managing temperatures inside the switch is essential to providing greater service life. Square D safety switches feature more copper than other switches available on the market today. This larger amount of copper is one of the reasons Square D safety switches have lower operating temperatures.

Heat is not the only factor that impacts switch life. The enclosed operating mechanism design of Square D safety switches reduces the amount of dust and other contaminants that shorten the mechanism's operating life.

A Full Range of Accessories

Square D safety switches feature a complete offering of accessories, available either factory-installed or field-installable. Factory-installed options include key interlocks, nameplates, push buttons, and optional safety colors. Field-installable accessory options include neutral kit, ground lugs, electrical interlocks, Class "R" fuse rejection kits, compression terminals, and conduit hubs.

Efficient Installation

Our time-saving design features make installation quick and easy.

Square D safety switches feature quick-release cover latches that are easier to operate than screw-fasteners. On Type 4X and Type 12 switches, this design feature ensures a better gasket seal — a critical feature in adverse operating conditions — than is available with designs that rely on screw-fastened covers. Tangential knock-outs enable easier installation of conduit, without the need for costly, time-consuming offsets and bends.

Mechanical Endurance Requirements for UL, NEMA, and F-Series Switches

Switch Rating (Amps)	Number of Operations**			
	UL 98	NEMA KS 1 General-Duty	NEMA KS 1 Heavy-Duty	E-Series Reqmts.
30 and 60	10,000	10,000	15,000	50,000
100	10,000	10,000	14,000	50,000
200	8,000	8,000	12,000	36,000*

* Single-throw switches only.

** Actual number of operations may vary based on environmental conditions.

Short-Circuit Current Ratings

UL Listed Fuse Class	General-Duty RMS Sym Amps	Heavy-Duty RMS Sym Amps
Plug	10,000	N/A
H	10,000	10,000
K	10,000	10,000
J	100,000	200,000
R	100,000	200,000
T	100,000	200,000
L	—	200,000

Reliability

Cost-Saving Maintenance

Advanced maintenance features extend switch life and reduce downtime, saving both labor and material costs. The Square D safety switch modular design allows the replacement of all interior worn or damaged components.

Field-replaceable components such as interior line bases, load bases, and mechanisms are available. Moreover, handles and lock plates are also replaceable if they are damaged or vandalized.

In addition, Square D Type 4X and 12 safety switches come standard with fuse pullers, increasing the convenience and safety of maintenance. Fuse pullers are also field-installable on certain models.

Operation and Safety

Nothing is as important in the design of a switch as understanding how it will be used. To ensure Square D safety switches continue to meet the needs of commercial and industrial applications, products are engineered with the operational procedures and safe work practices of customers in mind.

Superior Handle Design

The Square D F-Series insulated switch handle is an industry exclusive. It is made from a high-strength polymer chosen for weather resistance, durability, and impact strength.

The two-color, position-indicating handle on heavy-duty safety switches enhances operator safety by aiding in visual recognition of switch position from an angle or at a distance. The simple concept of having contrasting colors on the handle enhances the ability of the operator to determine quickly the position of the switch, even in low-light conditions. In an emergency, it is vital that switch position be accurately recognizable. Plus, an embossed on/off marking is a permanent indication of the switch position and cannot be removed or vandalized.



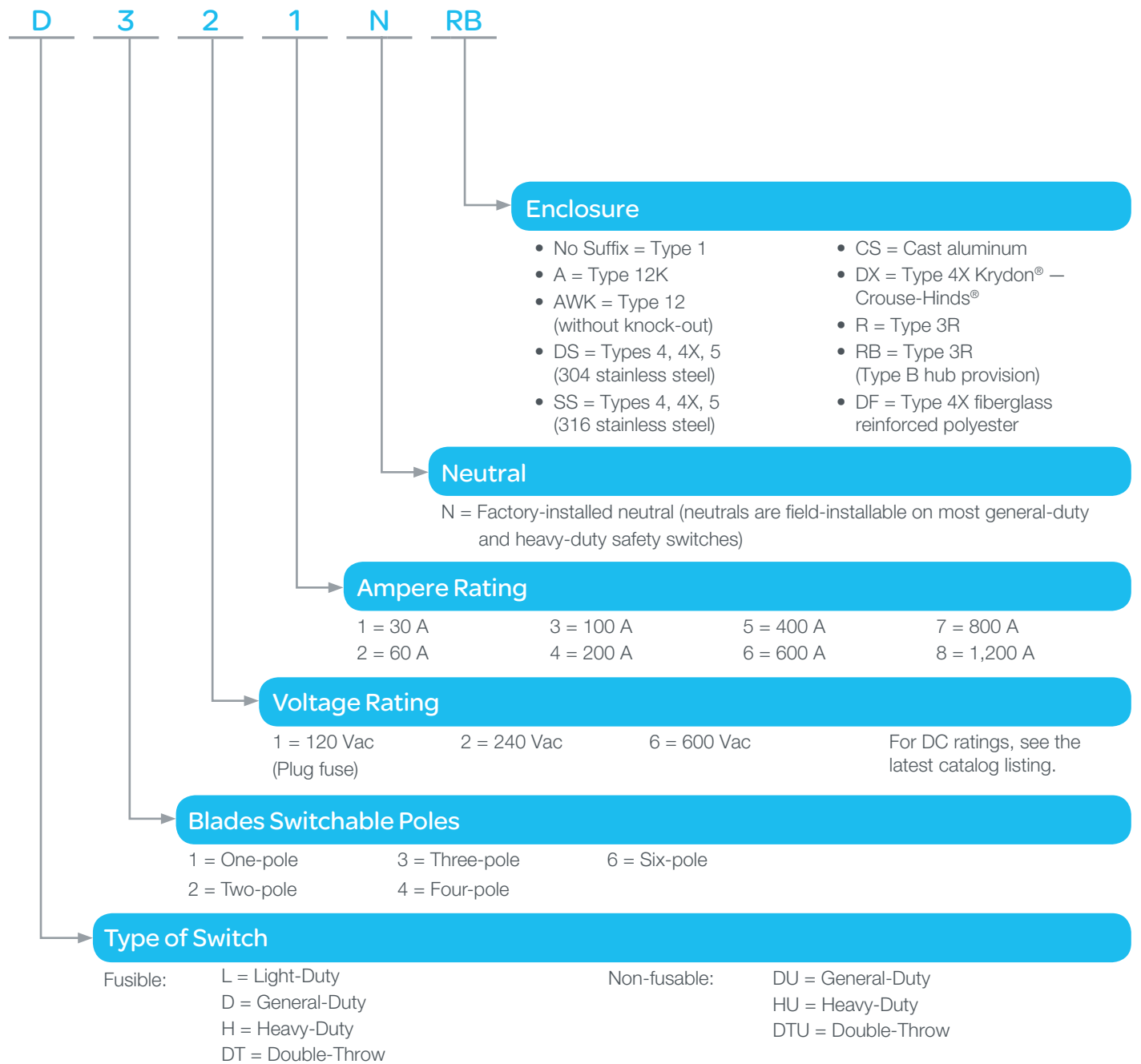
Tamper-Resistant Enclosure

Resolving lockout issues is a priority with major industrials. Square D F-Series safety switches have an extruded lock plate feature that helps prevent tampering with lockout devices. The lock plate opening is extruded to reduce the possibility of lockout devices being removed by non-authorized personnel.

With the use of the handle lock plate, the switch can be locked in the OFF position with up to three padlocks to comply with OSHA lockout requirements. The safety switch can also be modified so that the switch can be locked in the ON position, if required by the application.

Heavy-duty dual cover interlocks are key safety features on single-throw and double-throw heavy-duty switches. These prevent the opening of the cover when the switch is ON or turning the switch ON when the cover is open. Qualified personnel can also defeat this feature allowing them to perform any necessary testing.

Catalog Numbering System for Safety Switches



Miscellaneous

- | | | |
|--|----------------------------|---|
| EI or EI2 = Factory-installed electrical interlock | LK = Compression lugs | WA = Appleton Powertite® interlocked receptacle |
| CLR = Class R fuse kits | SPLO = Lock on | WC = Crouse-Hinds Arktite® interlocked receptacle |
| FP = Fuse pullers | VW = Viewing window | WH = Hubbellock® interlocked receptacle |
| GL = Ground lugs | NP = Phenolic legend plate | |
| SLC = Copper lugs | KI = One-key interlock | |
| | KIKI = Two-key interlocks | |

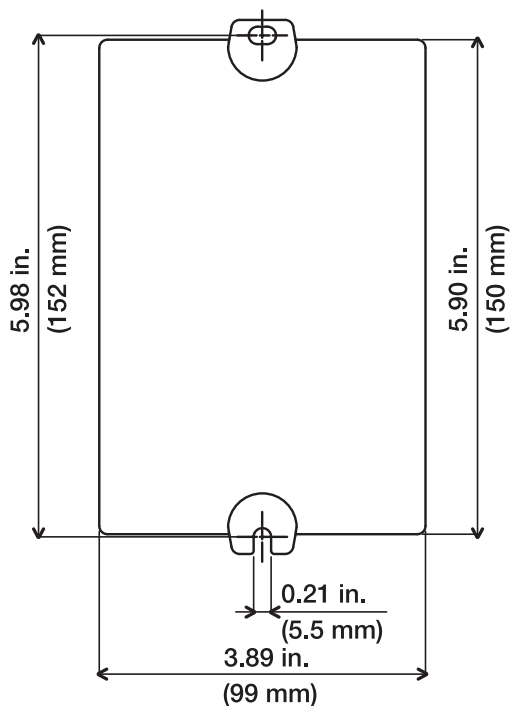
For Types 7 and 9 construction, see the latest catalog listing.

Square D MD Enclosed Motor Disconnect Switch

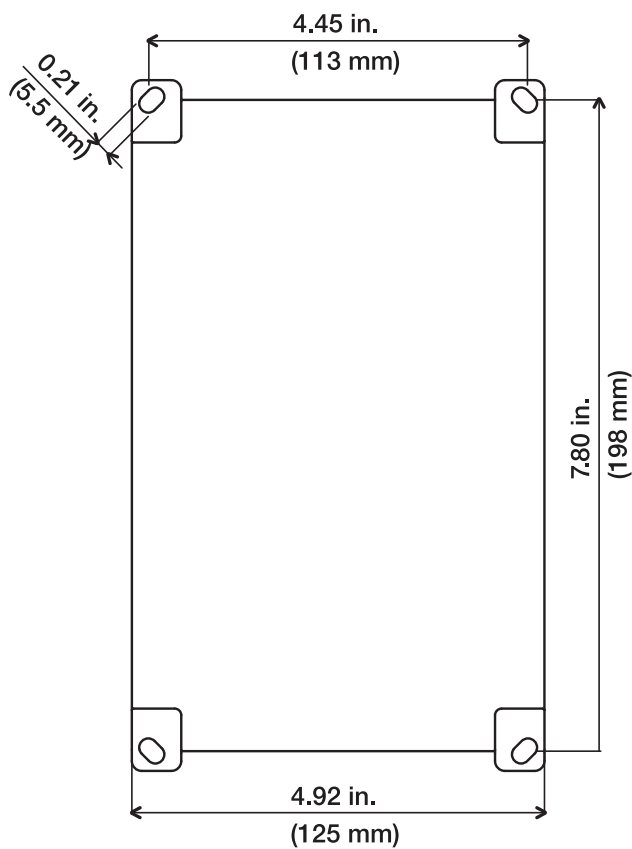
NEMA 4X Enclosed Switches				
Listed	Maximum Horsepower Ratings			Catalog Number
	Three-Phase			
	220 – 240 Vac	440 – 480 Vac	600 Vac	
UL 508	7.5	20	25	MD3304X
UL 508	20	40	40	MD3604X

Accessories	
Description	Catalog Number
Two normally open auxiliary contact modules	MDSAN20
One normally open + one normally closed auxiliary contact modules	MDSAN11
Additional power pole — 30 A	MDS30P

30 A Enclosed Switch
Mounting Diagram



60 A Enclosed Switch
Mounting Diagram



The Most Complete Line of Switches in the Industry

	Amp Range	Vac Max.	Vdc Max.	Fusible	Enclosure Type
General-Duty	30 – 800	240	—	Fusible and Non-Fusible	Type 1, 3R
Heavy-Duty	30 – 1,200	600	600	Fusible and Non-Fusible	Type 1, 3R, 4, 4X Stainless Steel, 5, 12
Four-Pole Heavy-Duty	30 – 600	600	600	Fusible and Non-Fusible	Type 1, 3R, 4X Stainless Steel, 12
Six-Pole Heavy-Duty	30 – 200	600	—	Fusible and Non-Fusible	Type 1, 3R, 4X Stainless Steel, 12
Double-Throw	30 – 100	600	600	Fusible and Non-Fusible	Type 1, 3R, 4X Stainless Steel, 12
Double-Throw	200 – 600	600	250	Non-Fusible	Type 1, 3R, 4X Stainless Steel, 12
Interlock Receptacle Switches ^{(1) (2)}	30 – 100	600	250	Fusible and Non-Fusible	Type 1, 3R, 4, 4X Stainless Steel, 5, 12
Hazardous Location Switches	60 – 225	600	250	Non-Fusible	Type 7 and 9 — Divisions 1 and 2 of the following: Class 1, Groups C and D, Class 2, Groups E and F; on Class 3, Hazardous Locations as defined in NEC® Article 500

⁽¹⁾ Appleton Powertite, Crouse-Hinds Arktite, and Hubbell receptacles.

⁽²⁾ The MD motor disconnect switch serves as a local on/off switch for a motor when the motor branch circuit protection is in a central enclosure. It is in a compact NEMA 4X enclosure and is available in 30 A and 60 A versions.

Type 1 (indoor), Type 3R (outdoor), Type 4, 4X, 5 (watertight and dust-tight, corrosion-resistant) (cast aluminum, stainless steel, glass polyester, or Krydon), Type 12 (mill and foundry type).

Switches are UL Listed (UL 98 Enclosed Switches) and meet or exceed the NEMA KS1 standard unless otherwise noted.

For more information, visit
www.schneider-electric.com/us
 and enter key code **y290v**.

Enter key code

> OK



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