Low-voltage power distribution and control systems > Switches and disconnects>

Safety switches—customized solutions

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Note: For standard safety switches, see Safety Switches (DG008001EN).

Powering Business Worldwide

More about this product
Eaton.com/switches

Complete library of design guides
Eaton.com/designguides

Product Description

Safety Switches


Quick Connect


OLI


Double Door


Elevator Control


NEMA 7/9


Six-Pole Motor Circuit

Safety switches have a number of applications from service entrance to branch circuit protection. They are also horsepower rated for use as motor circuit switches. **Table 28.2-1** lists some of the specialty products designed and manufactured by Eaton that provide solutions for a variety of applications.

If you don't see your specific application listed below, make sure to call your local Eaton salesperson to discuss the capabilities of our Flex Center that will provide custom switches to meet many industry needs.

The following pages give more details on the many types of switching devices Eaton can provide to meet your every need.

Table 28.2-1. Safety Switch Application Guide—See Catalog Selection Tables for Specific Ratings

Specialty Product	Description	NEMA Rating / Protection	Website
Quick-connect single-throw and double-throw switches	Factory installed/interlocked Cam-Lok™/Posi-Lok™ receptacles	NEMA 1 and 3R / fusible and non-fusible 30–1200 A	Eaton.com/quickconnect
Double-door switch	Allows access to fuse compartment with no exposure to line side power	NEMA 12/3R, 4X / fusible 30–1200 A	Eaton.com/doubledoor
OLI switches	Allows access to control panel without exposure to line side voltage	NEMA 12 and 4X / fusible 60–400 A	Eaton.com/oli
Elevator control switches	Provides shunt trip capability, voltage monitoring, selective coordination and fire safety signal interface for elevator applications	NEMA 1, 3R, 4, 12 / fusible 30–400 A	Eaton.com/elevatorcontrol
NEMA Type 7/9 switches	Class I, Div I and II rated for harsh industrial application and environments	NEMA 7/9 / fusible and non-fusible 30–100 A	Eaton.com/switches
Energy transition/solar PV	Providing the best solution for switching 600 Vdc and 1000 Vdc photovoltaic (PV) circuits	NEMA 1, 3R, 12 / fusible and non-fusible 30–600 A	Eaton.com/switches
Six-pole motor circuit switches	Compact safety switch that's ideal for use in heavy industry when an "in sight" disconnecting means is required for two-speed motors that are remote from their motor control devices	NEMA 12/3R, 4X / fusible and non-fusible 30–800 A	Eaton.com/switches

Table 28.2-2. Safety Switch Selection Guide

Type		Fuse Class Provision ①	Ampere Rating	Number of Poles	Enclosure Types						
					NEMA 1	NEMA 3R	NEMA 12/3R ②	NEMA 4 Painted Steel	NEMA 4X Stainless Steel	NEMA 4X 316 Grade Stainless Steel	NEMA 7/9
Quick-connect single-throw	Max. 600 Vac horsepower rated	H L	100–600 800–1200	3 and 4	Yes	Yes	—	—	—	—	—
Quick-connect double-throw	Max. 600 Vac horsepower rated	H T L	100–200 400–800 1200	3 and 4	Yes	Yes	—	—	—	—	—
OEM line isolation (OLI) switch	Max. 600 Vac horsepower rated	J	30–400	②	—	—	Yes	—	Yes	Yes	—
Heavy-duty double-door	Max. 600 Vac horsepower rated	H L	30–600 800–1200	②	—	—	Yes	—	Yes	Yes	—
Elevator control switch	Max. 600 Vac horsepower rated	J	30–400	②	Yes	Yes	Yes	Yes	Yes	—	—
NEMA Type 7/9	Max. 600 Vac horsepower rated	J	30–100	②	—	—	—	—	—	—	Yes
Energy transition/ solar PV	600 Vdc, 1000 Vdc, NOT horsepower rated	H (600 Vdc) J (1000 Vdc)	30–400 ③ 100–400	1–6 ④	—	Yes	—	Yes	Yes	Yes	—
Six-pole motor circuit	Single-throw max. 600 Vac	H	30–800	6	—	Yes	Yes	—	Yes	—	—

① Class J, R and T available in many instances with the use of adapter kits listed on **Page 28.2-9**.
② NEMA Type 12 enclosures (30–1200 A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain screw is removed.
③ Single circuit (DH16 series) available 30–600 A.
④ Varies between one and six circuits (not poles), based on amperage and grounding application.

Quick-Connect Switches



Quick-Connect Double-Throw

General Description

Provides a safe and quick means of connecting portable generators to facilities, transferring the building to backup power, or providing for temporary connection of portable loads.

Features

- Single-throw and double-throw designs
- Single-throw receptacles can wire to the line side or the load side
- Safety interlocks prevent access to the receptacle compartment unless the lower switch is in the "open" position; this prevents against accidentally unplugging a circuit under load
- For short-circuit ratings, see **Table 28.2-43**
- 30–1200 A switches
- 600 Vac, 600 Vdc maximum
- Fusible or non-fusible
- Fusible and non-fusible switches are 100% load break and load make rated
- Cam-Lok or Posi-Lok receptacle options
- NEMA 1 or NEMA 3R enclosure ratings
- NEMA 3R stainless steel enclosures available
- Switching neutral option

OEM Line Isolation (OLI) Switch

General Description

Traditional control panels may expose operators to line side system voltage (i.e., 480 Vac) even when the internal main disconnect is in the OFF position. Many panel-building OEMs and OEM customers are concerned with arc flash hazards and arc flash categories and may be looking for ways to reduce them.

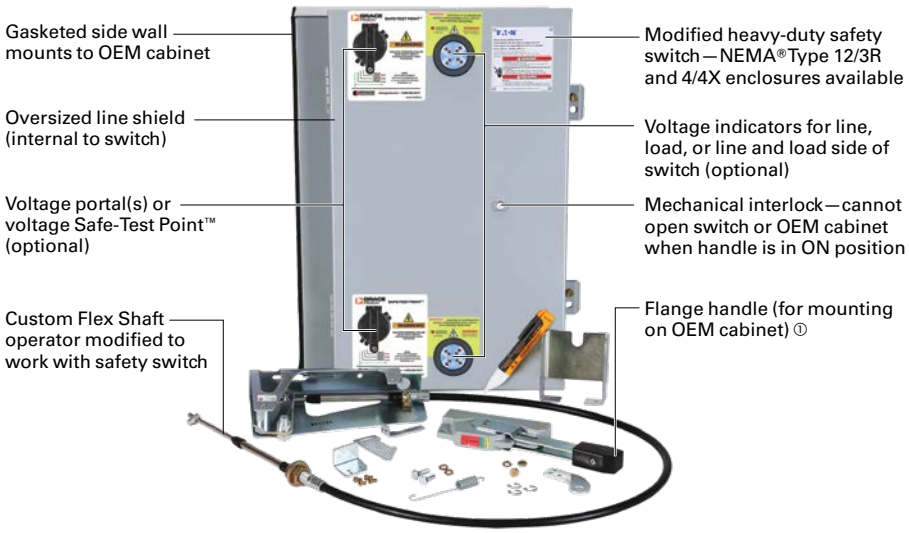
The solution is the OEM Line Isolation (OLI) switch—the newest product in Eaton's expanding offering of safer switching devices. The OLI switch provides an external disconnecting means for industrial control panels. It allows an operator to access the control panel without exposure to the line side voltage, thus enhancing safety and allowing for reduced PPE, which improves worker dexterity and mobility.



OLI Switch Integrated onto Disconnect Enclosure

The OLI switch is designed to universally integrate to major manufacturers' "disconnect enclosures" that will work with the Eaton C371-style handle and operating mechanism. The Eaton solution is a complete package, including enclosure, disconnect, handle, flex-cable operator and all other necessary components.

Features



① Flex Shaft™ operator and handle assembly is included and shipped with switch loose, for field installation.

Modifications

Additions are available such as custom paint, 316-stainless enclosures, custom OEM labeling and more. Call the Flex Center at 1-888-329-9272 for more information.

Standards and Certifications

- UL/cUL
- UL 98 standard, file no. E222859
- UL 50 standard, file no. E478865

Heavy-Duty Double-Door Safety Switch



Heavy-Duty Double-Door

General Description

Eaton's double-door safety switch is the industry's first compartmentalized fusible safety switch. The revolutionary two-door design includes an internal barrier that separates the upper switching compartment from the lower fuse compartment. This allows operators to access the fuse compartment with no exposure to line-side power, providing enhanced safety during fuse replacement.

Features

- 30–1200 A
- NEMA 12/3R and NEMA 4X stainless enclosures
- External viewing window over switching blade standard
- Enhanced visible blades included
- Interlocking mechanism keeps door closed when the switch is ON
- Optional voltage monitors

Standards and Certifications

- UL 98 Standard, file no. E5239

UL® Listed

Elevator Control Switch



Elevator Control Switch

General Description

The elevator control switch provides an all-in-one product solution and selective coordination for elevator circuits. The elevator control switch uses a shunt trip disconnect as standard with Class J time-delay current-limiting fuses for meeting several code and user requirements for such circuits. Ratings are 30–200 A, 600 Vac, NEMA 1, 3R, 12 and 4 enclosures. The elevator control switch carries a 200 kAIC rms symmetrical short-circuit rating.

Why do Buildings Require Eaton Elevator Disconnects?

Eaton's Elevator Disconnect is a simple, all-in-one solution that takes the mystery out of meeting the many codes associated with fire protection and safety in elevator shafts. The model national building codes that prescribe the requirements for sprinklers, elevators and electrical equipment, and how the various systems shall interact are:

- NFPA® 70 (National Electrical Code®)
- NFPA 72 (National Fire Alarm Code)
- ANSI/ASME A17.1 (Safety Code for Elevators and Escalators)
- NFPA 13 (Installation of Sprinkler Systems)

In addition to these national codes, state and local jurisdictions or other agencies of the government (such as the Veteran's Administration) may edit or amend the codes, as they deem necessary for public safety.

Eaton's Elevator Disconnect enables consultants, contractors and building owners to install a single device that meets the requirements of the various codes.

Why is There a Need for the Eaton Elevator Disconnect?

1. According to 2010 NFPA 13, fire sprinkler protection is required (with some exceptions) at the top and bottom of elevator shafts. Additionally, NFPA 13 requires the installation of sprinklers in the elevator machine room. When sprinkler heads are installed in elevator shafts, or in elevator machine rooms, then they must also be installed according to the State-Adopted Elevator Code (in many cases, ANSI/ASME A17.1).
2. The ASME A17.1 Safety Code for Elevators and Escalators, Rule 102.2 (c) (3), requires the shutdown of power to the elevator **prior to the application of water** in the elevator machine room **or** hoistway.

   Shutdown of power is usually accomplished with the use of a shunt trip device in the elevator circuit, and is done for two valid safety concerns.

   The first of these is to minimize the potential for electric shock due to the release of water on energized electrical equipment. The second, and less obvious, is to reduce the possibility of elevator car slippage after the car has gone to the recall floor and the doors have opened. Slippage is possible when the hoisting equipment (cables, sheave, braking system, etc.) become wet from discharged water.

   Eaton's Elevator Disconnect is a fusible switch that is equipped with a shunt trip mechanism. The shunt trip is operated by a control relay (called a Fire Safety Interface Relay) in the unit that is wired to a normally open contact in the remote Fire Alarm Control Panel (FACP).

   When the FACP receives a signal from the fire alarm system that there is going to be a sprinkler release in an elevator shaft, a normally open contact in the FACP closes, energizing the Fire Safety Interface Relay and completing a circuit to initiate a trip.

   The Fire Safety Interface Relay is available with a 120 Vac or 24 Vdc coil. The 120 Vac coil should be selected when powered by the Elevator Disconnect control circuit, and the 24 Vdc relay should be selected when the power is supplied from the fire alarm system.

NEMA 7/9 Hazardous Location Disconnect Switch



NEMA Type 7/9

General Description

The cast aluminum enclosure is ideally suited for harsh industrial applications including petrochemical facilities, mining operations, pharmaceutical plants and waste-water treatment facilities. Eaton's Type DS switch is used as the switching device. Ratings are 30–100 A, 600 Vac, fusible and non-fusible

Certifications and Compliances

- Class I, Divisions 1 and 2, Groups B, C, D
- Class I, Zones 1 and 2
- Class II, Division 1, Groups E, F, G
- Class III
- NEMA 3, 3R, 4, 4X, 7BCD, 9EFG
- UL standard: 1203
- cUL to CSA C22.2 No. 30

Standard Materials

- Body and cover—copper-free aluminum
- Gasket—neoprene
- Cover bolts—steel, stainless steel
- Hinges—stainless steel
- Mounting plate sheet—aluminum
- Rotary actuating handle—aluminum

Standard Finishes

- Copper-free aluminum—natural
- Steel—electrogalvanized

Energy Transition/Solar PV

Heavy-Duty—Solar Photovoltaic Switch Single-Circuit



Heavy-Duty—Solar Photovoltaic Switch

Marked as suitable for NEC 690 PV applications up to 600 Vdc.

Features

- UL 98 listed
- All switches are single-pole and suitable for switching one circuit
- Clear polycarbonate deadfront to guard against accidental contact with live parts
- Suitable for positive and negative grounded systems—100% load break rated with current flowing in either direction
- NEC 690.17—compliant labeling warning that the switch terminals may be energized in the open position
- NEC 690.14.(C) two required "PV System Disconnect" labels included
- Isolated ground terminals (neutral) for grounded conductors
- Ground lug for equipment grounding conductor
- NEMA 3R, 12 and 4X stainless enclosures
- Fusible and non-fusible configurations—Class R fuse clips standard
- Fuse clips are located on the center pole to ensure that both fuse clips are de-energized—meets NEC Article 690.16, which requires isolation of the fuse from all potential supply sources

Heavy-Duty Solar Photovoltaic Switch Multi-Circuit



Heavy-Duty Solar Photovoltaic Switch Multi-Circuit

Marked as suitable for NEC 690 PV applications per UL 1741 requirements. 600 Vdc per pole and 1000 Vdc.

Features

- UL Listed to the UL 98B standard
- Products designed and available for grounded and ungrounded (floating) systems

Note: Catalog numbers beginning with DCG are for use on grounded systems. Catalog numbers beginning with DCU are for use on ungrounded systems.

- Grounded designs can be used on positive and negative grounded systems
  - ❑ Not polarity sensitive
- Bidirectional functionality
  - ❑ Will break high-energy DC arc regardless of direction of current flow
- Ampacity range—30 A, 60 A, 100 A, 200 A and 400 A
- Clear polycarbonate deadfront shield
- Equipment ground
- NEMA 3R, 4 and 4X stainless steel enclosures
- Flex Center modification available, such as viewing windows, pilot lights and more

800 Vac and 1000 Vac



800 Vac and 1000 Vac

General Description

Eaton's renewable energy safety switches are rated for bidirectional flow of power as well as for increased AC voltages required with higher-rated inverters. Additionally, their heavy-duty safety switch design protects people, property and investment, and their proven reliability can meet your current and future energy transition needs.

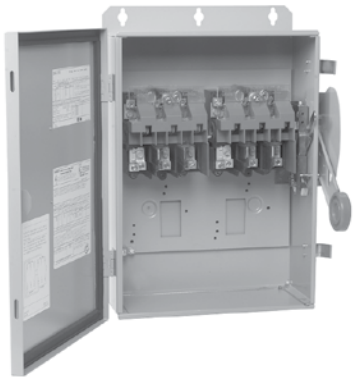
Standard Features

- Fusible and non-fusible configurations (800 Vac)
- Non-fusible configurations (1000 Vac)
- Enhanced visible blade (viewing window optional)
- Load break rated
- Visible ON/OFF indication
- Padlockable in the OFF position
- cULus® Listed for reverse power flow

Options/accessories

- Viewing window with visible blade compliant with EUSERC requirements
- Lock-on provision
- Additional grounding
- Custom painted enclosures
- Voltage indicators
- Auxiliary contacts
- Neutral

Six-Pole Motor Circuit



Six-Pole Motor Circuit

General Description

A compact safety switch that's ideal for use in heavy industry...when an "in sight" disconnecting means is required for two-speed motors that are remote from their motor control devices.

Features

- 600 Vac, 250 Vdc maximum
- 30–800 A
- Fusible or non-fusible
- Trunk-type latches keep the cover tightly closed and a neoprene gasket seals out moisture and dust from the switch assembly
- Visible double break rotary blade mechanism; two points of contact provide a positive open and close, easier operation, and also help to prevent contact burning for longer contact life
- Clear line shield protection
- Built-in fuse pullers
- Clearly visible handle
- Triple padlocking capability; cabinet door can be further padlocked at the top and bottom
- De-ionizing arc chutes; arc chutes confine and suppress the arcs produced by contacts under load

Flex Center

Introduction

The Switching Device Flex Center is a special facility at the site of Eaton's Cleveland, Tennessee plant that is dedicated to providing customized safety switches and enclosed breakers that meet customer's challenging applications.

Table 28.2-3. Common Flex Center Design Offerings

Modification	Catalog Suffix	Description
Custom paint	(varies)	Special paint colors are available such as red, orange, yellow, green, black, white. Other colors may be available upon request. Custom color is applied over the standard ANSI-61 gray finish.
Nameplates	-00NP	Plastic or phenolic nameplates are available. Up to three lines of text, 25 characters per line. Standard offering is white with black letters. Custom colors and sizes available upon request. Specify text at order entry.
Lock-on provisions	-00LO	Available on heavy-duty and double-throw safety switches. Provision will accept a single lock.
Trapped key interlock	-00TK	Available on heavy-duty and double-throw safety switches. Trapped key systems are used on safety switches to prevent unauthorized operations or to predetermine a series of power transfers by an authorized operator.
Upper viewing window	W	An upper viewing window is centered over the switching contacts to provide visual verification of ON/OFF status. Available on NEMA 12/3R and NEMA 4X stainless steel heavy-duty and double-throw safety switches. **Note:** 30–100 A switches are now provided with a full view cover window for both blade and blown fuse viewing.
Lower viewing window	LW	A lower viewing window is centered over the fuses and provides visual verification of blown fuse indicators. Available on 200–1200 A NEMA 12/3R and NEMA 4X stainless steel heavy-duty and double-throw safety switches. Available for fusible switches only. **Note:** 30–100 A switches are now provided with a full view cover window for both blade and blown fuse viewing.
Neutral assemblies	N	Factory-installed field neutral accessory kits. Add Suffix N on non-fusible switches, or replace the 6th character "F" with "N" on fusible switches.
Class "R" fuse clips	5 or 6	Factory-installed Class R fuse clips/provisions. Add Suffix 5 for 240 V switches, and Suffix 6 for 600 V switches. Available on 30–600 A safety switches.
Class "T" fuse clips	T	Factory-installed ClassT fuse clips/provisions. Available on 200–1200 A safety switches.
Class "J" fuse clips	J	Factory-installed Class J fuse clips/provisions. Available on 30–600 A safety switches. **Note:** Field modification kits are not available for 30 A heavy-duty safety switches. 30 A switches requiring Class J fusing must be ordered factory installed with J suffix.
Fungus proofing	-00FP	All non-metallic components of the switch are coated with a moisture and fungus-resistant varnish. The inhibitor used meets military specification: MIL-V-173C for MOISTURE AND FUNGUS-RESISTANT TREATMENT. The treated switch meets military specification MIL-T-152E for MOISTURE AND FUNGUS-RESISTANT TREATMENT OF COMMUNICATIONS, ELECTRONICS, AND ASSOCIATED EQUIPMENT. Not UL Listed.
Fuse pullers	FE	Factory-installed fuse pullers. **Note:** Standard NEMA 12/3R and 4X switches 30–200 A are supplied with fuse pullers from the factory.
Crimp lug pads	-00CK	Factory-installed crimp lug pad kits. Available on 400–800 A safety switches. Crimp lugs are not included. **Note:** Standard heavy-duty Type DH switches 30–200 A are adaptable to crimp lugs; simply remove the box lugs.
Copper lugs	-00CL	Factory-installed copper lug kits. Available on 30–800 A safety switches.
Ground lug kits factory installed	G	Factory-installed ground lug kits. Provides additional ground lug capacity when compared to ground lugs that come with standard safety switches. Available on 30–1200 A safety switches.
Custom lugs	-000L	Customer-specified lug arrangements are available on heavy-duty and double-throw safety switches.
Auxiliary contacts	2 or 3	Factory-installed auxiliary contact kits (DS200EK1 or DS200EK2). Auxiliary contacts are Early-Make/Early-Break operation. To specify 1NO/1NC contact, add Suffix 2. To specify 2NO/2NC contacts, add Suffix 3.
Control pole	-00CP	The K-Series control pole provides one NO contact. It mounts in the exact location as the neutral block using the same pre-drilled holes. This is directly connected to the power pole operating shaft. Direct connection and visible blades provide more secure electrical interlocking than handle linkage operation of a snap/switch type interlock. This reliability meets the requirements of many specifications for four-pole switches when the fourth pole is required for secure electrical interlocking. This control pole provides Same-Make/Same-Break operation.
Control pole with offset	-0CP2	Same as above except this control pole provides Late-Make/Early-Break operation. Both Control Pole options are provided when you purchase the DS16CP field kit.
Switching neutral double throws	SN	UL Listed for three-pole and four-pole non-fusible double-throw safety switches. Switching neutrals are required for separately derived systems when bonding the neutral of the generator to a grounding system at the generator.
Surge protection	(varies)	Factory-installed Eaton Type 1 (SP1 series) or Type 2 (CVX series) surge protective device products. SPD installed and wired to load side of disconnect.

Additional Flex Center Design Offerings

- Left-hand design (30–200 A)
- Cover controls
- 200% neutrals
- Seam-welded stainless steel
- Quick Connect products with Cam-Lok and Posi-Lok receptacles
- Custom enclosures
- 316 grade stainless steel
- Mill-duty switches
- Irrigation switches
- Fuses installed
- Hook stick handles (heavy-duty switches only)
- Custom labels
- Custom mounting
- Pad-mount designs
- Non-standard receptacles
- Enhanced visible blade
- Voltage indicators

Contact

For more information on these or any other modifications, please contact the Switching Device Flex Center at 1-888-329-9272, email FlexSwitches@eaton.com or visit Eaton.com/FlexCenter.

Accessories and Field Kits

For General-Duty, Heavy-Duty and Double-Throw Safety Switches

Table 28.2-4. Safety Switches—Accessories

Description		Catalog Number
Neutral Kits ①		
DH030NK 	30 A DG	**DG030NB**
	60–100 A DG	**DG100NB**
	200 A DG, DH (NEMA 1, 3R enclosures)	**DG200NK**
	30–60 A DH	**DH030NK**
	100 A DH	**DH100NK**
	200 A DH (NEMA 4X, 12 enclosures)	**DH200NK**
	400 A DG, DH	**DS400NK**
	600 A DG, DH	**DS600NK**
	400 A fusible DT, 800–1200 A DH	**DS800NK**
	30–100 A DT	**DT100NK**
	200 A DT	**DT200NK**
	400 A non-fusible DT	**DT400NK**
	600 A non-fusible DT	**DT600NK**
	600 A fusible DT, 800 A DT	**DT800NK**
	1200 A DT	**DT1200NK**
Ground Lug Kits Factory-installed ground lug is supplied in all safety switches		
DS200GK 	30–100 A DG	**DG030GB**
	30–100 A DH, DT ②	**DS100GK**
	200 A DG, DH, DT	**DS200GK**
	400–600 A DG, 400–1200 A DH, 400–1200 A DT	**DS468GK**
Switching Neutral Bonding Kits ③		
DT100BK 	30–100 A DT, 3P, 4P non-fusible	**DT100BK**
	200 A DT, 3P, 4P non-fusible	**DT200BK**
	400 A DT, 3P, 4P non-fusible	**DT400BK**
	600 A DT, 3P, 4P non-fusible	**DT600BK**
	800–1200 A DT, 3P, 4P non-fusible	**DT800BK**
Control Pole Kit (For 2P, 3P Switches)		
DS16CP 	400–600 A DG, 30–1200 A DH, 30–1200 A DT Multiple key options are included with the control pole kit. Standard keys provide late-make, early-break functionality. Flanged key provides same make, same break functionality.	**DS16CP**
Auxiliary Contact Kits Auxiliary contact kits are not field installable on shunt trip safety switches		
DS200EK1 	All switches (except 30–100 A DG) 1NO/1NC	**DS200EK1** ④
	All switches (except 30–100 A DG) 2NO/2NC	**DS200EK2** ④
	NEMA 7/9 switches (30–100 A) 1NO/1NC	**178C265G05**
	NEMA 7/9 switches (30–100 A) 2NO/2NC	**178C265G06**
Copper Lug Kits		
DS36CL 	30 A DH, DT ⑤	**DS16CL**
	60 A DH, DT ⑤	**DS26CL**
	100 A DH, DT ⑤	**DS36CL**
	200 A DH ⑤	**DS46CL**
	400 A DH (NEMA 4, 4X, 12 enclosures) ⑥	**DS56CL**
	600–800 A DH (NEMA 4, 4X, 12 enclosures) ⑥	**DS66CL**

Description		Catalog Number
Crimp Lug Pad Kit (NEMA 4, 4X, 12 Enclosures Only)		
DS56CK 	400–600 A DH ⑤	**DS56CK**
	800 A DH ⑥	**DS76CK**
	400–800 A neutral DH ③	**DS800CNK**
Fuse Puller Kits		
DS30FP 	30 A DH ⑤	**DS30FP**
	60 A DH ⑤	**DS60FP**
	100 A DH ⑤	**DS100FP**
	200 A DH ⑤	**DS200FP**
"J" Fuse Adapter Kits ⑦⑧		
DS22JK 	60 A 240 V DH ⑤	**DS22JK**
	60 A DH, DT and receptacle switches ⑤	**DS26JK**
	400 A 600 V DT ⑨	**DT400JK**
	600 A 240–600 V DH, 600 A DG ⑥	**DS600JK**
"R" Fuse Adapter Kits 4		
DS12FK 	30 A DG	**DG030RB**
	100 A DG	**DG100RB**
	30 A 240 V DH, DT	**DS12FK**
	30 A 600 V DH, DT, 60 A 240 V DH, DT, 60 A DG	**DS16FK**
	60 A 600 V DH, DT	**DS26FK**
	100 A 240–600 V DH, DT	**DS36FK**
	200 A 240–600 V DH, DT, 200 A DG	**DS46FK**
	400 A 240–600 V DH, 240 V DT, 400 A DG	**DS56FK**
	600 A 240–600 V DH, DT, 600 A DG	**DS66FK**
"T" Fuse Adapter Kits		
DS426TK 	200 A 240 V DH ⑤	**DS426TK**
	200 A 600 V DH ⑤	**DS466TK**
	400 A 240 V DG, DH, DT ⑥	**DS526TK**
	400 A 600 V DH ⑥	**DS566TK**
	600 A 240 V DG, DH ⑥	**DS626TK**
	600 A 600 V DH ⑥	**DS666TK**
	600 A 240 V DT ⑥	**DT626TK**
	600 A 600 V DT ⑥	**DT666TK**
	800 A 240 V DH ⑥	**DS726TK**
	800 A 600 V DH, DT ⑥	**DS766TK**
Miscellaneous Kits		
Hookstick handle		**DH800HSH**
Lubricating grease for safety switch blades and contacts (each kit contains three 30 cc tubes of lubricating grease)		**DSLUBEKIT**

① Service entrance bonding kit and sticker are included with the neutral kit.
② Ground bar kit is not listed on device publications.
③ Order one kit per switch.
④ For duty ratings, see table on following page.
⑤ Order one kit for three poles.
⑥ Order one kit for each pole.
⑦ 30 A Class J available as factory option only.
⑧ If Class J fuse kit is not listed, then switch will accept Class J fusing by repositioning either fuse base or fuse clips. No drilling required.
⑨ Order one kit for six poles.

Note: Accessories are not applicable to NEMA 7/9 switches unless indicated otherwise.

Auxiliary Contact Rating

Table 28.2-5. AC Pilot Duty Ratings

Description	Volts	Break (Amperes)	Make (Amperes)	Catalog Number
1NO-1NC	110	15.0	40.0	**DS200EK1**
1NO-1NC	220	10.0	20.0	**DS200EK1**
1NO-1NC	440	6.0	10.0	**DS200EK1**
1NO-1NC	600	5.0	8.0	**DS200EK1**
2NO/2NC	110	3.0	30.0	**DS200EK2**
2NO/2NC	220	1.5	15.0	**DS200EK2**
2NO/2NC	440	1.0	8.0	**DS200EK2**
2NO/2NC	600	0.8	6.0	**DS200EK2**

Table 28.2-6. DC Pilot Duty Ratings

Description	Volts	SingleThrow (Amperes)	DoubleThrow (Amperes)	Catalog Number
1NO-1NC	115	2.0	0.5	**DS200EK1**
1NO-1NC	230	0.5	0.2	**DS200EK1**
1NO-1NC	600	0.1	0.02	**DS200EK1**
2NO/2NC	115	1.0	0.2	**DS200EK2**
2NO/2NC	230	0.3	0.1	**DS200EK2**
2NO/2NC	600	0.1	—	**DS200EK2**

Table 28.2-7. Myers Type Hubs—Dimensions in Inches (mm)
NEMA 3R (400 A and above)
NEMA 4, 4X (stainless steel), 12

	Conduit Size	Catalog Number
DS050MH 	0.50 (12.7)	**DS050MH**
	0.75 (19.1)	**DS075MH**
	1.00 (25.4)	**DS100MH**
	1.25 (31.8)	**DS125MH**
	1.50 (38.1)	**DS150MH**
	2.00 (50.8)	**DS200MH**
	2.50 (63.5)	**DS250MH**
	3.00 (76.2)	**DS300MH**
	3.50 (88.9)	**DS350MH**
	4.00 (101.6)	**DS400MH**
	5.00 (127.0)	**DS500MH**

Table 28.2-8. Plate Type Hubs—Dimensions in Inches (mm)
For NEMA 3R enclosures (up to 200 A)

	Group 1 General-Duty, Heavy-Duty, Double-Throw Through 100 A		Group 2 General-Duty, Heavy-Duty, Double-Throw Through 200 A	
	Conduit Size	Catalog Number	Conduit Size	Catalog Number
DS075H1 	0.75 (19.1)	**DS075H1**	2.00 (50.8)	**DS200H2**
	1.00 (25.4)	**DS100H1**	2.50 (63.5)	**DS250H2**
	1.25 (31.8)	**DS125H1**	3.00 (76.2)	**DS300H2**
	1.50 (38.1)	**DS150H1**	—	—
	2.00 (50.8)	**DS200H1**	—	—

Note: Catalog number DS900AP adapter kit permits Installation of Group 1 hubs on 200 A type general-duty, heavy-duty and double-throw switches.

Quick-Connect Switches

Approximate Dimensions in Inches (mm)

Note: Dimensions are for estimating purposes only.

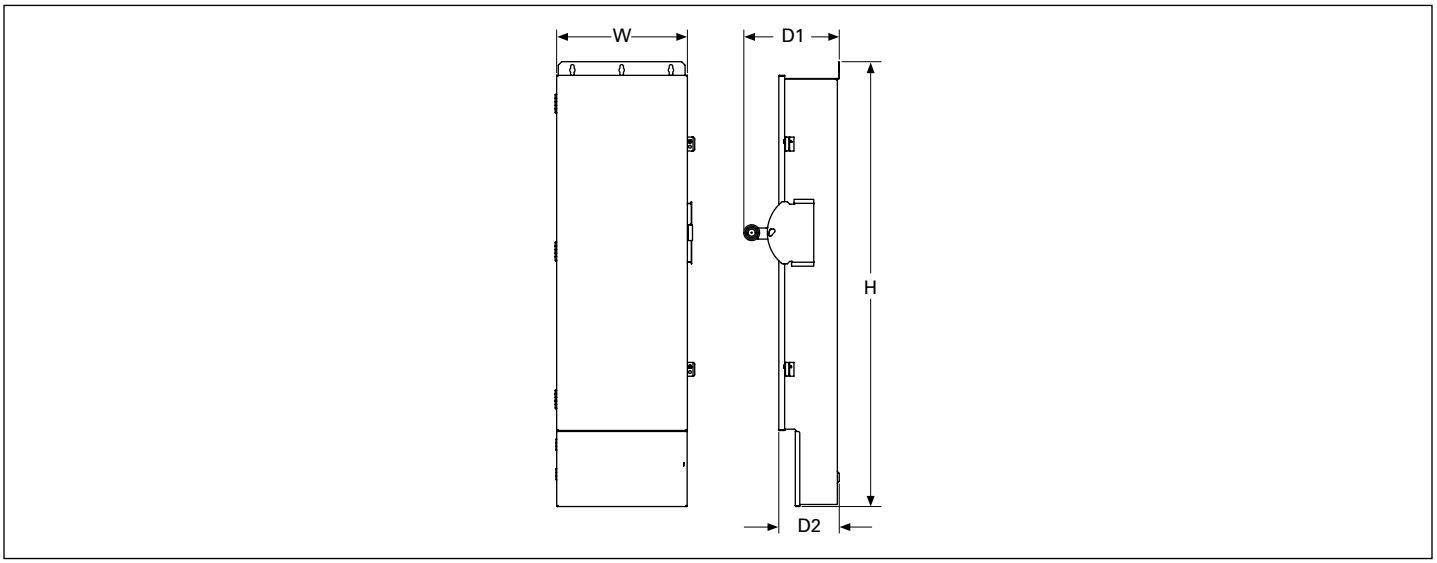


Figure 28.2-1. Quick-Connect Double-Throw, Fusible and Non-Fusible, 240 V and 600 V (1 of 2)

Table 28.2-9. Quick-Connect Double-Throw, Fusible and Non-Fusible, 240 V and 600 V (1 of 2)

Ampere Rating	Width (W)	Height (H)	Depth (D1)	Depth (D2)	Weight Lb (kg)
100	18.57 (471.7)	62.89 (1597.4)	13.56 (344.4)	8.59 (218.2)	240 (109)
200	18.57 (471.7)	62.89 (1597.4)	13.56 (344.4)	8.59 (218.2)	240 (109)
1200	42.62 (1083.0)	87.78 (2230.0)	29.62 (752.0)	20.47 (520.0)	1025 (465)

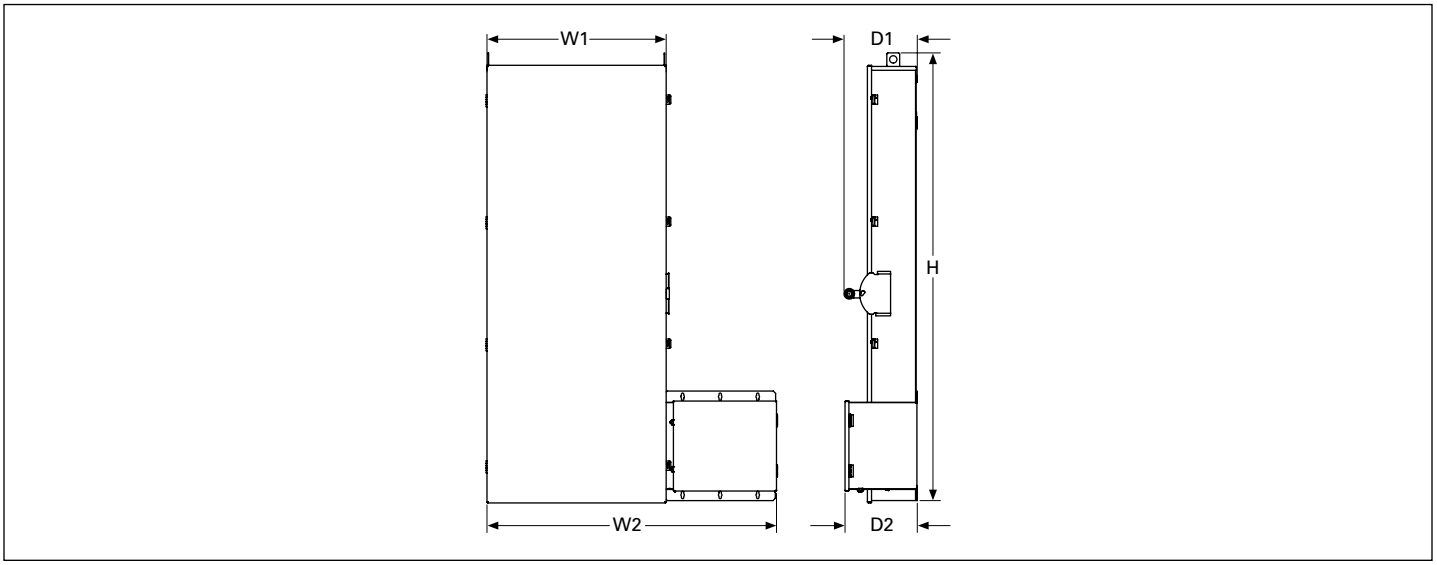


Figure 28.2-2. Quick-Connect Double-Throw, Fusible and Non-Fusible, 240 V and 600 V (2 of 2)

Table 28.2-10. Quick-Connect Double-Throw, Fusible and Non-Fusible, 240 V and 600 V (2 of 2)

Ampere Rating	Width (W1)	Width (W2)	Height (H)	Depth (D1)	Depth (D2)	Weight Lb (kg)
400	26.68 (677.7)	50.18 (1274.6)	92.49 (2349.2)	15.61 (396.5)	15.40 (391.2)	800 (363)
600	38.18 (969.8)	61.68 (1566.7)	92.49 (2349.2)	15.61 (396.5)	15.40 (391.2)	820 (372)
800	38.18 (969.8)	61.68 (1566.7)	92.49 (2349.2)	15.61 (396.5)	15.40 (391.2)	820 (372)

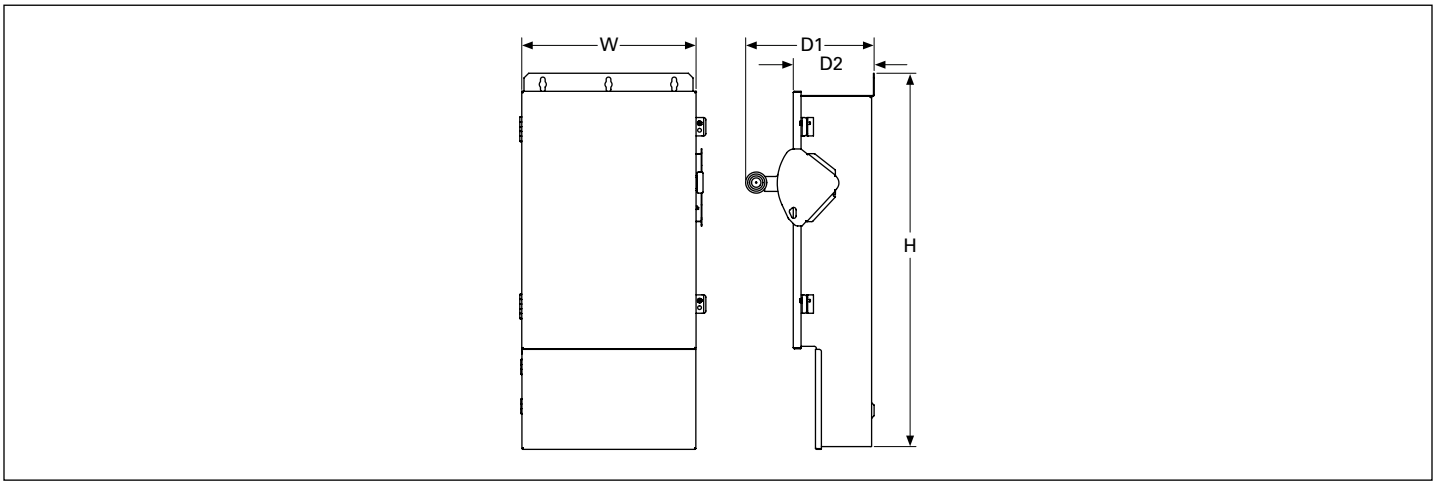


Figure 28.2-3. Quick-Connect Single-Throw, Fusible and Non-Fusible, 240 V and 600 V

Table 28.2-11. Quick-Connect Single-Throw, Fusible and Non-Fusible, 240 V and 600 V

Ampere Rating	Width (W)	Height (H)	Depth (D1)	Depth (D2)	Weight Lb (kg)
100 200 400	18.57 (471.1) 18.57 (471.1) 32.87 (834.9)	39.12 (993.6) 41.87 (1063.5) 73.79 (1874.3)	13.68 (347.5) 13.68 (347.5) 16.10 (408.9)	8.61 (218.7) 8.61 (218.7) 11.14 (283.0)	85 (39) 140 (64) 370 (168)
600 800 1200	32.87 (834.9) 32.87 (834.9) 42.62 (1083.0)	73.79 (1874.3) 85.04 (2160.0) 90.23 (2292.0)	16.10 (408.9) 21.73 (551.9) 29.62 (752.0)	11.14 (283.0) 16.79 (426.5) 20.47 (520.0)	370 (168) 540 (245) 915 (415)

OEM Line Isolation

Table 28.2-12. OEM Line Isolation (OLI) Switch Ratings and Capacities

Ampere Rating	Short-Circuit Ratings (Amperes)		Standard Lug Capacities					
	Fusible (Class J)	Non-Fusible	Per Phase			Ground		
			Min. Wire Size	Max. Wire Size	Wire Type	Min. Wire Size	Max. Wire Size	Wire Type
60 100 200	200 k at 600 V 200 k at 600 V 200 k at 600 V	10 k at 600 V 10 k at 600 V 10 k at 600 V	#14 #14 #6	#2 1/0 300 kcmil	Cu/Al Cu/Al Cu/Al	(2) #14 (2) #14 (2) #14	(2) 1/0 (2) 1/0 (2) 1/0	Cu/Al Cu/Al Cu/Al
400	100 k at 600 V 200 k at 480 V	10 k at 600 V	(2) 1/0 (1) 1/0	(2) 300 kcmil or (1) 750 kcmil	Cu/Al	(2) #6	(2) 250 kcmil	Cu/Al

Table 28.2-13. OLI Switch Dimensions in Inches (mm)

Switch Rating (Amperes)	Height (H)	Width (W)	Depth (D)
60 100	21.49 (545.8) 21.49 (545.8)	16.08 (408.4) 16.08 (408.4)	9.24 (234.7) 9.24 (234.7)
200 400	28.21 (716.5) 50.15 (1273.8)	18.30 (464.8) 21.30 (541.0)	9.24 (234.7) 9.24 (234.7)

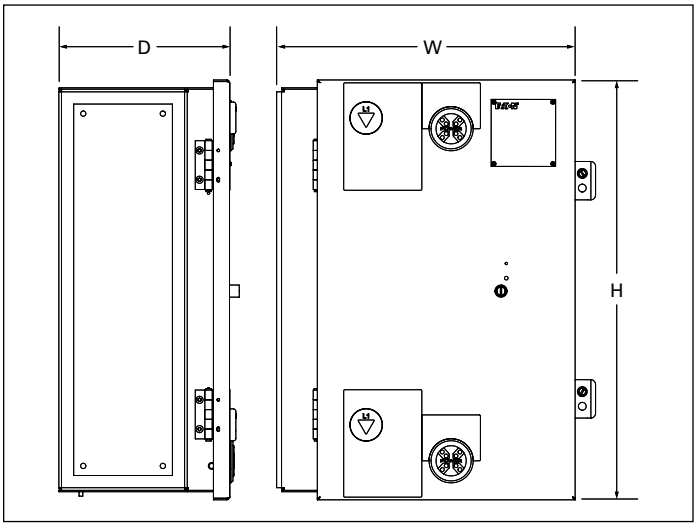


Figure 28.2-4. OLI Switch Dimensions

Note: Learn more at Eaton.com/OLI.

Double Door

Dimensions

Approximate Dimensions in Inches (mm)

Note: Dimensions are for estimating purposes only.

Table 28.2-14. Heavy-Duty Double-Door Safety Switch

Ampere Rating	Height (H)	Width (W)	Depth (D1)	Depth (D2)
30/60 100 200	37.49 (952.3) 39.19 (995.4) 49.90 (1267.5)	9.30 (236.2) 12.33 (313.2) 17.18 (436.4)	8.22 (208.8) 10.21 (259.3) 11.62 (295.1)	6.37 (161.8) 6.37 (161.8) 7.31 (185.7)
400 600 800 1200	72.46 (1840.5) 77.96 (1980.2) 86.73 (2202.9) 91.02 (2312.0)	24.32 (617.7) 25.32 (643.1) 26.57 (674.9) 43.11 (1095.0)	16.41 (416.8) 19.31 (490.5) 22.16 (562.9) 27.18 (690.4)	14.56 (369.8) 17.80 (452.1) 17.81 (452.4) 21.23 (539.2)

① Switches ranging from 30 A to 400 A can relocate clips/base for class J fuses. All other classes/amperages require a kit. Please consult catalog or contact the Technical Resource Center (TRC) for specific kit catalog numbers.
② Lay-in type lug uses 30–100 A. Two ground lugs are provided for 200–1200 A switches, each accommodating the wire range listed above.
③ Single barrel lug that accepts one or two cables per phase as detailed above.
④ Double barrel lug that accepts two cables per phase as detailed above.
⑤ Remove wireway in bottom compartment. Necessary for 30–200 A units only.

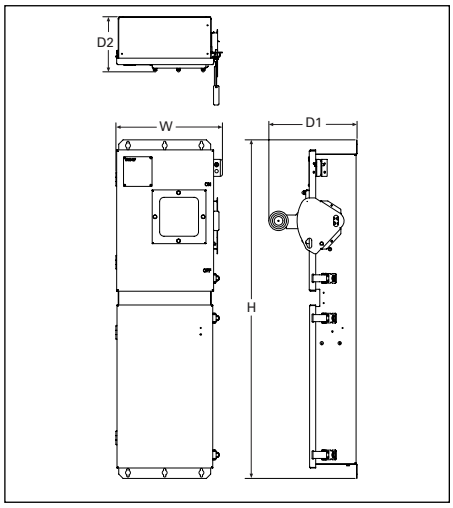


Figure 28.2-5. Heavy-Duty Double-Door Safety Switch

Elevator Control

Table 28.2-15. Elevator Control Switch

Ampere Rating	Dimensions in Inches (mm)		
	Width (W)	Height (H)	Depth (D)
NEMA 1			
30 60 100	16.35 (415.4) 16.35 (415.4) 16.35 (415.4)	29.62 (752.3) 29.62 (752.3) 29.62 (752.3)	11.18 (283.9) 11.18 (283.9) 11.18 (283.9)
200 400	20.38 (517.8) 25.21 (640.3)	32.63 (828.9) 54.63 (1387.7)	11.28 (286.4) 12.69 (322.3)
NEMA 3R or 12			
30 60 100	16.35 (415.4) 16.35 (415.4) 16.35 (415.4)	29.62 (752.3) 29.62 (752.3) 29.62 (752.3)	11.18 (283.9) 11.18 (283.9) 11.18 (283.9)
200 400	20.38 (517.8) 25.21 (640.3)	32.63 (828.9) 54.63 (1387.7)	11.28 (286.4) 12.69 (322.3)

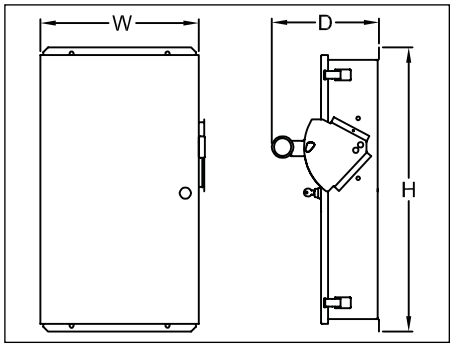


Figure 28.2-6. Elevator Control Switch

Explosion Proof (NEMA Type 7/9)

Table 28.2-16. NEMA 7/9 Hazardous Location Disconnect Switch Dimensions in Inches (mm) and Weights

Non-Fusible Disconnect Switch				Fusible Disconnect Switch		
Dimension	**DS361UX**	**DS362UX**	**DS363UX**	**DS361FX**	**DS362FX**	**DS363FX**
A	9.74 (247.0)	9.90 (251.0)	10.28 (261.0)	10.02 (255.0)	9.90 (251.0)	10.40 (264.0)
B	5.00 (127.0)	7.00 (178.0)	9.00 (229.0)	7.00 (178.0)	7.00 (178.0)	15.00 (380.0)
C	10.47 (266.0)	12.53 (318.0)	14.67 (373.0)	12.67 (322.0)	12.53 (318.0)	17.31 (440.0)
D	11.13 (283.0)	15.13 (384.0)	17.13 (435.0)	13.13 (333.0)	15.13 (384.0)	11.50 (292.0)
E	12.47 (317.0)	16.53 (420.0)	18.67 (474.0)	14.67 (373.0)	16.53 (420.0)	23.31 (592.0)
F	3.50 (89.0)	3.50 (89.0)	3.50 (89.0)	3.50 (89.0)	3.50 (89.0)	3.50 (89.0)
Weight in lb (kg)	33 (15)	51 (23)	72 (33)	47 (21)	51 (23)	108 (49)

Table 28.2-17. NEMA 7/9 Hazardous Location Disconnect Switch Electrical Ratings

Non-Fusible Horsepower Rating				Fusible Horsepower Rating			
Switch Rating (Amperes)	**480 Vac**	**600 Vac**	**250 Vdc**	**Switch Rating (Amperes)**	**480 Vac**	**600 Vac**	**250 Vdc**
30 60 100	15 30 60	20 50 75	5 10 20	30 60 100	15 30 60	20 50 75	5 10 20

Table 28.2-18. NEMA 7/9 Hazardous Location Disconnect Switch Ordering Information

Ampere Rating	Fusible/Non-Fusible	Catalog Number
30	Non-fusible	**DS361UX**
	Fusible	**DS361FX**
60	Non-fusible	**DS362UX**
	Fusible	**DS362FX**
100	Non-fusible	**DS363UX**
	Fusible	**DS363FX**

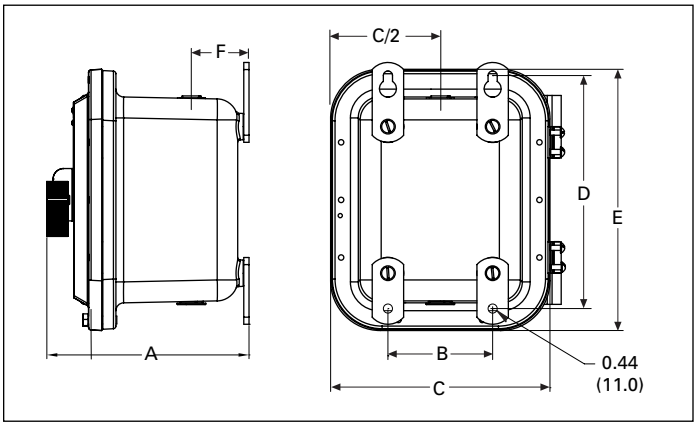


Figure 28.2-7. Non-Fusible and Fusible Disconnect Switch Dimensions

Note: Dimensions are for estimating purposes only.

Energy Transition/Solar PV

Table 28.2-19. Heavy-Duty, Solar Photovoltaic Switch Multi-Circuit, 1000 Vdc, Non-Fusible (Fusible Available at 200 A and 400 A)

Ampere Rating	Number of Circuits	NEMA Type 3R ①				NEMA Types 4, 4X Stainless ①			
		Dimensions in Inches (mm)				Dimensions in Inches (mm)			
		A	B	C	D	A	B	C	D
Grounded									
30, 60	1	16.27 (413.3)	8.87 (225.3)	9.89 (251.2)	5.25 (133.4)	14.14 (359.2)	8.76 (222.5)	10.22 (259.6)	5.50 (139.7)
30, 60	2	19.08 (484.6)	12.88 (327.2)	10.22 (259.6)	5.50 (139.7)	19.08 (484.6)	12.88 (327.2)	10.22 (259.6)	5.50 (139.7)
100	1	21.99 (558.6)	11.84 (300.7)	9.89 (251.2)	5.25 (133.4)	24.95 (633.7)	11.79 (299.5)	10.22 (259.6)	5.50 (139.7)
100	2	24.95 (633.7)	16.13 (409.7)	10.22 (259.6)	5.50 (139.7)	24.95 (633.7)	16.13 (409.7)	10.22 (259.6)	5.50 (139.7)
200	1	35.38 (898.7)	16.95 (430.5)	11.63 (295.4)	6.44 (163.6)	35.38 (898.7)	16.95 (430.5)	11.63 (295.4)	6.44 (163.6)
200	2	35.38 (898.7)	24.57 (624.1)	11.63 (295.4)	6.44 (163.6)	35.38 (898.7)	24.57 (624.1)	11.63 (295.4)	6.44 (163.6)
200	3	35.38 (898.7)	24.57 (624.1)	11.63 (295.4)	6.44 (163.6)	35.38 (898.7)	24.57 (624.1)	11.63 (295.4)	6.44 (163.6)
400 ②	1	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)
400 ②	2	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)
Ungrounded									
30, 60	1	16.27 (413.3)	8.87 (225.3)	9.89 (251.2)	5.25 (133.4)	14.14 (359.2)	8.76 (222.5)	10.22 (259.6)	5.50 (139.7)
30, 60	2	19.08 (484.6)	12.88 (327.2)	10.22 (259.6)	5.50 (139.7)	19.08 (484.6)	12.88 (327.2)	10.22 (259.6)	5.50 (139.7)
100	1	21.99 (558.6)	11.84 (300.7)	9.89 (251.2)	5.25 (133.4)	24.95 (633.7)	11.79 (299.5)	10.22 (259.6)	5.50 (139.7)
100	2	24.95 (633.7)	16.13 (409.7)	10.22 (259.6)	5.50 (139.7)	24.95 (633.7)	16.13 (409.7)	11.63 (295.4)	5.50 (139.7)
200	1	35.38 (898.7)	16.54 (420.1)	11.63 (295.4)	6.44 (163.6)	35.38 (898.7)	16.54 (420.1)	11.63 (295.4)	6.44 (163.6)
200	2	35.38 (898.7)	16.54 (420.1)	11.63 (295.4)	6.44 (163.6)	35.38 (898.7)	16.54 (420.1)	11.63 (295.4)	6.44 (163.6)
200	3	35.38 (898.7)	24.26 (616.2)	11.63 (295.4)	6.44 (163.6)	35.38 (898.7)	24.26 (616.2)	11.63 (295.4)	6.44 (163.6)
400 ②	1	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)
400 ②	2	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)	57.47 (1459.7)	24.12 (612.7)	12.43 (315.7)	7.19 (182.6)

① NEMA Type 4 and 4X stainless steel enclosures are suitable for mounting in either vertical or horizontal positions. NEMA Type 3R enclosures must be mounted vertically.

② For smaller NEMA 3R enclosure, consult factory.

Table 28.2-20. 800 Vac and 1000 Vac Product Dimensions in Inches (mm)

Ampere Rating	Width	Height	Depth (D1)	Depth (D2)	Weight Lb (kg)
NEMA 12/3R					
200	16.95 (430.5)	35.38 (898.7)	11.63 (295.4)	6.44 (163.6)	46 (20.88)
400	24.12 (612.6)	57.47 (1459.7)	12.43 (320.8)	7.19 (182.6)	110 (49.94)
NEMA 4X Stainless Steel					
200	16.95 (430.5)	35.38 (898.7)	11.63 (295.4)	6.44 (163.6)	55 (24.97)
400	24.12 (612.6)	57.47 (1459.7)	12.43 (320.8)	7.19 (182.6)	125 (56.75)

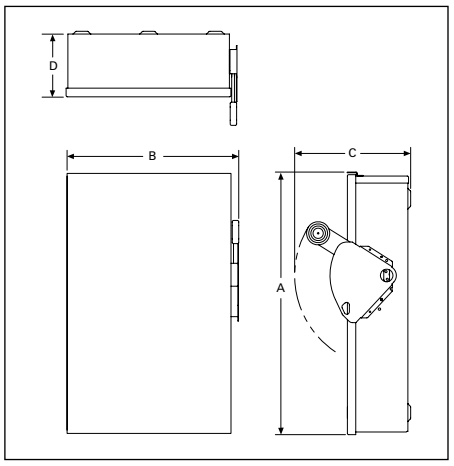


Figure 28.2-8. NEMA Type 3R Dimensions

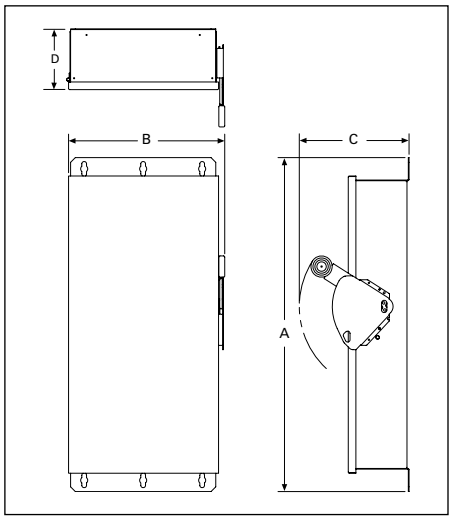


Figure 28.2-9. NEMA 4/4X Stainless Dimensions

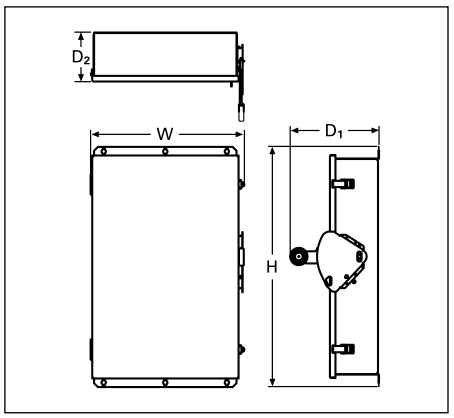


Figure 28.2-10. NEMA 12/3R and NEMA 4X Dimensions

Six-Pole Motor Circuit

Approximate Dimensions in Inches (mm)

Note: Dimensions are for estimating purposes only.

Table 28.2-21. Six-Pole Switches, Fusible and Non-Fusible

Amperage	NEMA Rating	Height (H)	Width (W)	Depth (D)	Depth (D2)	Weight Lb (kg)
30	NEMA 12/3R and 4X	12.17 (309.2)	19.08 (484.6)	10.22 (259.6)	5.50 (139.7)	40 (18.1)
60	NEMA 12/3R and 4X	12.17 (309.2)	19.08 (484.6)	10.22 (259.6)	5.50 (139.7)	40 (18.1)
100	NEMA 12/3R and 4X	15.42 (391.7)	24.95 (633.7)	10.22 (259.6)	5.50 (139.7)	45 (20.4)
200	NEMA 12/3R and 4X	23.51 (597.2)	35.38 (898.7)	11.63 (295.4)	6.44 (163.6)	65 (29.5)

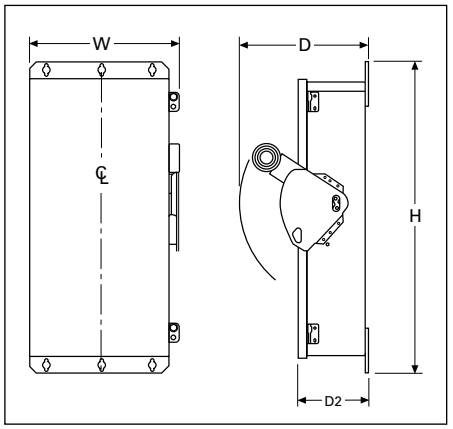


Figure 28.2-11. 600 Vac Heavy-Duty, Six-Pole, Single-Throw

Note: A factory-installed ground lug is supplied in all heavy-duty safety switches.

Maximum Horsepower Ratings with Time Delay Fuses

Table 28.2-22. Quick-Connect Single-Throw, Non-Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	20	40	50
200	15	50	50
400	—	—	—
600	—	—	—
800	—	—	—
1200	—	—	—

Table 28.2-23. Quick-Connect Single-Throw, Non-Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	40	75	100
200	60	125	150
400	125	250	350
600	200	400	500
800	—	500	500
1200	—	500	500

Table 28.2-24. Quick-Connect Single-Throw, Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	15	30	40
200	15	50	50
400	—	—	—
600	—	—	—
800	—	—	—
1200	—	—	—

Table 28.2-25. Quick-Connect Single-Throw, Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	30	60	75
200	60	125	150
400	125	250	350
600	200	400	500
800	250	500	500
1200	—	500	500

Table 28.2-26. Quick-Connect Double-Throw, Non-Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	50	40	50
200	15	50	50
400	—	—	—
600	—	—	—
800	—	—	—
1200	—	—	—

Table 28.2-27. Quick-Connect Double-Throw, Non-Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	40	75	100
200	60	125	150
400	125	250	350
600	125	250	350
800	125	250	350
1200	—	250	350

Table 28.2-28. Quick-Connect Double-Throw, Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	15	30	40
200	15	50	50
400	—	—	—
600	—	—	—
800	—	—	—
1200	—	—	—

Table 28.2-29. Quick-Connect Double-Throw, Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
100	30	60	75
200	60	125	150
400	125	250	350
600	50 ①	—	—
800	250	—	—
1200	—	—	—

① Only available for use with fast acting fuses.

Table 28.2-30. OEM Line Isolation (OLI) Switches, Non-Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30	3	7.5	10
60	10	20	25
100	20	40	50
200	15	50	50
400	—	—	—

Table 28.2-31. OEM Line Isolation (OLI) Switches, Non-Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30	10	20	30
60	20	50	60
100	40	75	100
200	60	125	150
400	125	250	350

Table 28.2-32. OEM Line Isolation (OLI) Switches, Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30	3	7.5	10
60	10	20	25
100	15	30	40
200	15	50	50
400	—	—	—

Table 28.2-33. OEM Line Isolation (OLI) Switches, Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30	7.5	15	20
60	15	30	50
100	30	60	75
200	60	125	150
400	125	250	350

Table 28.2-34. Double-Door Switches, Non-Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30 60 100	3 10 20	7.5 20 40	10 25 50
200 400 600	15 — —	50 — —	50 — —
800 1200	— —	— —	— —

Table 28.2-35. Double-Door Switches, Non-Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30 60 100	10 20 40	20 50 75	30 60 100
200 400 600	60 125 200	125 250 400	150 350 500
800 1200	— —	500 500	500 500

Table 28.2-36. Double-Door Switches, Fusible, Single-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30 60 100	3 10 15	7.5 20 30	10 25 40
200 400 600	15 — —	50 — —	50 — —
800 1200	— —	— —	— —

Table 28.2-37. Double-Door Switches, Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30 60 100	7.5 15 30	15 30 60	20 50 75
200 400 600	60 125 200	125 250 400	150 350 500
800 1200	250 —	500 500	500 500

Table 28.2-38. Elevator Control Switches

Ampere Rating	208 Vac	240 Vac	480 Vac	600 Vac
30 60 100	5 10 15	5 10 20	10 25 40	15 30 50
200 400	40 75	40 75	75 150	100 200

Table 28.2-39. NEMA Type 7/9 Disconnects

Ampere Rating	240 Vac	480 Vac	600 Vac	250 Vdc
Non-Fusible				
30 60 100	10 20 30	20 40 50	30 40 50	5 10 20
Fusible				
30 60 100	— — —	15 30 60	20 50 75	5 10 20

Solar PV Disconnects

These products do not carry a horsepower rating.

Table 28.2-40. Six-Pole Motor Circuit Switches, Non-Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30 60 100	10 20 40	20 50 75	30 60 100
200 400 600	60 — —	125 — —	150 — —

Table 28.2-41. Six-Pole Motor Circuit Switches, Fusible, Three-Phase

Ampere Rating	240 Vac	480 Vac	600 Vac
30 60 100	7.5 15 30	15 30 60	20 50 75
200 400 600	60 — —	125 — —	150 — —

Short-Circuit Ratings

Heavy-Duty

Table 28.2-42. Short-Circuit Ratings Using Class "R," "J" or "T" Fusing where Applicable ①

Ampere Rating	Short-Circuit Ratings (Amperes)			
	Type 1	Type 3R	Type 12	Type 4 and 4X
30	200 k at 600 V	200 k at 600 V	200 k at 600 V	200 k at 600 V
60	200 k at 600 V	200 k at 600 V	200 k at 600 V	200 k at 600 V
100	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V	200 k at 600 V	200 k at 600 V
200	200 k at 600 V	200 k at 600 V	200 k at 600 V	200 k at 600 V
400	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V
600	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V
800 ②	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V	200 k at 480 V 100 k at 600 V
1200 ②	200 k at 600 V	200 k at 600 V	200 k at 600 V	200 k at 600 V

① Applicable to quick-connect single-throw, OEM line isolation (OLI) switches, double door, elevator control switches, six-pole motor circuit switches.

② Class "L" fuse connectors supplied as standard for 800 A and 1200 A.

Note: Class "H" fuse clips supplied as standard for 30–600 A. Rated at 10,000 A rms symmetrical when using Class "H" fuses.

NEMA Type 7/9

Fusible and non-fusible versions are rated up to 10 kAIC at 600 Vac.

Quick-Connect Double-Throw

Table 28.2-43. Short-Circuit Ratings Using Class "R," "J" or "T" Fusing where Applicable

Ampere Rating	Short-Circuit Ratings (Amperes) (600 V)	
	Type 1	Type 3R
100 200 400	100 k 100 k 100 k	100 k 100 k 100 k
600 800 1200	100 k 100 k 100 k	100 k 100 k 100 k

Note: Class "H" fuse clips supplied as standard for 100–200 A, Class "T" for 400–800 A. Rated at 10,000 A rms symmetrical when using Class "H" fuses.

Note: Class "L" fuse connectors supplied as standard for 1200 A.

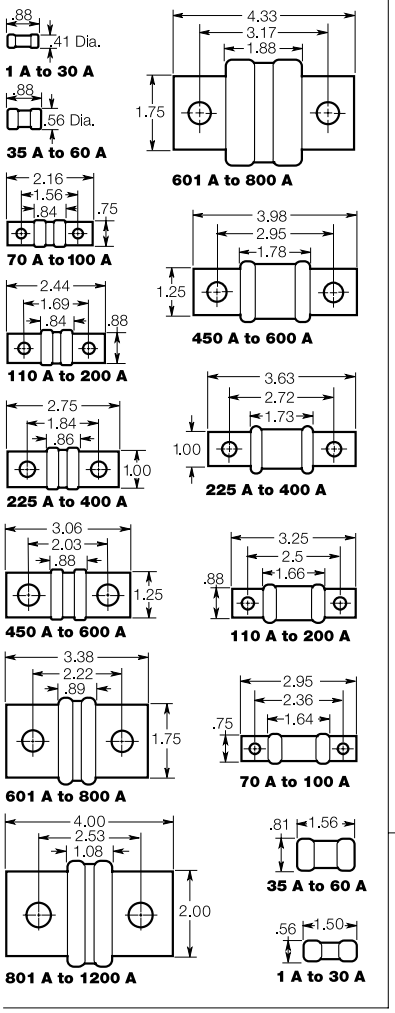
Note: Safety switch short-circuit ratings are applicable to AC only.

Note: Safety switch I^2t and I_p values are identical to UL maximum acceptable I^2t and I_p values for the corresponding class fuse.

Fuse Dimensions

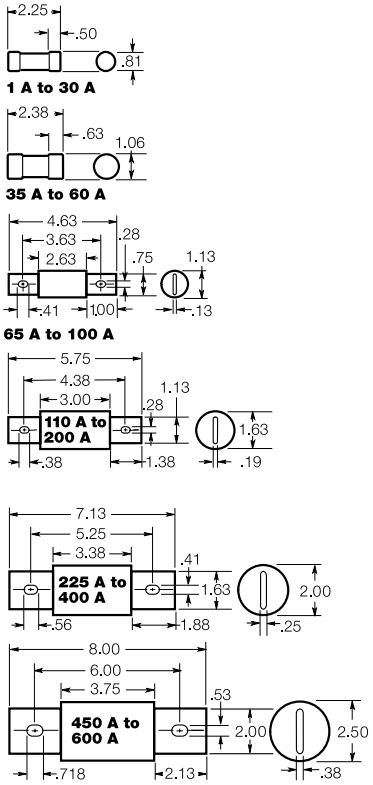
Class T

T-Tron™ Fuses
JJN **(300 V)** JJS **(600 V)**



Class J

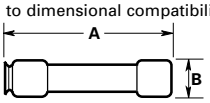
Low-Peak® and Limitron® Fuses
LPJ & JKS **(600 V)**



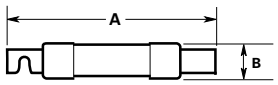
Class RK5 and RK1

Fusetron®, Low-Peak and Limitron Fuses (250 and 600 V)
FRN-R and FRS-R; LPN-RK and LPS-RK; KTN-R and KTS-R
Basic dimensions are same as Class H (formerly NEC) ONE-TIME (NON and NOS) and SUPERLAG Renewable RES and REN fuses.

Note: These fuses can be used to replace existing Class H, RK1 and RK5 fuses relating to dimensional compatibility.



	250 V		600 V	
Ampere	**A**	**B**	**A**	**B**
1/10–30	2.00	0.56	5.00	0.81
35–60	3.00	0.81	5.50	1.06



Fusetron and Limitron

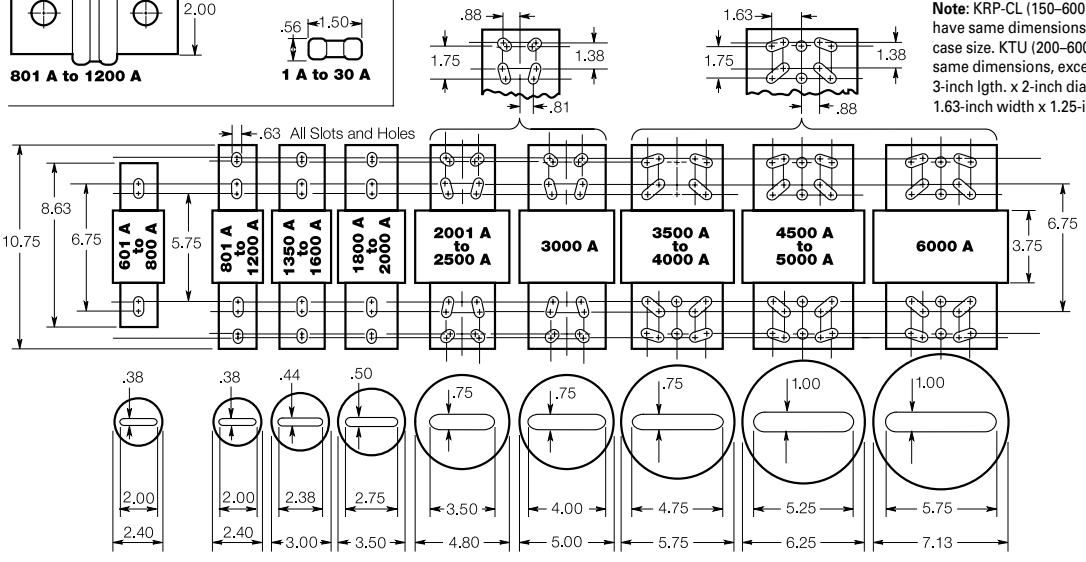
	250 V		600 V	
Ampere	**A**	**B**	**A**	**B**
70–100	5.88	1.06	7.88	1.34
110–200	7.13	1.56	9.63	1.84
225–400	8.63	2.06	11.63	2.59
450–600	10.38	2.59	13.38	3.13

Low-Peak

	250 V		600 V	
Ampere	**A**	**B**	**A**	**B**
70–100	5.88	1.16	7.88	1.16
110–200	7.13	1.66	9.63	1.66
225–400	8.63	2.38	11.63	2.38
450–600	10.38	2.88	13.38	2.88

Class L Low-Peak and Limitron Fuses

KRP-C, KTU & KLU (601–4000 A) **(600 V)**



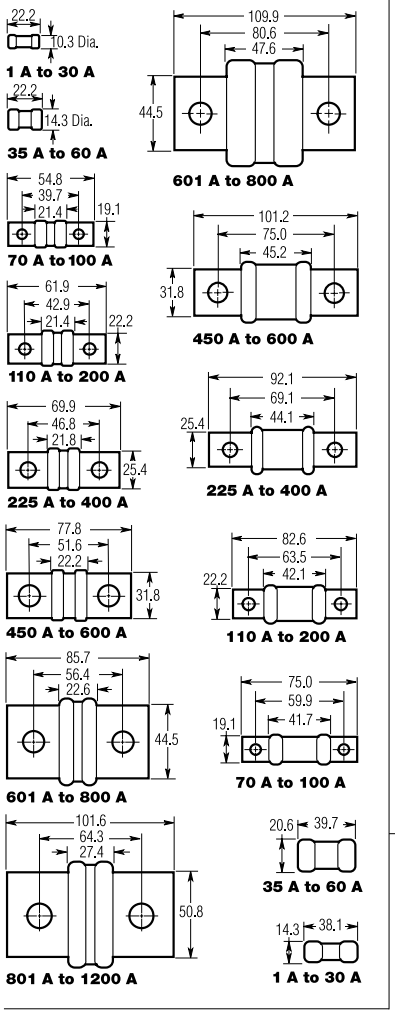
Note: KRP-CL (150–600 A) fuses have same dimensions as 601–800 A case size. KTU (200–600 A) have same dimensions, except tube 3-inch lgth. x 2-inch dia.; terminal 1.63-inch width x 1.25-inch thick.

Figure 28.2-12. Typical Fuse Dimensions in Inches

Note: For typical fuse dimensions in millimeters, see **Figure 28.2-13 on Page 28.2-21**.

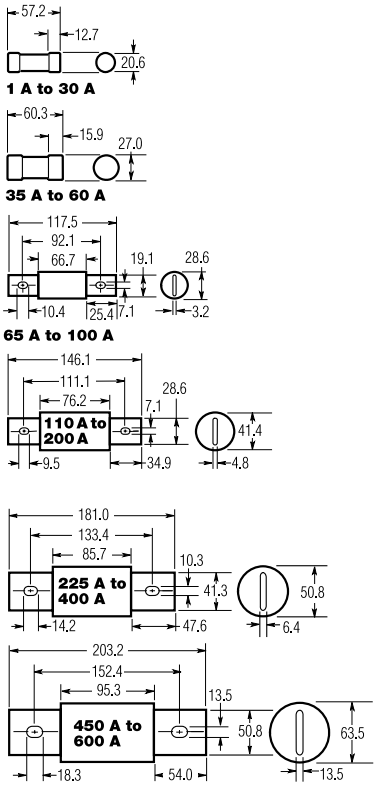
Class T

T-Tron Fuses
JJN **(300 V)** JJS **(600 V)**



Class J

Low-Peak and Limitron Fuses
LPJ and JKS **(600 V)**

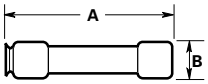


Class RK5 and RK1

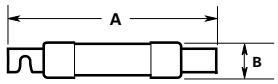
Fusetron, Low-Peak and Limitron Fuses (250 and 600 V)
FRN-R and FRS-R; LPN-RK and LPS-RK; KTN-R and KTS-R

Basic dimensions are same as Class H (formerly NEC) ONE-TIME (NON and NOS) and SUPERLAG Renewable RES and REN fuses.

Note: These fuses can be used to replace existing Class H, RK1 and RK5 fuses relating to dimensional compatibility.



	250 V		600 V	
Ampere	**A**	**B**	**A**	**B**
1/10–30	50.8	14.3	127.0	20.6
35–60	76.2	20.6	139.7	27.0



Fusetron and Limitron

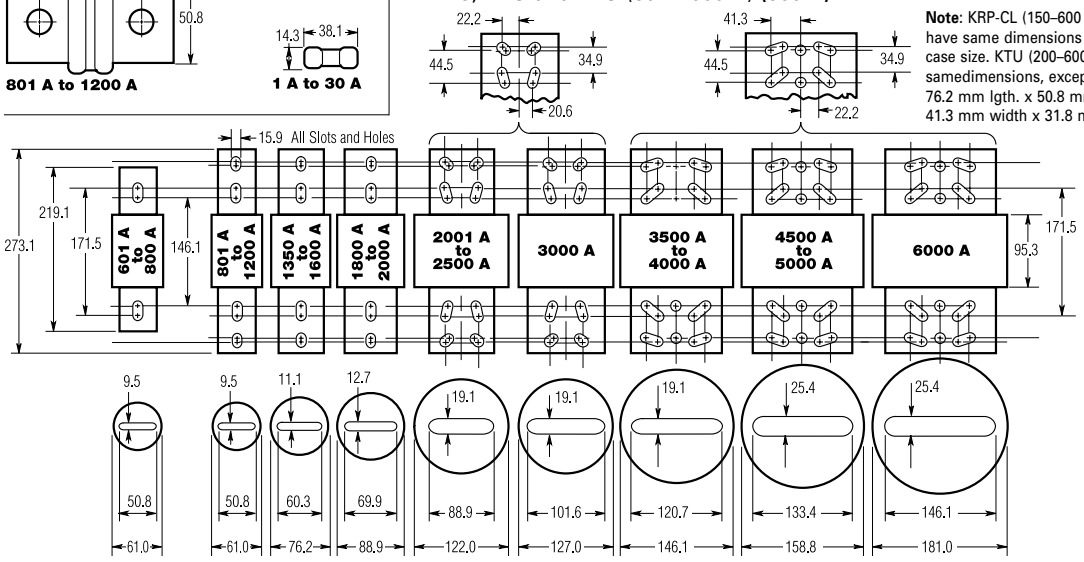
	250 V		600 V	
Ampere	**A**	**B**	**A**	**B**
70–100	149.2	26.9	200.0	34.0
110–200	181.0	39.6	244.5	46.7
225–400	219.1	52.3	295.3	65.8
450–600	263.5	65.8	339.7	79.5

Low-Peak

	250 V		600 V	
Ampere	**A**	**B**	**A**	**B**
70–100	149.2	29.5	200.0	29.5
110–200	181.0	42.2	244.5	42.2
225–400	219.1	60.5	295.3	60.5
450–600	263.5	73.2	339.7	73.2

Class L Low-Peak and Limitron Fuses

KRP-C, KTU and KLU (601–4000 A) **(600 V)**



Note: KRP-CL (150–600 A) fuses have same dimensions as 601–800 A case size. KTU (200–600 A) have samedimensions, except tube 76.2 mm lgth. x 50.8 mm dia.; terminal 41.3 mm width x 31.8 mm thick.

Figure 28.2-13. Typical Fuse Dimensions in Millimeters

Note: For typical fuse dimensions in inches, see **Figure 28.2-12 on Page 28.2-20**.

Note: There are no applicable Catalog Numbering Systems available for NEMA 7/9 disconnects or Six-Pole motor circuits. The Catalog Numbering Systems on this page can be used for those catalog number product selections.

Table 28.2-44. Quick-Connect Single-Throw Safety Switch Catalog Numbering System

DH 3 6 4 U R K N LC

Position	Description
1–2	**Switch Type** **DH** = Heavy-duty single-throw
3	**Number of Poles** **2** = 2 **3** = 3 **4** = 4
4	**Maximum Voltage** **2** = 240 Vac **6** = 600 Vac
5	**Switch Ampacity** **3** = 100 A **4** = 200 A **5** = 400 A **6** = 600 A **7** = 800 A **8** = 1200 A
6	**Protection** **F** = Fusible **U** = Unfused **N** = Fusible with solid neutral **SN** = Fusible with switched neutral ①
7	**Series** **K** = K
8	**NEMA Enclosure** **G** = NEMA 1 **R** = NEMA 3R
9–10	**Receptacle Type** **LC** = Cam-Lok company switch **LCR** = Cam-Lok generator switch **LP** = Posi-Lok company switch **LPR** = Posi-Lok generator switch
9	**Neutral** ② **Blank** = None, or neutral is included with fusible selection **N** = Solid neutral for unfused device **SN** = Switched neutral for unfused device ①

① For a two-pole switched neutral device, the catalog number will build as a three-pole, such as DH323SNRKLC 2P/3W. For a three-pole switched neutral device, the catalog number will build as a four-pole, such as DH423SNRKLC 3P/4W.
② This field is used only when a switch is completely non-fused. If the switch is fusible, the neutral will be included with that character.

Table 28.2-45. Quick-Connect Double-Throw Safety Switch Catalog Numbering System

DT 3 6 5 N U R K LC

Position	Description
1–2	**Switch Type** **DT** = Heavy-duty double-throw
3	**Number of Poles** **2** = 2 **3** = 3 **4** = 4
4	**Maximum Voltage** **2** = 240 Vac **6** = 600 Vac
5	**Switch Ampacity** **3** = 100 A **4** = 200 A **5** = 400 A **6** = 600 A **7** = 800 A **8** = 1200 A ⑤
6	**Upper Switch** ③ **U** = Unfused **F** = Fusible **N** = Fusible with solid neutral **SN** = Fusible with switched neutral
7	**Lower Switch** ③ **U** = Unfused **F** = Fusible **N** = Fusible with solid neutral **SN** = Fusible with switched neutral
8	**NEMA Enclosure** **G** = NEMA 1 **R** = NEMA 3R
9	**Series** **K** = K
10	**Neutral** ④ **Blank** = No neutral or included with switch designation **N** = Solid neutral **SN** = Switched neutral
11–12	**Receptacle Type** **LC** = Cam-Lok **LCR** = Cam-Lok reverse pin **LP** = Posi-Lok **LPR** = Posi-Lok reverse

③ When upper and lower switches are the same, the switch configuration is consolidated in one letter (e.g., "U" not "UU").
④ This field is used only when a switch is completely non-fused.
⑤ 1200 A is only available as fully fused or fully non-fused as it incorporates the stacked double throw design.

Table 28.2-46. Cord Set Catalog Numbering System

5 BOY 1 1 100 C F M M

Number of Cables/Plugs
3 = 3 per cord set
4 = 4 per cord set
5 = 5 per cord set
6 = 6 per cord set
7 = 7 per cord set
8 = 8 per cord set
9 = 9 per cord set
10 = 10 per cord set
12 = 12 per cord set
15 = 15 per cord set

Phase Plugs Color Scheme
BRB = Black, red, blue (240 V)
BOY = Brown, orange, yellow (600 V)
BR = Black, red
BO = Brown, orange

Number of Neutral Plugs
0 = 0 plugs
1 = 1 plug
2 = 2 plugs
3 = 3 plugs

Number of Ground Plugs
1 = 1 plug
2 = 2 plugs
3 = 3 plugs

Cord Length per Conductor
000 = 0 feet
010 = 10 feet
015 = 15 feet
020 = 20 feet
025 = 25 feet
050 = 50 feet
100 = 100 feet
125 = 125 feet

Type
C = Cam-Lok 4/0
C2 = Cam-Lok 2/0 ①
C7 = Posi-Lok 4/0 (17 Series) ①
P = Posi-Lok 4/0
P2 = Posi-Lok 2/0 E0200 Series ①
P4 = Posi-Lok 2/0 E0400 Series ①

Phase Plug Gender
M = Male
F = Female

Neutral Plug Gender
M = Male
F = Female
0 = No neutral

Ground Plug Gender
M = Male
F = Female

① Customer special requests, not common.

Table 28.2-47. OLI Safety Switch Catalog Numbering System

OLI 3 6 3 F D J B - 00VP

Switch Type
OEM Line Isolation

Poles/Blades
2 = Two-pole
3 = Three-pole

Voltage
6 = 600 Vac max.

Ampere Rating
1 = 30 A
2 = 60 A
3 = 100 A
4 = 200 A
5 = 400 A
6 = 600 A

NEMA Enclosure
D = NEMA 12/3R
W = NEMA 4X stainless

Fusible/Non-Fusible
F = Fusible without neutral
U = Non-fusible without neutral

Fuse Class Provisions
J = Class J
X = Non (non-fused)

Voltage Indicator Location
X = None
A = Load side
B = Line and load side
C = Line side

Options/Modifications ②
0000 = None
0002 = 1NO/1NC auxiliary
0003 = 2NO/2NC auxiliary
BLAK = Painted black
0RNG = Painted orange
0RED = Painted red
0316 = 316 stainless steel
00NP = Custom nameplate
000G = Additional grounding
00VP = Voltage portal ③
00VT = Voltage safe-test point ③

② More combinations and options are available.
③ One voltage portal or one voltage Safe-Test Point for each voltage indicator specified.

Table 28.2-48. Double-Door Safety Switch Catalog Numbering System

DD 3 6 3 F D K W - 00LO

Switch Type
DD = Heavy-duty isolation switch

Poles/Blades
2 = Two-pole
3 = Three-pole
4 = Four-pole

Voltage
2 = 240 Vac
6 = 600 Vac

Ampere Rating

1 = 30 A	**5** = 400 A
2 = 60 A	**6** = 600 A
3 = 100 A	**7** = 800 A
4 = 200 A	**8** = 1200 A

Fusible/Non-Fusible or Neutral
F = Fusible without neutral
N = Fusible with neutral
SN = Fusible with switched neutral

NEMA Enclosure
D = NEMA 12/3R
W = NEMA 4X stainless

Series
K = Switch

Options
W = Upper viewing window

Options/Modifications
00V1 = Voltage indicator line side
00V2 = Voltage indicator load side
00V3 = Voltage indicator line and load side
BLAK = Painted black
WHIT = Painted white
0RED = Painted red
0316 = 316 stainless steel
00NP = Custom nameplate
00TK = Trapped key (Kirk, superior)
00LW = Lower viewing window
00CP = Control pole (same make/same break)
0CP2 = Control pole (late make/early break)
0002 = 1NO/1NC auxiliary contact
0003 = NO/2NC auxiliary contact
00LO = Lock on

Table 28.2-49. Elevator Control Switch Catalog Numbering System

ES 1 T2 R2 G F1 3 N B X SS

Prefix
ES = Elevator control switch

Ampere Rating
1 = 30 A
2 = 60 A
3 = 100 A
4 = 200 A

Control Transformer ①
T2 = 208 V
T3 = 240 V
T1 = 480 V
T4 = 600 V

Fire Safety Interface Relay (3PDT, 10 A, 120 V)
R2 = 24 Vdc coil
R1 = 120 Vac coil

Pilot Light ON
G = Green
R = Red
W = White

Fire Alarm Voltage Monitoring Relay (To Monitor Shunt Trip Voltage)
F1 = Single-pole
F3 = Three-pole ②

Enclosure Options (NEMA 1 Standard With No Suffix Designation Required)
3 = NEMA 3R
D = NEMA 12
P = NEMA 4 painted steel

Neutral Lug
N = Isolated full capacity

Auxiliary Contacts ③ **and Surge Protection** ④
Blank = No additional
B = Additional 1NO/1NC auxiliary contacts
C = Surge protection
E = Additional 1NO/1NC auxiliary contact and surge protection

Key to Test
Blank = Includes key to test
X = Omit ⑤

Options/Modifications ⑥
Blank = No mods test
SS = 304 stainless steel

① 100 VA with Primary and Secondary fusing (120 V Secondary).
② F3 Option only available with R1 relay selection.
③ All Elevator Control Switches come with 1NO/1NC auxiliary contact as standard.
④ For specific information on Eaton's SP1 surge protective devices, refer to Product Aid PA01005006E.
⑤ Required by some codes in Arizona.
⑥ Not in Bid Manager® but available through the Flex Center (FlexSwitches@Eaton.com or 1-888-329-9272).

Table 28.2-50. Energy Transition DC Disconnect Catalog Numbering System

DCG 3 06 1 U R M _

Class and Type
DCG = DC Disconnect/ grounded system
DCU = DC Disconnect/ ungrounded system

Number of Circuits ①
1 = 1 circuit
2 = 2 circuits
3 = 3 circuits
4 = 4 circuits
5 = 5 circuits
6 = 6 circuits

Maximum System Voltage
06 = 600 Vdc
10 = 1000 Vdc

Ampere Rating
1 = 30 A
2 = 60 A
3 = 100 A
4 = 200 A
5 = 400 A

Protection
F = Fusible
U = Non-fusible

NEMA Enclosure
R = NEMA 3R
P = NEMA 4
W = NEMA 4X, stainless 304
X = NEMA 4X, stainless 316

Switch Series
M = DC photovoltaic applications

Accessories/Options
Blank = No accessories
2 = 1NO/1NC auxiliary contact
3 = 2NO/2NC auxiliary contact
W = Viewing window
J = Factory-converted Class J fuse provisions

① Not all configurations for ampere rating and number of circuits are available. All circuit configurations can be found in the product dimension tables.

Table 28.2-51. Energy transition/Solar PV (800/1000 Vac) Catalog Numbering System

DH 3 8 4 F D K V

Switch Type
DH = Heavy-duty

Poles/Blades
3 = Three-pole

Voltage ②
8 = 800 Vac
1 = 1000 Vac

Ampere Rating
4 = 200 A
5 = 400 A

Protection
U = Non-fusible
F = Fusible without neutral

NEMA Enclosure
D = NEMA 12/3R
W = NEMA 4X corrosion resistant (304 Grade stainless steel)

Series
K = Design all general-duty

Options ③
V = Enhanced visible blade (standard feature)
W = Viewing window ③

② 1000 Vac available in non-fusible configurations only.
③ Contact FlexCenter for additional available options at FlexSwitches@eaton.com.

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