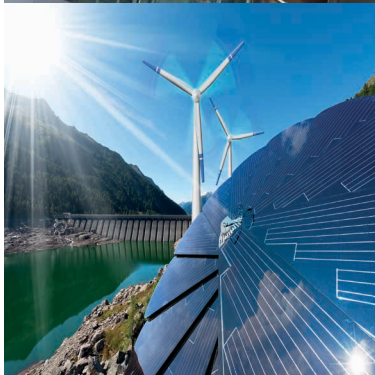


# Switching Devices



*Powering Business Worldwide*



# Switching Devices

## Safety Switches



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# Switching Devices

## Safety Switches

### Product Selection Guide

	Voltage	Fuse Type	Number of Poles	Enclosure Type			NEMA 4 Painted Steel	NEMA 4X Stainless Steel	NEMA 4X Non Metallic	NEMA 7/9 Hazardous Location	Page #	
				NEMA 1	NEMA 3R	NEMA 12						
<b>Air Conditioning Disconnect</b>	Max. 240 Vac	Fusible	Cartridge	2	—	30-60A	—	—	—	—	17	
		Non-Fusible	—	2	—	60A	—	—	—	—		
		Moulded Case Switch	—	2	—	60A	—	—	—	—		
<b>General Duty</b>	Max. 600 Vac	Fusible	Cartridge	3	—	30-80A	—	—	—	—	21	
				2	30-600A	30-600A	—	—	—	—		
				3	30-600A	30-600A	—	—	—	—		
				2	30-100A	30-200A	—	—	—	—		
<b>Heavy Duty</b>	Max. 600 Vac 250 Vdc & 600 Vdc	Fusible	Cartridge	2	30-800A	30-800A	30-800A	400-800A	30-800A	—	27	
				3	30-1200A	30-1200A	30-1200A	400-800A	30-1200A	30-200A		30-100A
				4	30-600A	—	30-600A	—	30-600A	—		—
		Non-Fusible	2	30-800A	30-800A	30-800A	400-800A	30-800A	—	—		
			3	30-1200A	30-1200A	30-1200A	400-800A	30-1200A	30-200A	30-100A		
			4	30-600A	—	30-600A	—	30-600A	—	—		
<b>Heavy Duty Double Door</b>	Max. 600 Vac	Fusible	Cartridge	2	—	—	30-1200A	—	30-1200A	—	39	
				3	—	—	30-1200A	—	30-1200A	—		
<b>6-Pole Motor Circuit</b>	Max. 600 Vac	Fusible and Non-Fusible	—	6	—	30-200A	30-200A	—	30-200A	—	65	
<b>Double Throw</b>	Max. 600 Vac 250 Vdc	Fusible	Cartridge	2	200A	200A	—	—	—	—	43	
				3	30-1200A	100-1200A	30-400A	—	30-400A	—		—
				4	—	—	—	—	—	—		—
		Non-Fusible	2	30-1200A	200-1200A	—	—	—	—	—	—	
			3	30-1200A	30-1200A	300-800A	—	300-800A	—	—	—	
			4	200-800A	30-800A	—	—	—	—	—	—	
<b>Enclosed Rotary Switches</b>	Max. 600 Vac	Non-Fusible	—	3	—	—	16-80A	—	16-80A	16-80A	105	
				4	—	—	16-80A	—	16-80A	16-80A		
<b>Hazardous Location Disconnect Switch</b>	Max 600 Vac 250 Vdc	Fusible and Non-Fusible	—	3	—	—	—	—	—	30-100A	85	
<b>Enviroline All Stainless</b>	Single Throw Max. 600 Vac/ Vdc	Fusible	Cartridge	2	—	—	—	—	30-400A	—	81	
				3	—	—	—	—	30-400A	—		
				3	—	—	—	—	30-400A	—		—
<b>Viewing Window</b>	Single Throw Max. 600 Vac/ Vdc	Fusible and Non-Fusible	—	2	—	—	30-1200A	30-1200A	30-1200A	—	14	
				3	—	—	30-1200A	30-1200A	30-1200A	—		
				4	—	—	30-600A	30-600A	30-600A	—		
				6	—	—	30-200A	30-200A	30-200A	—		
<b>Receptacle (Pin &amp; Sleeve)</b>	Single Throw Max. 600 Vac/ Vdc	Fusible	Cartridge	3	—	—	30-100A	—	30-100A	—	55	
				3	—	—	60A	—	60A	—		
<b>Quick Connect (Cam &amp; Posi Lok)</b>	Single Throw Max. 600 Vac	Fusible	Cartridge	2	100-800A	100-800A	—	—	—	—	51	
				3	100-800A	100-800A	—	—	—	—		
				4	100-800A	100-800A	—	—	—	—		
				4	100-800A	100-800A	—	—	—	—		
		Non-Fusible	2	100-800A	100-800A	—	—	—	—	—		
3	100-800A		100-800A	—	—	—	—	—				
<b>Solar</b>	Single Throw Max. 600 Vdc	Fusible and Non-Fusible	—	1(3)	—	30-600A	30-600A	30-600A	—	—	89	
				1(3)	—	30-600A	30-600A	30-600A	—	—		
<b>Surge</b>	—	Fusible and Non-Fusible	—	2	—	—	30-1200A	—	30-1200A	—	69	
				3	—	—	30-1200A	—	30-1200A	—		
<b>OEM Line Isolation (OLI)</b>	—	Fusible and Non-Fusible	—	2	—	—	30-400A	—	30-400A	—	121	
				3	—	—	30-400A	—	30-400A	—		

**Note:**

NEMA 12 enclosures (30-1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain screw is removed. Optional windows also available with NEMA 12 or 4/4X enclosures. Double throw non-fusible 4 pole 30-800A, 6 pole 30-100A.



### Product Overview

- Used to open or close a circuit
- Non-fusible safety switches provide a means to manually connect or disconnect the load from the source
- Fusible safety switches provide a means to manually open and close a circuit and provide overcurrent protection by means of installed fuses
- Fusible switches suitable for service entrance application when equipped with factory-installed neutral assembly
- Also commonly referred to as a disconnect switch or disconnect

- Available from 30–1200A
- All Padlockable
- Horsepower rated
- 100% load break rated (unless noted)
- Non-Fusible switches are 100% continuous duty rated and fusible switches are 80% continuous duty rated per CSA C22.2 No.4

### Standards and Certifications

- C22.2 No.4 File #69743
- C22.2 No.14 (Enclosed Rotary) File #162136
- Det Norske Veritas
- ISO 9001:2008
- CSA certified Class I, Div, 1 & 2, Groups B, C & D; Class II, Div 1 & 2, Groups E, G & F; Class III, Div 1 & 2, Zone 1, IIB + H2 for NEMA 7/9.
- Seismic qualified (UBC and CBC) for Heavy Duty 30-800A
- ISO 1400



\* unless otherwise noted

### Fuse Clips/Class

#### Adaptable to Accept the Following Fuse Class

Safety Switch Type	Standard Fuse Class Clips Supplied with Switch	Adaptable to Accept the Following Fuse Class		
		R	J	T
AC Disconnect	H	—	—	—
General Duty	H	30-600A	400-600A	400-600A
Heavy Duty	H 30-600A L 800-1200A	30-600A	240V: 100-600A 600V: 30-600A	200-800A 1200A
Heavy Duty 6 Pole	H	30-200A	60-200A	200A
Double-Throw	H 30-200A T 240V: 600-1200A T 600V: 400-800A L 600V: 1200A	30-400A	240V: 200A Only 600V: 200-400A	240V: 600-1200A 600V: 400-1200A (Standard)
Enviroline	Same as Heavy Duty	Same as Heavy Duty		Same as Heavy Duty
All Stainless & Window	Same as Heavy Duty	Same as Heavy Duty		Same as Heavy Duty
Receptacle (Pin & Sleeve)	H	30-100A	60-100A	—
Solar	R	30-600A	—	—

### Note:

Refer to specific switch technical data page for field adaptation notes.

# Switching Devices

## Safety Switches

### Options and Accessories

#### Safety Switches

Description	Catalogue Number
<b>DH030NK</b>	
<b>Neutral Kits*/Ground Kits</b>	
30A CDG	<b>DG030NB</b>
60–100A CDG	<b>DG100NB</b>
200A GD, (NEMA 3R enclosures), CDG	<b>DG200NK</b>
30–60A HD	<b>DH030NK</b>
100A HD	<b>DH100NK</b>
200A HD (NEMA 1, 3R enclosures)	<b>N200</b>
200A HD (NEMA 4X, 12 enclosures)	<b>DH200NK</b>
400A GD, HD	<b>DS400NK</b>
600A GD, HD	<b>DS600NK</b>
400–600A fusible DT, 800–1200A HD	<b>DS800NK</b>
30–100A DT	<b>DT100NK</b>
200A DT	<b>DT200NK</b>
400A non-fusible DT	<b>DT400NK</b>
600A non-fusible DT	<b>DT600NK</b>
800A DT	<b>DT800NK</b>
1200A DT	<b>DT1200NK</b>
<b>Ground Lug Kits</b>	
30–100A CDG	<b>DG030GB</b>
30–100A HD, DT ①	<b>DS100GK</b>
200A GD, HD, DT	<b>DS200GK</b>
400–600A GD, 400–1200A HD, 400–800A DT	<b>DS468GK</b>



#### DS16CP



#### Control Pole Kit (For 2P, 3P Switches)①

400–600A GD, 30–1200A HD, 30–800A  
**DS16CP**  
DT, 1 N/O Aux contact

**Control Pole Description - Operation** - The HD-Series Control Pole provides one normally open contact, late-make, early-break operation (7" lag to main contacts on "make"). It mounts in the same position with pre-drilled holes as the neutral block, 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 of interlock. This reliability meets the requirements of many specifications for 4-pole switches when the fourth pole is required for secure electrical interlocking. Unit is approved for use with elevating devices.

**Wire Size Range** - #16 to #12 AWG, copper conductors.

**Ratings** - 10A continuous, AC or DC

AC Code Rating A600			DC Code Rating N600	
Volts AC	Make	Break	Volts DC	Make & Break
120V	60A	6A	125V	2.2A
240V	30A	3A	250V	1.1A
480V	15A	1.5A	600V	0.4A
600V	12A	1.2A	—	—

#### DS200EK1



#### Auxiliary Contact Kits

All switches (except 30–100A GD) 1NO/1NC	<b>DS200EK1</b>
All switches (except 30–100A GD) 2NO/2NC	<b>DS200EK2</b>
NEMA 7/9 switches (30–100A) 1NO/1NC	<b>178C265G05</b>
NEMA 7/9 switches (30–100A) 2NO/2NC	<b>178C265G06</b>
Enclosed Rotary	<b>See page 105</b>

#### Safety Switches, continued

Description	Catalogue Number
<b>DS60FP</b>	
<b>Fuse Puller Kits</b>	
30A 240V-600V, 60A 240V, 1.5" pole spacing, SLIDER type (3 per kit)	<b>DS32FP</b>
30 & 60A 600V, 1.5" pole spacing STRAP type (3 per kit)	<b>DS30FP</b>
60A 240V-600V, 2" pole spacing SLIDER type (4 per kit)	<b>DS60FP</b>
100A SLIDER integral to fuse clip (3 per kit)	<b>DS100FP</b>
200A SLIDER integral to fuse clip (3 per kit)	<b>DS200FP</b>
<b>"J" Fuse Adapter Kits ⑤</b>	
60A 240V HD ②	<b>DS22JK</b>
60A DT and receptacle switches ②	<b>DS26JK</b>
400A 600V DT ④	<b>DT400JK</b>
600A 240–600V HD, 600A GD ③	<b>DS600JK</b>
<b>"R" Fuse Rejector Adapter Kits ②</b>	
30A CDG	<b>DG030RB</b>
100A CDG	<b>DG100RB</b>
30A 240V HD, DT	<b>DS12FK</b>
30A 600V HD, DT, 60A 240V HD, DT, 60A CDG	<b>DS16FK</b>
60A 600V HD, DT	<b>DS26FK</b>
100A 240–600V HD, DT	<b>DS36FK</b>
200A 240–600V HD, DT, 200A GD, CDG	<b>DS46FK</b>
400A 240–600V HD, 240V DT, 400A GD	<b>DS56FK</b>
600A 240–600V HD, 600A GD	<b>DS66FK</b>
<b>"T" Fuse Adapter Kits</b>	
200A 240V HD ②	<b>DS426TK</b>
200A 600V HD ②	<b>DS466TK</b>
400A 240V GD, HD ③	<b>DS526TK</b>
400A 600V HD ③	<b>DS566TK</b>
600A 240V GD, HD ③	<b>DS626TK</b>
600A 600V HD ③	<b>DS666TK</b>
800A 240V HD ③	<b>DS726TK</b>
800A 600V HD ③	<b>DS766TK</b>
<b>Form II Class C Clips ⑥</b>	
30, 60A HD (1 kit for 1-3 pole switch)	<b>F2CLIP30</b>
100A HD (1 kit for 3 poles)	<b>F2CLIP100</b>
200A HD (1 kit for 3 poles)	<b>F2CLIP200</b>
400A HD (1 kit for 3 poles)	<b>F2CLIP400</b>



#### DS22JK



#### DS12FK



#### DS426TK



① For 6 pole switches with control pole DS16CP contact sales for special order.

② Order one kit for three poles.

③ Order one kit for each pole.

④ Order one kit per switch.

⑤ Majority of switches do not require fuse adapter kits, or kit is included. Fuse blocks or fuse clips are field adaptable. See fuse class adaptation notes under technical data and specifications, for specific switch categories.

⑥ Centre blade class 'C' fuse must be used.

#### Note:

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

\*Suitable for service entrance application when equipped with factory-installed neutral assembly

### Options and Accessories - Continued

DS36CL



### Safety Switches

#### Copper Lug Kits

30A HD, DT <sup>Ⓢ</sup>	DS16CL
60A HD, DT <sup>Ⓢ</sup>	DS26CL
100A HD, DT <sup>Ⓢ</sup>	DS36CL
200A HD, DT <sup>Ⓢ</sup>	DS46CL
400A HD, (NEMA 4, 4X, 12 enclosures) <sup>Ⓢ</sup>	DS56CL
600-800A HD, (NEMA 4, 4X, 12 enclosures) <sup>Ⓢ</sup>	DS66CL

DS56CK



#### Crimp Lug Pad Kit (NEMA 4, 4X, 12 Enclosures)

400-600A HD <sup>Ⓢ</sup>	DS56CK
800A HD <sup>Ⓢ</sup>	DS76CK
400-800A neutral HD <sup>Ⓢ</sup>	DS800CNK

#### Replacement Red Operating Handle (Knob only)

Hookstick handle - GD, HD 200-600A, 30-100 NEMA 12 with or without window	DH800HSH
---	----------

**Lubricating grease** for safety switch blades and contacts (each kit contains three 30 cc tubes of lubricating grease) **DSLUBEKIT**

#### Clear Line Shields (for General Duty 200-600A)

200A GD	70-7759-11
400A GD	70-8063-8
600A GD	70-8064-8

**Note:**

Refer to page 4 for footnotes <sup>Ⓢ</sup>, <sup>Ⓣ</sup>, <sup>Ⓤ</sup>

DS050MH



### Myers Type Hubs

For NEMA 3R (400A and above) and NEMA 4, 4X (stainless steel), 12

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

**Note:**

3R enclosures include hub opening and cover plate 30-200A.

DS075H1



### Plate Type Hubs

For NEMA 3R enclosures (up to 200A)

#### Group 1 General Duty, Heavy Duty, Double-Throw Through 100A

Catalogue Number	Conduit Size
DS075H1	0.75 (19.1)
DS100H1	1.00 (25.4)
DS125H1	1.25 (31.8)
DS150H1	1.50 (38.1)
DS200H1	2.00 (50.8)

#### Group 2 General Duty, Heavy Duty, Double-Throw—200A

Catalogue Number	Conduit Size
DS200H2	2.00 (50.8)
DS250H2	2.50 (63.5)
DS300H2	3.00 (76.2)
—	—
—	—

Catalogue number **DS900AP** adapter kit - permits installation of group 1 hubs on 200 ampere general duty, heavy duty, and double-throw switches.

**Note:**

3R enclosures include hub opening and cover plate 30-200A.

# Switching Devices

## Safety Switches

### Technical Data and Specifications

#### Standard Lug Capacities - Safety Switches/Ground/Neutral/Copper Lug Kits

Description - Safety Switches	Minimum Wire Capacity	Maximum Wire Capacity	Wire Type
30A CDG	#14	#6	Cu/Al
30A HD, DT	#14	#6	Cu/Al
60A CDG	#14	#1/0	Cu/Al
60A HD, DT	#14	#2	Cu/Al
100A CDG <sup>①</sup>	#14	#1/0	Cu/Al
100A HD, DT	#14	#1/0	Cu/Al
200A CDG, GD, DT	#6	250 kcmil	Cu/Al
200A HD NEMA 1 and 3R	#6	250 kcmil	Cu/Al
200A HD NEMA 4 and 12	#6	300 kcmil	Cu/Al
400A GD, HD, DT	(2) #1/0 <sup>①</sup> (1) #1/0 <sup>①</sup>	(2) 300 kcmil <sup>①</sup> <b>or</b> (1) 750 kcmil <sup>①</sup>	Cu/Al Cu/Al
600A GD, HD, fusible DT	(1) #2 <sup>①</sup> (1) #1/0 <sup>①</sup>	(1) 600 kcmil <sup>①</sup> <b>and</b> (1) 750 kcmil <sup>①</sup>	Cu/Al Cu/Al
600A non-fusible DT	(2) #250 <sup>①</sup>	(2) 500 kcmil <sup>①</sup>	Cu/Al
800A HD	(4) #1/0 <sup>①</sup>	(4) 750 kcmil <sup>①</sup>	Cu/Al
800A DT	(3) #250 <sup>①</sup>	(3) 500 kcmil <sup>①</sup>	Cu/Al
1200A HD, DT	(4) #1/0 <sup>①</sup>	(4) 750 kcmil <sup>①</sup>	Cu/Al
<b>Ground Lugs</b>			
Standard with switch 30-200A	#14	#4 (continuous ground rated)	Cu/Al
Standard with switch 400A-1200A	#6	250mcm (continuous ground rated)	Cu/Al
<b>Optional Ground Lugs</b>			
<b>DG030GB</b> , 30-100A, CDG	#14	#4	Cu/Al
<b>DS100GK</b> , 30-100A HD, DT (10 per kit)	7 x #14	7 x #4	Cu/Al
<b>DS200GK</b> , 200A GD, HD, DT 400-600A GD, 400-800A HD	2 x #14	2 x #2	Cu/Al
<b>DS468GK</b> , 400-800A DT, 1200A HD	2 x #6	2 x 250mcm	Cu/Al
<b>Copper-Bodied Lug Kits</b>			
<b>DS16CL</b> , 30A Cu, 6 per kit	#14	#6	Cu
<b>DS26CL</b> , 60A Cu, 6 per kit	#14	#4	Cu
<b>DS36CL</b> , 100A Cu, 6 per kit	#6	#1/0	Cu
<b>DS46CL</b> , 200A Cu, 6 per kit	#6	250 kcmil	Cu
<b>DS56CL</b> , 400A Cu, 2 per kit	#1/0	500 kcmil	Cu
<b>DS66CL</b> , 600A Cu, 2 per kit	(2) #1/0 <sup>①</sup>	(2) 500 kcmil <sup>①</sup>	Cu
<b>Neutral Kits - All neutral lugs accommodate Cu/Al wire</b>			
<b>DG030NB</b> , 30A, CDG	3 x #14 - #4		
<b>DG100NB</b> , 60-100A, CDG	3 x #14 - 1/0		
<b>DG200NK</b> , 200A, GD, CDG	2 x #6 - 250mcm <b>and</b> #14 - #2		
<b>DH030NK</b> , 30-60A, HD	4 x #14 - #2		
<b>DH100NK</b> , 100A, HD	2 x #14 - #2 <b>and</b> #14 - 1/0		
<b>DH200NK</b> , 200A HD (NEMA 12, 4X encl.)	2 x #6 - 300mcm <b>and</b> 2 x #14 - #2		
<b>N200</b> , 200A HD (NEMA 1, 3R encl.)	2 x #6 - 250mcm <b>and</b> #14 - #2		
<b>DS400NK</b> , 400A HD	2 x 1/0 - (1)750mcm <sup>①</sup> <b>or</b> 1/0 - (2) 300mcm <sup>①</sup> <b>and</b> 3 x #6 - 250mcm		
<b>DS600NK</b> , 600A, GD, HD	2 x 1/0 - (1)750mcm <sup>①</sup> <b>or</b> 1/0 - (2) 300mcm <sup>①</sup> <b>and</b> 1 x #2 - 600mcm <b>and</b> 3 x #6 - 250mcm		
<b>DS800NK</b> , 400-600A Fusible DT, 800A HD, 1200A HD	2 x 3/0 - (4)750mcm <sup>①</sup> <b>and</b> 3 x #6 - 250mcm		
<b>DT100NK</b> , 30-100A DT	1 x #14 - #2 <b>and</b> 3 x #14 - #2		
<b>DT200NK</b> , 200A DT	3 x #6 - 250mcm <b>and</b> 1 x #14 - #2		
<b>DT400NK</b> , 400A Non Fusible DT	7 x #6 - 250mcm		
<b>DT600NK</b> , 600A Non Fusible DT	6 x 250 - 500mcm <b>and</b> 1 x #6 - 250mcm		
<b>DT800NK</b> , 800A DT	3 x (3)250mcm <sup>①</sup> - (3)500mcm		
<b>DT1200NK</b> , 1200A DT	3 x (4)1/0 <sup>①</sup> - (4) 750mcm <sup>①</sup>		

① Number in parentheses indicates number of conductors per phase.



Alternate lug capacities<sup>①</sup>

Description	Minimum wire size	Maximum wire size	Wire type	Catalogue number suffix	Line/load <sup>②</sup>
30 A, 60 A, 100 A HD fusible	(3) #14	(3) #2	Cu/Al	"-00LA" <sup>③</sup>	
30 A, 60 A, 100 A HD	(3) #14	(3) #2	Cu/Al	"-LALN" <sup>④</sup>	Line lugs only
30 A, 60 A, 100 A HD fusible	(3) #14	(3) #2	Cu/Al	"-LALD" <sup>④</sup>	Line lugs only
30 A, 60 A, 100 A HD fusible	(2) #14	(2) #2/0	Cu/Al	"-00LB" <sup>⑤</sup>	
30 A, 60 A, 100 A HD	(2) #14	(2) #2/0	Cu/Al	"-LBLN" <sup>④</sup>	Line lugs only
30 A, 60 A, 100 A HD fusible	(2) #14	(2) #2/0	Cu/Al	"-LBLD" <sup>④</sup>	Line lugs only
30 A, 60 A HD	#14	#1/0	Cu/Al	"-LSE3" <sup>⑥</sup>	
100 A HD NEMA 1 and 3R	#6	250 kcmil	Cu/Al	"-LSE4" <sup>⑦</sup>	
100 A HD NEMA 4X and 12	#6	300 kcmil	Cu/Al	"-LSE4" <sup>⑦</sup>	
200 A HD	(2) #1/0 (1) #1/0	(2) 300 kcmil (1) 750 kcmil	Cu/Al or Cu/Al <sup>⑧</sup>	"-LSE5" <sup>⑧</sup>	
400 A HD	(1) #2 (1) #1/0	(1) 600 kcmil (1) 750 kcmil	Cu/Al and Cu/Al <sup>⑨</sup>	"-LSE6" <sup>⑨</sup>	
600 A HD	(4) #1/0	(4) 750 kcmil	Cu/Al	"-LSE7" <sup>⑩</sup>	

① Number in parentheses indicates number of conductors per phase.

② Single barrel lug that accepts one or two cables per phase as detailed above.

③ Double barrel lug that accepts two cables per phase as detailed above.

④ Alternate lugs are available as factory-installed options only, through the Switching Device Flex Center. Field kits are not available.

⑤ The alternate lugs will be provided on both line and load side, unless otherwise noted.

⑥ Uses the 100 A switch enclosure and dimensions.

⑦ Uses the 200 A switch enclosure and dimensions.

⑧ Uses the 400 A switch enclosure and dimensions.

⑨ Uses the 600 A switch enclosure and dimensions.

⑩ Uses the 800 A switch enclosure and dimensions.

# Switching Devices

## Safety Switches

### Heavy Duty (HD) Switches Fuse Class Chart

Ampere	Voltage	Factory Fuse Class	R Fuse Kit	T Fuse Kit	J Fuse Kit
30	240	H	DS12FK	n/a	n/a
30	600	H	DS16FK	n/a	Field modified
60	240	H	DS16FK	n/a	n/a
60	600	H	DS26FK	n/a	Field modified
100	240/600	H	DS36FK	n/a	Relocate clips/base
200	240	H	DS46FK	DS426TK	Relocate clips/base
200	600	H	DS46FK	DS466TK	Relocate clips/base
400	240	H	DS56FK	DS526TK	Relocate clips/base
400	600	H	DS56FK	DS56TK	Relocate clips/base
600	240	H	DS66FK	DS626TK	DS600JK
600	600	H	DS66FK	DS66TK	DS600JK
800	240	L	n/a	DS726TK	n/a
800	600	L	n/a	DS766TK	n/a
1200	240	L	n/a	Relocate bases	n/a
1200	600	L	n/a	n/a	n/a

### General Duty (CDG) Switches Fuse Class Chart

Ampere	Voltage	Factory Fuse Class	R Fuse Kit	T Fuse Kit	J Fuse Kit
30	240	H	DG030RB		
60	240	H	DS16FK		
100	240	H	DG100RB		
200	240	H	DS46FK		
400	240	H	DS56FK	DS526TK	
600	240	H	DS66FK	DS626TK	DS600JK

### Double Throw (DT) Switches Fuse Class Chart

Ampere	Voltage	Factory Fuse Class	R Fuse Kit	T Fuse Kit	J Fuse Kit
30	240	H	DS12FK	n/a	n/a
30	600	H	DS16FK		n/a
60	240	H	DS16FK	n/a	n/a
60	600	H	DS26FK	n/a	n/a
100	240/600	H	DS36FK		n/a
200	240/600	H	DS46FK		n/a
400	240	H	DS56FK		n/a
400	600	T			DT400JK
600	240	J		DT626TK	n/a
600	600	J		DT666TK	n/a
800	240/600	L			DS766TK
1200	240/600	L			n/a

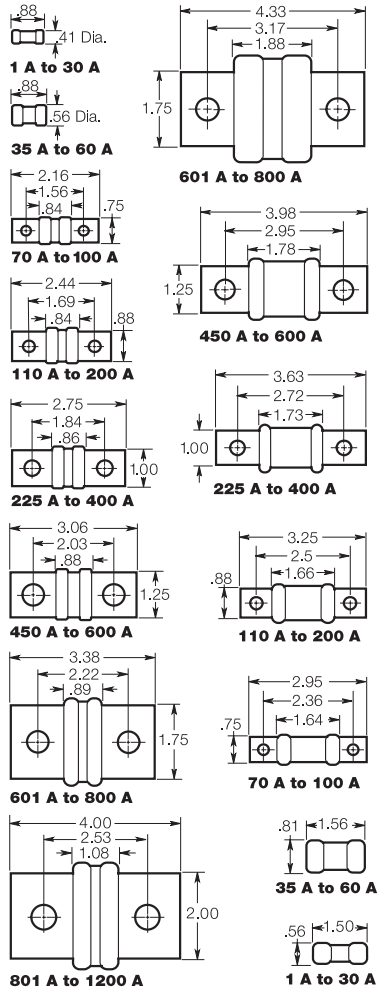
### Quick connect double throw fuse class chart

Ampere	Voltage	Factory Fuse Class	Optional Fuse Kit	Optional Fuse Kit
100A	240/600V	Class H	DS36FK (R) 3P	n/a
200A	240/600V	Class H	DS46FK (R) 3P	Move forward class J
400A	240V	Class T	-	n/a
400A	600V	Class T	DT400JK (J) 6P	n/a
600A	240V	Class T	-	n/a
600A	600V	Class T	-	n/a
800A	240V	Class T	-	n/a
800A	600V	Class T	-	n/a
1200A	240V	Class L	-	n/a
1200A	600V	Class L	-	n/a

### Typical Fuse Dimensions in Inches

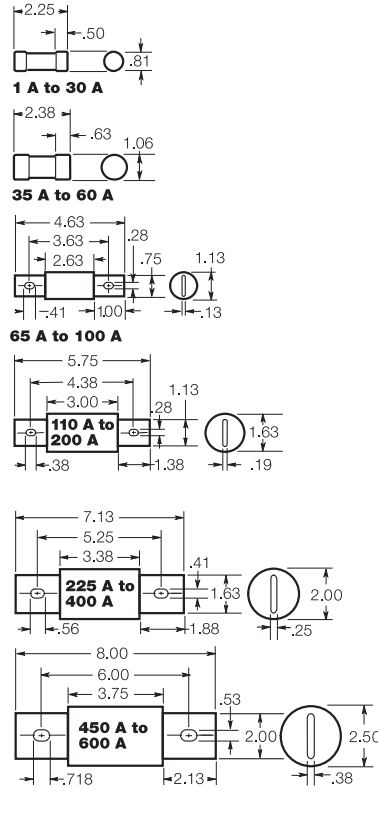
#### Class T

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



#### Class J

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

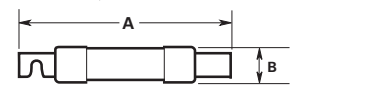
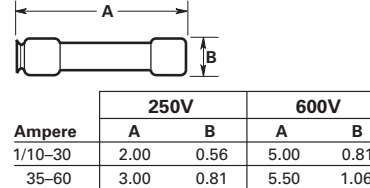


#### Class RK5 and RK1

##### Fusetron®, Low-Peak and Limitron Fuses (250 and 600V)

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.



**Fusetron and Limitron**

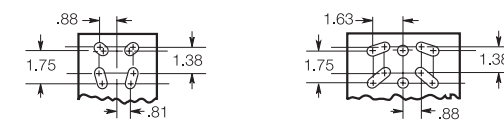
Ampere	250V		600V	
	A	B	A	B
70-100	5.88	1.06	7.88	1.34
110-200	7.13	1.56	9.63	1.84
225-400	8.63	2.06	11.63	2.59
450-600	10.38	2.59	13.38	3.13

**Low-Peak**

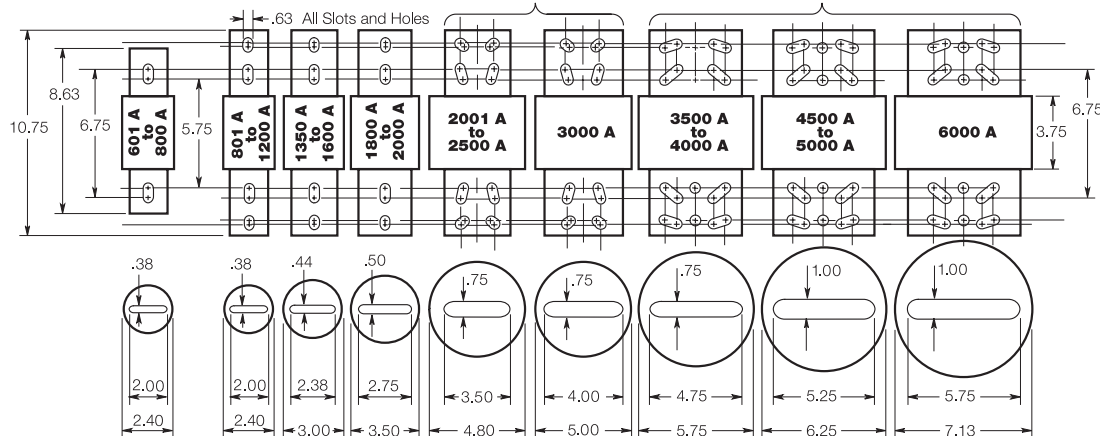
Ampere	250V		600V	
	A	B	A	B
70-100	5.88	1.16	7.88	1.16
110-200	7.13	1.66	9.63	1.66
225-400	8.63	2.38	11.63	2.38
450-600	10.38	2.88	13.38	2.88

#### Class L Low-Peak and Limitron Fuses

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



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

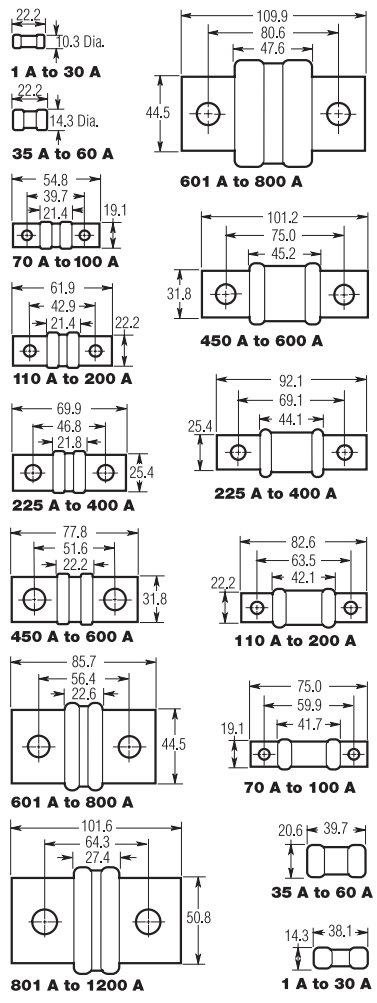


**Note:** Eaton does not supply fuses - information for reference only.

### Typical Fuse Dimensions in Millimeters

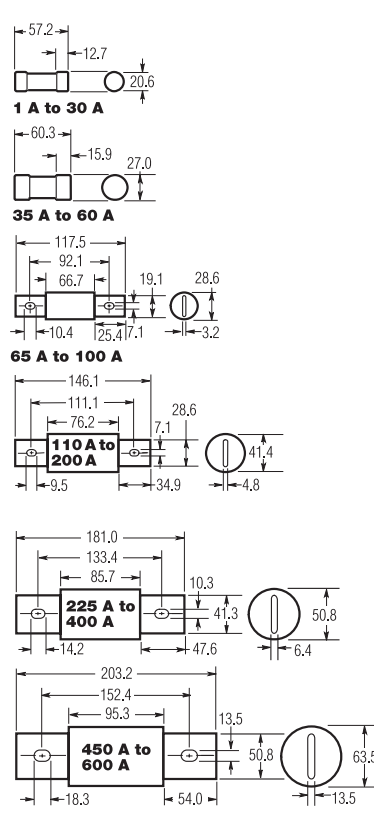
#### Class T

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



#### Class J

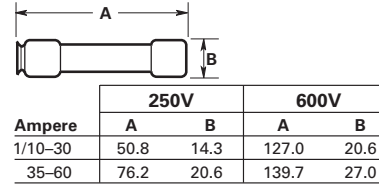
**Low-Peak and Limitron Fuses**  
LPJ and JKS (600V)



#### Class RK5 and RK1

**Fusetron, Low-Peak and Limitron Fuses (250 and 600V)**  
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.



#### Fusetron and Limitron

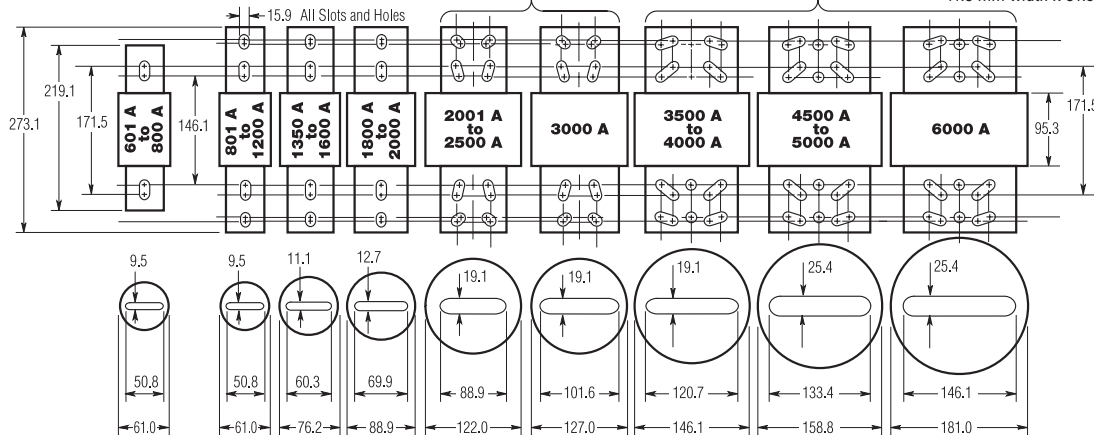
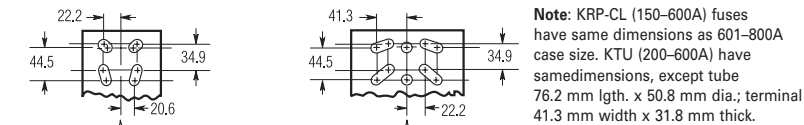
Ampere	250V		600V	
	A	B	A	B
70-100	149.2	26.9	200.0	34.0
110-200	181.0	39.6	244.5	46.7
225-400	219.1	52.3	295.3	65.8
450-600	263.5	65.8	339.7	79.5

#### Low-Peak

Ampere	250V		600V	
	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 (601-4000A) (600V)



**Note:** Eaton does not supply fuses - information for reference only.



**General Duty Short-Circuit Ratings (kA) Using Class “R”, “J” or “T” Fusing where Applicable**

Ampere Rating	NEMA 1	NEMA 3R
30	100 at 240V	100 at 240V
60	100 at 240V	100 at 240V
100	100 at 240V	100 at 240V
200	100 at 240V	100 at 240V
400	100 at 240V	100 at 240V
600	100 at 240V	100 at 240V

**Heavy Duty Short-Circuit Ratings (kA) Using Class “R”, “J”, “L” or “T” Fusing where Applicable**

Ampere Rating	NEMA 1	NEMA 3R	NEMA 12	NEMA 4 & 4X
30	200 at 600V	200 at 600V	200 at 600V	200 at 600V
60	200 at 600V	200 at 600V	200 at 600V	200 at 600V
100	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 600V	200 at 600V
200	200 at 600V	200 at 600V	200 at 600V	200 at 600V
400	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V
600	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V
800 <sup>Ⓢ</sup>	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V
1200 <sup>Ⓢ</sup>	200 at 600V	200 at 600V	200 at 600V	200 at 600V

<sup>Ⓢ</sup> Class “L” fuse connectors supplied as standard for 800A and 1200A.

**Note:**

Class “H” fuse clips supplied as standard for 30-600A.  
Rated at 10,000 rms when using class “H” fuses.

**Double-Throw Short-Circuit Ratings (kA) Using Class “R”, “J” or “T” Fusing where Applicable**

Ampere Rating	NEMA 1	NEMA 3R	NEMA 12	NEMA 4 & 4X
30	100 at 600V	100 at 600V	100 at 600V	100 at 600V
60	100 at 600V	100 at 600V	100 at 600V	100 at 600V
100	100 at 600V	100 at 600V	100 at 600V	100 at 600V
200	100 at 600V	100 at 600V	100 at 600V	100 at 600V
400	100 at 600V	100 at 600V	100 at 600V	100 at 600V
600	100 at 600V	100 at 600V	100 at 600V	100 at 600V
800	100 at 600V	100 at 600V	—	—

**Note:**

Class “H” fuse clips supplied as standard for 30-600A except Class “T” for 400A at 600V and 600A at 240V.  
Rated at 10,000A rms when using Class “H” fuses.  
Safety switch short-circuit ratings are applicable to AC only. For 600 Vdc, 10 kA short-circuit applies.  
Safety switch I<sup>2</sup>t and I<sub>p</sub> values are identical to UL maximum acceptable I<sup>2</sup>t and I<sub>p</sub> values for the corresponding class fuse.

# Switching Devices

## Safety Switches

### Non-Fusible Switches - Short-Circuit Ratings

The circuit breaker or fuse rating is not to exceed the ampere rating of the non-fusible switch. When used on systems with greater than 10 kA short-circuit rating available, the UL Listed short-circuit rating of the non-fusible switch is based upon the switch being used in combination with fuses or moulded-case circuit breaker identified as below.

### Non-Fusible Safety Switches

Eaton Non-Fusible Safety Switch Ampere Rating <sup>①</sup>	Maximum System Voltage AC	Maximum Short-Circuit Rating	Upstream Device <sup>②</sup>	
			Fuse Class	Breaker Frame
30 and 60	600	10,000	H, K	Any circuit breaker
		14,000		FDB
		18,000		FD, EGE
		25,000		FDC, HFD, HFDE, EGH
		200,000		R, T, J, L
100	480	10,000	H, K	Any circuit breaker
		35,000		FDB
		200,000		R, T, J, L
	600	10,000	H, K	Any circuit breaker
		14,000		FDB
		18,000		FD, EGE
		25,000		FDC, HFD, HFDE, EGH
		200,000 <sup>③</sup>	R, T, J, L	
200	480	10,000	H, K	Any circuit breaker
		65,000		HFD, HFDE, HJD, JGH
		200,000		R, T, J, L
	600	10,000	H, K	Any circuit breaker
		14,000		FDB
		18,000		FD, JD, JGE
		25,000		FDC, HFD, HFDE, HJD, JGH
		200,000	R, T, J, L	

① For use on NEMA 1, 3R, 12/3R, and 4X switches.

② Fuse or circuit breaker rating is not to exceed switch rating.

③ NEMA 12, 4/4X only. NEMA 1, 3R are 100 kAIC at 600 Vac.

## Modifications—Flex Centre/Satellites

### Introduction

The Safety Switch Flex Centre is a special facility at the site of our Cleveland, Tennessee plant, that is dedicated to providing customized safety switches that meet customer's challenging applications.

In addition, customized safety switches are available through Eaton's Canadian network of eight regional satellite facilities.

The Eaton Flex Centre and Canadian regional Satellites are solution centres that provide real value:

- A dedicated and knowledgeable engineering/manufacturing/customer service team to meet your needs
- A production facility stocked with a full arsenal of equipment to get the job done
- Local accessibility, eight strategically located satellites in Canada
- Quick turnaround
- For pricing of modification contact Eaton Sales, Satellite or Customer Support (1-800-268-3578)

Description	Suffix	Item
Nameplates	<b>NP</b>	1
Fungus proofing	<b>FP</b>	2
Special paint		3
Lock-on provisions on heavy duty safety switches for most enclosure types	<b>LO</b>	4
Trapped key interlock systems	<b>TK</b>	5
Viewing window	<b>W</b>	6
Solid neutral factory installed for double-throw safety switches	<b>N</b>	7
Switched neutral factory installed for double-throw switches	<b>SN</b>	8
Neutral assemblies for single throw Non-fusible/Fusible switches	<b>N or SN</b>	9
200% neutrals factory installed	<b>200</b>	10
Fuse pullers factory installed	<b>FE</b>	11
Special crimp lug pads factory installed for general duty and heavy duty switches	<b>CK</b>	12
Copper lugs factory installed	<b>CL</b>	13
Custom lug configurations	<b>L</b>	14
Auxiliary contacts factory installed	<b>2 or 3</b>	15
Control pole factory installed	<b>CP</b>	16
Grade 316 stainless	<b>316</b>	17
Left hand operated	<b>LH</b>	18

### 1. Nameplates

Price covers up to three lines of text with a maximum of 25 characters per line. Standard nameplates are laser-engraved plastic and have black letters on a white background. Rotary-engraved lamacoid nameplates are also available. Additional colour combinations and larger nameplates are available upon request. Customer must specify the text when placing an order.

#### Description

Plastic nameplate—up to three lines

Lamacoid nameplate—up to three lines

### 2. Fungus Proofing

All non-metallic components of the switch are coated with a moisture and fungus-resistant varnish. The inhibitor used meets USA military specification: MIL-V-173C for MOISTURE AND FUNGUS-RESISTANT TREATMENT. The treated switch meets USA military specification: MIL-T-152E for MOISTURE AND FUNGUS-RESISTANT TREATMENT OF COMMUNICATIONS, ELECTRONICS AND ASSOCIATED EQUIPMENT. Not UL listed/CSA Certified.

To order, **add Suffix FP** to standard safety switch catalogue number. *Example:* **1HD363FP**.

### 3. Special Paint

Special paint colours are available for order quantities of five or more switches. Custom colour is applied over the standard ANSI-61 gray finish.

Minimum quantity of five of the same colour is required. For quantities less than five, higher ampere ratings, or other colour request, contact Eaton Sales.

To order, add the following **suffix** to the standard catalogue number:

Red - **RED**  
 Orange - **ORG**  
 Yellow - **YEL**  
 Green - **GRN**  
 White - **WHT**  
 Black - **BLK**  
 Tan - **TAN**  
 Brown - **BRN**  
**Example: 1HD361NF-ORG**

### 4. Lock-ON Provision

Available on 30–800A heavy duty and double-throw safety switches. Provision will accept a single lock.

To order, **add Suffix LO** to the standard catalogue number. *Example:* **3HD362LO**.

### 5. Trapped Key Interlock Systems

Available only 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.

Before system construction can begin, the following information must be provided to the Flex Centre:

- User—name, address and telephone number
- Complete coordination (lock scheme) required with order

To order, **add Suffix TK** to the standard catalogue number. *Example:* **12HD363TK**.

### 6. Viewing Window

Viewing window is centred over the switching contacts to provide visual verification of ON/OFF status. Available on 30-1200A heavy duty single and double-throw switches NEMA 12, 4/4X enclosures. To order, **add Suffix W** to the standard catalogue number. *Example:* 12HD362NFW.

**Note:** Effective August 2003 30-100A window switches are provided with a full view cover window. Double-throw window switches are provided with two windows.

### 7. Solid Neutral for Double-Throw Safety Switches

**Solid neutrals** are suitable for non bonded generator applications. For bonded generators **switched neutrals** are required. See item 8.

To order **solid neutral, add Suffix N**.

*Example 1:* **3DT361NFN** non-fusible double-throw, 600V, three phase, 30A switch with factory-installed solid neutral.

### 8. Switched Neutral Double-Throw

Switching neutrals are required for separately derived systems when bonding the neutral of the generator to a grounding system at the generator.

For non-bonded generator application, a solid neutral would apply. See Item 7.

For a switched neutral application order one more pole than number of power phases. *Example:* single phase order 3 pole switch, three phase order 4 pole switch.

Available rating 30-800A.

To order, **add Suffix SN** to the standard safety switch catalogue number.

*Example:* **3DT324NFSN** non-fusible double-throw, 240V, single phase, 200A switch with factory-installed switching neutral.

### 9. Neutral Assemblies Factory Installed for Single-Throw Non-Fusible/Fusible Safety Switches

Available on 200-600A general duty safety switches and 30-1200A heavy duty safety switches.

To order **Solid Neutral, add Suffix N** to the standard safety switch catalogue number.

*Example:* **4HD364NFN** Heavy duty, three-pole, 200A, non-fusible with solid neutral.

To order **Switched Neutral**, order one more pole than number of power phases and **add Suffix SN** to catalogue number.

*Example:* **3HD463SN** 3 PH, four-pole, 600V, 100A with switched neutral factory installed.

### 10. 200% Neutrals Factory Installed

Available on heavy duty 30-600A safety switches.

To order, **add Suffix 200** to standard switch catalogue number.

*Example:* **1HD324N200** Heavy duty, 200A, 240V, 3 phase with solid neutral 200% rated.

### 11. Fuse Pullers Factory Installed

Ampere Rating	Switch Type
30-100	Heavy Duty
200	General Duty, Heavy Duty

To order, **add Suffix FE** to the standard catalogue number.

*Example:* **3HD361FE**



### 12. Special Crimp Lug Pads Factory Installed for General Duty and Heavy Duty Switches (Crimp Lugs are Not Included)

To order **add Suffix CK** to the standard safety switch catalogue number.

Ampere Rating
400–600, GD
400–800, HD

**Note:** Heavy duty Type HD switches, 30–200A are field adaptable to accept crimp lugs, simply remove the box lugs.

### 13. Copper Lugs Factory Installed

Ampere Rating	Switch Type
30–100	HD, DT
200	HD
400	GD, HD
600	GD, HD

To order, **add Suffix CL** to the standard safety switch catalogue number.

*Example:* **1HD361CL** heavy duty, three-pole, 30A fusible switch at 600V with copper lugs factory installed.

### 14. Custom Lug Configurations

Customer-specified lug arrangements are available on heavy duty and double-throw safety switches. Contact Eaton.

### 15. Auxiliary Contacts Factory Installed Provide Early-Make/Early-Break Operation

**General Duty Switches 200–600A, Heavy Duty 30–1200A and Double-Throw Switches 30–800A**

Ampere Rating	Description
30–1200	1NO/1NC 2NO/2NC

To order 1NO/1NC contacts, **add Suffix 2** to the standard safety switch catalogue number.

To order 2NO/2NC contacts, **add Suffix 3** to the standard safety switch catalogue number.

*Example:* **1HD4232**

Heavy duty, four-pole, 100A fusible switch at 240V with factory-installed 1NO/1NC contacts.

*Example:* **1DT324NF22** double-throw, three-pole, 200A non-fusible switch at 240V with two factory-installed contacts (one installed in the primary switch ON position and one installed in the secondary switch ON position).

### 16. Control Pole Factory Installed Provides Late-Make/Early-Break Operation

The DS16CP control pole (1NO aux contact). Approved for use with elevating devices, provides one normally open contact, late-make, early-break operation. 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.

Ampere Rating	Switch Type
30–1200	HD
30–200	DT
400–600	GD

To order, **add Suffix CP** to the standard safety switch catalogue number.

*Example:* **1HD364CP** heavy duty, three-pole, 200A fusible switch at 600V with factory-installed control pole.

### 17. Grade 316 Stainless Enclosures

Standard stainless enclosures are made from grade 304. For a higher degree of stainless, grade 316 can be specified.

To order, **add -316** to **Suffix** of **4HD** standard catalogue number.

*Example:* **4HD362-316** or **>200A 4HD365SS-316**.

### 18. Left-Hand Operated Safety Switch

Available from 30-200A Heavy Duty, for applications that require an operating handle and door opening of the left side of the enclosure.

To order, **add Suffix LH** to the standard safety switch catalogue number.

*Example:* **1HD364NFLH** Heavy Duty 3 pole, 600V, 200A, non-fusible, left hand operated.

### Additional Safety Switch Flex/Satellite Centre Design Offerings

- Left-hand design (30–200A)
- Cover-mounted status lights and selector switches
- Integrated:
  - Transient Voltage Surge Suppression (TVSS)
  - Current transformers
- Double-throw receptacle switches
- 200% neutrals
- Seam-welded stainless steel
- Gang-operated kits:
  - Mechanically interlocks two or three separate switches
- Integrated wattmeter
- Custom enclosures
- Double-throw switches with windows
- 316 grade stainless steel
- Breather/drains
- Voltage/phase monitor



### Air Condition Disconnects



### Air Condition Disconnects

#### Application Description

Typically used as an outdoor motor disconnect for 240V residential and 600V commercial heating, ventilating and air conditioning applications. Per Section 28-604(5) CEC Part 1, "motor disconnecting means for air-conditioning and refrigeration equipment shall be located within sight of and within 3m of the equipment".

#### Product Description

240 Vac single phase 30A, 60A, and 600 Vac three phase 30A, 40A, 60A, 80A, horsepower rated motor disconnects. Rugged 3R outdoor rated padlockable metallic enclosure, ANSI 61 (light grey) electrocoat finish. CSA certified as a motor disconnect.

#### Single Phase 2 Wire 240 Vac 30, 60A.

- 240 Vac at 10 kA rms short-circuit rating when protected by 60A fuse or breaker
- Available in four designs.
- Standard pullout, fused, and non fusible.
- Moulded case switch.
- For additional safe power source, 15A GFI receptacle c/w pullout.
- Swing-up cover remains in place when in the open position. Cover can be easily removed for wiring and mounting. Cover snaps into place and no screws required. Includes provision for padlocking.

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#### Three Phase 3 Wire 600 Vac, 30A, 40A, 60A, 80A non-fusible motor disconnect

- 600 Vac at 65 kA rms short circuit rating when protected by J fusing. Applies to 'B' series, effective March 2011, non 'B' series rated 10 kA
- 600V unit complies with CEC rule 28-602(3)(b) and are labelled "suitable for motor disconnect." cCSAus approved
- For ease of wiring, din rail mounted removable 600V disconnect
- Versatile cable entry-bottom, sides or back. Both 240 Vac and 600 Vac

#### Standards and Certifications

- 240V meets C22.2 No.4
- 600V meets C22.2 No.14, "suitable for motor disconnect"
- See page 18 for specific catalogue number certifications



# Switching Devices

## Safety Switches

### Product Selection

3GAC222NF

#### 240 Vac HVAC Air Condition Disconnect



System	Ampere Rating	Maximum Horsepower Ratings <sup>①</sup>				600V	NEMA 3R Catalogue Number
		Single-Phase AC		Three-Phase AC			
		120V	240V	240V	480V		
<b>Two Pole, Two-Wire - 240 Vac - Fusible - Pullout design<sup>②</sup></b>							
	30	—	3	—	—	—	3GAC221 <sup>②③</sup>
	60	—	10	—	—	—	3GAC222 <sup>②③</sup>

4GAC222NF



<b>Two Pole, Two-Wire - 240 Vac - Non Fusible - Pullout design<sup>②</sup></b>							
	60	—	10	—	—	—	3GAC222NF <sup>②③</sup>
	60	—	10	—	—	—	3GAC222NFGF <sup>②③④</sup>

#### Two Pole, Two-Wire - 240 Vac - Non Fusible - Pullout design<sup>②</sup> Non Metallic

	60	—	10	—	—	—	4GAC222NF <sup>②③</sup>
--	----	---	----	---	---	---	-------------------------

DPB222R



<b>Two Pole, Two-Wire - 240 Vac - Non Fusible - Moulded Case Switch<sup>⑤</sup></b>							
	60	—	10	—	—	—	DPB222R <sup>⑤⑥</sup>

3GAC362NFB

#### 600 Vac HVAC Air Condition Disconnect



System	Ampere Rating	Maximum Horsepower Ratings <sup>①</sup>				600V	NEMA 3R Catalogue Number
		Single-Phase AC		Three-Phase AC			
		120V	240V	240V	480V		
<b>Three Pole, Three-Wire - 600 Vac - Non Fusible - Toggle design</b>							
	30	—	3	7.5	15	20	3GAC361NFB <sup>⑦⑧</sup>
	40	—	3	7.5	20	25	3GAC3640NFB <sup>⑦⑧</sup>
	60	—	7.5	15	30	30	3GAC362NFB <sup>⑦⑧</sup>
	80	—	10	20	40	40	3GAC3680NFB <sup>⑦⑧</sup>

<sup>①</sup> Hp ratings apply when time delay fuses used.

<sup>②</sup> Replacement pullout head 96-3258-4.

<sup>③</sup> cUL listed.

<sup>④</sup> c/w factory installed 15A GFI receptacle.

<sup>⑤</sup> c/w factory installed Moulded Case Switch.

<sup>⑥</sup> CSA certified

<sup>⑦</sup> "B" series effective March 2011, 600V @ 65kA rms when protected by J fuse on line side, otherwise 10ka rms.

<sup>⑧</sup> cCSAus (approved by CSA to CSA and UL standards).

#### Note:

Fusible disconnect not approved for service entrance.



### Technical Data and Specifications for Air Condition Disconnects

#### Short-Circuit Ratings (kA) Terminal Capacity 240 Vac Single Phase Pullout and Moulded Case Switch Design

Ampere Rating	Short-Circuit Withstand/Voltage	Upstream Protection	Terminal Capacity
30	10 at 240V	30A max Fuse or Breaker <sup>①</sup>	#14 - #3 Cu/Al
60	10 at 240V	60A max Fuse or Breaker <sup>①</sup>	#14 - #3 Cu/Al

① Fuse or Circuit Breaker utilized must have a minimum 10 kA short-circuit rating

#### 600 Vac Three Phase Toggle Design

Ampere Rating	Short-Circuit Withstand/Voltage	Upstream Protection	Terminal Capacity
30	10 at 600V	60A max J Fuse	#14 - #4
30	65 at 600V	30A max J Fuse	#14 - #4
40	10 at 600V	60A max J Fuse	#14 - #4
40	65 at 600V	30A max J Fuse	#14 - #4
60	50 at 600V	100A max J Fuse	#14 - #1
60	65 at 600V	60A max J Fuse	#14 - #1
80	50 at 600V	100A max J Fuse	#14 - #1
80	65 at 600V	60A max J Fuse	#14 - #1

### Dimensions

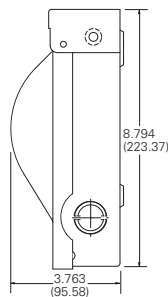
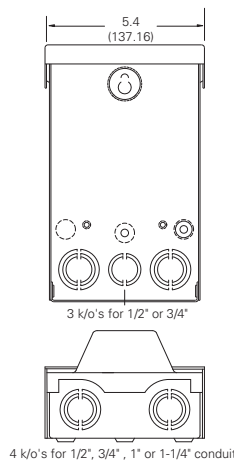
Approximate Dimensions in inches (mm)

#### 240 Vac Single Phase - 2 Wire

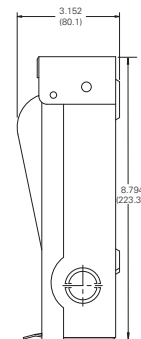
Ampere Rating	Disconnect Type	Height (H)	Width (W)	Depth (D)	Weight lbs(kg)
30	Fusible	8.79 (223.4)	5.4 (137.16)	3.152 (80.1)	2.7 (1.23)
60	Fusible/ Non fusible	8.79 (223.4)	5.4 (137.16)	3.152 (80.1)	2.7 (1.23)
60	Non fusible with moulded case switch	8.79 (223.4)	5.4 (137.16)	3.75 (95.25)	3.4 (1.5)
60	Non fusible with 15A GFI receptacle	11.63 (295.4)	6.63 (168.4)	4.44 (112.8)	8 (3.6)

#### 600 Vac Three Phase - 3 Wire

Ampere Rating	Disconnect Type	Height (H)	Width (W)	Depth (D)	Weight lbs(kg)
30	Non fusible toggle	8.79 (223.4)	5.4 (137.16)	3.75 (95.25)	3.8 (1.7)
40	Non fusible toggle	8.79 (223.4)	5.4 (137.16)	3.75 (95.25)	3.8 (1.7)
60	Non fusible toggle	8.79 (223.4)	5.4 (137.16)	3.75 (95.25)	4 (1.8)
80	Non fusible toggle	8.79 (223.4)	5.4 (137.16)	3.75 (95.25)	4 (1.8)



DPB222R  
3GAC361NFB  
3GAC3640NFB  
3GAC362NFB  
3GAC3680NFB



3GAC221  
3GAC222  
3GAC222NF



### General Duty Safety Switch - Cartridge Fuse Design



### General Duty

#### Application Description

For residential and commercial applications. Suitable for light-duty motor circuits and service entrance.

#### Product Description

- 30-60A 120/240V, fusible cartridge type and non fusible
- Fusible and non-fusible switches. Single-pole S/N through four-wire; 120/240, and 240 Vac
- Cartridge type general duty switches are certified for use on low voltage < 60 Vdc circuits
- Solid neutral standard on all fusible general duty switches
- Suitable for service entrance application when equipped with factory-installed neutral assembly
- NEMA 1 and 3R enclosures

- Fusible and non-fusible switches are 100% load break and 100% load make rated
- The continuous load current of fusible switches is not to exceed 80% of the rating of fuses employed in other than motor circuits. Non-fusible switches are 100% continuous load rated
- 200-600A features K-Series design
- Horsepower rated
- Where applicable with Class R, J, T fuses, switches may be used on systems capable of delivering 100,000A rms symmetrical
- Bolt-on hub provision. Provided for general duty switches in a NEMA 3R enclosure.

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#### General Duty Features (Cartridge Fuse/Non-Fusible type)

- Ample wire bending space provides for easier installation
- Visible double-break quick-make, quick-break rotary blade mechanism
- Side opening door on all enclosures
- Mechanically interlocked cover to prevent easy access when the switch is in the ON position
- Clearly visible and accessible neutral where applicable
- Visible ON/OFF indication
- Double padlocking capability on 30-100A
- Triple padlocking capability on 200-600A
- Additional door locking capability
- Fusible suitable for service entrance application when equipped with

factory-installed neutral assembly

#### Standards and Certifications

- CSA certified File No. 69743
- Meets C22.2 No.4 for enclosed switches
- ISO 9001:2008

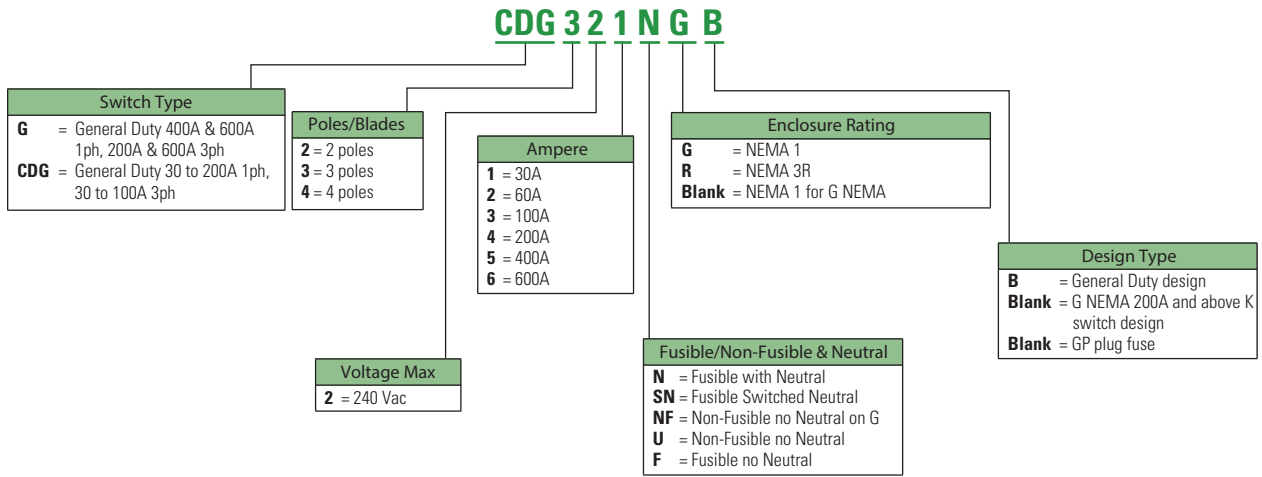


# Switching Devices

## Safety Switches

### Catalog Numbering System

#### General Duty



**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers. For more detailed catalogue part numbers, see Product Selection Guide

### CDG321NRB



### 120/240 Vac General Duty, Fusible, Single-Throw, continued

System	Ampere Rating	Fuse Type Provision	Maximum Horsepower Ratings <sup>①</sup>			DC 250V	NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number
			Single-Phase AC 120V	Single-Phase AC 240V	Three-Phase AC 240V			
<b>Cartridge Type— Three-Wire (Two Blades, Two Fuses, S/N) — 120/240 Vac</b>								
	30	H	—	1-1/2-3	3-7-1/2	—	CDG221NGB	CDG221NRB
	60	H	—	3-10	7-1/2-15	—	CDG222NGB	CDG222NRB
	100	H	—	7-1/2-15	15-30	—	CDG223NGB	CDG223NRB
	200	H	—	15	25-60	—	CDG224NGK	CDG224NRK
	400	H	—	—	50-125	50	G225N	3G225N
	600	H	—	—	75-200	—	G226N	3G226N
<b>Cartridge Type— Four-Wire (Three Blades, Three Fuses, S/N) — 120/240 Vac</b>								
	30	H	—	1-1/2-3	3-7-1/2	—	CDG321NGB	CDG321NRB
	60	H	—	3-10	7-1/2-15	—	CDG322NGB	CDG322NRB
	100	H	—	7-1/2-15	15-30	—	CDG323NGB	CDG323NRB
	200	H	—	15	25-60	—	G324N	3G324N
	400	H	—	—	50-125	—	G325N	3G325N
	600	H	—	—	75-200	—	G326N	3G326N

### CDG322URB



### 120/240 Vac General Duty, Non-Fusible, Single-Throw

System	Ampere Rating	Maximum Horsepower Ratings <sup>①</sup>			DC 250V	NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number
		Single-Phase AC 120V	Single-Phase AC 240V	Three-Phase AC 240V			
<b>Two-Pole, Two-Wire (Two Blades) — 240 Vac</b>							
	30	2	3	—	—	CDG221UGB <sup>②</sup>	CDG221URB <sup>②</sup>
	60	3	10	—	—	CDG222UGB <sup>②</sup>	CDG222URB <sup>②</sup>
	100	—	15	—	—	— <sup>②</sup>	— <sup>②</sup>
	200	—	—	—	—	— <sup>②</sup>	— <sup>②</sup>
<b>Three-Pole, Three-Wire (Three Blades) — 240 Vac</b>							
	30	2	3	7-1/2	—	CDG321UGB	CDG321URB
	60	3	10	15	—	CDG322UGB	CDG322URB
	100	—	15	30	—	CDG323UGB	CDG323URB
	200	—	15	60	—	G324NF	3G324NF
	400	—	—	125	—	G325NF	3G325NF
	600	—	—	200	—	G326NF	3G326NF

<sup>①</sup> Maximum hp ratings apply only when dual element time delay fuses are used.

<sup>②</sup> Use three-wire catalogue numbers below.

#### Note:

All general duty safety switches are individually packaged.

Accessories are limited in scope on general duty safety switches. See **Page 4 and 5** for selection. Clear line shields are available as an accessory on 200–600A general duty switches.

For “J” fusing on General Duty 30-200A use Heavy Duty switch no modification available.

For “J” fusing on General Duty 400-600A, field modification required.

400A, reposition loadside fuse block to accept ‘J’ fuse.

600A, fuse kit adapter for ‘J’ fusing included with switch. For adaptation to “R” and “T” fusing see accessory page 4.

### Technical Data and Specifications for General Duty Switches

#### Short-Circuit Ratings (kA) Using Class “R”, “J” or “T” Fusing Where Applicable

Ampere Rating	NEMA 1	NEMA 3R
30	100 at 240V	100 at 240V
60	100 at 240V	100 at 240V
100	100 at 240V	100 at 240V
200	100 at 240V	100 at 240V
400	100 at 240V	100 at 240V
600	100 at 240V	100 at 240V

#### Dimensions

Approximate Dimensions in Inches (mm)

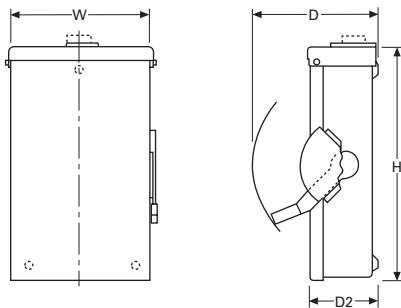
#### General Duty, Plug Fuse Type 120V, 120/240V, Single-, Two-Pole Solid Neutral, Single-Throw<sup>2</sup>

Ampere Rating	Height	Width	Depth	Weight Lbs/(kg)
30	6.88 (174.8)	4.94 (125.5)	3.44 (87.4)	2(1.9)

#### General Duty, Non-Fusible, 240V, Three-Pole, Single-Throw<sup>2</sup>

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 1</b>					
30	6.38 (162.1)	10.69 (271.5)	6.88 (174.8)	3.75 (95.2)	6 (2.724)
60	8.69 (220.7)	14.19 (360.4)	7.38 (187.5)	4.21 (106.9)	9 (4.086)
100	9.13 (231.9)	18.81 (477.8)	7.38 (187.5)	4.23 (107.4)	12 (5.448)
200	16.00 (406.4)	25.25 (641.4)	11.25 (285.8)	6.14 (156.0)	48 (21.792)
400	23.00 (584.2)	44.75 (1136.7)	12.63 (320.8)	7.27 (184.7)	100 (45.4)
600	24.00 (609.6)	52.25 (1327.2)	14.25 (362.0)	8.95 (227.3)	130 (59.02)
<b>NEMA 3R</b>					
30	6.38 (162.1)	10.81 (274.6)	6.88 (174.8)	3.75 (95.2)	6 (2.724)
60	8.69 (220.7)	14.38 (365.3)	7.38 (187.5)	4.21 (106.9)	9 (4.086)
100	9.13 (231.9)	19.25 (489.0)	7.38 (187.5)	4.23 (107.4)	12 (5.448)
200	16.00 (406.4)	25.50 (647.7)	11.25 (285.8)	6.14 (156.0)	55 (24.97)
400	23.00 (584.2)	45.19 (1147.8)	12.63 (320.8)	7.27 (184.7)	105 (47.67)
600	24.00 (609.6)	52.70 (1338.6)	14.25 (362.0)	8.95 (227.3)	135 (61.29)

#### NEMA 1, 3R 30–100A General Duty Non-Fusible and Fusible Single-Throw<sup>2</sup>



<sup>1</sup> Dimensions are for estimating purposes only.  
<sup>2</sup> Figure is not applicable to plug fuse design.

#### Terminal Capacity for General Duty 240V

Ampere	Line/Load (per phase)	Ground	Neutral Catalogue #	Neutral Terminal Capacity
30 (GP type)	#14 - #8	#14 - 4	—	#14 - #8
30	#14 - #6	#14 - 4	<b>DG030NB</b>	3x #14 - #4
60	#14 - 1/0	#14 - 4	<b>DG100NB</b>	3x #14 - 1/0
100	#14 - 1/0	#14 - 4	<b>DG100NB</b>	3x #14 - 1/0
200	#6 - 250mcm	#14 - 4	<b>DG200NK</b>	2x #6 - 250mcm <b>AND</b> 2x #14 - #2
400	(2) 1/0 - (2)300mcm OR (1) 1/0 - 750mcm	#6 - 200mcm	<b>DS400NK</b>	2x 1/0 - 750mcm <b>OR</b> (2) 1/0 - (2)300mcm <b>AND</b> 3x #6 - 250mcm
600	(1) #2 - 600mcm AND (1) 1/0 - 750mcm	#6 - 200mcm	<b>DS600NK</b>	2 x 1/0 - (1)750mcm <b>OR</b> 1/0 - (2) 300mcm <b>AND</b> 1 x #2 - 600mcm <b>AND</b> 3 x #6 - 250mcm

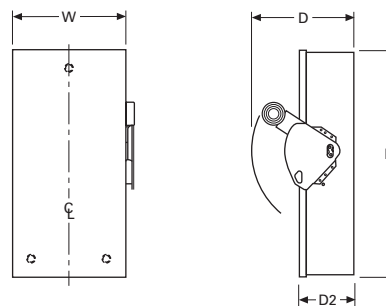
#### Note:

Use neutral catalogue number when neutral not included with switch  
 All terminals are rating Al/Cu unless otherwise noted  
 For optional ground lug kits see page 4

#### General Duty, Fusible (cartridge type), 240V, Three-Pole Solid Neutral, Single-Throw<sup>1</sup>

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 1</b>					
30	6.38 (162.1)	10.69 (271.5)	6.88 (174.8)	3.75 (95.2)	6 (2.724)
60	8.69 (220.7)	14.19 (360.4)	7.38 (187.5)	4.21 (106.9)	10 (4.54)
100	9.13 (231.9)	18.81 (477.8)	7.38 (187.5)	4.23 (107.4)	14 (6.356)
200	16.00 (406.4)	24.75 (628.7)	11.25 (285.8)	6.14 (156.0)	48 (21.792)
400	23.00 (584.2)	44.75 (1136.7)	12.63 (320.8)	7.27 (184.7)	110 (49.94)
600	24.00 (609.6)	52.25 (1327.2)	14.25 (362.0)	8.95 (227.3)	145 (65.83)
<b>NEMA 3R</b>					
30	6.38 (162.1)	10.81 (274.6)	6.88 (174.8)	3.75 (95.2)	6 (2.724)
60	8.69 (220.7)	14.38 (365.3)	7.38 (187.5)	4.21 (106.9)	10 (4.54)
100	9.13 (231.9)	19.25 (489.0)	7.38 (187.5)	4.23 (107.4)	14 (6.356)
200	16.00 (406.4)	25.50 (647.7)	11.25 (285.8)	6.14 (156.0)	55 (24.97)
400	23.00 (584.2)	45.19 (1147.8)	12.63 (320.8)	7.27 (184.7)	115 (52.21)
600	24.00 (609.6)	52.70 (1338.6)	14.25 (362.0)	8.95 (227.3)	150 (68.1)

#### NEMA 1, 3R 200–600A General Duty Non-Fusible and Fusible Single-Throw





Heavy Duty Safety Switch



### Heavy Duty

#### Application Description

For light to heavy commercial and industrial applications. Main service entrance, branch and motor circuit protection, disconnecting or transferring to alternate power source. Where reliable performance and service continuity are critical.

#### Product Description

- 30–1200A
- 600 Vac, 600 Vdc maximum
- Horsepower rated
- Fusible and non-fusible switches are 100% load break and 100% load make rated
- The continuous load current of fusible switches is not to exceed 80% of the rating of fuses employed in other than motor circuits. Non-fusible switches are 100%

- continuous load rated
- Fusible switches suitable for service entrance application when equipped with factory-installed neutral assembly
- Enclosures, NEMA 1, 3R, 12/3R, 4 are painted steel ANSI 61 light grey electrocoat. and 4X are grade 304 stainless steel, grade 316 available upon request.
- For factory modifications, refer to **Pages 13** through **15**

#### 240 Vac Heavy Duty, Fusible, Single-Throw

- 30–1200A
- Horsepower rated
- Fusible switches, suitable for service entrance application when equipped with factory-installed neutral assembly, except

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- 4 pole switches
- For accessories refer to **Pages 4 and 5**

#### 600 Vac Heavy Duty, Fusible, Single-Throw

- 30–1200A
- Horsepower rated
- Suitable for service entrance application when equipped with factory-installed neutral assembly, except 4 pole switches
- **Note:** Must use suitable ground fault protection at 1200A for service entrance.

#### 600 Vac Heavy Duty, Non-Fusible, Single-Throw

- 30–1200A
- Horsepower rated
- Not suitable for service entrance per CEC

# Switching Devices

## Safety Switches

### Features, Benefits and Functions

- Visible double-break quick-make, quick-break rotary blade mechanism. Two points of contact provide a positive open and close, easier operation, and also help prevent contact burning for longer contact life



**Visible Double-Break Rotary Blade Mechanism**

- Triple padlocking capability. Personnel safety feature since the large hasp can accommodate up to three 3/8-inch (9.5 mm) shank locks. Cabinet door can be further padlocked at the top and bottom

- Interlocking mechanism. Door cannot be opened when the handle is in the ON position. Built-in defeater mechanism provides for user access when necessary

- Deionizing arc chutes; arc chutes confine and suppress the arcs produced by opening contacts under load

- Mechanically interlocked cover to prevent easy access when the switch is in the ON position

- Clear line shield with probe holes

- Clearly visible palm fitting red handle

- Tangential knockouts on NEMA 1 and NEMA 3R enclosures through 200A

- Built-in fuse pullers on NEMA 4X and NEMA 12 enclosures through 200A

- Additional door locking capability

- Complete accessory and renewal parts data shown on inner door label.

- 30–1200A NEMA 12 designs convertible to NEMA 3R by opening factory-installed drain hole

- 30–1200A switches are seismic qualified and exceed the requirements of the Uniform Building Code (UBC) and California Code Title 24

- Two points of contact provide a positive open and close, easier operation, and also help prevent contact burning for longer contact life

- Protects against accidental contact with energized parts. Probe holes enable the user to test if the line side is energized without removing the shield.



**Clear Line Shield**

- Provide easy removal of fuses



**Built-In Fuse Pullers (Type 12 and 4X 30–200A)**

- The position (ON or OFF) can be clearly seen from a distance and the length provides for easy operation



**Clearly Visible Handle**

- Personnel safety feature since the large hasp can accommodate up to three 3/8-inch (9.5 mm) shank locks



**Triple Padlocking Capability**

- Cabinet door can be further padlocked at the top and bottom as applicable



**Additional Locking Capability**

- Door cannot be opened when the handle is in the ON position. Front and side operable defeater mechanism provides for user access when necessary on single-throw switches



**Interlocking Mechanism**

- An ample number are provided on the top, bottom and sides of both NEMA 1 and 3R enclosures through 200A



**Tangential Knockouts**

- For switches in a NEMA 3R, 30–200A. Use a Myers type hub for all others



**Bolt-On Hub Kits**

- NEMA 12 and 4X 30–100A have padlockable suitcase latches vs screw type latches.



**Padlockable Suitcase Latches**

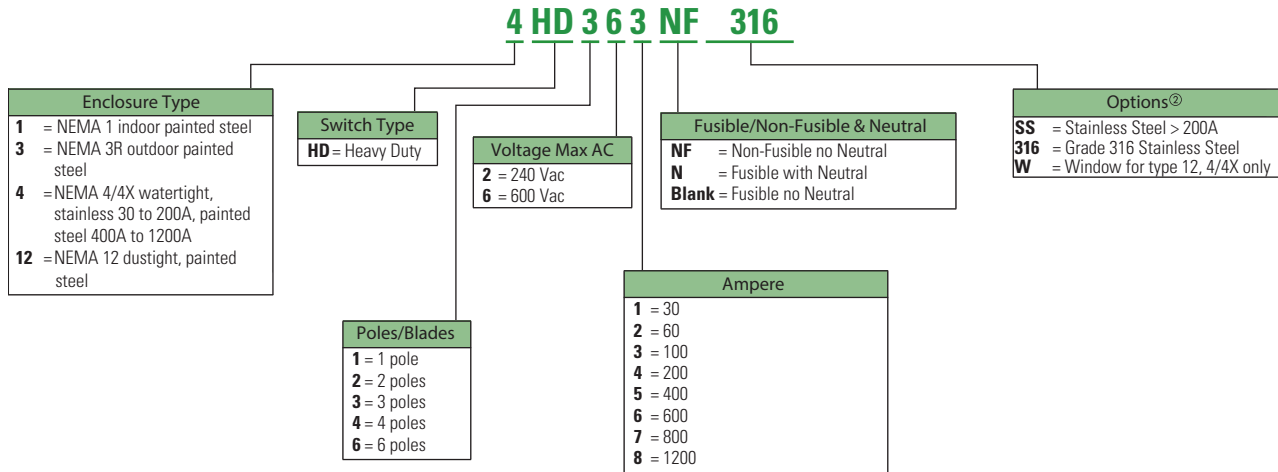
### Standards and Certifications

- CSA Certified File No. 69743
- Meets C22.2 No. 4 for enclosed switches
- Refer to page 2 for additional certifications
- ISO 9001:2008



### Catalog Numbering System

#### Heavy Duty



① Always verify the number of poles and wires required since catalogue numbers may appear in multiple tables.

② See **Pages 13** through **15** for additional Flex Centre options.

#### Note:

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Safety Switches

### Product Selection

3HD221N



### 240 Vac Heavy Duty, Fusible, Single-Throw, Fusible—NEMA 1, 3R

System	Ampere Rating	Fuse Type Provision	Maximum Horsepower Ratings				DC 250V	NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number
			AC		Time Delay				
			Standard Fuse Single-Phase	Three-Phase	Single-Phase	Three-Phase			
<b>Three-Wire (Two Blades, Two Fuses, S/N) — 240 Vac, 250 Vdc</b>									
	30	H	1-1/2	3	3	7-1/2	5	1HD221N	3HD221N
	60	H	3	7-1/2	10	15	10	1HD222N	3HD222N
	100	H	7-1/2	15	15	30	20	1HD223N	3HD223N
	200	H	15	25	15	60	40	1HD224N	3HD224N
	400	H	—	50	—	125	50	1HD225N	3HD225N
	600	H	—	75	—	200	—	1HD226N	3HD226N
	800	L	—	100	—	—	—	1HD227N	3HD227N
<b>Four-Wire (Three Blades, Three Fuses, S/N) — 240 Vac, 250 Vdc</b>									
	30	H	1-1/2	3	3	7-1/2	5	1HD321N	3HD321N
	60	H	3	7-1/2	10	15	10	1HD322N	3HD322N
	100	H	7-1/2	15	15	30	20	1HD323N	3HD323N
	200	H	15	25	15	60	40	1HD324N	3HD324N
	400	H	—	50	—	125	50	1HD325N	3HD325N
	600	H	—	75	—	200	—	1HD326N	3HD326N
	800	L	—	100	—	250	—	1HD327N	3HD327N
	1200	L	—	—	—	—	—	1HD328N	3HD328N
<b>Four-Pole — 240 Vac, 250 Vdc</b>									
	30	H	3	3	10	7-1/2	5	1HD421	①
	60	H	7-1/2	7-1/2	20	15	10	1HD422	①
	100	H	15	15	30	30	20	1HD423	①
	200	H	30	25	50	60	40	1HD424	①
	400	H	50	50	—	125	50	1HD425	①②
	600	H	—	75	—	200	—	1HD426	①③

① NEMA 12 enclosures (30–1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

② Contact Customer Support (1-800-268-3578) for availability of this product.

③ NEMA 4X stainless steel enclosure.

④ NEMA 4 painted steel enclosure.

#### Note:

For 'J' Fusing on 240V Heavy Duty Switches Field Modification Required.

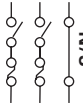
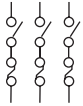
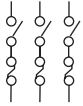
30-60A not available.

100-400A, reposition loadside fuse block to accept 'J' fuse.

600A adapter kit included with switch.

For 'R' fuse rejector adapter kit and 'T' fusing see page 4 accessory application options.

### 240 Vac Heavy Duty, Fusible, Single-Throw, Fusible—NEMA 12/3R<sup>①</sup>, 4X<sup>③</sup>, and 4<sup>④</sup>

System	Ampere Rating	Fuse Type Provision	Maximum Horsepower Ratings				DC 250V	NEMA 12/3R <sup>①</sup> Enclosure Dust-Tight Catalogue Number	NEMA 4X and 4 <sup>③④</sup> Enclosure Watertight Catalogue Number
			AC Standard Fuse Single-Phase	Three-Phase	Time Delay Single-Phase	Three-Phase			
<b>Three-Wire (Two Blades, Two Fuses, S/N) — 240 Vac, 250 Vdc</b>									
	30	H	1-1/2	3	3	7-1/2	5	12HD221N <sup>①</sup>	4HD221N <sup>③</sup>
	60	H	3	7-1/2	10	15	10	12HD222N <sup>①</sup>	4HD222N <sup>③</sup>
	100	H	7-1/2	15	15	30	20	12HD223N <sup>①</sup>	4HD223N <sup>③</sup>
	200	H	15	25	15	60	40	12HD224N <sup>①</sup>	4HD224N <sup>③</sup>
	400	H	—	50	—	125	50	12HD225N <sup>①</sup>	4HD225NSS <sup>③</sup>
	400	H	—	50	—	125	50	—	4HD225N <sup>④</sup>
	600	H	—	75	—	200	—	12HD226N <sup>①</sup>	4HD226NSS <sup>③</sup>
	600	H	—	75	—	200	—	—	4HD226N <sup>④</sup>
	800	L	—	100	—	250	—	12HD227N <sup>①</sup>	4HD227NSS <sup>③</sup>
	800	L	—	100	—	250	—	—	4HD227N <sup>④</sup>
<b>Four-Wire (Three Blades, Three Fuses, S/N) — 240 Vac, 250 Vdc</b>									
	30	H	1-1/2	3	3	7-1/2	5	12HD321N <sup>①</sup>	4HD321N <sup>③</sup>
	60	H	3	7-1/2	10	15	10	12HD322N <sup>①</sup>	4HD322N <sup>③</sup>
	100	H	7-1/2	15	15	30	20	12HD323N <sup>①</sup>	4HD323N <sup>③</sup>
	200	H	15	25	15	60	40	12HD324N <sup>①</sup>	4HD324N <sup>③</sup>
	400	H	—	50	—	125	50	12HD325N <sup>①</sup>	4HD325NSS <sup>③</sup>
	400	H	—	50	—	125	50	—	4HD325N <sup>④</sup>
	600	H	—	75	—	200	—	12HD326N <sup>①</sup>	4HD326NSS <sup>③</sup>
	600	H	—	75	—	200	—	—	4HD326N <sup>④</sup>
	800	L	—	100	—	250	—	12HD327N <sup>①</sup>	4HD327NSS <sup>③</sup>
	800	L	—	100	—	250	—	—	4HD327N <sup>④</sup>
	1200	L	—	—	—	—	—	12HD328N <sup>①</sup>	4HD328NSS <sup>③</sup>
	1200	L	—	—	—	—	—	—	4HD328N <sup>④</sup>
<b>Four-Pole — 240 Vac, 250 Vdc</b>									
	30	H	3	3	10	7-1/2	5	12HD421 <sup>①</sup>	②
	60	H	7-1/2	7-1/2	20	15	10	12HD422 <sup>①</sup>	②
	100	H	15	15	30	30	20	12HD423 <sup>①</sup>	②
	200	H	30	25	50	60	40	12HD424 <sup>①</sup>	②
	400	H	50	50	—	125	50	②	②
	400	H	50	50	—	125	50	②	②
	600	H	—	75	—	200	—	②	②
	600	H	—	75	—	200	—	②	②

① NEMA 12 enclosures (30–1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

② Contact Customer Support (1-800-268-3578) for availability of this product.

③ NEMA 4X stainless steel enclosure.

④ NEMA 4 painted steel enclosure.

#### Note:

For 'J' Fusing on 240V Heavy Duty Switches Field Modification Required.  
30-60A not available.

100-400A, reposition loadside fuse block to accept 'J' fuse.

600A adapter kit included with switch.

For 'R' fuse rejector adapter kit and 'T' fusing see page 4 accessory application options.


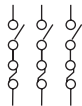
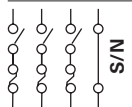
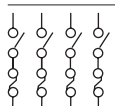
# Switching Devices

## Safety Switches

3HD362N



### 600 Vac Heavy Duty, Fusible, Single-Throw, 277/480–600V — NEMA 1, 3R

System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses						NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number
			Single-Phase AC		Three-Phase AC		DC			
			480V	600V	480V	600V	250V	600V		
<b>Two-Pole—480 Vac—600 Vac or Vdc<sup>②</sup> (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	H	7-1/2	10	—	—	—	15	1HD261	3HD261
	60	H	20	25	—	—	—	25	1HD262	3HD262
	100	H	30	40	—	—	20	25	1HD263	3HD263
	200	H	50	50	—	—	—	50	1HD264	3HD264
	400	H	—	—	—	—	50	—	1HD265	3HD265
	600	H	—	—	—	—	—	—	1HD266	3HD266
	800	L	—	—	—	—	—	—	1HD267 <sup>②</sup>	3HD267 <sup>②</sup>
	1200	L	—	—	—	—	—	—	③	③
<b>Three-Pole—480 Vac—600 Vac, 250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	H	7-1/2	10	15	20	—	—	1HD361	3HD361
	60	H	20	25	30	50	—	—	1HD362	3HD362
	100	H	30	40	60	75	—	—	1HD363	3HD363
	200	H	50	50	125	150	—	—	1HD364	3HD364
	400	H	—	—	250	350	—	—	1HD365	3HD365
	600	H	—	—	400	500	—	—	1HD366	3HD366
	800	L	—	—	500	500	—	—	1HD367	3HD367
	1200	L	—	—	500	500	—	—	1HD368 <sup>⑤</sup>	3HD368 <sup>⑤</sup>
<b>Four-Wire (Three Blades, Three Fuses, S/N) 480 Vac—600 Vac, 250 Vdc</b>										
	30	H	7-1/2	10	15	20	—	—	1HD361N	3HD361N
	60	H	20	25	30	50	—	—	1HD362N	3HD362N
	100	H	30	40	60	75	—	—	1HD363N	3HD363N
	200	H	50	50	125	150	—	—	1HD364N	3HD364N
	400	H	—	—	250	350	—	—	1HD365N	3HD365N
	600	H	—	—	400	500	—	—	1HD366N	3HD366N
	800	L	—	—	500	500	—	—	1HD367N	3HD367N
	1200	L	—	—	500	500	—	—	1HD368N <sup>⑤</sup>	3HD368N <sup>⑤</sup>
<b>Four-Pole—480 Vac—600 Vac, 250 Vdc</b>										
	30	H	20 <sup>④</sup>	25 <sup>④</sup>	15	20	—	—	1HD461	3HD461
	60	H	40 <sup>④</sup>	50 <sup>④</sup>	30	50	—	—	1HD462	3HD462
	100	H	50 <sup>④</sup>	50 <sup>④</sup>	60	75	—	—	1HD463	3HD463
	200	H	—	—	125	150	40	—	1HD464	3HD464
	400	H	—	—	250	350	50	—	1HD465	3HD465
	600	H	—	—	400	500	—	—	1HD466	3HD466
	800	L	—	—	—	—	—	—	③	③

- ① NEMA 12 enclosures (30–1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.
- ② DC rating for 800A switches is 250V.
- ③ Contact Customer Support (1-800-268-3578) for availability of this product.
- ④ Ratings are for two-phase AC.
- ⑤ Must use suitable ground fault protection at 1200A for service entrance.
- ⑥ NEMA 4X stainless steel enclosure.
- ⑦ NEMA 4 painted steel enclosure.

**Note:**

For 'J' Fusing on 600V Heavy Duty Switches Field Modification Required.  
 30-60A reposition clips on loadside of fuse base.  
 100-400A, reposition loadside fuse base.  
 600A adapter kit included with switch.  
 For 'R' fuse rejector adapter kit and 'T' fusing see page 4 accessory application options.



12HD361



### 600 Vac Heavy Duty, Fusible, Single-Throw, 277/480–600V—NEMA 12/3R<sup>①</sup>, 4X<sup>⑥</sup> and 4<sup>②</sup>

System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses						NEMA 12/3R <sup>①</sup> Enclosure Dust-Tight Catalogue Number	NEMA 4X <sup>⑥</sup> and 4 <sup>②</sup> Enclosure Watertight, Catalogue Number
			Single-Phase AC		Three-Phase AC		DC			
			480V	600V	480V	600V	250V	600V		
<b>Two-Pole—480 Vac—600 Vac or Vdc<sup>②</sup> (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	H	7-1/2	10	—	—	—	15	12HD261 <sup>①</sup>	4HD261 <sup>⑥</sup>
	60	H	20	25	—	—	—	25	12HD262 <sup>①</sup>	4HD262 <sup>⑥</sup>
	100	H	30	40	—	—	20	25	12HD263 <sup>①</sup>	4HD263 <sup>⑥</sup>
	200	H	50	50	—	—	—	50	12HD264 <sup>①</sup>	4HD264 <sup>⑥</sup>
	400	H	—	—	—	—	50	—	12HD265 <sup>①</sup>	4HD265SS <sup>⑥</sup>
	400	H	—	—	—	—	50	—	—	4HD265 <sup>⑦</sup>
	600	H	—	—	—	—	—	—	12HD266 <sup>①</sup>	4HD266SS <sup>⑥</sup>
	600	H	—	—	—	—	—	—	—	4HD266 <sup>⑦</sup>
	800	L	—	—	—	—	—	—	12HD267 <sup>①②</sup>	4HD267SS <sup>⑥</sup>
	800	L	—	—	—	—	—	—	—	4HD267 <sup>⑦</sup>
	1200	L	—	—	—	—	—	—	⑤③	⑥③
<b>Three-Pole—480 Vac—600 Vac, 250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	H	7-1/2	10	15	20	—	—	12HD361 <sup>①</sup>	4HD361 <sup>⑥</sup>
	60	H	20	25	30	50	—	—	12HD362 <sup>①</sup>	4HD362 <sup>⑥</sup>
	100	H	30	40	60	75	—	—	12HD363 <sup>①</sup>	4HD363 <sup>⑥</sup>
	200	H	50	50	125	150	—	—	12HD364 <sup>①</sup>	4HD364 <sup>⑥</sup>
	400	H	—	—	250	350	—	—	12HD365 <sup>①</sup>	4HD365SS <sup>⑥</sup>
	400	H	—	—	250	350	—	—	—	4HD365 <sup>⑦</sup>
	600	H	—	—	400	500	—	—	12HD366 <sup>①</sup>	4HD366SS <sup>⑥</sup>
	600	H	—	—	400	500	—	—	—	4HD366 <sup>⑦</sup>
	800	L	—	—	500	500	—	—	12HD367 <sup>①</sup>	4HD367SS <sup>⑥</sup>
	800	L	—	—	500	500	—	—	—	4HD367 <sup>⑦</sup>
	1200	L	—	—	500	500	—	—	12HD368 <sup>①⑤</sup>	4HD368SS <sup>⑥⑤</sup>
	1200	L	—	—	500	500	—	—	—	4HD368 <sup>⑤⑦</sup>
<b>Four-Wire (Three Blades, Three Fuses, S/N) 480 Vac—600 Vac, 250 Vdc</b>										
	30	H	7-1/2	10	15	20	—	—	12HD361N <sup>①</sup>	4HD361N <sup>⑥</sup>
	60	H	20	25	30	50	—	—	12HD362N <sup>①</sup>	4HD362N <sup>⑥</sup>
	100	H	30	40	60	75	—	—	12HD363N <sup>①</sup>	4HD363N <sup>⑥</sup>
	200	H	50	50	125	150	—	—	12HD364N <sup>①</sup>	4HD364N <sup>⑥</sup>
	400	H	—	—	250	350	—	—	12HD365N <sup>①</sup>	4HD365N <sup>⑦</sup>
	400	H	—	—	250	350	—	—	—	4HD365N <sup>⑦</sup>
	600	H	—	—	400	500	—	—	12HD366N <sup>①</sup>	4HD366N <sup>⑦</sup>
	600	H	—	—	400	500	—	—	—	4HD366N <sup>⑦</sup>
	800	L	—	—	500	500	—	—	12HD367N <sup>①</sup>	4HD367N <sup>⑦</sup>
	800	L	—	—	500	500	—	—	—	4HD367N <sup>⑦</sup>
	1200	L	—	—	500	500	—	—	12HD368N <sup>①⑤</sup>	⑤③
	1200	L	—	—	500	500	—	—	—	⑤③
<b>Four-Pole—480 Vac—600 Vac, 250 Vdc</b>										
	30	H	20 <sup>⑤</sup>	25 <sup>⑤</sup>	15	20	—	—	12HD461 <sup>①</sup>	4HD461 <sup>⑥</sup>
	60	H	40 <sup>⑤</sup>	50 <sup>⑤</sup>	30	50	—	—	12HD462 <sup>①</sup>	4HD462 <sup>⑥</sup>
	100	H	50 <sup>⑤</sup>	50 <sup>⑤</sup>	60	75	—	—	12HD463 <sup>①</sup>	4HD463 <sup>⑥</sup>
	200	H	—	—	125	150	40	—	12HD464 <sup>①</sup>	4HD464 <sup>⑥</sup>
	400	H	—	—	250	350	50	—	12HD456 <sup>①</sup>	③
	600	H	—	—	400	500	—	—	12HD466 <sup>①</sup>	③

See notes listed on Page 30.




# Switching Devices

## Safety Switches

1HD362NF



### 600 Vac Heavy Duty, Non-Fusible, Single-Throw, 277/480–600V—NEMA 1, 3R

System	Ampere Rating	Maximum Horsepower Ratings								NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R <sup>①</sup> Enclosure Rainproof Catalogue Number
		Single-Phase AC			Three-Phase AC			DC			
		240V	480V	600V	240V	480V	600V	250V	600V		
<b>Two-Pole—480 Vac—600 Vac or Vdc<sup>②</sup></b>											
	30	3	7-1/2	10	—	—	—	—	15	1HD261NF	3HD261NF
	60	10	20	25	—	—	—	—	25	1HD262NF	3HD262NF
	100	20	30	40	—	—	—	20	25	1HD263NF	3HD263NF
	200	15	50	50	—	—	—	—	50	1HD264NF	3HD264NF
	400	—	—	—	—	—	—	50	—	1HD265NF	3HD265NF
	600	—	—	—	—	—	—	—	—	1HD266NF	3HD266NF
	800	—	—	—	—	—	—	—	—	1HD267NF <sup>②</sup>	3HD267NF <sup>②</sup>
	1200	—	—	—	—	—	—	—	—	③	③
<b>Three-Pole—480 Vac—600 Vac, 250 Vdc</b>											
	30	3	7-1/2	10	10	20	30	5	—	1HD361NF	3HD361NF
	60	10	20	25	20	50	60	10	—	1HD362NF	3HD362NF
	100	20	40	50	40	75	100	20	—	1HD363NF	3HD363NF
	200	15	50	50	60	125	150	40	—	1HD364NF	3HD364NF
	400	—	—	—	125	250	350	50	—	1HD365NF	3HD365NF
	600	—	—	—	200	400	500	—	—	1HD366NF	3HD366NF
	800	—	—	—	—	500	500	—	—	1HD367NF	3HD367NF
	1200	—	—	—	—	500	500	—	—	1HD368NF	3HD368NF
<b>Four-Pole—480 Vac—600 Vac, 250 Vdc</b>											
	30	10 <sup>④</sup>	20 <sup>④</sup>	25 <sup>④</sup>	10	20	30	5	—	1HD461NF	3HD461NF
	60	20 <sup>④</sup>	40 <sup>④</sup>	50 <sup>④</sup>	20	50	60	10	—	1HD462NF	3HD462NF
	100	40 <sup>④</sup>	50 <sup>④</sup>	50 <sup>④</sup>	40	75	100	20	—	1HD463NF	3HD463NF
	200	50 <sup>④</sup>	50 <sup>④</sup>	50 <sup>④</sup>	60	125	150	40	—	1HD464NF	3HD464NF
	400	50 <sup>④</sup>	—	—	125	250	350	50	—	1HD465NF	⑤
	600	—	—	—	200	400	500	—	—	1HD466NF	⑤
	800	—	—	—	—	—	—	—	—	②③	②③

① NEMA 12 enclosures (30–1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

② DC rating for 800A switches is 250V.




③ Contact Customer Support (1-800-268-3578) for availability of this product.

④ Ratings are for two-phase AC.

⑤ NEMA 4X stainless steel enclosure.

⑥ NEMA 4 painted steel enclosure.

### 600 Vac Heavy Duty, Non-Fusible, Single-Throw, 277/480–600V—NEMA 12/3R<sup>①</sup>, 4X<sup>②</sup> and 4<sup>③</sup>

System	Ampere Rating	Maximum Horsepower Ratings						DC	NEMA 12/3R Enclosure Dust-Tight Catalogue Number	NEMA 4X <sup>②</sup> and 4 <sup>③</sup> Enclosure Watertight, Painted Steel Catalogue Number	
		Single-Phase AC			Three-Phase AC						
		240V	480V	600V	240V	480V	600V				250V
<b>Two-Pole—480 Vac—600 Vac or Vdc<sup>④</sup></b>											
	30	3	7-1/2	10	—	—	—	5	15	12HD261NF <sup>①</sup>	4HD261NF <sup>⑤</sup>
	60	10	20	25	—	—	—	10	25	12HD262NF <sup>①</sup>	4HD262NF <sup>⑤</sup>
	100	20	30	40	—	—	—	20	25	12HD263NF <sup>①</sup>	4HD263NF <sup>⑤</sup>
	200	15	50	50	—	—	—	40	50	12HD264NF <sup>①</sup>	4HD264NF <sup>⑤</sup>
	400	—	—	—	—	—	—	50	—	12HD265NF <sup>①</sup>	4HD265NFSS <sup>⑥</sup>
	400	—	—	—	—	—	—	50	—	—	4HD265NF <sup>⑤</sup>
	600	—	—	—	—	—	—	—	—	12HD266NF <sup>①</sup>	4HD266NFSS <sup>⑥</sup>
	600	—	—	—	—	—	—	—	—	—	4HD266NF <sup>⑤</sup>
	800	—	—	—	—	—	—	—	—	12HD267NF <sup>①②</sup>	4HD267NFSS <sup>⑥</sup>
	800	—	—	—	—	—	—	—	—	—	4HD267NF <sup>⑤</sup>
	1200	—	—	—	—	—	—	—	③	③	
<b>Three-Pole—480 Vac—600 Vac, 250 Vdc</b>											
	30	3	7-1/2	10	10	20	30	5	—	12HD361NF <sup>①</sup>	4HD361NF <sup>⑤</sup>
	60	10	20	25	20	50	60	10	—	12HD362NF <sup>①</sup>	4HD362NF <sup>⑤</sup>
	100	20	40	50	40	75	100	20	—	12HD363NF <sup>①</sup>	4HD363NF <sup>⑤</sup>
	200	15	50	50	60	125	150	40	—	12HD364NF <sup>①</sup>	4HD364NF <sup>⑤</sup>
	400	—	—	—	125	250	350	50	—	12HD365NF <sup>①</sup>	4HD365NFSS <sup>⑥</sup>
	400	—	—	—	125	250	350	50	—	—	4HD365NF <sup>⑤</sup>
	600	—	—	—	200	400	500	—	—	12HD366NF <sup>①</sup>	4HD366NFSS <sup>⑥</sup>
	600	—	—	—	200	400	500	—	—	—	4HD366NF <sup>⑤</sup>
	800	—	—	—	—	500	500	—	—	12HD367NF <sup>①</sup>	4HD367NFSS <sup>⑥</sup>
	800	—	—	—	—	500	500	—	—	—	4HD367NF <sup>⑤</sup>
	1200	—	—	—	—	500	500	—	—	12HD368NF <sup>①</sup>	4HD368NFSS <sup>⑥</sup>
	1200	—	—	—	—	500	500	—	—	—	4HD368NF <sup>⑤</sup>
<b>Four-Pole—480 Vac—600 Vac, 250 Vdc</b>											
	30	10 <sup>⑤</sup>	20 <sup>⑤</sup>	25 <sup>⑤</sup>	10	20	30	5	—	12HD461NF <sup>①</sup>	4HD461NF <sup>⑤</sup>
	60	20 <sup>⑤</sup>	40 <sup>⑤</sup>	50 <sup>⑤</sup>	20	50	60	10	—	12HD462NF <sup>①</sup>	4HD462NF <sup>⑤</sup>
	100	40 <sup>⑤</sup>	50 <sup>⑤</sup>	50 <sup>⑤</sup>	40	75	100	20	—	12HD463NF <sup>①</sup>	4HD463NF <sup>⑤</sup>
	200	50 <sup>⑤</sup>	50 <sup>⑤</sup>	50 <sup>⑤</sup>	60	125	150	40	—	12HD464NF <sup>①</sup>	4HD464NF <sup>⑤</sup>
	400	50 <sup>⑤</sup>	—	—	125	250	350	50	—	①③	—
	600	—	—	—	200	400	500	—	—	①③	—
	800	—	—	—	—	—	—	—	—	①③⑤	—

① NEMA 12 enclosures (30–1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

② DC rating for 800A switches is 250V.

③ Contact Customer Support (1-800-268-3578) for availability of this product.

④ Ratings are for two-phase AC.

⑤ NEMA 4X stainless steel enclosure.

⑥ NEMA 4 painted steel enclosure.

### Technical Data and Specifications for 2, 3, 4 Pole Heavy Duty

#### Short-Circuit Ratings (kA) Using Class “R”, “J” or “T” Fusing Where Applicable

Ampere Rating	Short-Circuit Ratings			
	NEMA 1	NEMA 3R	NEMA 12	NEMA 4 and 4X
30	200 at 600V	200 at 600V	200 at 600V	200 at 600V
60	200 at 600V	200 at 600V	200 at 600V	200 at 600V
100	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 600V	200 at 600V
200	200 at 600V	200 at 600V	200 at 600V	200 at 600V
400	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V
600	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V
800	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V	200 at 480V 100 at 600V
1200	200 at 600V	200 at 600V	200 at 600V	200 at 600V

**Note:**

Class “H” fuse clips supplied as standard for 30–600A. Class “L” fuse clips supplied as standard for 800–1200A. Rated at 10,000 rms symmetrical when using Class “H” fuses.  
For DC application short-circuit rating is 10 kA.

#### Fuse Class Adaptation

Safety Switch Type	Standard Fuse Class Clips Supplied with Switch	Adaptable to Accept the Following Fuse Class		
		R	J	T
Heavy Duty	H 30-600A L 800-1200A	30A-600A	240V: 100-600A 600V: 30-600A	200A-800A 1200A

**Note:**

For ‘J’ Fusing on 240V Heavy Duty Switches Field Modification Required.  
30-60A not available.  
100-400A, reposition loadside fuse block to accept ‘J’ fuse.  
600A adapter kit included with switch.  
For ‘R’ fuse rejector adapter kit and ‘T’ fuse adapter kit see accessory options on page 4.

For ‘J’ fusing on 600V Heavy Duty Switches Field Modification Required.  
30-60A, reposition fuse clips on loadside of fuse base.  
100-400A, reposition loadside fuse block to accept ‘J’ fuse.  
600A adapter kit included with switch.  
For ‘R’ fuse rejector adapter kit and ‘T’ fusing see page 4 accessory application options.

#### Terminal Capacity for Heavy Duty Safety Switch 600V Max

Ampere	Line/Load Terminal Capacity (per phase)	Ground terminal Capacity	Neutral Catalogue #	Neutral Terminal Capacity
30	#14 - #6	#14 - 4	DH030NK	4x #14 - #2
60	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
100	#14 - 1/0	#14 - 4	DH100NK	2x #14-#2 AND 2x #14 - 1/0
200 (NEMA 1 & 3R)	#6 - 250mcm	#14 - 4	N200	2x #6 - 250mcm AND 2x #14 - #2
200 (NEMA 12 & 4X)	#6 - 300mcm	#14 - #4	DH200NK	2x #6 - 300mcm AND 2x #14 - #2
400	(2) 1/0 - (2)300mcm OR (1) 1/0 - 750mcm	#6 - 250mcm	DS400NK	2X 1/0 - 750mcm OR (2)1/0 - (2)300mcm AND 3x#6 - 250mcm
600	(1)#2 - 600mcm AND (1) 1/0 - 750mcm	#6 - 250mcm	DS600NK	2 x 1/0 - (1)750mcm OR 1/0 - (2) 300mcm AND 1 x #2 - 600mcm AND 3 x #6 - 250mcm
800	(4) 3/0 - (4)750mcm	#6 - 250mcm	DS800NK	2 X (4)3/0 - (4)750mcm AND 3 x #6 - 250mcm
1200	(4) 1/0 - (4)750mcm	#6 - 250mcm	DS800NK	2 X (4)3/0 - (4)750mcm AND 3 x #6 - 250mcm

**Note:**

\* Order neutral catalogue number when neutral required and not included with switch.  
All terminals are rating Al/Cu unless otherwise noted.  
Ground terminal is standard on all switches. For optional ground lug kits or copper lug kits see page 4 and 5.

#### UL/CSA Recognized Non-Fusible Safety Switch/Circuit Breaker Series-Connected Ratings Eaton 30-200A non fusible safety switch withstand ratings when protected with circuit breakers

Non-Fusible Safety Switch Ampere Rating	Max System Voltage AC	Number of Poles Switched	Maximum fault level available at upstream circuit breaker (kA RMS symmetrical)	Circuit Breaker Frame(s)		
30A & 60A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH		
		2, 3, 4, 6	18,000	FD, EGE		
		2, 3, 4, 6	14,000	FDB		
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type		
100A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH		
		2, 3, 4, 6	18,000	FD, EGE		
		2, 3, 4, 6	14,000	FDB		
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type		
480	600	2, 3, 4, 6	35,000	EGH, EGS		
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type		
		200A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, HJD, JGH
				2, 3, 4, 6	18,000	FD, JD, JGE
2, 3, 4, 6	14,000			FDB		
2, 3, 4, 6	10,000			Any manufacturer or Eaton breaker type		
480	600	2, 3, 4, 6	65,000	HFD, HFDE, HJD, JGH		
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type		

### Dimensions

Approximate Dimensions in Inches (mm)

**Note:** Dimensions are for estimating purposes only.

### Heavy Duty, Non-Fusible, 600V, Three-Pole, Single-Throw

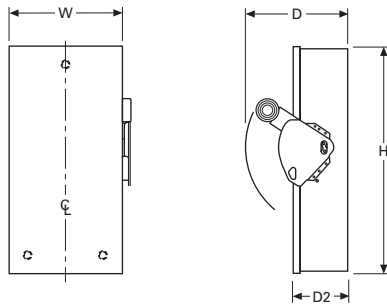
Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 1, 3R</b>					
30	8.13 (206.5)	15.88 (403.4)	9.89 (251.3)	5.25 (133.3)	16 (7.264)
60	8.13 (206.5)	15.88 (403.4)	9.89 (251.3)	5.25 (133.3)	16 (7.264)
100	11.13 (282.7)	21.69 (550.9)	9.89 (251.3)	5.25 (133.3)	22 (9.988)
200	15.91 (404)	27.63 (701.8)	11.25 (285.8)	6.14 (156.0)	46 (20.884)
400	22.66 (576)	44.31 (1125)	12.39 (315)	7.27 (184.7)	110 (49.94)
600	23.66 (601)	51.82 (1316)	14.07 (357)	8.95 (227.3)	135 (61.29)
800	25.38 (644.7)	56.24 (1428)	14.07 (357)	8.95 (227.3)	158 (71.732)
1200	40.00 (1016)	70.31 (1785.9)	19.94 (506.5)	12.44 (316.0)	430 (195.22)
<b>NEMA 12, 4 Painted Steel, 4X Stainless Steel <sup>①</sup></b>					
30	8.76 (222.5)	14.14 (359)	10.22 (259)	5.50 (139.7)	17 (7.718)
60	8.76 (222.5)	14.14 (359)	10.22 (259)	5.50 (139.7)	17 (7.718)
100	11.79 (299.5)	25.00 (634)	10.22 (259)	5.50 (139.7)	28 (12.712)
200	16.54 (421)	35.38 (899)	11.63 (295)	6.44 (163.6)	55 (24.97)
400	24.12 (613)	57.47 (1460)	12.43 (316)	7.19 (182.6)	125 (56.75)
600	25.08 (637)	63.00 (1600.2)	14.25 (362.0)	8.88 (225.6)	167 (75.818)
800	26.34 (669)	71.75 (1822.5)	14.25 (362.0)	8.88 (225.6)	175 (79.45)
1200	41.47 (1053.3)	73.77 (1874)	19.99 (506.5)	13.51 (343.2)	475 (215.65)

### Heavy Duty, Fusible, 240V and 600V, Three-Pole with or without Neutral, Single-Throw

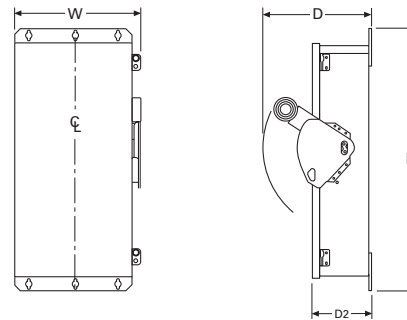
Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 1, 3R</b>					
30	8.13 (206.5)	15.88 (403.4)	9.89 (251.3)	5.25 (133.3)	20 (9.08)
60	8.13 (206.5)	15.88 (403.4)	9.89 (251.3)	5.25 (133.3)	20 (9.08)
100	11.13 (282.7)	21.69 (550.9)	9.89 (251.3)	5.25 (133.3)	27 (12.258)
200	15.91 (404)	27.63 (701.8)	11.25 (285.8)	6.14 (156.0)	52 (23.608)
400	22.66 (576)	44.31 (1125)	12.39 (315)	7.27 (184.7)	120 (54.48)
600	23.66 (601)	51.82 (1316)	14.07 (357)	8.95 (227.3)	135 (61.29)
800	25.38 (644.7)	56.24 (1428)	14.07 (357)	8.95 (227.3)	168 (76.272)
1200	40.00 (1016)	70.31 (1785.9)	19.94 (506.5)	12.44 (316.0)	465 (211.11)
<b>NEMA 12, 4 Painted Steel, 4X Stainless Steel <sup>①</sup></b>					
30	8.76 (222.5)	19.08 (485)	10.22 (259)	5.50 (139.7)	22 (9.988)
60	8.76 (222.5)	19.08 (485)	10.22 (259)	5.50 (139.7)	22 (9.988)
100	11.79 (299.5)	25.00 (634)	10.22 (259)	5.50 (139.7)	30 (13.62)
200	16.54 (421)	35.38 (899)	11.63 (295)	6.44 (163.6)	61 (27.694)
400	24.12 (613)	57.47 (1460)	12.43 (316)	7.19 (182.6)	135 (61.29)
600	25.08 (637)	63.00 (1600.2)	14.25 (362.0)	8.88 (225.6)	203 (92.162)
800	26.34 (669)	71.75 (1822.5)	14.25 (362.0)	8.88 (225.6)	213 (96.702)
1200	41.47 (1053.3)	73.77 (1874)	19.99 (506.5)	13.51 (343.2)	510 (231.54)

<sup>①</sup> NEMA 12 enclosures (30-1200A) can be field modified to meet NEMA 3R rainproof requirements when factory provided drain hole is opened.

### NEMA 1, 3R Heavy Duty 30-1200A



### NEMA 12, 4, and 4X Heavy Duty 30-1200A <sup>①</sup>







### Heavy Duty Double Door Safety Switch



### Heavy Duty Double Door Safety Switch

#### Product 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

- 30–1200A
- 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

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- CSA 22.2 no. 4-16



# Switching Devices

## Safety Switches

### Catalog Numbering System

#### Heavy Duty Double Door Safety Switch

**CDD 3 6 3 F D K W - 00LO**

Switch Type
<b>CDD</b> = Heavy duty isolation switch

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

Voltage
<b>2</b> = 240 Vac
<b>6</b> = 600 Vac

Ampere Rating	
<b>1</b> = 30A	<b>5</b> = 400A
<b>2</b> = 60A	<b>6</b> = 600A
<b>3</b> = 100A	<b>7</b> = 800A
<b>4</b> = 200A	<b>8</b> = 1200A

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

Enclosure Type
<b>D</b> = NEMA 12/3R
<b>W</b> = NEMA 4X Stainless

Series
<b>K</b> = Switch

Options
<b>W</b> = Upper viewing window

Options/Modifications
<b>00V1</b> = Voltage indicator line side
<b>00V2</b> = Voltage indicator load side
<b>00V3</b> = Voltage indicator line and load side
<b>BLAK</b> = Painted black
<b>WHIT</b> = Painted white
<b>ORED</b> = Painted red
<b>0316</b> = 316 stainless steel
<b>00NP</b> = Custom nameplate
<b>00TK</b> = Trapped key (Kirk, superior)
<b>00LW</b> = Lower viewing window
<b>00CP</b> = Control pole (same make/same break)
<b>OCP2</b> = Control pole (late make/early break)
<b>0002</b> = 1NO/1NC auxiliary contact
<b>0003</b> = NO/2NC auxiliary contact
<b>00LO</b> = Lock on

**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers. Contact Customer Support 1-800-268-3578 for availability of this product.

### Product Selection

CDD321FDKW



#### 240 Vac Heavy Duty Double Door, Fusible—NEMA 12/3R, 4X

System	Ampere Rating	Fuse Type Provision	Maximum hp Ratings with Time Delay Fuses						NEMA 12/3R Enclosure Dust-tight Catalogue Number	NEMA 4X Enclosure Watertight Catalogue Number
			Single-Phase AC		Three-Phase AC		DC			
			480V	600V	480V	600V	250V	600V		
<b>Three-Pole, 240 Vac, 250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	H	7.5	10	15	20	—	—	CDD321FDKW	CDD321FWKW
	60	H	20	25	30	50	—	—	CDD322FDKW	CDD322FWKW
	100	H	30	40	60	75	—	—	CDD323FDKW	CDD323FWKW
	200	H	50	50	125	150	—	—	CDD324FDKW	CDD324FWKW
	400	H	—	—	250	350	—	—	CDD325FDKW	CDD325FWKW
	600	H	—	—	400	500	—	—	CDD326FDKW	CDD326FWKW
	800	L	—	—	500	500	—	—	CDD327FDKW	CDD327FWKW
	1200	L	—	—	500	500	—	—	CDD328FDKW	CDD328FWKW
<b>Four-Wire (Three Blades, Three Fuses, S/N) 240 Vac, 250 Vdc</b>										
	30	H	7.5	10	15	20	—	—	CDD321NDKW	CDD321NWKW
	60	H	20	25	30	50	—	—	CDD322NDKW	CDD322NWKW
	100	H	30	40	60	75	—	—	CDD323NDKW	CDD323NWKW
	200	H	50	50	125	150	—	—	CDD324NDKW	CDD324NWKW
	400	H	—	—	250	350	—	—	CDD325NDKW	CDD325NWKW
	600	H	—	—	400	500	—	—	CDD326NDKW	CDD326NWKW
	800	L	—	—	500	500	—	—	CDD327NDKW	CDD327NWKW
	1200	L	—	—	500	500	—	—	CDD328NDKW	CDD328NWKW

CDD361FDKW



#### 600 Vac Heavy Duty Double Door, Fusible—NEMA 12/3R, 4X

System	Ampere Rating	Fuse Type Provision	Maximum hp Ratings with Time Delay Fuses						NEMA 12/3R Enclosure Dust-tight Catalogue Number	NEMA 4X Enclosure Watertight Catalogue Number
			Single-Phase AC		Three-Phase AC		DC			
			480V	600V	480V	600V	250V	600V		
<b>Three-Pole, 480 Vac–600 Vac or Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	H	7.5	10	15	20	—	—	CDD361FDKW	CDD361FWKW
	60	H	20	25	30	50	—	—	CDD362FDKW	CDD362FWKW
	100	H	30	40	60	75	—	—	CDD363FDKW	CDD363FWKW
	200	H	50	50	125	150	—	—	CDD364FDKW	CDD364FWKW
	400	H	—	—	250	350	—	—	CDD365FDKW	CDD365FWKW
	600	H	—	—	400	500	—	—	CDD366FDKW	CDD366FWKW
	800	L	—	—	500	500	—	—	CDD367FDKW	CDD367FWKW
	1200	L	—	—	500	500	—	—	CDD368FDKW ①	CDD368FWKW ①
<b>Four-Wire (Three Blades, Three Fuses, S/N) 480 Vac–600 Vac, 250 Vdc</b>										
	30	H	7.5	10	15	20	—	—	CDD361NDKW	CDD361NWKW
	60	H	20	25	30	50	—	—	CDD362NDKW	CDD362NWKW
	100	H	30	40	60	75	—	—	CDD363NDKW	CDD363NWKW
	200	H	50	50	125	150	—	—	CDD364NDKW	CDD364NWKW
	400	H	—	—	250	350	—	—	CDD365NDKW	CDD365NWKW
	600	H	—	—	400	500	—	—	CDD366NDKW	CDD366NWKW
	800	L	—	—	500	500	—	—	CDD367NDKW	CDD367NWKW
	1200	L	—	—	500	500	—	—	CDD368NDKW ①	CDD368NWKW ①

① 1200A is not service entrance rated at 600V.

# Switching Devices

## Safety Switches

### 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 or FlexSwitches@Eaton.com for more information.

### Technical Data and Specifications

#### Ratings and Capacities

Ampere Rating	Factory Fuse Class	Optional Fuse Class <sup>①</sup>	Standard Lug Capacities Per Phase		Ground <sup>②</sup>	
			Min. Wire Size	Max. Wire Size	Min. Wire Size	Max. Wire Size
30	H	J, R	#14	#2	#14	#4
60	H	J, R	#14	#2	#14	#4
100	H	J, R	#14	1/0	#14	#4
200	H	J, R, T	#6	300 kcmil	#14	#2
400	H	J, R, T	(2) 1/0 (1) 1/0	(2) 300 kcmil–1/0 or <sup>③</sup> (1) 175 kcmil–1/0	#6	250 kcmil
600	H	J, R, T	(1) #2 (1) #2	(1) 600 kcmil and <sup>④</sup> (1) 750 kcmil	#6	250 kcmil
800	L	T	(4) 1/0	(4) 750 kcmil	#6	250 kcmil
1200	L	T	(4) 1/0	(4) 750 kcmil	#6	250 kcmil

#### Cable IN/OUT reference chart

	Top IN <sup>⑤</sup>	Bottom IN
Top OUT	■	—
Bottom OUT	■	■

- ① Switches ranging from 30A to 400A can relocate clips/base for class J fuses. All other classes/ampereages require a kit. Please consult catalogue or contact the Technical Resource Center (TRC) for specific kit catalogue numbers.
- ② Lay-in type lug uses 30–100A. Two ground lugs are provided for 200–1200A 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 30–200A units only.

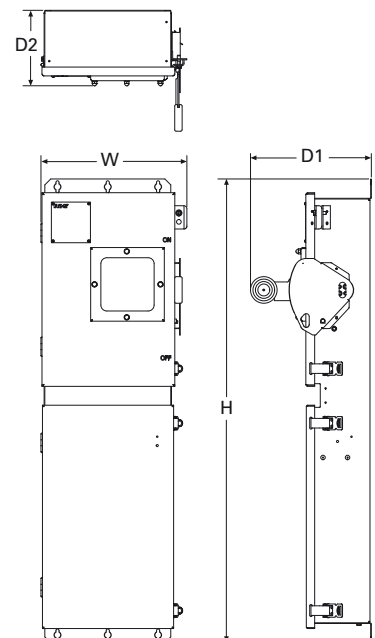
### Dimensions

Approximate Dimensions in Inches (mm)

**Note:** Dimensions are for estimating purposes only.

#### Heavy Duty Double Door Safety Switch

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



Heavy Duty Non-Fusible Double-Throw



### Double-Throw Switches

#### Application Description

Used to manually transfer a load from one power source to an alternate source, or to connect a single source of power to either of two different loads.

#### Product Description

- 30–1200A
- Horsepower rated
- 600 Vac, 250 Vdc maximum
- 2, 3, 4, 6 pole designs available
- Enclosures NEMA 1, 3R, 12, 4, painted steel and 4X stainless steel
- 800–1200A fusible utilize common set of fuses; two Source 1 load applications
- Fusible or non-fusible
- Fusible and non-fusible switches are 100% load break and 100% load make rated

- Suitable for use on systems capable of delivering 100,000 rms symmetrical fault current when used with class J, R, or T fuses.
- The handle operating mechanism actuates either the upper or lower switch. When the handle is in the centre position, both switches are OFF.
- The handle and door are interlocked to keep the door closed when a switch is ON and hold the handle OFF when the door is open
- The continuous load current of fusible switches is not to exceed 80% of the rating of fuses employed in other than motor circuits. Non-fusible switches are 100% continuous duty rated
- Double-throw switches are not approved for service entrance in Canada, per CEC and C22.2 No.4.
- Wiring configuration from factory allows a single load to be supplied by a normal or alternate source. Can be field modified to allow two loads to be alternately supplied by a single power source
- Clear line shield (provided on **fusible** double-throw) protects against accidental contact with energized parts. Probe holes enable the user to test if the line side is energized without removing the shield
- For accessories, refer to **Pages 4 and 5**
- Window option available for NEMA 12 and 4X enclosures
- For factory modifications refer to **Pages 13 through 15**

- Same heavy duty features per page 28 for double-throw switches, unless noted.
- Triple padlocking capability. Two on door and up to three 3/8" shank locks in 'OFF' (centre) handle position. Special modification available for locking in 'ON' position, see page 13 note 4.

#### Standards and Certifications

- CSA Certified File No. 69473
- Meets C22.2 No. 4 standard for enclosed switches.
- ISO 9001:2008



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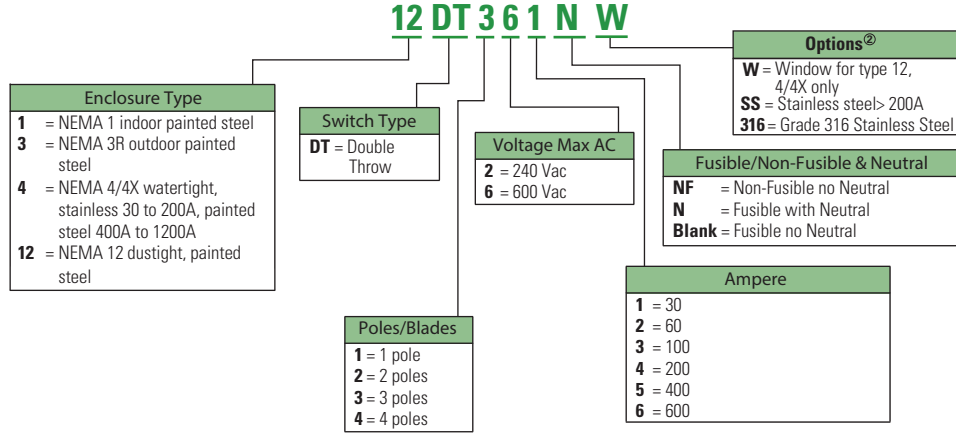
# Switching Devices

## Safety Switches

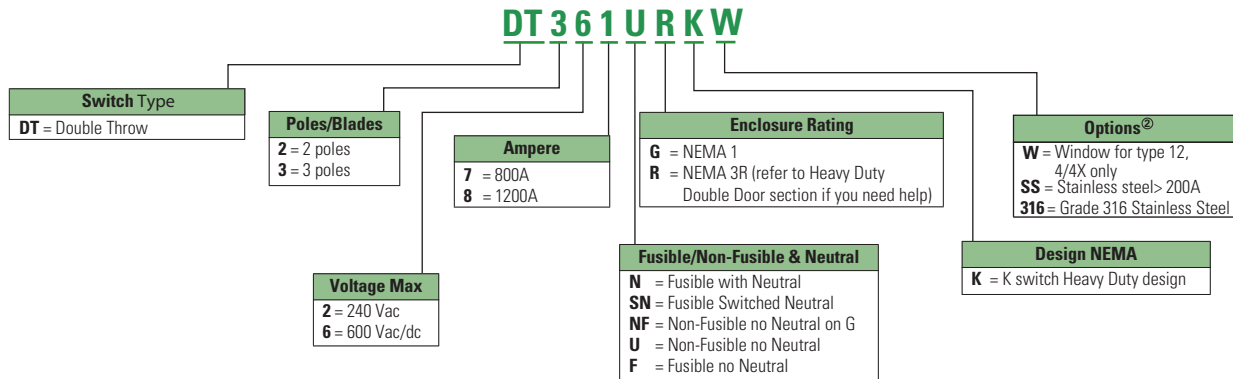
### Catalog Numbering System

#### Double-Throw Switches

##### 30-600A



##### 800-1200A



#### Note:

Always verify the number of poles and wires required since catalogue numbers may appear in multiple tables.

See **Pages 13** through **15** for additional Flex Centre options.

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

## 240 Vac Heavy Duty, Fusible, Double-Throw

Ampere Rating Main and Standby	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses						DC 250V	NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number
		Single-Phase AC			Three-Phase AC					
		240V	480V	600V	240V	480V	600V			
<b>Two-Pole—240 Vac—250 Vdc</b>										
200	H	15	—	—	—	—	—	40	1DT224	3DT224
<b>Three-Pole—240 Vac—250 Vdc</b>										
30	H	3	—	—	7-1/2	—	—	5	1DT321	3DT321
60	H	10	—	—	15	—	—	10	1DT322	3DT322
100	H	15	—	—	30	—	—	20	1DT323	3DT323
200	H	15	—	—	60	—	—	40	1DT324	3DT324
400	H	—	—	—	125	—	—	50	1DT325	3DT325
600 <sup>ⓐ</sup>	T	—	—	—	50	—	—	50	1DT326	3DT326
800	T	—	—	—	—	—	—	—	DT327FGK	DT327FRK
1200	T	—	—	—	—	—	—	—	DT328FGK	DT328FRK

## 240 Vac Heavy Duty, Non-Fusible, Double-Throw

Ampere Rating Main and Standby	Maximum Horsepower Ratings						DC 250V	NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number
	Single-Phase AC			Three-Phase AC					
	240V	480V	600V	240V	480V	600V			
<b>Two-Pole—240 Vac—250 Vdc</b>									
30	3	—	—	—	—	—	5	1DT221NF	3DT221NF
60	10	—	—	—	—	—	10	1DT222NF	3DT222NF
100	20	—	—	—	—	—	20	1DT223NF	3DT223NF
200	15	—	—	—	—	—	40	1DT224NF	3DT224NF
400	—	—	—	—	—	—	50	1DT225NF	3DT225NF
600	—	—	—	—	—	—	—	1DT226NF	3DT226NF
800	—	—	—	—	—	—	—	②	②
1200	—	—	—	—	—	—	—	②	②
<b>Three-Pole—240 Vac—250 Vdc</b>									
30	3	—	—	10	—	—	5	1DT321NF	3DT321NF
60	10	—	—	20	—	—	10	1DT322NF	3DT322NF
100	20	—	—	40	—	—	20	1DT323NF	3DT323NF
200	15	—	—	60	—	—	40	1DT324NF	3DT324NF
400	—	—	—	125	—	—	50	1DT325NF	3DT325NF
600	—	—	—	125	—	—	50	1DT326NF	3DT326NF
800	—	—	—	125	—	—	50	1DT327NF	3DT327NF
800	—	—	—	125	—	—	50	1DT327NF-N	3DT327NF-N
1200	—	—	—	125	—	—	50	②	②

<sup>ⓐ</sup> Only available for use with fast-acting fuses. Standard hp rating is shown.

<sup>ⓑ</sup> Contact Customer Support (1-800-268-3578) for availability of this product.

**Note:**

For 'J' Fusing on 240V at 30A, 60A, 100A, 400A, 600A not available.

For 'J' Fusing on 240V at 200A reposition loadside fuse block to accept J fusing.



# Switching Devices

## Safety Switches

1DT363



### 600 Vac Heavy Duty, Fusible, Double-Throw

Ampere Rating Main and Standby	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses				NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number	NEMA 12 <sup>®</sup> Enclosure Dust-Tight Catalogue Number	NEMA 4X Enclosure <sup>®</sup> Corrosion-Resistant, Stainless Steel Catalogue Number
		Single-Phase		Three-Phase					
		480V	600V	480V	600V	DC 250V			
<b>Three-Pole—600 Vac—250 Vdc</b>									
30	H	7-1/2	10	15	20	—	1DT361	3DT361	①
60	H	20	25	30	50	—	1DT362	3DT362	①
100	H	30	40	60	75	—	1DT363	3DT363	①
200	H	50	50	125	150	40	1DT364	3DT364	①
400	T	—	—	250	350	50	1DT365	3DT365	①
600	T	—	—	—	—	—	1DT366	3DT366	①
800	T	—	—	—	—	—	DT367FGK	DT367FRK	①
1200	L	—	—	—	—	—	DT368FGK	DT368FRK	—

3DT363NF



### 600 Vac Heavy Duty, Non-Fusible, Double-Throw

Ampere Rating Main and Standby	Maximum Horsepower Ratings Single-Phase AC	Maximum Horsepower Ratings Three-Phase AC		DC 250V	NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number	NEMA 12 <sup>®</sup> Enclosure Dust-Tight Catalogue Number	NEMA 4X Enclosure <sup>®</sup> Corrosion-Resistant, Stainless Steel Catalogue Number	
		480V	600V						
<b>Two-Pole—600 Vac—250 Vdc</b>									
30	7-1/2	10	—	—	5	1DT261NF	3DT261NF	①	
60	20	25	—	—	10	1DT262NF	3DT262NF	①	
100	40	50	—	—	20	1DT263NF	3DT263NF	①	
200	50	50	—	—	40	1DT264NF <sup>②</sup>	3DT264NF <sup>②</sup>	①	
400	—	—	—	—	50	1DT265NF	3DT265NF	①	
600	—	—	—	—	50	1DT266NF	3DT266NF	①	
800	—	—	—	—	50	DT267UGK	DT267URK	①	
1200	—	—	—	—	50	DT268UGK	DT268URK	—	
<b>Three-Pole—600 Vac—250 Vdc</b>									
30	7-1/2	10	20	30	5	1DT361NF	3DT361NF	12DT361NF	4DT361NF
60	20	25	50	60	10	1DT362NF	3DT362NF	12DT362NF	4DT362NF
100	40	50	75	100	20	1DT363NF	3DT363NF	12DT363NF	4DT363NF
200	50	50	125	150	40	1DT364NF	3DT364NF	12DT364NF	4DT364NF
400	—	—	250	350	50	1DT365NF	3DT365NF	12DT365NF	①
600	—	—	250	350	50	1DT366NF	3DT366NF	①	①
800	—	—	250	350	50	1DT367NF	3DT367NF	①	①
800	—	—	250	350	50	1DT367NF-N	3DT367NF-N	①	①
1200	—	—	250	350	50	DT368UGK	DT368URK	—	①

① Contact Customer Support (1-800-268-3578) for availability of this product.

② Rated 600 Vdc, 50 hp in addition to ratings shown in table.

③ NEMA 12 enclosures (30–1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

④ 30-200A, stainless steel 4X standard, 400-800A NEMA 4 painted steel standard. For stainless @ 400-1200A add 'SS' to catalogue number suffix.

#### Note:

For 'J' Fusing on 600V DT, 30, 60, 100, 600A not available..

For 200A reposition loadside fuse base to accept J fuse.

For 400A order DT400JK.

For applications with bonded generators, switched neutrals required, for 240V use 3 pole switch, for 600V use 4 pole switch, for factory installation of solid or switched neutrals refer to page 14.

For window option see factory modifications pages 13-15.

3DT363NF



### 600 Vac Heavy Duty, Non-Fusible, Double-Throw

Ampere Rating Main and Standby	Maximum Horsepower Ratings					NEMA 1 Enclosure Indoor Catalogue Number	NEMA 3R Enclosure Rainproof Catalogue Number	NEMA 12 <sup>③</sup> Enclosure Industrial, Dust-Tight Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
	480V	600V	480V	600V	250V				
<b>Four-Pole—600 Vac—250 Vdc<sup>①</sup></b>									
30	7-1/2	10	20	30	5	1DT461NF	3DT461NF	②	②
60	20	25	50	60	10	1DT462NF	3DT462NF	②	②
100	40	50	75	100	20	1DT463NF	3DT463NF	②	②
200	—	50	125	150	40	1DT464NF	3DT464NF	②	②
400	—	—	250	350	50	1DT465NF	②	②	④
600	—	—	250	350	50	1DT466NF	②	②	④
800	—	—	250	350	50	1DT467NF	②	②	④
<b>Six-Pole—600 Vac—250 Vdc<sup>①</sup></b>									
30	7-1/2	10	15	30	5	1DT661NF	3DT661NF	②	②
60	20	25	50	60	10	1DT662NF	3DT662NF	②	②
100	40	50	75	100	20	1DT663NF	3DT663NF	②	②

① Field installable neutral kit is not available. If a neutral is required, order the catalogue number shown in the table add "N" suffix.

② Contact Customer Support (1-800-268-3578) for availability of this product.

③ NEMA 12 enclosures (30–1200A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

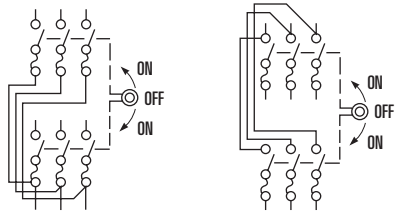
④ 30-200A stainless steel 4X standard, 400-800A NEMA 4 painted steel standard. For stainless at 400-800A add 'SS' to catalogue number suffix.

# Switching Devices

## Safety Switches

### Technical Data and Specifications for Double-Throw Switches

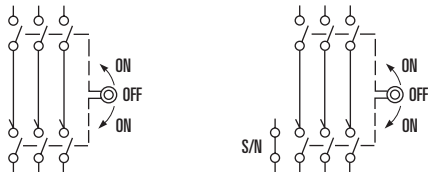
#### Typical Fusible, Double-Throw Schematic Diagram



**Fusible Three-Pole Two Sources**

**Fusible Three-Pole Two Loads**

#### Typical Non-Fusible, Double-Throw Schematic Diagram



**Non-Fusible Three-Pole Two Sources or Two Loads**

**Non-Fusible Three-Pole Two Sources or Two Loads**

#### Short-Circuit Ratings (kA) Using Class "R", "J" or "T" Fusing Where Applicable

Ampere Rating	NEMA 1	NEMA 3R	NEMA 12	NEMA 4 and 4X
30	100 at 600V	100 at 600V	100 at 600V	100 at 600V
60	100 at 600V	100 at 600V	100 at 600V	100 at 600V
100	100 at 600V	100 at 600V	100 at 600V	100 at 600V
200	100 at 600V	100 at 600V	100 at 600V	100 at 600V
400	100 at 600V	100 at 600V	100 at 600V	100 at 600V
600	100 at 600V	100 at 600V	100 at 600V	100 at 600V
800	100 at 600V	100 at 600V	—	—
1200	100 at 600V	100 at 600V	—	—

### Fuse Class Adaptation

Safety Switch Type	Standard Fuse Class Clips Supplied with Switch	Adaptable to Accept the Following Fuse Class	
		R	J
Double-Throw	H 30-200A T 240V: 600-1200A T 600V: 400-800A L 600V: 1200A	30-400A	240V 200A Only 600V 200A-400A Only

#### Note:

For 'J' Fusing on 600V DT, 30, 60, 100, 600A, not available.

For 'J' Fusing on 200A reposition loadside fuse base.

For 'J' fuse on 400A order DT400JK

For 'R' fuse rejector adapter kits, and 'T' class adapter kits see accessories page 4

For 'J' Fusing on 240V 30, 60, 100, 400, 600A not available

For 'J' Fusing on 200A reposition loadside fuse block to accept J fuse

#### Terminal Capacity for Heavy Duty Double-Throw Safety Switch 600V Max

Ampere	Line/Load Terminal Capacity (per phase)	Ground terminal Capacity	Neutral Catalogue # <sup>①</sup>	Neutral Terminal Capacity
30	#14 - #2	#14 - 4	DT100NK	1x #14 - #2 AND 3x #14 - #2
60	#14 - #2	#14 - 4	DT100NK	1x #14 - #2 AND 3x #14 - #2
100	#14 - 1/0	#14 - 4	DT100NK	1x #14 - #2 AND 3x #14 - #2
200	#6 - 250mcm	#14 - 4	DT200NK	3x #6 - 250mcm AND 1x #14 - #2
400 (non fusible)	(2) 1/0 - (2)300mcm OR (1) 1/0 - 750mcm	#6 - 250mcm	DT400NK	7x #6 - 250mcm
400 (fusible)	(2) 1/0 - (2)300mcm OR (1) 1/0 - 750mcm	#6 - 250mcm	DS800NK	2x (4)3/0 - (4)750mcm AND 3x #6 - 250mcm
600 (non fusible)	(2)250mcm - (2)500mcm	#6 - 250mcm	DT600NK	6x 250mcm - 500mcm AND 1x #6 - 250mcm
600 (fusible)	(1) #2 - 600mcm AND (1)1/0 - 750mcm	#6 - 250mcm	DS800NK	2x (4)3/0 - (4)750mcm AND 3 x #6 - 250mcm
800	(3)250mcm - (3)500mcm	#6 - 250mcm	DT800NK	3x (3) 250mcm - (3) 500mcm
1200	(4) 1/0 - (4)750mcm	#6 - 250mcm	DT1200NK	3x (4)1/0 - (4)750mcm

<sup>①</sup> Order neutral catalogue number when neutral required and not included with switch.

#### Note:

All terminals are rating Al/Cu unless otherwise noted.

Ground terminal is standard on all switches. For optional ground lug kits or copper lug kits see page 4 and 6.

### Dimensions

Approximate Dimensions in Inches (mm)

#### Heavy Duty, Non-Fusible, 240V and 600V, Two and Three-Pole, Double-Throw

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 1, 3R</b>					
30	11.94 (303.3)	24.63 (625.6)	9.88 (251.0)	5.38 (136.7)	34 (15)
60	11.94 (303.3)	24.63 (625.6)	9.88 (251.0)	5.38 (136.7)	34 (15)
100	11.94 (303.3)	24.63 (625.6)	9.88 (251.0)	5.38 (136.7)	34 (15)
200	19.56 (496.8)	37.38 (949.5)	11.25 (285.8)	6.10 (154.9)	80 (36)
400	23.13 (587.5)	53.81 (1366.8)	12.50 (317.5)	7.25 (184.2)	130 (59)
600	24.13 (612.9)	63.31 (1608.1)	14.13 (358.9)	8.88 (225.6)	160 (73)
800	24.13 (612.9)	63.31 (1608.1)	14.13 (358.9)	8.88 (225.6)	175 (79)
1200	42.62 (1082.5)	78.11 (1984.0)	25.62 (650.7)	20.47 (519.9)	471(214)

#### NEMA 12, 4X Stainless Steel, 4 Painted Steel >200A

30	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27)
60	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27)
100	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27)
200	19.50 (495.3)	41.00 (1041.4)	11.63 (295.4)	6.48 (164.6)	105 (48)
400	23.05 (587)	57.48 (1460)	12.5 (317)	7.25 (184.2)	135 (61)
600	24.07 (612)	67.02 (1702)	14.05 (357)	8.88 (225.6)	180 (82)
800	24.07 (612)	67.02 (1702)	14.05 (357)	8.88 (225.6)	200 (91)

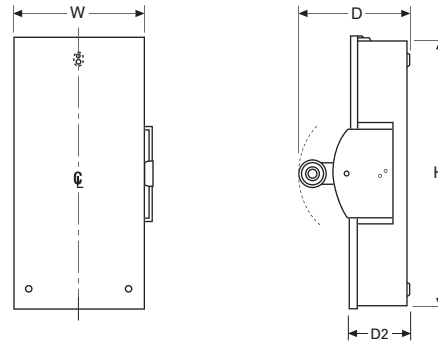
#### Heavy Duty, Fusible, 240V and 600V, Three-Pole, Double-Throw

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 1, 3R</b>					
30	11.94 (303.3)	36.63 (930.4)	9.88 (251.0)	5.38 (136.7)	44 (20)
60	11.94 (303.3)	36.63 (930.4)	9.88 (251.0)	5.38 (136.7)	44 (20)
100	11.94 (303.3)	36.63 (930.4)	9.88 (251.0)	5.38 (136.7)	44 (20)
200	19.56 (496.8)	50.88 (1292.4)	11.25 (285.8)	6.10 (154.9)	95 (43)
400	25.38 (644.7)	74.75 (1898.7)	14.13 (358.9)	8.88 (225.6)	195 (89)
600	27.44 (697.0)	86.13 (2187.7)	14.13 (358.9)	8.88 (225.6)	230 (104)
800	28.12 (714.2)	58.86 (1495.0)	25.62 (650.7)	20.47 (519.9)	277(126)
1200	42.62 (1082.5)	78.11 (1984.0)	25.62 (650.7)	20.47 (519.9)	501(228)

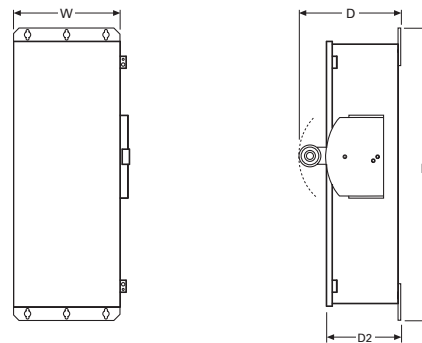
#### NEMA 12, 4X Stainless Steel, 4 Painted Steel >200A

30	12.00 (304.8)	39.81 (1011.2)	10.25 (260.4)	5.50 (139.7)	45 (20)
60	12.00 (304.8)	39.81 (1011.2)	10.25 (260.4)	5.50 (139.7)	45 (20)
100	12.00 (304.8)	39.81 (1011.2)	10.25 (260.4)	5.50 (139.7)	45 (20)
200	19.56 (496.8)	55.63 (1413.0)	11.63 (295.4)	6.46 (164.1)	100 (45)
400	25.32 (643)	77 (1956)	14.05 (357)	8.92 (226)	—
600	25.32 (643)	77 (1956)	14.05 (357)	8.92 (226)	—

#### NEMA 1, 3R Double-Throw 30-1200A



#### NEMA 12, 4X Double-Throw 30-1200A



#### Heavy Duty, Non-Fusible, 600V, Four and Six-Pole<sup>Ⓢ</sup>, Double-Throw

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 1, 3R</b>					
30	17.75 (451)	24.63 (625)	9.88 (251.0)	5.28 (134)	45 (20.5)
60	17.75 (451)	24.63 (625)	9.88 (251.0)	5.28 (134)	45 (20.5)
100	17.75 (451)	24.63 (625)	9.88 (251.0)	5.28 (134)	45 (20.5)
200	19.50 (497)	37.25 (946)	11.25 (285.8)	6.10 (155)	95 (43)
400	27.50 (697)	63.31 (1608)	14.13 (358.9)	8.88 (226)	160 (72.6)
600	27.50 (697)	63.31 (1608)	14.13 (358.9)	8.88 (226)	185 (84)
800	27.50 (697)	63.31 (1608)	14.13 (358.9)	8.88 (226)	185 (84)

#### Note:

Six pole dimensions listed 30, 60, 100A only.



### Non-Metallic Switch



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### Heavy Duty Non-Metallic Switches

#### Product Description

This switch has a KRYDON™ enclosure. These are compression molded fiberglass reinforced polyester enclosure, which is capable of withstanding almost any corrosive environment. Ratings are 30–200A, 240–600 Vac, fusible and non-fusible. Enclosure is NEMA 4X rated.

#### Features

- 30–200A
- KRYDON high-impact strength fiberglass reinforced polyester material
- Horsepower rated
- Suitable for service entrance use
- Fusible and non-fusible
- Stainless steel external hardware

#### Standards and Certifications

- UL 98 listed File No. E5239

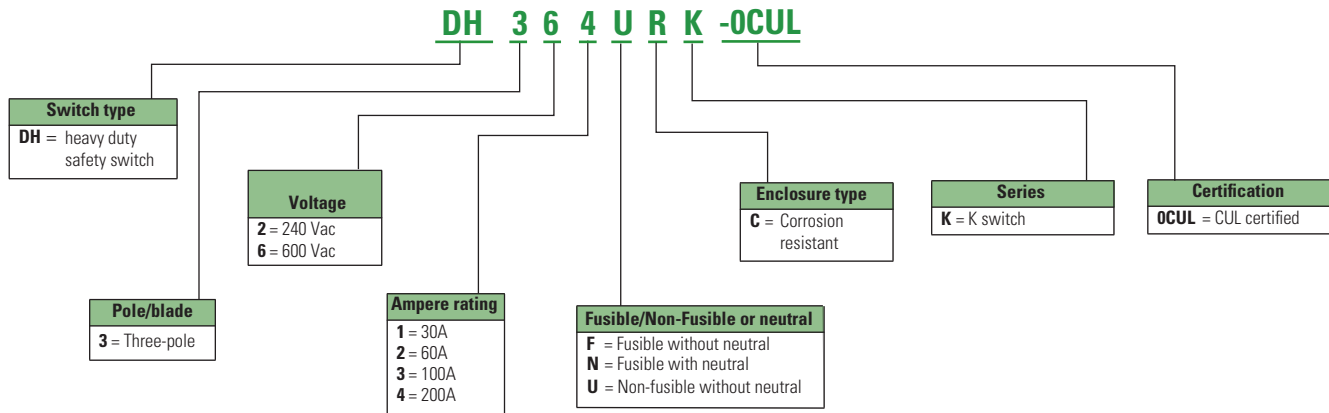


# Switching Devices

## Safety Switches

### Catalog Numbering System

#### Heavy Duty Single Throw with Cam or Posi-Lok Receptacles



**Note:**

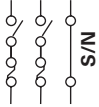
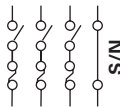
This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers. For more detailed catalogue part numbers, see Product Selection Guide

### Product Selection

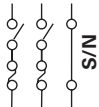
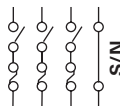
DH361UCK




### 240 Vac Heavy-Duty Non-Metallic Fusible

System	Ampere Rating	Fuse Type Provision	Maximum Horsepower Ratings				NEMA 4X Enclosure Corrosion-Resistant, Non-Metallic Catalog Number	
			AC Standard Fuse		Time Delay	DC 250V		
			Single-phase	Three-Phase	Single-Phase			
<b>Three-Pole, 240 Vac—250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>								
	30	H	1-1/2	3	—	7-1/2	—	DH321FCK <sup>①</sup> -OCUL
	60	H	3	7-1/2	—	15	—	DH322FCK-OCUL
	100	H	7-1/2	7-15	—	30	20	DH323FCK-OCUL
	200	H	15	25	—	60	40	DH324FCK-OCUL
<b>Four-Wire (Three Blades, Three Fuses, S/N), 240 Vac—250 Vdc</b>								
	30	H	—	3	—	7-1/2	—	DH321FCK <sup>①</sup> -OCUL
	60	H	—	7-1/2	—	15	—	DH322FCK-OCUL
	100	H	—	7-15	—	30	20	DH323FCK-OCUL
	200	H	—	25	—	60	40	DH324FCK-OCUL

### 600 Vac Heavy-Duty Non-Metallic Fusible

System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses						NEMA 4X Enclosure Corrosion-Resistant, Non-Metallic Catalog Number	
			Single-Phase AC			Three-Phase AC		DC		
			480V	600V	480V	600V	250V	600V		
<b>Three-Pole, 240 Vac—250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	H	7-1/2	10	15	20	—	—	DH361FCK <sup>①</sup> -OCUL	
	60	H	20	25	30	50	—	—	DH362FCK-OCUL	
	100	H	30	30	60	75	—	—	DH363FCK-OCUL	
	200	H	50	50	125	150	—	—	DH364FCK-OCUL	
<b>Four-Wire (Three Blades, Three Fuses, S/N), 480 Vac—600 Vac, 250 Vdc</b>										
	30	H	7-1/2	10	15	20	—	—	DH361FCK <sup>①</sup> -OCUL	
	60	H	20	25	30	50	—	—	DH362FCK-OCUL	
	100	H	30	30	60	75	—	—	DH363FCK-OCUL	
	200	H	50	50	125	150	—	—	DH364FCK-OCUL	

### 600 Vac Heavy-Duty Non-Metallic Non-Fusible 277/480–600V

System	Ampere Rating	Single-Phase AC 240V	Maximum Horsepower Ratings with Time Delay Fuses						NEMA 4X Enclosure Corrosion-Resistant, Non-Metallic Catalog Number	
			Single-Phase AC 480V		Three-Phase AC 240V		DC 250V			
			480V	600V	480V	600V	250V	600V		
<b>Three-Pole, 480 Vac—600 Vac, 250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>										
	30	3	7-1/2	10	10	20	30	5	—	DH361UCK-OCUL
	60	10	20	25	20	50	60	10	—	DH362UCK-OCUL
	100	20	40	50	40	75	100	20	—	DH363UCK-OCUL
	200	15	50	50	60	125	150	40	—	DH364UCK-OCUL

**Note:**

① 30A heavy-duty switches with Type J fuse provisions are available from the factory only.



# Switching Devices

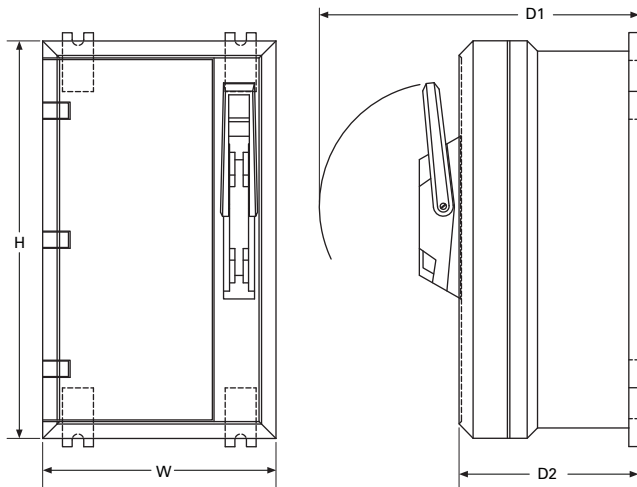
## Safety Switches

### Dimensions

Approximate Dimensions in Inches (mm)

**Note:** Dimensions are for estimating purposes only.

### 240 Vac and 600 Vac Heavy-Duty Non-Metallic



### Non-Metallic NEMA 4X Rated Safety Switches, Fusible and Non-Fusible

Amperage	Height Height (H)	Width Width (W)	Depth Depth (D1)	Depth (D2)	Weight lbs(kg)
30A	19.25 (489.0)	11.30 (287.0)	15.46 (392.7)	8.63 (219.2)	32 (14.5)
60A	19.25 (489.0)	11.30 (287.0)	15.46 (392.7)	8.63 (219.2)	32 (14.5)
100A	27.25 (692.2)	15.30 (388.6)	16.46 (418.1)	9.70 (246.4)	45 (20.4)
200A	27.25 (692.2)	25.30 (642.6)	16.46 (418.1)	9.70 (246.4)	77 (35.0)

CDH364URKNLC Single Throw Quick Connect CDT364URKNLC Double-Throw Quick Connect



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### Heavy Duty Quick Connect Switches

#### Application Description

The heavy duty quick connect **single throw** design is typically used with your main utility when temporary power is required such as, to connect a sound or lighting system, media equipment, carnival equipment. When portable power from a generator is required either a **single throw (reverse configuration)** or a **double-throw** quick connect could be used. CEC does not permit double-throw safety switches to be used for service entrance.

#### Product Description

- 100-800A  
100-1200A
- 240-600 Vac heavy duty
- Utilizes Crouse-Hinds "J" Power series E1015, E1016, E1017 Cam-Lok® connectors or Crouse-

Hinds E200, E400 Posi-Lok® receptacles

- Fusible, Non-fusible switch design
- CDH – single throw switch design
- CDT – double-throw switch design
- Single or Three phase, ground receptacle standard. Fourth pole, solid or switched neutral optional
- NEMA 1 or 3R enclosure. Optional NEMA 12 or 4/4X (assembly rating 3R)
- 100% load break make rated
- Key interlocking available upon request
- Windows for NEMA 12 or 4/ 4X (assembly rating 3R) available upon request

#### Features

- Both designs provide a superior safety solution, interlocking the operation of the switch with the door interlock of the receptacle compartment.
- The switch cannot be turned to the ON position without first closing the receptacle compartment door.
- Convenient and safe method to quickly connect and disconnect portable equipment.
- Spring loaded flap door in the receptacle compartment allows the cables to exit the compartment, but seals the compartment when the switch is not in use.

- An additional flap door on the main compartment allows for quick connection in the event that the appropriate plugs are not readily available.
- Additional options such as Key Interlocking, Windows, NEMA 12, 4/4X enclosures available upon request

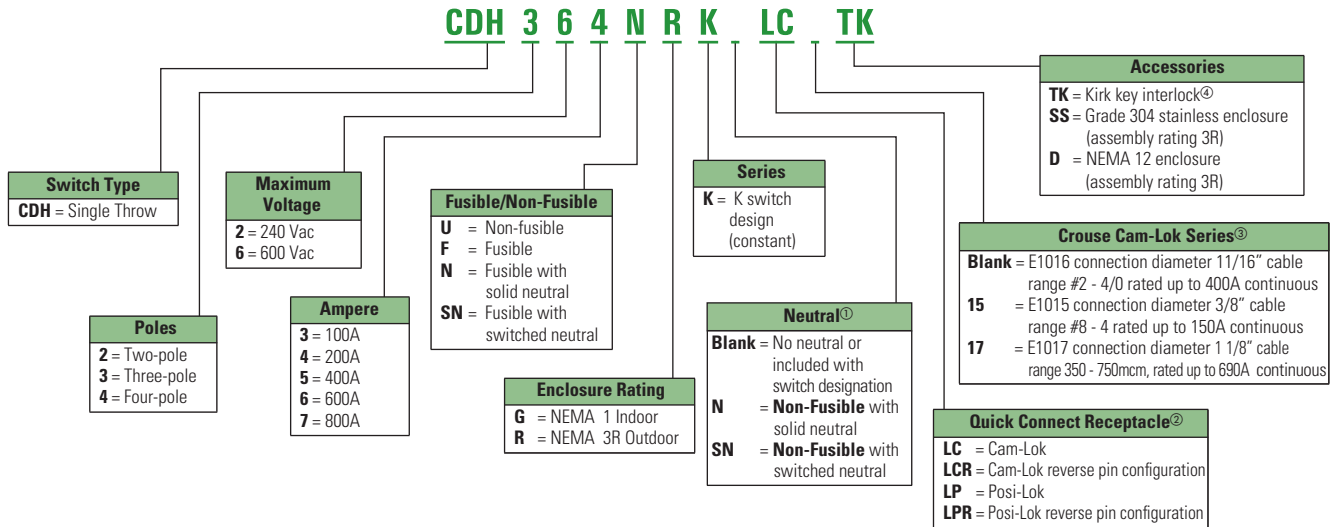
#### Standards and Certifications

- CSA certified File No. LR69743
- Meets C22.2 No. 4
- ISO-9001



### Catalog Numbering System

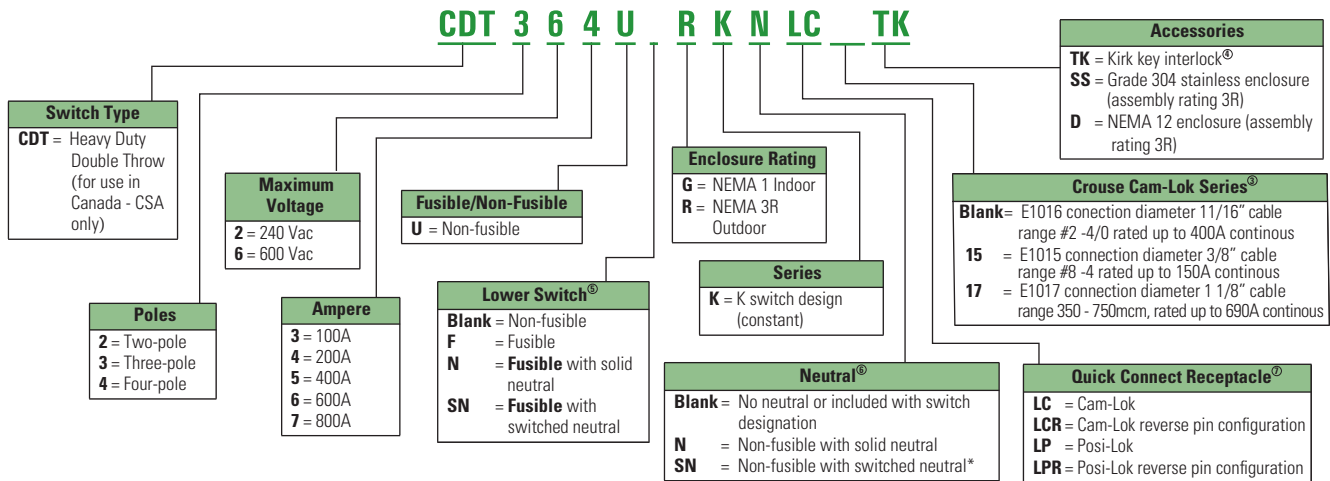
#### Heavy Duty Single Throw with Cam or Posi-Lok Receptacles



- ① This field is only used when the switch is non-fusible.
- ② Cam-Lok devices have male ground and neutral and female phase receptacles as standard on single throw. Posi-Lok devices have all female receptacles as standard on single throw. Should a reverse gender configuration be required add suffix "R" to the receptacle designation. An easy way to determine receptacle type: for generator applications male phase receptacles, for temporary load applications female phase receptacles.
- ③ E1016 receptacle supplied as standard for all ratings, leave blank unless optional receptacle required.
- ④ Provide key interlocking co-ordination as well as customer name, address and phone number for key registration when ordering.

**Note:**  
This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

#### Heavy Duty Double-Throw with Cam or Posi-Lok Receptacles



- ⑤ When lower switch is unfused, the switch configuration is consolidated in one letter (ie: "U" not "UU"). A switch with a neutral will have either a solid neutral or a switched neutral, not both. For switched neutral application order 3 pole for single phase and 4 pole for three phase.
- ⑥ This field is only used when the switch is non-fusible.
- ⑦ Cam-Lok devices have female ground and neutral and male phase receptacles as standard on double-throw. Posi-Lok devices have all male receptacles as standard on double-throw. Should a reverse gender configuration be required add suffix "R" to the receptacle designation. An easy way to determine receptacle type: for generator applications male phase receptacles, for temporary load applications female phase receptacles.

**Note:**  
This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

### Technical Data and Specifications

- 100-800A
- 240V - 600 Vac heavy duty
- Utilizes Crouse-Hinds "J" Power series E1015, E1016, E1017 Cam-Lok® connectors or Crouse-Hinds E200, E400 Posi-Lok® receptacles
- Fusible, Non-fusible switch design
- CDH – single throw switch design
- CDT – double-throw switch design
- 100% load break and make rated
- For short-circuit withstand ratings refer to page 11 for single throw and 12 for double-throw
- Horsepower rated
- Single or Three phase, ground receptacle standard. Fourth pole, solid or switched neutral optional
- NEMA 1 or 3R enclosures standard optional NEMA 12 or 4/4X (assembly rating 3R)
- **Single throw** design with Cam Lok® - male ground (standard) and male neutral (optional) receptacles, female phase receptacles (standard)
- Single throw design with Posi Lok® - all female receptacles
- Receptacles on single throw factory wired to load side of switch – standard
- Reverse pin (receptacle) and wiring configuration available – add "R" to catalogue suffix
- **Double-throw** with Cam-Lok® - female ground and male phase receptacles (standard). Female neutral receptacles (optional)
- Double-throw design with Posi Lok® - all male receptacles
- Reverse pin (receptacle) and wiring configuration available – add "R" to catalogue suffix
- Receptacles on double throw, non fusible, factory wired to lower switch line side
- Receptacles on double throw, lower switch fusible, factory wired to line side of fuse
- 100-200A receptacle compartment located at bottom of enclosure
- 400–800A receptacle compartment located beside enclosure
- 100A through 400A have a single row of receptacles, while 600A and 800A have parallel receptacles
- Additional options such as Key Interlocking, Windows, NEMA 12, 4/4X enclosures (3R rated assembly) available upon request

### Lug Capacities - Quick Connect Double-Throw Switch Assembly with Cam-Lok or Posi-Lok Receptacles

Double-Throw Switch Size - Cam-Lok or Posi-Lok Receptacles	Line Terminal Per Phase	Load Terminal Per Phase	Switched Neutral Pole Load Terminals	Solid Neutral Terminals	Ground Terminals	Receptacle Bypass Terminals
100A	(1) 1/0 – 14 AWG Cu/Al	(1) 1/0 – 14 AWG Cu/Al	(1) 1/0 - 14 AWG Cu/Al	(2) 1/0 - 14 AWG, (1) 2 - 14 AWG Cu/Al	(3) 2 - 14 AWG Cu/Al	(1) 10 - 32 Screw Mounting
200A	(1) 300 kcmil 6 AWG Cu/Al	(1) 250 kcmil 6 AWG Cu/Al	(1) 250 kcmil - 6 AWG Cu/Al	(2) 250 kcmil - 6 AWG, (1) 1/0 - 14 AWG, (1) 2 - 14 AWG Cu/Al	(3) 2 - 14 AWG Cu/Al	(2) 1/4 Studs, 1.75 Inch Spacing
400A	(1) 750 kcmil - 1/0 or (2) 300 kcmil - 1/0 Cu/Al	(1) 750 kcmil - 1/0 or (2) 300 kcmil - 1/0 Cu/Al	(1) 750 kcmil - 1/0 or (2) 300 kcmil - 1/0 Cu/Al	(6) 500 - 250 kcmil, (6) 250 kcmil - 6 AWG Cu/Al	(4) 250 kcmil - 6 AWG Cu/Al	(2) 1/2 - 13 UNC Studs, 1.75 Inch Spacing
600A	(4) 750 kcmil - 3/0 Cu/Al	(4) 750 kcmil - 3/0 Cu/Al	4) 750 kcmil - 3/0 Cu/Al	(6) 500 - 250 kcmil, (4) 250 kcmil - 6 AWG Cu/Al	(4) 250 kcmil - 6 AWG Cu/Al	(2) 1/2 - 13 UNC Studs, 1.75 Inch Spacing
800A	(4) 750 kcmil - 3/0 Cu/Al	4) 750 kcmil - 3/0 Cu/Al	(4) 750 kcmil - 3/0 Cu/Al	(6) 500 - 250 kcmil, (4) 250 kcmil - 6 AWG	(4) 250 kcmil - 6 AWG Cu/Al	(2) 1/2 - 13 UNC Studs, 1.75 Inch Spacing

### Lug Capacities - Quick Connect Single Throw with Cam-Lok or Posi-Lok Receptacles

Ampere	Line Terminals Per Phase	Load Terminals Per Phase	Solid Neutral Terminals	Ground Terminal
100A	1/0 - #14	1/0 - #14	(2) 1/0 - #14, (2) #2 - #14	#4 - 14AWG
200A	(1) #6 - 300mcm	(1) #6 - 300mcm	(2) #6 - 300mcm, (2) #4 - #14	#4 - 14AWG
400A	(1) 1/0 - 750mcm or (2) 1/0 - 300mcm	(1) 1/0 - 750mcm or (2) 2/0 - 300mcm	(1) 1/0 - 750mcm or (2) 1/0 - 300mcm, and (3) #6 - 250mcm	(2) #6 - 250mcm
600A	(1) #2-600mcm and (1) 1/0 - 750mcm	(1) #2-600mcm and (1) 1/0 - 750mcm	(1) 1/0 - 750mcm and (1) #2 - 600mcm, and (3) #6 - 250mcm	(2) #6 - 250mcm
800A	(4) 3/0 - 750mcm	(4) 3/0 - 750mcm	(3) #6 - 250mcm, (4) 3/0 - 750mcm	(2) #6 - 250mcm

# Switching Devices

## Safety Switches

### Standard Receptacle Color Codes By Application

SINGLE THROW SWITCHES		GROUND				NEUTRAL				PHASE A				PHASE B				PHASE C			
		Gender		Color		Gender		Color		Gender		Color		Gender		Color		Gender		Color	
		Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color
LC	Canada	X		GREEN		X		WHITE		X		BLACK		X		RED		X		BLUE	
LCR	Canada		X	GREEN		X		WHITE	X			BLACK	X			RED	X				BLUE
LP	Canada		X	GREEN		X		WHITE	X			BLACK	X			RED		X			BLUE
LPR	Canada	X		GREEN	X			WHITE	X			BLACK	X			RED	X				BLUE

DOUBLE THROW SWITCHES		GROUND				NEUTRAL				PHASE A				PHASE B				PHASE C			
		Gender		Color		Gender		Color		Gender		Color		Gender		Color		Gender		Color	
		Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color	Male	Female	240 V Color	600 V Color
LC	Canada		X	GREEN		X		WHITE	X			BLACK	X			RED	X				BLUE
LCR	Canada	X		GREEN	X			WHITE	X			BLACK	X			RED		X			BLUE
LP	Canada	X		GREEN	X			WHITE	X			BLACK	X			RED	X				BLUE
LPR	Canada		X	GREEN		X		WHITE	X			BLACK	X			RED		X			BLUE

Chart shows typical color codes, other colors can be substituted

\*Note - Single Phase Posi-Lok switches, and 200% Neutral Posi-Lok switch will revert to a Red Black, or a Red Black Blue color scheme. Brown Orange Yellow has a limited offering, and there are no Brown Orange available.

\*\*Note - Suffix "H" refers to Canadian switches for Hydro One. They require Red Black Blue color configuration for Phase A, B, C respectively.

\*\*\*Note - Suffix "RG" refers to Reverse Gender for Single Throw. An example would be an LCR single throw supplied with Male Ground, Male Neutral, and Female Phases.

\*\*\*\*Note - Suffix "F" refers to all Female receptacles.

\*\*\*\*\*Note - The "R" at the end of Double Throw is Reverse Gender for Double Throw. Only difference between LCR and LC on a DT is gender swap.

\*\*\*\*\*Note - Suffix "FN" refers to a Female Neutral.

\*\*\*\*\*Note - Suffix "DR" refers to Double Receptacles. This is for 200A or 400A QC switches where the customer wants (2) CamLok receptacles per phase, neutral, and ground, instead of our standard (1) per phase, neutral, and ground.

\*\*\*\*\*Note - Suffix "MG" refers to Male Ground.

\*\*\*\*\*Note - Suffix "M" refers to all Male receptacles.

\*\*\*\*\*Note - Suffix "BBW" refers to Brown, Black, White for the Phases (A, B, C).

\*\*\*\*\*Note - Suffix "LS" refers to moving the CamLok box from the right side to left side. 400-800A DT Only. Non-UL. Non-Interlocked CamLok compartment.

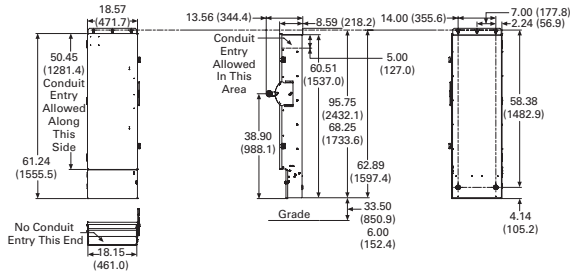
# Switching Devices

## Safety Switches

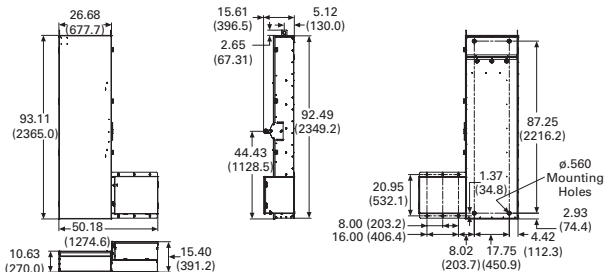
### Dimensions

Approximate Dimensions in Inches (mm)

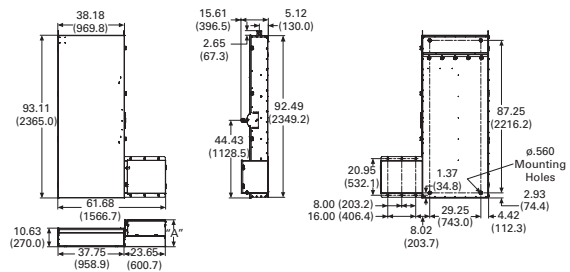
#### 100-200A CDT Dimensions



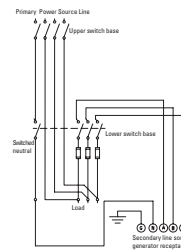
#### 400A CDT Dimensions



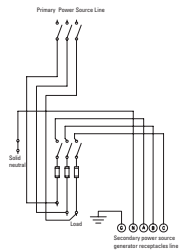
#### 600-800A CDT Dimensions



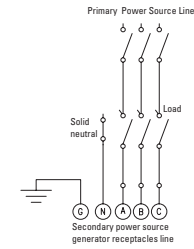
#### Wiring Diagrams



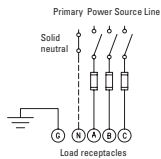
IE: CDT464USNGKLC



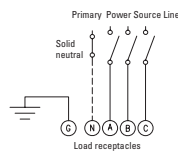
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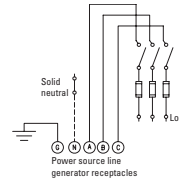
IE: CDT364UGKNLC



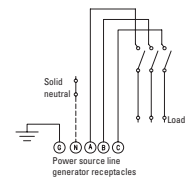
IE: CDT364NGKLC



IE: CDH364UGKNLC

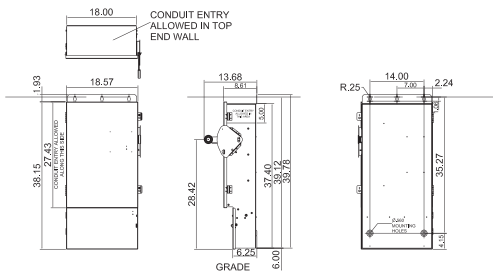


IE: CDH364NGKLC

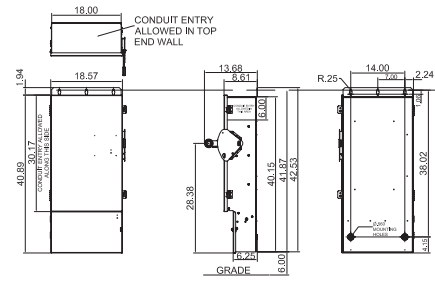


IE: CDH364UGKNLC

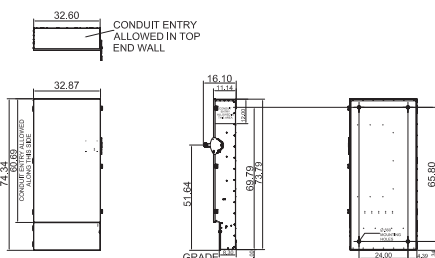
#### 100A CDH Dimensions



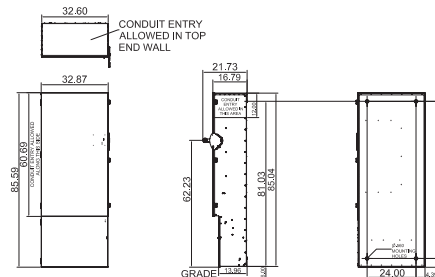
#### 200A CDH Dimensions



#### 400-600A CDH Dimensions



#### 800A CDH Dimensions



Pin & Sleeve Type Receptacle Switch



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### Pin & Sleeve Receptacle Switches

#### Application Description

These switches are used with pin & sleeve type power plugs for portable power applications such as welders, infrared ovens, batch feeders, conveyors, truck and marine docks.

#### Product Description

These heavy duty switches are pre-wired and interlocked to polarized receptacles for three-phase, three-wire, grounded type power plugs. Referred as 3W4P (4th pole used for grounding).

Receptacles are interlocked to the handle mechanism so that power plugs may not be inserted or removed when the switch is in the ON position.

- 30–100A
- 600 Vac
- Fusible and non-fusible
- NEMA 12/3R painted steel, 4X stainless enclosure and receptacle rating
- 200A and 400A

receptacles available upon request - Note 200A and 400A not mechanically interlocked

- Utilizes 3W 4P Style 2 Powertite®, Arkrite®, or Max-Gard® series pin and sleeve receptacles
- Windows available upon request
- 3W 3P receptacles available upon request
- Receptacles with a 22.5 degree interior rotation available upon request
- Receptacles with reverse contacts available upon request
- Power plugs not supplied with the receptacle

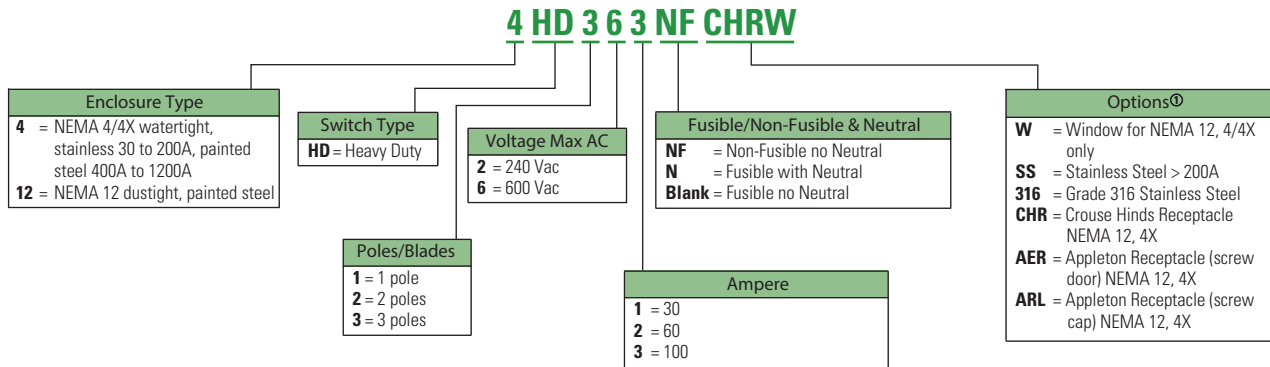
#### Standards and Certifications

- CSA certified File No. 69743
- Meets C22.2 No.4 standard for enclosed switches
- ISO - 9001:2008



### Catalog Numbering System

#### Pin & Sleeve Receptacle Switches



<sup>Ⓞ</sup> See **Pages 13** through **15** for additional Flex Centre options.

**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.



# Switching Devices

## Safety Switches

### Product Selection

600 Vac Heavy Duty, Single-Throw with Pin & Sleeve Type Receptacle, Fusible, Non-Fusible

DH362FDK2WR



### Safety Switch 3PH 3W with Pin and Sleeve Type Receptacle 3W4P, 600V Single Throw – Fusible

Ampere Rating		Maximum Horsepower Rating with Time Delay Fuses	NEMA 12 Enclosure Dusttight	NEMA 4X Enclosure Corrosion Resistant, Stainless Steel	Power Plug <sup>①</sup>
Switch	Receptacle		Catalogue Number <sup>②</sup>	Catalogue Number	
<b>Crouse-Hinds ARKTITE® Receptacle</b>					
30	30	20	12HD361CHR	4HD361CHR	Accepts Crouse-Hinds APJ3485
60	60	50	12HD362CHR	4HD362CHR	APJ6485
100	100	75	12HD363CHR	4HD363CHR	APJ10487
<b>Appleton POWERTITE® Receptacle</b>					
30	30	20	12HD361AER	4HD361AER	Accepts Appleton ACP3034BC
60	60	50	12HD362AER	4HD362AER	ACP6034BC
100	100	75	12HD363AER	4HD363AER	ACP1034CD

### Safety Switch 3PH 3W with Pin and Sleeve Type Receptacle 3W4P, 600V Single Throw – Non-Fusible

Ampere Rating		Maximum Horsepower Rating with Time Delay Fuses	NEMA 12 Enclosure Dusttight	NEMA 4X Enclosure Corrosion Resistant, Stainless Steel	Power Plug <sup>①</sup>
Switch	Receptacle		Catalogue Number <sup>②</sup>	Catalogue Number	
<b>Crouse-Hinds ARKTITE® Receptacle</b>					
30	30	30	12HD361NFCHR	4HD361NFCHR	Accepts Crouse-Hinds APJ3485
60	60	60	12HD362NFCHR	4HD362NFCHR	APJ6485
100	100	75	12HD363NFCHR	4HD363NFCHR	APJ10487
<b>Appleton POWERTITE® Receptacle</b>					
30	30	30	12HD361NFAER	4HD361NFAER	Accepts Appleton ACP3034BC
60	60	60	12HD362NFAER	4HD362NFAER	ACP6034BC
100	100	75	12HD363NFAER	4HD363NFAER	ACP1034CD

<sup>①</sup> Power plugs are not included with switch and not available through Eaton.

<sup>②</sup> NEMA 12 enclosures can be field modified to meet NEMA 3R rainproof rating when factory provided drain hole is opened.

<sup>③</sup> Contact Customer Support (1-800-268-3578) for availability of this product.

**Note:**

For viewing window add 'W' to suffix of catalogue number.

### Technical Data and Specifications - For Heavy Duty Switches with Pin and Sleeve Receptacles

#### Short-Circuit Ratings (kA) Using Class "R", "J" or "T" Fusing Where Applicable

Ampere Rating	NEMA 1	NEMA 3R	NEMA 12/3R	NEMA 4X
30	—	—	200 at 600V	200 at 600V
60	—	—	200 at 600V	200 at 600V
100	—	—	200 at 600V	200 at 600V

**Note:**

Class "H" fuse clips supplied as standard. Rated at 10,000 rms symmetrical when using Class "H" fuses.

#### Fuse Class Adaptation

Safety Switch Type	Standard Fuse Class Clips Supplied with Switch	Adaptable to Accept the Following Fuse Class		
		R	J	T
Pin & Sleeve Receptacle Switch	H	30-100A	60-100A	—

**Note:**

For 'J' Fusing on 600V heavy duty with receptacle field modification required.

30A reposition fuse clips on loadside of fuse base for 'J' fusing.

60A reposition fuse clips on loadside of fuse base for 'J' fusing.

100A reposition loadside fuse blocks to accept 'J' fusing.

#### Terminal Capacity for Heavy Duty Safety Switch with pin & sleeve receptacles 600V Max

Ampere	Line/Load Terminal Capacity (per phase)	Ground terminal Capacity	Neutral Catalogue #	Neutral Terminal Capacity
30	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
60	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
100	#14 - 1/0	#14 - 4	DH100NK	2x #14-#2 AND 2x #14 - 1/0

**Note:**

\* Order neutral catalogue number when neutral required and not included with switch.

All terminals are rating Al/Cu unless otherwise noted.

Ground terminal is standard on all switches. For optional ground lug kits or copper lug kits see pages 4 and 5.

# Switching Devices

## Safety Switches

### Dimensions

Approximate Dimensions in Inches (mm)

**Note:** Dimensions are for estimating purposes only.

#### Heavy Duty, Non-Fusible, 600V, Three Pole, Single Throw, with Crouse Hinds Pin & Sleeve Receptacle

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight	Weight
					Lbs (kg)	Lbs (kg)
NEMA 12, 4X Stainless Steel						
30	8 (203)	24.13 (612)	10.25 (260)	5.5 (140)	23 (10.5)	32 (14.54)
60	8 (203)	24.13 (612)	10.25 (260)	5.5 (140)	23 (10.5)	34 (15.45)
100	11.13 (281)	30.88 (786)	10.25 (260)	5.5 (140)	28 (12.7)	32 (14.54)

#### Heavy Duty, Fusible, 600V, Three Pole, Single Throw, with Crouse Hinds Pin & Sleeve Receptacle

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight	Weight
					Lbs (kg)	Lbs (kg)
NEMA 12, 4X Stainless Steel <sup>®</sup>						
30	8 (203)	24.13 (612)	10.25 (260)	5.5 (140)	23 (10.5)	35 (15.9)
60	8 (203)	24.13 (612)	10.25 (260)	5.5 (140)	23 (10.5)	35 (15.9)
100	11.13 (281)	30.88 (786)	10.25 (260)	5.5 (140)	28 (12.7)	36 (16.36)

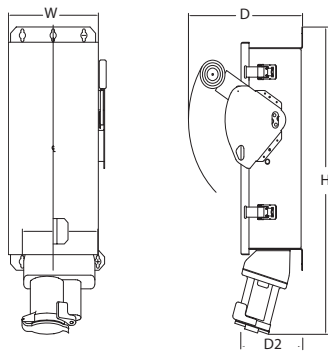
#### Heavy Duty, Non-Fusible, 600V, Three Pole, Single Throw, with Appleton Pin & Sleeve Receptacle

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight	Weight
					Lbs (kg)	Lbs (kg)
NEMA 12, 4X Stainless Steel						
30	8 (203)	23.5 (597)	10.25 (260)	5.5 (140)	23 (10.5)	31 (14.1)
60	8 (203)	23.5 (597)	10.25 (260)	5.5 (140)	23 (10.5)	31 (14.1)
100	11.13 (281)	29.5 (749)	10.25 (260)	5.5 (140)	28 (12.7)	36 (16.3)

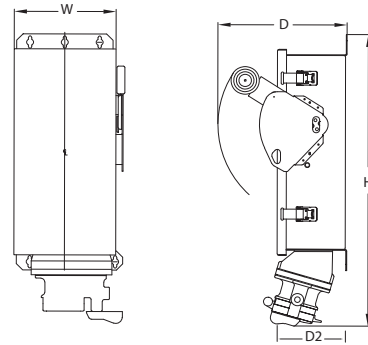
#### Heavy Duty, Fusible, 600V, Three Pole, Single Throw, with Appleton Pin & Sleeve Receptacle

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight	Weight
					Lbs (kg)	Lbs (kg)
NEMA 12, 4X Stainless Steel						
30	8 (203)	23.5 (597)	10.25 (260)	5.5 (140)	23 (10.5)	31 (14.1)
60	8 (203)	23.5 (597)	10.25 (260)	5.5 (140)	23 (10.5)	31 (14.1)
100	11.13 (281)	29.5 (749)	10.25 (260)	5.5 (140)	28 (12.7)	36 (16.3)

#### Switch with Crouse Hinds Receptacle 30, 60, 100A



#### Switch with Appleton Receptacle 30, 60, 100A



#### Note:

NEMA 12 enclosures can be field modified to meet NEMA 3R rainproof requirements when factory provided drain hole is opened.

**Depth listed is for non window design.**

**For 30-100A window version increase depth (D) by 1.22" (32mm) and (D2) by .8" (20mm)**



### Shunt Trip Safety Switch



### Shunt Trip Safety Switch

#### Product Description

Eaton's tried and true heavy-duty safety switch line expands to include shunt trip capability—remote switching and visible means of disconnect for commercial and industrial applications.

The shunt trip technology enhances safety by providing a means to open a safety switch electronically. When using an emergency stop, safety interlock or similar means, the remote operation capability of the shunt trip switch no longer requires personnel to manually open the switch with the handle, enhancing safety and improving productivity.

The shunt trip safety switch builds on Eaton's extensive portfolio of safety switch solutions, incorporating a side-handle operation mechanism and visible blade indication that have decades of successful installation and operation.

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### Application Description

The shunt trip safety switch can be configured to meet the needs of safety applications in industrial and commercial environments. The switches can be signaled to electronically operate the trip mechanism and interrupt the flow of power when a defined electrical condition is detected via protection relay (for example, ground fault, undervoltage, blown fuse shutdown).

### Application Examples

- E-stop
- Safety interlocking
- Machinery OEM interlocking
- Remote opening (distant from switch)
- Cost-effective solution for high-interrupt applications
- Ground fault ①
- Phase reversal/phase loss ①
- Blown fuse shutdown ①
- Undervoltage release ①

#### Note

① Shunt trip switch provides solenoid/coil to facilitate shunt trip, specific relay and applicable power supply provided by others.

### Features

- Variety of coil voltages available
- Visible means of disconnect
- Standard heavy duty safety switch design with integrated shunt trip module
- Passes Class 1 ground fault testing (1200% opening)
- 30–800A (240–600 Vac)
- Horsepower ratings are the same as Eaton’s standard heavy duty safety switches
- Fusible devices have short-circuit ratings of up to 200 kAIC

### Options

Flex Center modifications available, such as viewing windows, pilot lights and more.

Auxiliary contacts **MUST** be factory installed. No auxiliary contacts are available for field installation.

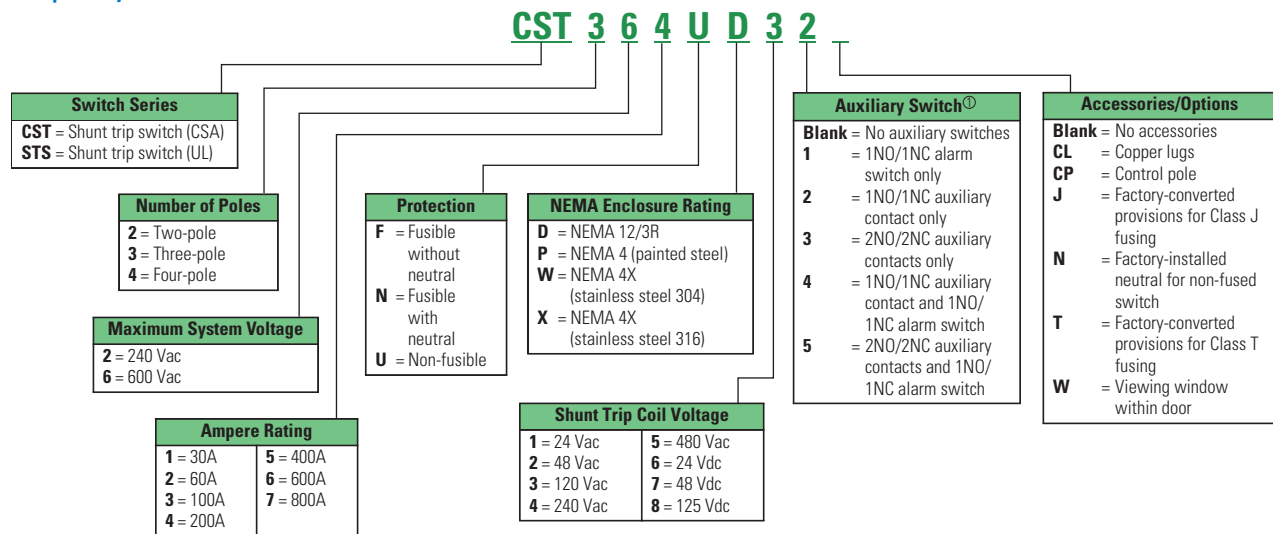
### Standards and Certifications

- UL 98 file number E5239 (600 Vac maximum)
- CSA C22.2 No. 4, file number LL69743 (600 Vac maximum)
- Enclosure ratings: NEMA 12/3R, 4 (painted steel), 4X (stainless steel)



### Catalog Numbering System

#### Shunt Trip Safety Switch



Ⓞ Auxiliary switches must be specified and ordered up front in the catalogue number as a factory installed option. Auxiliary switch field kits (DS200EK1 and DS200EK2) can not be field installed on shunt trip switches.

### Notes

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Safety Switches

### Technical Data and Specifications

#### Shunt Trip Safety Switch—240 Vac and 600 Vac—Ratings

Ampere Rating	Fuse Class <sup>①</sup>	Number of Poles
<b>Fusible</b>		
30	H	2, 3 or 4 <sup>②</sup>
60	H	2, 3 or 4 <sup>②</sup>
100	H	2, 3 or 4 <sup>②</sup>
200	H	2, 3 or 4
400	H	2, 3 or 4
600	H	2, 3
800	L	2, 3
<b>Non-Fusible</b>		
30	—	2, 3 or 4 <sup>②</sup>
60	—	2, 3 or 4 <sup>②</sup>
100	—	2, 3 or 4 <sup>②</sup>
200	—	2, 3 or 4
400	—	2, 3 or 4
600	—	2, 3
800	—	2, 3

#### Terminal/Lug Wire Range

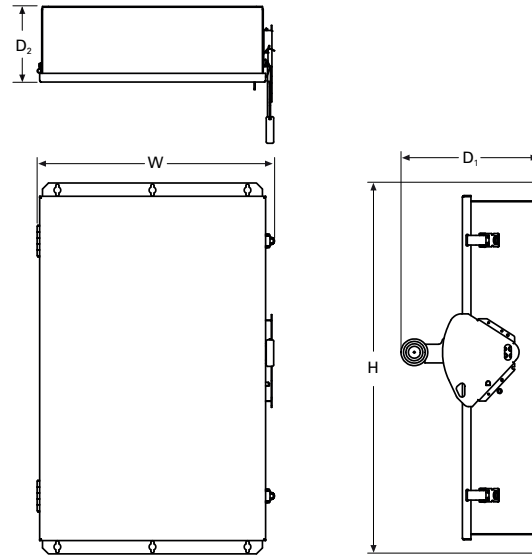
Ampere Rating	Minimum—Maximum	Wire Type
30	#14–#2	Cu/Al
60	#14–#2	Cu/Al
100	#14–1/0	Cu/Al
200	#6–300 kcmil	Cu/Al
400	(2) 1/0–300 kcmil or (1) 1/0–750 kcmil	Cu/Al
600	(1) #2–600 kcmil and (1) 1/0–750 kcmil	Cu/Al
800	(4) 1/0–750 kcmil	Cu/Al

### Dimensions

Approximate Dimensions in Inches (mm)

#### Shunt Trip Safety Switch—240 Vac and 600 Vac

Ampere Rating	Enclosure Height (H)	Dimensions <sup>③</sup> , Exterior Width (W)	Depth (D <sub>1</sub> )	Depth (D <sub>2</sub> )
<b>Fusible</b>				
30	21.58 (548.1)	11.58 (294.1)	11.43 (290.3)	5.58 (141.7)
60	21.58 (548.1)	11.58 (294.1)	11.43 (290.3)	5.58 (141.7)
100	24.95 (633.7)	14.89 (378.2)	11.51 (282.4)	5.58 (141.7)
200	35.38 (898.7)	20.11 (510.8)	11.61 (294.9)	6.45 (163.8)
400	57.47 (1459.7)	27.29 (693.2)	12.43 (315.7)	7.42 (188.5)
600	62.97 (1599.4)	28.29 (718.6)	12.43 (315.7)	7.42 (188.5)
800	71.72 (1821.7)	29.54 (750.3)	12.43 (315.7)	7.42 (188.5)
<b>Non-Fusible</b>				
30	21.58 (548.1)	11.58 (294.1)	11.43 (290.3)	5.58 (141.7)
60	21.58 (548.1)	11.58 (294.1)	11.43 (290.3)	5.58 (141.7)
100	24.95 (633.7)	14.89 (378.2)	11.51 (282.4)	5.58 (141.7)
200	35.38 (898.7)	20.11 (510.8)	11.61 (294.9)	6.45 (163.8)
400	57.47 (1459.7)	27.29 (693.2)	12.43 (315.7)	7.42 (188.5)
600	62.97 (1599.4)	28.29 (718.6)	12.43 (315.7)	7.42 (188.5)
800	71.72 (1821.7)	29.54 (750.3)	12.43 (315.7)	7.42 (188.5)



<sup>①</sup> Class H fuse clips supplied as standard on fusible devices 30–600 A, Class L for 800 A; Class R, J, T fuse clips available.

<sup>②</sup> Four-pole devices are wider than dimension for 30, 60 and 100 A devices. Consult factory for details.

<sup>③</sup> Accurate for all enclosure NEMA type ratings—12/3R, 4, 4X stainless steel.

### Notes

For additional technical information, please refer to Technical Data TD008003EN.





### Six-Pole Motor Circuit



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### Six-Pole Switches

#### Application 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, reversing motors, or two motors separately fed.

#### Product Description

- 600 Vac, 250 Vdc maximum - fusible
- 600 Vac, 600 Vdc maximum - non fusible
- 30–200A
- Fusible or non-fusible
- Enclosure NEMA 12/3R Painted Steel and 4X Stainless Steel

#### Features, Benefits and Functions

- Suitcase-type latches keep the cover tightly closed and a neoprene gasket seals out moisture and dust from the switch assembly
- Visible double-break quick-make, quick-break rotary blade mechanism. Two points of contact provide a positive open and close, easier operation, and also help 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

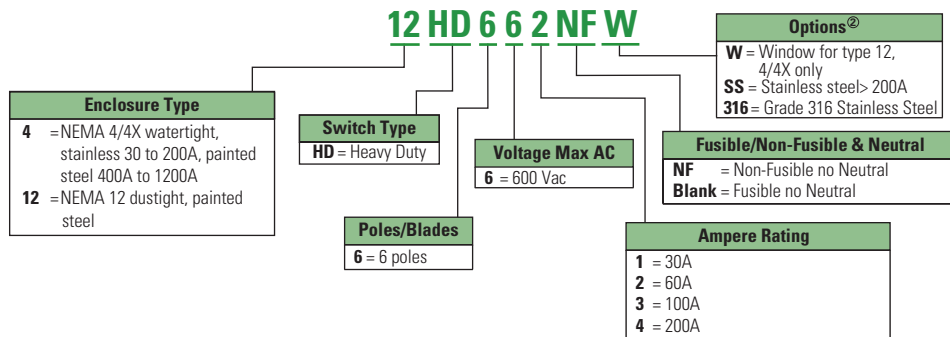
- Deionizing arc chutes; arc chutes confine and suppress the arcs produced by opening contacts under load
- For factory modifications, refer to **Pages 13** through **15**
- For accessories refer to **Pages 4 and 5**

#### Standards and Certifications

- CSA Certified File No. 69473
- Meets C22.2 No. 4 standard for enclosed switches.
- ISO 9001:2008



### Catalogue Configurator



**Note:**

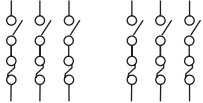



This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Safety Switches

### Product Selection





#### 600 Vac Heavy Duty, Fusible, Six-Pole, Single-Throw

System	Ampere Rating	Maximum Horsepower Ratings, Three-Phase AC (Higher Rating with Time Delay Fuses)				Three-Phase DC	NEMA 12/3R Enclosure <sup>①</sup> Dust-Tight Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
		240V	480V	600V	250V			
<b>600 Vac with Fuse Clips—250 Vdc</b>								
	30	3-7-1/2	5-15	7-1/2-20	5	<b>12HD661</b> ①	②	
	60	7-1/2-15	15-30	15-50	10	<b>12HD662</b> ①	②	
	100	15-30	25-60	30-75	20	<b>12HD663</b> ①	②	
	200	25-60	50-125	60-150	40	<b>12HD664</b> ①	②	

12DH661NF

#### 600 Vac Heavy Duty, Non-Fusible, Six-Pole, Single-Throw



System	Ampere Rating	Maximum Horsepower Ratings Three-Phase AC			Three-Phase DC		NEMA 12/3R Enclosure <sup>①</sup> Dust-Tight Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
		240V	480V	600V	250V	600v <sup>③</sup>		
<b>600 Vac—250 Vdc</b>								
	30	10	20	30	5	15 <sup>③</sup>	<b>12HD661NF</b> ①	<b>4HD661NF</b>
	60	20	50	60	10	25 <sup>③</sup>	<b>12HD662NF</b> ①	<b>4HD662NF</b>
	100	40	75	100	20	25 <sup>③</sup>	<b>12HD663NF</b> ①	<b>4HD663NF</b>
	200	60	125	150	40	50 <sup>③</sup>	<b>12HD664NF</b> ①	<b>4HD664NF</b>

① NEMA 12 enclosures (30-800A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

② Contact Customer Support (1-800-268-3578) for availability of this product.

③ 600 Vdc rating requires that the switch be wired per the wiring diagram on the device publication.

#### Note:

When control pole accessory required or custom enclosure required, contact Customer Support (1-800-268-3578)

Add 'W' to catalogue number suffix for window version.

For 'J' Fusing on 6-Pole 600V Heavy Duty Switches Field Modification Required.

30-60A not available to convert.

60A must order DS26JK adapter kit.

100-200A reposition loadside fuse base to accept 'J' fuse.

### Technical Data and Specifications for 6 Pole Heavy Duty

#### Short-Circuit Ratings (kA) Using Class "R", "J" or "T" Fusing Where Applicable

Ampere Rating	NEMA 12	NEMA 4 and 4X
30	200 at 600V	200 at 600V
60	200 at 600V	200 at 600V
100	200 at 600V	200 at 600V
200	200 at 600V	200 at 600V

#### Note:

Class "H" fuse clips supplied as standard for 30–200A. Rated at 10,000 rms symmetrical when using Class "H" fuses.

#### Fuse Class Adaptation

Safety Switch Type	Standard Fuse Class Clips Supplied with Switch	Adaptable to Accept the Following Fuse Class		
		R	J	T
Heavy Duty 6 Pole	H	30-200A	60-200A	200A

#### Note:

For 'J' Fusing on 6-Pole 600V Heavy Duty Switch, Field Modification Required  
 30A not available to convert  
 60A must order DS26JK adapter kit  
 100-200A reposition loadside fuse base to accept 'J' fuse  
 For 'R' fuse rejector adapter kits, and 'T' class adapter kits see accessories page 4

#### Dimensions

Approximate Dimensions in Inches (mm)

**Note:** Dimensions are for estimating purposes only.

#### Heavy Duty Six-Pole NEMA 12 Enclosure<sup>①</sup>

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>Fusible</b>					
30	12.88 (327)	19.08 (485)	10.22 (259)	5.5 (140)	30 (13.6)
60	12.88 (327)	19.08 (485)	10.22 (259)	5.5 (140)	30 (13.6)
100	16.13 (410)	24.95 (634)	10.22 (259)	5.5 (140)	40 (18.2)
200	24.16 (614)	35.38 (899)	11.63 (295)	6.44 (164)	65 (29.5)
<b>Non-Fusible</b>					
30	12.88 (327)	19.8 (485)	10.22 (259)	5.5 (140)	28 (12.7)
60	12.88 (327)	19.8 (485)	10.22 (259)	5.5 (140)	28 (12.7)
100	16.13 (410)	24.95 (634)	10.22 (259)	5.5 (140)	37 (16.6)
200	24.16 (614)	35.38 (899)	11.63 (295)	6.44 (164)	62 (28.1)

#### Heavy Duty Six-Pole Non-Fusible NEMA 4X Enclosure

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
30	16.13 (410)	18.95 (481)	10.22 (259)	5.5 (140)	28 (12.7)
60	16.13 (410)	18.95 (481)	10.22 (259)	5.5 (140)	28 (12.7)
100	16.13 (410)	18.95 (481)	10.22 (259)	5.5 (140)	35 (15.9)
200	24.16 (614)	35.38 (899)	11.63 (295)	6.44 (164)	65 (29.5)

<sup>①</sup> NEMA 12 enclosures can be field modified to meet 3R rainproof rating when factory provided drain hole opened.

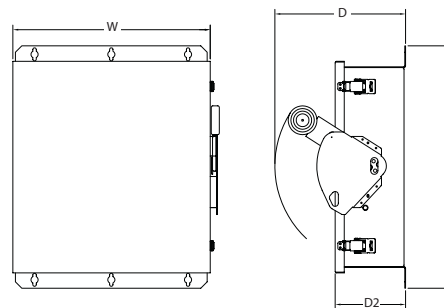
#### Note:

For 6 pole switch with window, 30, 60A same dimensions as 100A

#### UL/CSA Recognized Non-Fusible Safety Switch/Circuit Breaker Series-Connected Ratings Eaton 30-200A non-fusible safety switch withstand ratings when protected with circuit breakers

Non-Fusible Safety Switch Ampere Rating	Max System Voltage AC	Number of Poles Switched	Maximum fault level available at upstream circuit breaker (kA RMS symmetrical)	Circuit Breaker Frame(s)
30A & 60A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH
		2, 3, 4, 6	18,000	FD, EGE
		2, 3, 4, 6	14,000	FDB
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
100A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH
		2, 3, 4, 6	18,000	FD, EGE
		2, 3, 4, 6	14,000	FDB
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
480	600	2, 3, 4, 6	35,000	EGH, EGS
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
200A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, HJD, JGH
		2, 3, 4, 6	18,000	FD, JD, JGE
		2, 3, 4, 6	14,000	FDB
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
480	600	2, 3, 4, 6	65,000	HFD, HFDE, HJD, JGH
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type

#### NEMA 12, 4X - Six-Pole 30–200A<sup>①</sup>



#### Terminal Capacity for Heavy Duty Safety Switch Six-Pole 600V Max

Ampere	Line/Load Terminal Capacity (per phase)	Ground terminal Capacity	Neutral Catalogue #	Neutral Terminal Capacity
30	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
60	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
100	#14 - 1/0	#14 - 4	DH100NK	2x #14-#2 AND 2x #14 - 1/0
200 (NEMA 12 #6 - 300mcm & 4X)		#14 - 4	DH200NK	2x #6 - 300mcm AND 2x #14 - #2

#### Note:

\* Order neutral catalogue number when neutral required and not included with switch. All terminals are rating al/cu unless otherwise noted. Ground terminal is standard on all switches. For optional ground lug kits or copper lug kits see page 4 and 5

Heavy Duty Surge Switch



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## Heavy Duty Surge Switch

### Product Description

Eaton's Switching Device product line combined heavy duty safety switches and Eaton's SP1 and CVX series surge protective devices (SPDs) to provide reliable, cost-effective surge protection. Integral to the switch, an SPD provides significantly better performance compared to a device that is externally mounted, resulting in better protection for connected equipment. Eaton's new packaged solution provides contractors and end users a UL listed product by connecting the SPD to the safety switch at the factory.

### Features

- 30–1200A
- NEMA 12/3R or 4X 304-grade stainless steel enclosures
- External window over switching base standard
- Window to view LEDs of SPD for quick status view
- Enhanced visible blades included
- Eaton Type SP1 and CVX surge protective devices available

### Standards and Certifications

- UL 98, file no. E5239
- UL 1449 4th Edition, file no. E316410



### Seismic Qualifications

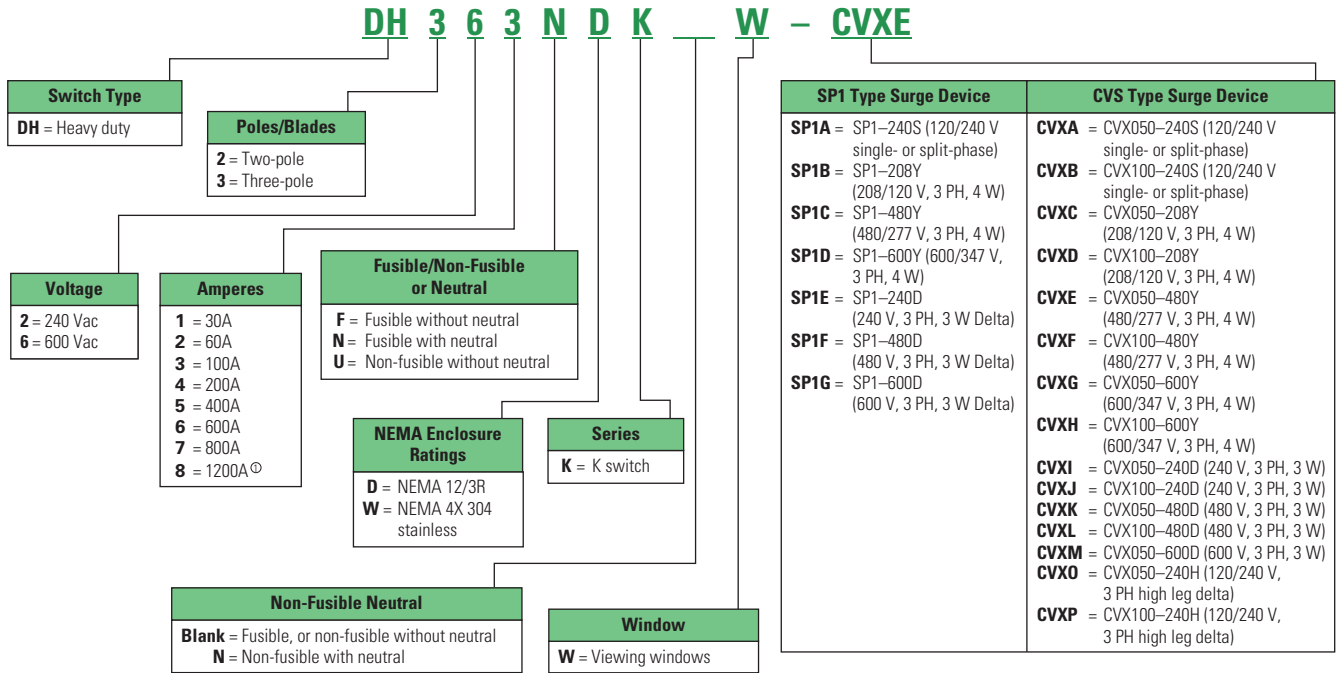
- Heavy duty switches exceed the requirements of Uniform Building Code (UBC) and California Code Title 24 OSP-0011-10, OSP-0012-10



For specific information on Eaton's SP1 and CVX surge protective devices, refer to product aids PA01005006E and PA01005002E.

### Catalog Numbering System

#### Heavy Duty Surge Switch



**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

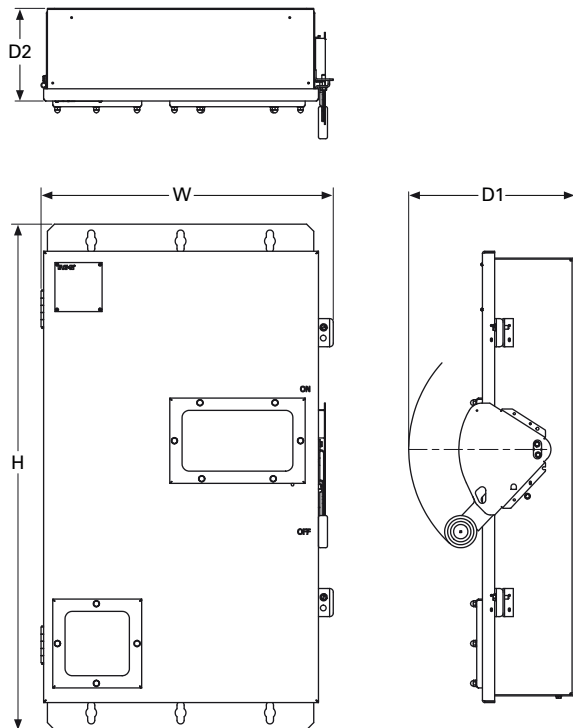
## Safety Switches

### Technical Data and Specifications

#### Dimensions

Approximate Dimensions in Inches (mm)

#### Heavy Duty Surge Switch



#### Heavy Duty Surge Switch

Ampere Rating	Height (H)	Width (W)	Depth (D1)	Depth (D2)
30	25.02 (635.5)	15.00 (381.0)	10.31 (261.9)	5.62 (142.7)
60	25.02 (635.5)	15.00 (381.0)	10.31 (261.9)	5.62 (142.7)
100	25.02 (635.5)	15.00 (381.0)	10.31 (261.9)	5.62 (142.7)
200	35.37 (898.4)	20.44 (519.2)	11.66 (296.2)	6.48 (164.6)
400	57.47 (1459.7)	23.30 (591.8)	12.45 (316.2)	7.36 (186.9)
600	62.97 (1599.4)	24.30 (617.2)	14.08 (357.6)	8.98 (228.1)
800	71.72 (1821.7)	25.55 (649.0)	14.08 (357.6)	8.98 (228.1)
1200	73.77 (1873.8)	43.12 (1095.0)	19.20 (487.7)	12.46 (316.5)

#### Standard Lug Capacities

Ampere Rating	Minimum Wire Size	Maximum Wire Size	Wire Type
30	#14	#2	Cu/Al
60	#14	#2	Cu/Al
100	#14	#1/0	Cu/Al
200	#6	#300 kcmil	Cu/Al
400	(2) #1/0 (1) #1/0	(2) 300 kcmil (1) 750 kcmil	Cu/Al or Cu/Al
600	(1) #2 (1) #1/0	(1) 600 kcmil (1) 750 kcmil	Cu/Al and Cu/Al
800	(4) #1/0	(4) 750 kcmil	Cu/Al
1200	(4) #1/0	(4) 750 kcmil	Cu/Al

① Available with SP1 type surge device only.





### Heavy Duty Voltage Indicator Switch



### Heavy Duty Voltage Indicator Switch

#### Application Description

Primarily used; but not limited to Industrial applications. LED's on the Line and /or Load side of the safety switch provide additional operator safety with highly visual voltage indication, warning of existing voltage presence and potentially dangerous situations.

#### Product Description

- 30-800A
- Fusible and Non-Fusible
- Heavy Duty K switch design at 600 Vac/ dc maximum
- Enclosure ratings 12/3R, 4/4X
- Viewing windows standard
- LED's factory installed on line side or load side or both sides of safety switch
- Switch is padlockable, up to 3 x 3/8" shank locks
- 100% load break rated
- Horsepower rated
- All heavy duty features per pages 28 and 75
- Options such as auxiliary contacts, control pole, kirk interlocking available, see options under catalogue configurator page 74

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#### Features

- Two options of LED's available – static or flashing indication
- **Static continuous indication** – CSA – 208V to 600 Vac, detects voltage or any current leakage greater than 2mA. Highly visible yellow lamacoid nameplates standard.
- **Flashing indication** – cULus – max 750 Vac/ 1000 Vdc detects line to line or line to ground voltage at 29 Vac three-phase, 40 Vac single-phase, 27 Vdc or stored energy.
- Flashing indication can be front or side mounted
- Warning nameplate standard
- Enhanced safety with bright, luninescent LED's indicating power status per individual phase, of line, load or both.
- Two options of LED's available, static and flashing, providing a wide range of voltage application options.
- Utilizes the robust heavy duty K switch features, and options
- Highly visible line/load lamacoid nameplates

#### Standards and Certifications

- CSA approved
- Meets C22.2 No.4
- Compliant with article 185 & 186 of RSST (CSST) for lock off procedure in Quebec.



### Catalog Numbering System

#### Voltage Indicator Switch

**12HD362NFW V1 A A1CP**

Standard Safety Switch Catalogue Number Prefix
12HD...W 4HD...W

Voltage Indication Location
<b>V1</b> = Line side only <b>V2</b> = Load side only <b>V3</b> = Line & load side

Voltage Indication Type
<b>A</b> = LED's for A B C phases, continuous indication for AC power <b>B</b> = LED's L1, L2, L3, GND, flashing indication, for AC or DC power, round shape for <b>front</b> enclosure mounting <b>C</b> = LED's L1, L2, L3, GND, flashing indication, for AC or DC power, round shape for <b>side</b> enclosure mounting

Options
<b>A1</b> = Auxiliary contact 1NO/1NC <b>A2</b> = Auxiliary contact 2NO/2NC <b>CP</b> = Control pole 1NO contact elevator approved <b>TK</b> = Key interlocking

**Note:**

For dimensions, terminal capacity, fuse adaptation refer to page 78.

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

### Heavy Duty/Window Switch



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### Heavy Duty Window Switches

#### Application Description

Typically used but not limited to industrial applications such as mining, forestry, saw mills, steel mills. Recommended for any application where verification of the blade contact status is required without opening the door of the switch.

#### Product Description

- Available on NEMA 12 and 4 painted steel and 4X stainless steel heavy duty switches
- 30–1200A
- 30-60A full window design provides visible blade and blown fuse verification
- 100-1200A window design provides visible blade verification
- Fusible and non-fusible
- Also available on double-throw, receptacle switches, 6 pole, and enviroline switches
- Windows are constructed from tempered safety glass.
- 30-100A field replaceable window kit available (effective August 2003)
- Fusible switches suitable for service entrance application when equipped

with factory-installed neutral assembly

#### Features & Benefits

- Full range offering 30–1200A
- Tempered safety glass, resists scratching, fading and blistering
- Large full window at 30 & 60A, provides unrestricted view without opening the door of the switch
  - Visible blade indication
  - Fuse presence, condition and type
  - Better visibility in low light or restricted areas
- Benefits operator safety
- Labour savings
- Field replaceable window kit for 30-100A
- NEMA 12 enclosure can be field converted to 3R

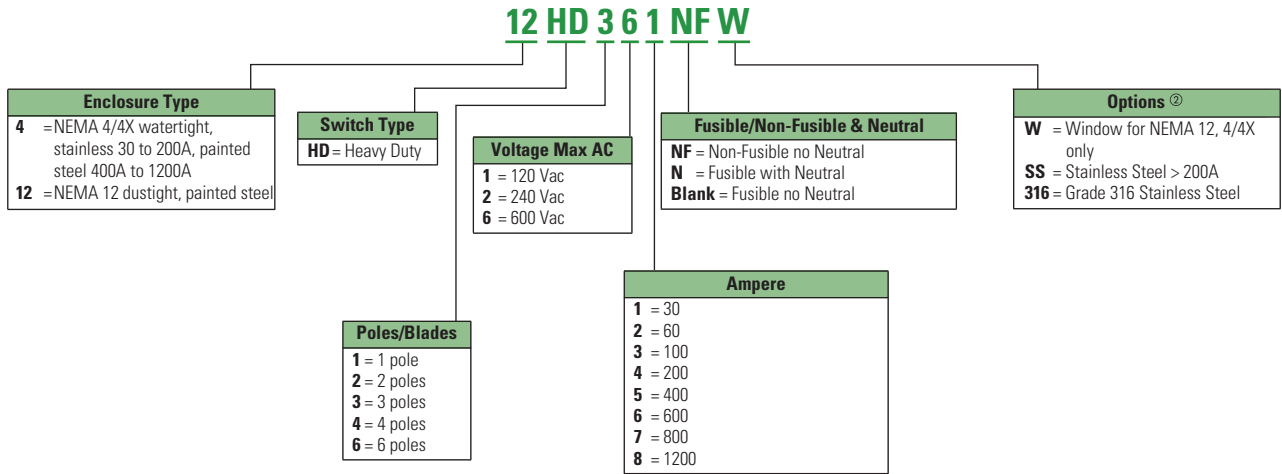
#### Standards and Certifications

- CSA certified File No. 69743
- Meets C22.2 No.4 standard for enclosed switches
- ISO 9001:2008



### Catalog Numbering System

#### Heavy Duty Window Switches



① Always verify the number of poles and wires required since catalogue numbers may appear in multiple tables.

② See **Pages 13** through **15** for additional Flex Centre options.

**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Safety Switches

### Product Selection

12HD361W

#### 240 Vac Heavy Duty, Fusible Single-Throw with Viewing Window



System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses				DC 250V	NEMA 12 <sup>②</sup> Enclosure Dust-Tight Catalogue Number	NEMA 4 Enclosure Watertight, Painted Steel Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
			AC Standard Fuse		Time Delay					
			Single-Phase	Three-Phase	Single-Phase	Three-Phase				
<b>Four-Wire (Three Blades, Three Fuses, S/N), 240 Vac—250 Vdc<sup>①</sup></b>										
	30	H	—	3	—	7-1/2	—	12HD321NW <sup>②</sup>	—	4HD321NW
	60	H	—	7-1/2	—	15	—	12HD322NW <sup>②</sup>	—	4HD322NW
	100	H	—	15	—	30	20	12HD323NW <sup>②</sup>	—	4HD323NW
	200	H	—	25	—	60	40	12HD324NW <sup>②</sup>	—	4HD324NW
	400	H	—	50	—	125	50	12HD325NW <sup>②</sup>	4HD325NW	4HD325NWSS
	600	H	—	75	—	200	—	12HD326NW <sup>②</sup>	4HD326NW	4HD326NWSS
	800	L	—	100	—	250	—	12HD327NW <sup>②</sup>	4HD327NW	4HD327NWSS
	1200	L	—	—	—	—	—	③	③	③

#### 600 Vac Heavy Duty, Fusible Single-Throw with Viewing Window

System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses				DC 250V 600V	NEMA 12 <sup>②</sup> Enclosure Industrial, Dust-Tight Catalogue Number	NEMA 4 Enclosure Watertight, Painted Steel Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
			Single-Phase AC		Three-Phase AC					
			480V	600V	480V	600V				
<b>Three Pole (Three Blades, Three Fuses), 600 Vac—250 Vdc<sup>①</sup></b>										
	30	H	7-1/2	10	15	20	—	12HD361W <sup>②</sup>	—	4HD361W
	60	H	20	25	30	50	—	12HD362W <sup>②</sup>	—	4HD362W
	100	H	30	40	60	75	—	12HD363W <sup>②</sup>	—	4HD363W
	200	H	50	50	125	150	—	12HD364W <sup>②</sup>	—	4HD364W
	400	H	—	—	250	350	—	12HD365W <sup>②</sup>	4HD365W	4HD365WSS
	600	H	—	—	400	500	—	12HD366W <sup>②</sup>	4HD366W	4HD366WSS
	800	L	—	—	500	500	—	12HD367W <sup>②</sup>	4HD367W	4HD367WSS
	1200	L	—	—	—	—	—	③	③	③

4HD361NFW

#### 600 Vac Heavy Duty, Non-Fusible Single-Throw with Viewing Window



System	Ampere Rating	Maximum Horsepower Ratings				DC 250V 600V	NEMA 12 Enclosure <sup>②</sup> Dust-Tight Catalogue Number	NEMA 4 Enclosure Watertight, Painted Steel Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number	
		Single-Phase AC		Three-Phase AC						
		480V	600V	480V	600V					
<b>Three-Pole—600 Vac, 250 Vdc<sup>①</sup> (Not Suitable for Service Entrance)</b>										
	30	7-1/2	10	20	30	5	—	12HD361NFW <sup>②</sup>	—	4HD361NFW
	60	20	25	50	60	10	—	12HD362NFW <sup>②</sup>	—	4HD362NFW
	100	40	50	75	100	20	—	12HD363NFW <sup>②</sup>	—	4HD363NFW
	200	50	50	125	150	40	—	12HD364NFW <sup>②</sup>	—	4HD364NFW
	400	—	—	250	350	50	—	12HD365NFW <sup>②</sup>	4HD365NFW	4HD365NFWSS
	600	—	—	400	500	—	—	12HD366NFW <sup>②</sup>	4HD366NFW	4HD366NFWSS
	800	—	—	500	500	—	—	12HD367NFW <sup>②</sup>	4HD367NFW	4HD367NFWSS
	1200	—	—	—	—	—	—	③	③	③

<sup>①</sup> For two-pole applications, use outside poles of three-pole switch.

<sup>②</sup> NEMA 12 enclosures (30–800A) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

<sup>③</sup> Contact Customer Support (1-800-268-3578) for availability of this product.

Effective August 2003, 30–100A window switches offer visible blade verification and blown fuse indication in a single design as shown in the photos. The window is field replaceable 30–100A. Higher ampere ratings will continue to be manufactured with a non-replaceable epoxy affixed design with visible blade verification only.

## Technical Data and Specifications

### Short-Circuit Ratings (kA) Using Class “R”, “J” or “T” Fusing Where Applicable

Ampere Rating	NEMA 12	NEMA 4 and 4X
30	200 at 600V	200 at 600V
60	200 at 600V	200 at 600V
100	200 at 600V	200 at 600V
200	200 at 600V	200 at 600V
400	200 at 480V 100 at 600V	200 at 480V 100 at 600V
600	200 at 480V 100 at 600V	200 at 480V 100 at 600V
800	200 at 480V 100 at 600V	200 at 480V 100 at 600V
1200	200 at 600V	200 at 600V

#### Note:

Class “H” fuse clips supplied as standard for 30–600A. Class “L” fuse clips supplied as standard for 800–1200A. Rated at 10,000 rms symmetrical when using Class “H” fuses.

### Fuse Class Adaptation

Safety Switch Type	Standard Fuse Class Clips Supplied with Switch	Adaptable to Accept the Following Fuse Class		
		R	J	T
Heavy Duty	H 30-600A	30A-600A	240V: 100-600A 600V: 30-600A	200-800A 1200A
	L 800-1200A			

#### Note:

For ‘J’ Fusing on 240V Heavy Duty Switches Field Modification Required.  
30-60 amperes not available.  
100-400 amperes, reposition loadside fuse block to accept ‘J’ fuse.  
600 amperes adapter kit included with switch.  
For ‘R’ fuse rejector adapter kit and ‘T’ fuse adapter kit see accessory options on page 4.

For ‘J’ Fusing on 600V Heavy Duty Switches Field Modification Required.  
30-60 amperes, reposition fuse clips on loadside of fuse base.  
100-400 amperes, reposition loadside fuse block to accept ‘J’ fuse.  
600 amperes adapter kit included with switch.  
For ‘R’ fuse rejector adapter kit and ‘T’ fusing see page 4 accessory application options.

### Window Replacement Kit (for 30-100A switches built after August 2003)

30-60A	NEMA 12, 4X	<b>70-8564</b>
100A	NEMA 12, 4X	<b>70-8564-3</b>
30-60A	Enviroline	<b>70-8564-2</b>
100A	Enviroline	<b>70-8564-4</b>

### UL/CSA Recognized Non-Fusible Safety Switch/Circuit Breaker Series-Connected Ratings Eaton 30-200A non fusible safety switch withstand ratings when protected with circuit breakers

Non-Fusible Safety Switch Ampere Rating	Max System Voltage AC	Number of Poles Switched	Maximum fault level available at upstream circuit breaker (kA RMS symmetrical)	Circuit Breaker Frame(s)
30A & 60A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH
		2, 3, 4, 6	18,000	FD, EGE
		2, 3, 4, 6	14,000	FDB
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
100A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH
		2, 3, 4, 6	18,000	FD, EGE
		2, 3, 4, 6	14,000	FDB
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
480	600	2, 3, 4, 6	35,000	EGH, EGS
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
200A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, HJD, JGH
		2, 3, 4, 6	18,000	FD, JD, JGE
		2, 3, 4, 6	14,000	FDB
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type
480	600	2, 3, 4, 6	65,000	HFD, HFDE, HJD, JGH
		2, 3, 4, 6	10,000	Any manufacturer or Eaton breaker type

# Switching Devices

## Safety Switches

### Dimensions

Approximate Dimensions in Inches (mm)

**Note:** Dimensions are for estimating purposes only.

### Heavy Duty, Non-Fusible, 600V, Three-Pole, Single-Throw with Window

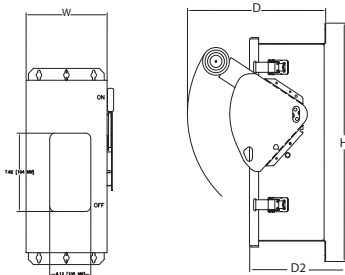
Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
30	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
60	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
100	11.84 (301)	24.95 (634)	11.44 (291)	6.30 (160)	30 (13.64)
200	16.95 (430)	35.38 (899)	11.63 (295)	6.44 (164)	55 (24.97)
400	24.12 (612)	57.47(1460)	12.43 (316)	7.19 (183)	125 (56.75)
600	25.12 (638)	63.00 (1600)	13.92 (353)	8.91 (226)	167 (75.82)
800	25.34 (644)	71.75 (1823)	13.92 (353)	8.91 (226)	175 (79.45)
1200	41.47 (1053)	73.77 (1874)	20 (508)	13.50 (343)	519 (231.54)

**Note:**

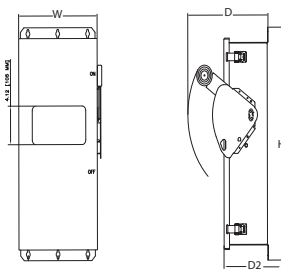
For 6 pole switches with windows, refer to page 49 for dimensions - NOTE 30, 60A same as 100A dimensions

For DT (Double-Throw) switches with windows refer to page 49 for dimensions. NEMA 12 enclosures (30-1200A) can be field modified to meet NEMA 3R rainproof requirements when factory provided drain hole is opened.

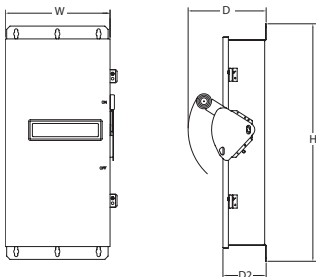
### NEMA 12, 4X 30-60A



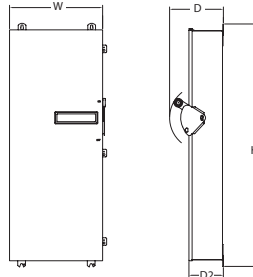
### NEMA 12, 4X 100A



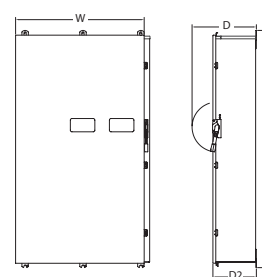
### NEMA 12, 4/4X 200A



### NEMA 12, 4/4X 400-800A



### NEMA 12, 4/4X 1200A



### Heavy Duty, Fusible, 240V and 600V, Three-Pole Single-Throw, with Window

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
30	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
60	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
100	11.84 (301)	24.95 (634)	11.44 (291)	6.30 (160)	30 (13.64)
200	16.95 (430)	35.38 (899)	11.63 (295)	6.44 (164)	55 (24.97)
400	24.12 (612)	57.47(1460)	12.43 (316)	7.19 (183)	125 (56.75)
600	25.12 (638)	63.00 (1600)	13.92 (353)	8.91 (226)	167 (75.82)
800	25.34 (644)	71.75 (1823)	13.92 (353)	8.91 (226)	175 (79.45)
1200	41.47 (1053)	73.77 (1874)	20 (508)	13.50 (343)	519 (231.54)

### Terminal Capacity for Heavy Duty Safety Switch 600V Max

Ampere	Line/Load Terminal Capacity (per phase)	Ground Terminal Capacity	Neutral Catalogue #	Neutral Terminal Capacity
30	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
60	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
100	#14 - 1/0	#14 - 4	DH100NK	2x #14-#2 AND 2x #14 - 1/0
200 (NEMA 12 & 4X)	#6 - 300mcm	#14 - #4	DH200NK	2x #6 - 300mcm AND 2x #14 - #2
400	(2) 1/0 - (2)300mcm OR (1) 1/0 - 750mcm	#6 - 250mcm	DS400NK	2X 1/0 - 750mcm OR (2)1/0 - (2)300mcm AND 3x#6 - 250mcm
600	(1) #2 - 600mcm AND (1) 1/0 - 750mcm	#6 - 250mcm	DS600NK	2 x 1/0 - (1)750mcm OR 1/0 - (2) 300mcm AND 1 x #2 - 600mcm AND 3 x #6 - 250mcm
800	(4) 3/0 - (4)750mcm	#6 - 250mcm	DS800NK	2 X (4)3/0 - (4)750mcm AND 3 x #6 - 250mcm
1200	(4) 1/0 - (4)750mcm	#6 - 250mcm	DS800NK	2 X (4)3/0 - (4)750mcm AND 3 x #6 - 250mcm

**Note:**

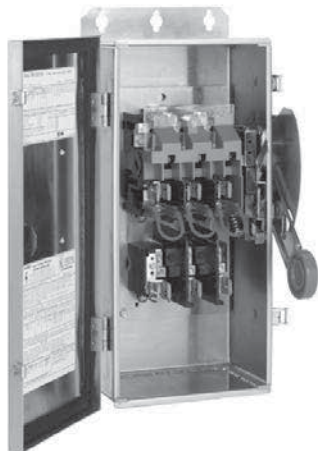
\* Order neutral catalogue number when neutral required and not included with switch. All terminals are rating Al/Cu unless otherwise noted.

Ground terminal is standard on all switches. For optional ground lug kits or copper lug kits see page 4 and 5





### EnviroLine/Stainless Steel Switch



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### EnviroLine—Stainless Steel Switch

#### Application Description

Primarily for use in high moisture or corrosive environments. Applications where water is frequently used to hose down equipment. ie. food processing, farm industry, fisheries, rendering plants.

In addition to the NEMA 4X standard stainless steel enclosure, the Enviroline operating mechanism, backpan and springs are all stainless, and all hardware is grade 316 stainless.

#### Product Description

- 30–400A
- 240V fusible
- 600V fusible and non-fusible
- NEMA 4X stainless steel enclosure
- Interior operating mechanism, backpan and springs are stainless steel
- All hardware grade 316 stainless
- Horsepower rated
- 100% load make/break rated
- The continuous load current of fusible switches is not to exceed 80% of the rating of fuses employed in other than motor circuits. Non-fusible switches are 100% continuous duty rated
- Current carrying parts are not stainless steel

#### Features

- Stainless steel enclosure (304 grade)
- Stainless steel interior operating mechanism (304 grade)
- Fusible switch suitable for service entrance application when equipped with factory-installed neutral assembly
- Similar features as Heavy Duty design
- Visible double-break quick-make, quick-break rotary blade mechanism. Two points of contact provide a positive open and close, easier operation, and also help prevent contact burning for longer contact life
- Clear line shield protection
- Triple padlocking capability plus additional locking at the door top and bottom
- For accessories refer to page 4 and 5

- For factory modifications refer to pages 13-15.

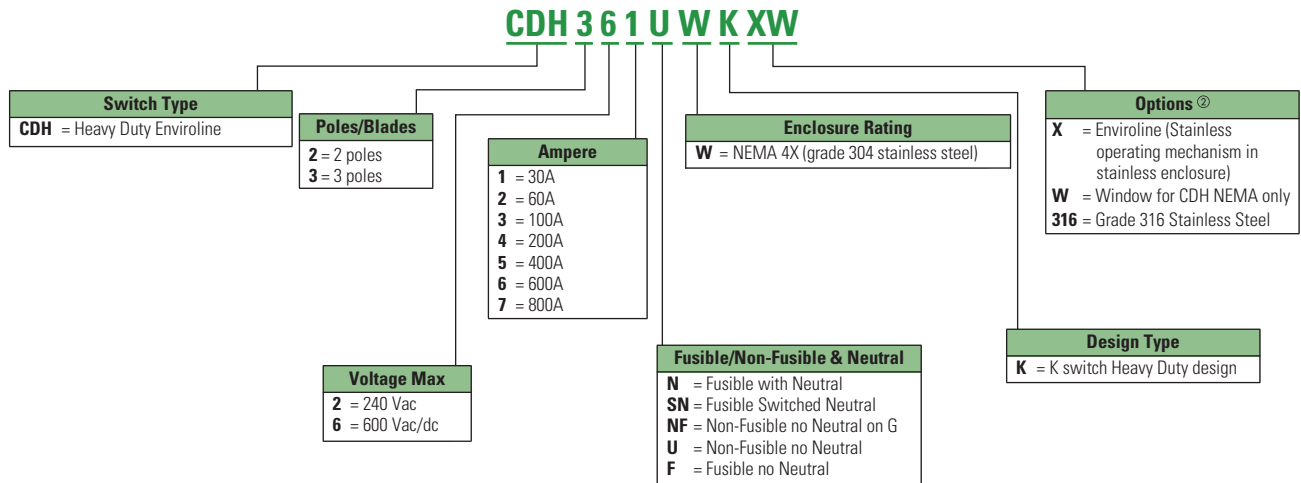
#### Standards and Certifications

- CSA certified File No. 69743
- Meets C22.2 No.4 standard for enclosed switches
- ISO 9001:2008



### Catalog Numbering System

#### EnviroLine—Stainless Steel Switch



① Always verify the number of poles and wires required since catalogue numbers may appear in multiple tables.

② See **Pages 13** through **15** for additional Flex Centre options.

**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Safety Switches

### Product Selection

CDH321NWKX

### 240 Vac Heavy Duty, Fusible, Single-Throw Stainless Steel Enclosure and Operating Mechanism



System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses				DC 250V	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
			AC		Time Delay			
			Standard Fuse Single-Phase	Three-Phase	Single-Phase	Three-Phase		
<b>Three-Wire (Two Blades, Two Fuses, S/N), 240 Vac—250 Vdc</b>								
	30	H	1-1/2	3	3	7-1/2	5	CDH221NWKX
	60	H	3	7-1/2	10	15	10	CDH222NWKX
	100	H	7-1/2	15	15	30	20	CDH223NWKX
	200	H	15	25	15	60	40	CDH224NWKX
	400	H	—	50	—	125	50	CDH225NWKX
<b>Three-Pole, 240 Vac—250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>								
	30	H	1-1/2	3	—	7-1/2	—	CDH321FWKX
	60	H	3	7-1/2	—	15	—	CDH322FWKX
	100	H	—	—	—	—	—	CDH323FWKX
	200	H	15	25	—	60	40	CDH324FWKX
	400	H	—	50	—	125	50	CDH325FWKX
<b>Four-Wire (Three Blades, Three Fuses, S/N), 240 Vac—250 Vdc</b>								
	30	H	—	3	—	7-1/2	—	CDH321NWKX
	60	H	—	7-1/2	—	15	—	CDH322NWKX
	100	H	—	15	—	30	20	CDH323NWKX
	200	H	—	25	—	60	—	CDH324NWKX
	400	H	—	50	—	125	50	CDH325NWKX

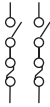
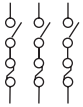
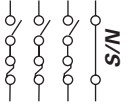
**Note:**

See page 36 for technical data and specifications, page 37 for dimensions, pages 4 and 5 for accessories, pages 13 to 15 for factory modifications. For fuse adaptation refer to page 36.


CDH361UWKX



### 600 Vac Heavy Duty, Fusible 277/480-600V, Single-Throw Stainless Steel Enclosure and Operating Mechanism

System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses						NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
			Single-Phase AC		Three-Phase AC		DC		
			480V	600V	480V	600V	250V	600V	
<b>Two-Pole, 480 Vac—600 Vac or Vdc <sup>①</sup> (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>									
	30	H	7-1/2	10	—	—	—	15	CDH261FWKX
	60	H	—	—	—	—	—	25	CDH262FWKX
	100	H	—	—	—	—	—	25	CDH263FWKX
	200	H	50	50	—	—	—	50	CDH264FWKX
	400	H	—	—	—	—	50	—	CDH265FWKX
<b>Three-Pole, 480 Vac—600 Vac, 250 Vdc (Suitable for Service Entrance Use with a Neutral Kit Factory Installed)</b>									
	30	H	7-1/2	10	15	20	—	—	CDH361FWKX
	60	H	20	25	30	50	—	—	CDH362FWKX
	100	H	30	30	60	75	—	—	CDH363FWKX
	200	H	50	50	125	150	—	—	CDH364FWKX
	400	H	—	—	250	350	—	—	CDH365FWKX
<b>Four-Wire (Three Blades, Three Fuses, S/N) 480 Vac—600 Vac, 250 Vdc</b>									
	30	H	7-1/2	10	20	30	—	—	CDH361NWKX
	60	H	20	25	50	60	—	—	CDH362NWKX
	100	H	40	50	75	100	—	—	CDH363NWKX
	200	H	50	50	125	150	—	—	CDH364NWKX
	400	H	—	—	250	350	—	—	CDH365NWKX

### 600 Vac Heavy Duty, Non-Fusible, Single-Throw Stainless Steel Enclosure and Operating Mechanism

System	Ampere Rating	Maximum Horsepower Ratings						NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
		Single-Phase AC		Three-Phase AC		DC		
		480V	600V	480V	600V	250V	600V	
<b>Three-Pole, 480 Vac—600 Vac, 250 Vdc</b>								
	30	7-1/2	10	20	30	5	—	CDH361UWKX
	60	20	25	50	60	10	—	CDH362UWKX
	100	40	50	75	100	20	—	CDH363UWKX
	200	50	50	125	150	40	—	CDH364UWKX
	400	—	—	250	350	50	—	CDH365UWKX

**Note:**

DC rating for 400A switch is 250V.

See Heavy Duty Switch page 36 for technical data and specifications, page 37 for dimensions, pages 4 and 5 for accessories, pages 13 to 15 for factory modifications.

See page 14 item 6 for optional window. For fuse adaptation refer to page 33.

### Hazardous Location Switch



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### NEMA 7/9 — Hazardous Location Disconnect Switch

#### Application Description

The cast aluminum enclosure is ideally suited for harsh industrial applications including but not limited to petrochemical facilities, mining operations, pharmaceutical plants and wastewater treatment facilities.

#### Product Description

Type DS switch is used as the switching device in a NEMA 4, 4X, 7, 9 enclosure. Ratings are 30–100A, 600 Vac, fusible and non-fusible.

#### Features

- 30–100A
- 600 Vac and 250 Vdc
- Explosion Proof NEMA 7/9 (4/4X) rated enclosure
- Fusible and non fusible
- Horsepower rated
- Three-pole, three-wire
- Field installable auxiliaries
- Optional breather, drain grounding stud and nameplates available
- 200A moulded case switch or breaker in NEMA 7/9 enclosure available via Eaton regional satellite locations in Canada

#### Standards and Certifications

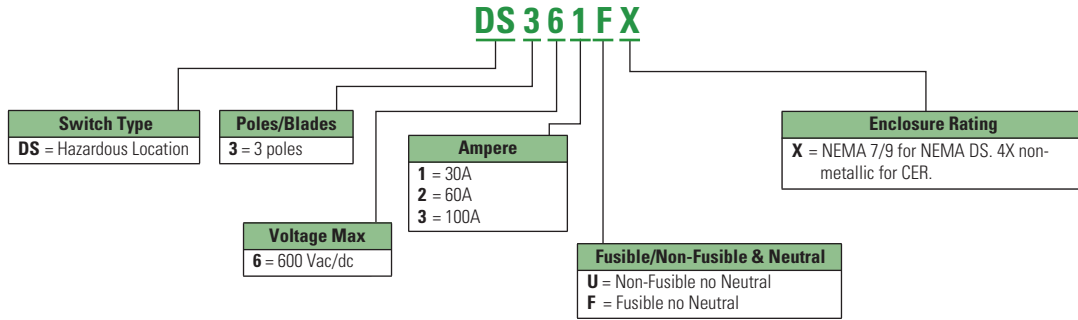
#### Compliances

<b>UL Classified— Standard 886 File No. E84577</b>	<b>CSA Certified— Standard C22.2 File No. LR 42131-6</b>
Class I, Division 1 and 2, Groups B, C and D	Class I, Division 1 and 2, Groups B, C and D
Class II, Division 1 and 2, Groups E, F and G	Class II, Division 1 and 2, Groups E, F and G
Class III, Division 1 and 2	Class III, Division 1 and 2
NEMA 7/9	NEMA 7/9
Zone 1, IIB + H <sub>2</sub>	Zone 1, IIB + H <sub>2</sub>



### Catalog Numbering System

#### NEMA 7/9 — Hazardous Location Disconnect Switch



**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Safety Switches

### Product Selection

#### DS361UX



#### NEMA 7/9 Enclosure Sizes—Fusible ①

Ampere Rating	Maximum Horsepower Ratings			Fuse Class Provision	Number of Poles	Voltage	Enclosure Number	Catalogue Number
	Three-Phase AC 480V	600V	DC 250V					
30	15	20	5	J	3	600 Vac, 125/250 Vdc	1 <sup>②</sup>	DS361FX
60	30	50	10	J	3	600 Vac, 125/250 Vdc	2 <sup>②</sup>	DS362FX
100	60	75	20	J	3	600 Vac, 125/250 Vdc	3	DS363FX

#### NEMA 7/9 Enclosure Sizes—Non-Fusible ①

Ampere Rating	Maximum Horsepower Ratings			Fuse Class Provision	Number of Poles	Voltage	Enclosure Number	Catalogue Number
	Three-Phase AC 480V	600V	DC 250V					
30	15	20	5	—	3	600 Vac, 125/250 Vdc	1 <sup>②</sup>	DS361UX
60	30	50	10	—	3	600 Vac, 125/250 Vdc	1 <sup>②</sup>	DS362UX
100	60	75	20	—	3	600 Vac, 125/250 Vdc	2 <sup>②</sup>	DS363UX

### Technical Data and Specifications

#### Dimensions

Approximate Dimensions in Inches (mm)

Catalogue Number	Standard Conduit Size
DS361FX	1.50 (38.1)
DS362FX	2.00 (50.8)
DS363FX	2.50 (63.5)
DS361UX	1.50 (38.1)
DS362UX	1.50 (38.1)
DS363UX	2.00 (50.8)

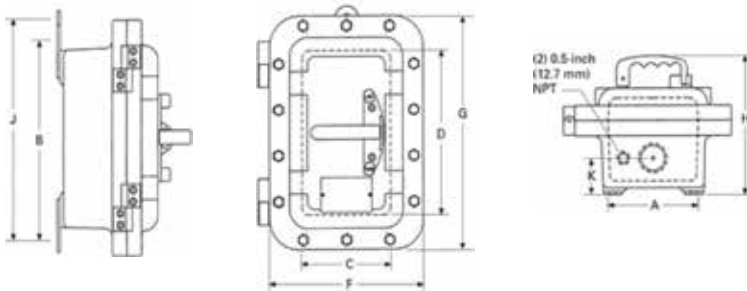
#### Terminal Capacity

Ampere	Line/Load per Phase Min - Max Copper	Line/Load per Phase Min - Max Aluminum
30A	#14 - #2	#12 - #2
60A	#14 - #2	#12 - #2
100A	#14 - 1/0	#12 - 1/0

#### NEMA 7/9 Fusible and Non-Fusible Dimensions – via Enclosure Number

Enclosure Number	Mounting Dimensions			Inside Dimensions		Outside Dimensions			Number of Outlets	Dimension K	Approximate Weight Lbs (kg)
	A	B	J	C	D	F	G	H			
1	5.50 (139.7)	13.13 (333.5)	14.13 (358.9)	5.94 (150.9)	10.75 (273.1)	10.63 (270.0)	15.25 (387.4)	8.84 (224.5)	2 (1.5 In. Dia.)	2.00 (50.8)	38 (17)
2	6.00 (152.4)	18.00 (457.2)	19.00 (482.6)	6.50 (165.1)	16.00 (406.4)	11.00 (279.4)	20.50 (520.7)	8.97 (227.8)	2 (1.5 In. Dia.)	2.31 (58.6)	57 (26)
3	10.25 (260.4)	22.63 (574.8)	—	11.75 (298.4)	20.00 (508.0)	16.38 (416.1)	25.13 (638.3)	9.59 (243.6)	2 (1.5 In. Dia.)	3.50 (88.9)	104 (47)

#### NEMA 7/9 30 – 100A ②



① Accessories and modifications shown on **Pages 13 through 15** are NOT applicable to NEMA 7/9 disconnect switches.

② Dual three- and four-point mounting available as standard on enclosures 1 and 2.

#### Note:

For field installable auxiliary contacts order: **178C265G05** - 30-100A 1NO/1NC, **178C265G06** - 30-100A 2NO/2NC.

Breather/drain group B (1) including outlets and installation, catalogue suffix **BR, DN**.

External ground stud (3/8"), catalogue suffix **ES**.





### Solar Disconnect Switch



### Solar Disconnect Switch

#### Application Description

Used in Photo Voltaic installations. A DC disconnect switch is required ahead of the inverter to isolate the load from the PV source.

The most common application is a **negative grounded PV system**, with the location of the bond usually found at the inverter (transformer type inverters). Per CEC 14-100 only the current carrying ungrounded conductors shall be switched. Thus in a negative-grounded PV system only the positive conductor is switched. The other conductor of the DC circuit must be grounded (like a neutral in an AC system).

**Ungrounded DC floating systems** would be applied with transformerless inverters. In an ungrounded DC floating system both positive and negative are switched in the disconnect.

#### Product Description for Negative Grounded Disconnects

- 30–600A, 600 Vdc single circuit
- Isolated negative ground and equipment ground lug standard
- Factory wired in series for DC, single circuit
- Fusible and Non-Fusible
- Class R fuse clips standard on fusible design
- Heavy Duty K switch design
- NEMA 3R, 12/3R and 4 painted steel ANSI 61 light grey electrocoat and 4X stainless steel enclosures available
- Line / Load terminal warning labels on door
- Line / Load fuse isolated
- 100% load break rated
- Meets disconnect requirements of Section 50 CEC part 1

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- Meets ESA requirements for PV applications
- For multi-circuit (2-6) and 1000 Vdc refer to Eaton publication No. BR00802002E for product offering and technical specifications

#### Features

- **“Out of the box solution”** no additional jumper bars or separate negative ground required
- **Enhanced safety** - fuse is completely de-energized on both line and load side when switch is in off position
- Isolated negative ground terminal included as standard, necessary for grounded PV systems per Section 50 CEC part 1
- Clear polycarbonate dead-front to guard against accidental contact with live parts

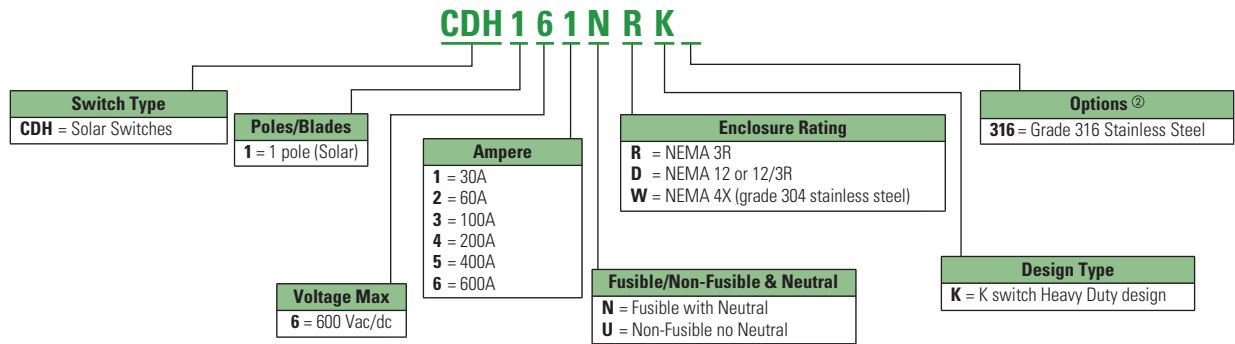
- Highly visible line and load warning label specific to PV on door front of switch
- Visibly marked positive and negative terminal connections
- Additional labels included with switch – “PV System Disconnect”

#### Product Description for Ungrounded DC Disconnects

- 30–400A, 600 Vdc
- 30–400A @ 1000 Vdc
- Multi-circuit offering
- Both positive (+) and negative (-) are switched
- UL listed to UL98b standard
- CSA/ESA accepted
- Refer to Eaton Publication No. BR00802002E for product offering and technical specifications

### Catalog Numbering System

#### Solar Disconnect Switch



① Always verify the number of poles and wires required since catalogue numbers may appear in multiple tables.

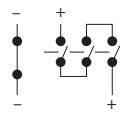
② See **Pages 13** through **15** for additional Flex Centre options.

**Note:**

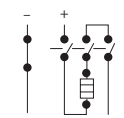
This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

### Product Selection

#### Non-Fusible 600 Vdc Disconnect for Negative Grounded PV Systems

System	Ampere	Catalogue Number NEMA 3R	Catalogue Number NEMA 12/3R <sup>②</sup>	Catalogue Number NEMA 4/ 4X <sup>③</sup>	Lug Capacity Main & Isolated Negative Ground <sup>④</sup>	Equipment Ground Lug
	30	CDH161URKN	CDH161UDKN	CDH161UWKN	#2 - #14 Cu/Al	#4 - #14 Cu/Al
	60	CDH162URKN	CDH162UDKN	CDH162UWKN	#2 - #14 Cu/Al	#4 - #14 Cu/Al
	100	CDH163URKN	CDH163UDKN	CDH163UWKN	1/0 - #14 Cu/Al	#4 - #14 Cu/Al
	200	CDH164URKN	CDH164UDKN	CDH164UWKN	250kcmil - #6 Cu/Al	#2 - #14 Cu/Al
	400	CDH165URKN	CDH165UDKN	CDH165UWKN	(1) 750kcmil - 1/0 or (2) 300kcmil - 1/0 Cu/Al	250kcmil - #6 Cu/Al
	600	CDH166URKN	CDH166UDKN	CDH166UWKN	(1) 750kcmil - 1/0 or (1) 600kcmil - #2 Cu/Al	250kcmil - #6 Cu/Al

#### Fusible 600 Vdc Disconnect for Negative Grounded PV Systems

System	Ampere	Catalogue Number NEMA 3R	Catalogue Number NEMA 12/3R <sup>②</sup>	Catalogue Number NEMA 4/ 4X <sup>③</sup>	Lug Capacity Main & Isolated Negative Ground <sup>④</sup>	Equipment Ground Lug
	30	CDH161NRK	CDH161NDK	CDH161NWK	#2 - #14 Cu/Al	#4 - #14 Cu/Al
	60	CDH162NRK	CDH162NDK	CDH162NWK	#2 - #14 Cu/Al	#4 - #14 Cu/Al
	100	CDH163NRK	CDH163NDK	CDH163NWK	1/0 - #14 Cu/Al	#4 - #14 Cu/Al
	200	CDH164NRK	CDH164NDK	CDH164NWK	250kcmil - #6 Cu/Al	#2 - #14 Cu/Al
	400	CDH165NRK	CDH165NDK	CDH165NWK	(1) 750kcmil - 1/0 or (2) 300kcmil - 1/0 Cu/Al	250kcmil - #6 Cu/Al
	600	CDH166NRK	CDH166NDK	CDH166NWK	(1) 750kcmil - 1/0 or (1) 600kcmil - #2 Cu/Al	250kcmil - #6 Cu/Al

**Note:** For negative grounded multi-circuit (2-6) and 1000 Vdc offering, refer to Eaton publication BR00802002E

#### Non-Fusible 600 Vdc 1000 Vdc Disconnect for UNGROUNDED DC Floating Systems<sup>⑤</sup>

#### Fusible 600 Vdc 1000 Vdc Disconnect for UNGROUNDED DC Floating Systems<sup>⑤</sup>

**Note:** Refer to Eaton publication No. BR00802002E for offering and technical specifications.

<sup>①</sup> Available Q4 2012

<sup>②</sup> NEMA 12 enclosures can be field converted to 3R when drain screw removed from end wall of enclosure.

<sup>③</sup> Enclosure NEMA 4X stainless steel 30A to 200A, NEMA 4 painted steel enclosure 400A and 600A. For stainless steel enclosures at 400 and 600A add SS to catalogue number suffix.

<sup>④</sup> Field-wiring conductor size shall be determined by referring to CEC Table 2 and Table 4, or NFPA Table 310.16, 75C column for wire size (AWG). Use wire rated for 90C (194F) or higher.

<sup>⑤</sup> Refer to CEC Part 1 Section 50 to calculate current rating of disconnect required.

### Technical Data and Specifications

#### Dimensions

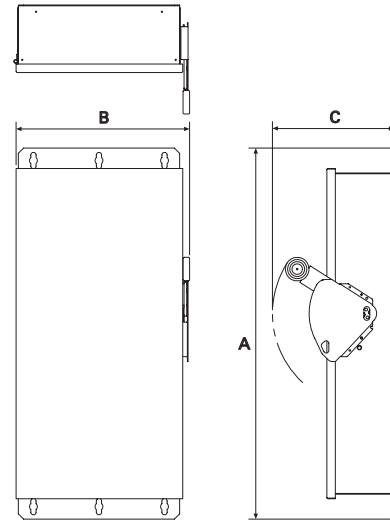
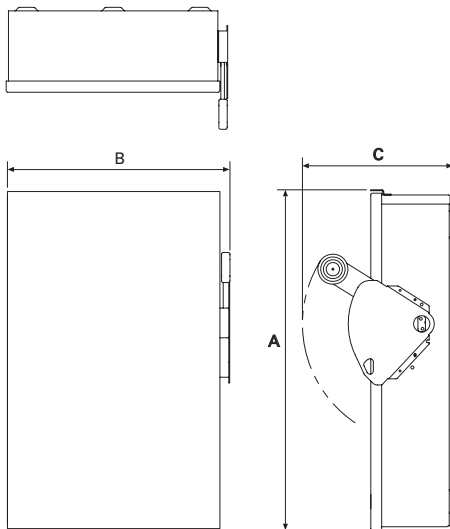
Approximate Dimensions in Inches (mm)

#### NEMA 3R Dimensions

Ampere	A	B	C
30 Non-Fusible	16.35 (415)	8.87 (225)	9.89 (251)
30 Fusible	16.35 (415)	8.87 (225)	9.89 (251)
60 Non-Fusible	16.35 (415)	8.87 (225)	9.89 (251)
60 Fusible	16.35 (415)	8.87 (225)	9.89 (251)
100	22.15 (563)	11.84 (301)	9.89 (251)
200	28.27 (718)	16.66 (423)	11.26 (286)
400	45 (1143)	24.12 (613)	12.39 (315)
600	52.5 (1334)	25.12 (638)	14.07 (357)

#### NEMA 12/3R and 4/4X Dimensions

Ampere	A	B	C
30 Non-Fusible	14.14 (359)	8.76 (223)	10.22 (260)
30 Fusible	19.8 (485)	8.76 (223)	10.22 (260)
60 Non-Fusible	14.14 (359)	8.76 (223)	10.22 (260)
60 Fusible	19.8 (485)	8.76 (223)	10.22 (260)
100	24.95 (634)	11.79 (299)	10.22 (260)
200	35.38 (899)	16.5 (431)	11.63 (295)
400	57.47 (1460)	24.12 (613)	12.43 (316)
600	63 (1600)	36.34 (923)	14.25 (362)



**Note:** Dimensions apply to disconnects for either negative grounded or ungrounded PV systems.

### Zone Blasting Switch



### Zone Blasting Switch

#### Application Description

Used as a means to safely initiate the blasting process found in mining, quarrying or roadway construction.

#### Product Description

- 30–100A
- 2 pole, 600 Vac - 250 Vdc maximum
- Non-fusible disconnect, Heavy Duty K switch design
- Highly visible RED NEMA 12/ 3R rated enclosure, or 4X stainless steel available
- Manually operated with three interlocked positions – PRIME, TEST, SHORT
  - PRIME – initiates the blast
  - TEST – neutral position, enables safe installation of detonator wires galvanometer testing
  - SHORT – provides a deadshort once blast complete

- Three lockable positions, each position accepts 3 x 3/8" shank locks
- 100% load break and make rated
- Optional auxiliary contacts available

#### Features

- Unsurpassed safety through a single point of control during the blasting process, along with a separate deadshort position safeguarding against premature blasts.
- Reduced installation time, with an all in one mechanical connection to short-circuit the blasting leg wires.

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#### Standards and Certifications

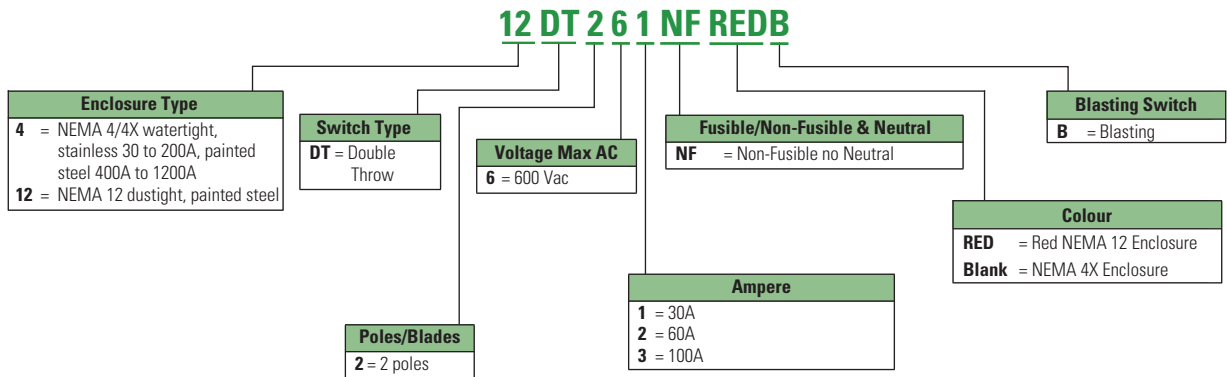
- CSA Certified LL45963
- Meets C22.2 No.4 for enclosed switches



- A permanent galvanometer testing connection is a quick, simple and safe standard feature as opposed to the alternate methods of twisting and untwisting wires when performing short and test functions.
- Easy identification with highly visible red enclosure and lamacoid nameplates.

### Catalog Numbering System

#### Zone Blasting Switch



**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Safety Switches

### Product Selection

12DT261NFRREDB

### Zone Blasting Switch, 600 Vac max. Non-Fusible - NEMA 12/3R, 4X Enclosure



#### Maximum Horsepower Rating

Ampere	Fuse Type Provision	Single Phase AC		DC	Catalogue Number	
		480V	600V		NEMA 12 Enclosure - Red <sup>2)</sup>	NEMA 4X Enclosure - Stainless Steel
30	—	7.5	10	5	12DT261NFRREDB	4DT261NFB
60	—	20	25	10	12DT262NFRREDB	4DT262NFB
100	—	40	50	20	12DT263NFRREDB	4DT263NFB

<sup>2)</sup> NEMA 12 enclosure can be field modified to 3R rating when drain screw from bottom of enclosure is removed.

### Accessories

#### Auxiliary Contact

Circuit	Catalogue Number
1 NO, 1 NC (Qty 2 required)	DS200EK1

### Technical Data and Specifications

#### Terminal Capacity

Disconnect Switch Size	Wire Size
30A	#14–2 Cu/Al
60A	#14–2 Cu/Al
100A	#14–1/0 Cu/Al

### Functions

**Prime:** The position that initiates the blast or blast signal.

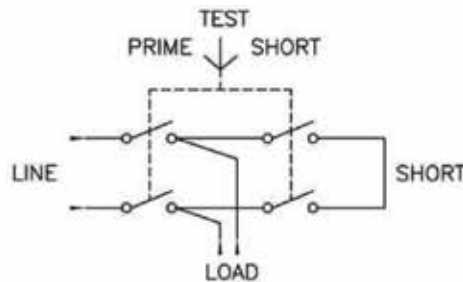
**Test:** An isolated position for operator to install detonator wires to load lugs, provides a permanent means for testing continuity of circuits with galvanometer.

**Short:** Position that mechanically short-circuits the leg wires. Once the blast has been completed, operator must return to the short position to activate the dead short.

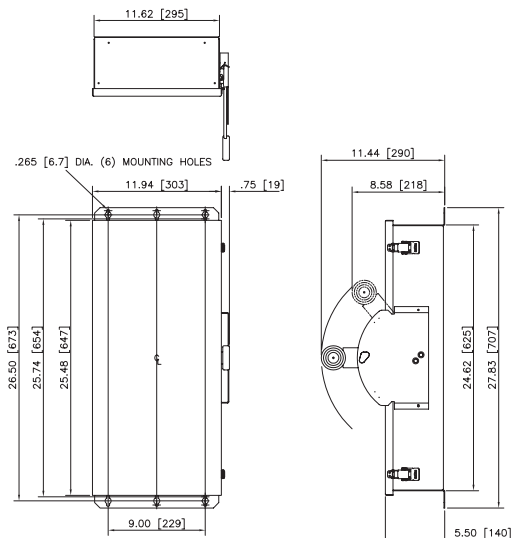
**Note:** Once installation of the leg wires and testing have been completed in the test position, the door of the enclosure must be closed to activate the prime position, as well to activate the short position.

**Mechanism:** Side operated handle, double break visible knife blades, quick make/break operation, 100% load break rated.

**Short-Circuit Rating:** 100 kA RMS with class R, J, or T upstream, otherwise 10 kA.



### Dimensions







### Elevator Control Switch



### Elevator Control Switch

#### Application

Typically used in elevator applications, allowing the AC power to be shut down to the elevator **prior to the application of water** in the elevator machine room or hoistway.

#### Product Description

This device 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.

It is a single device that meets the national building code requirements (US) for sprinklers, elevators and electrical equipment.

#### Standard Features

- 30–400A, 600 Vac three-phase fused power switch NEMA 1 enclosure
- 200kA rms short-circuit current rating
- Shunt trip 120V
- Control power terminal block
- Pilot light “ON”
- Class J Fuse mounting only (Class J Fuses not included)
- Key to test switch 120V
- Mechanically interlocked auxiliary contact for hydraulic elevators with battery backup (5A, 120 Vac rated) 1NO, 1NC

#### Optional Features

- Control power transformer with fuses and blocks
- Fire safety interface relay
- Isolated neutral lug (oversized 200% rated neutral option available where required by excessive nonlinear loads)
- Fire alarm voltage monitoring relay (to monitor shunt trip voltage)
- NEMA 3R, 4 and 12 enclosures available through 200A
- Phase failure and undervoltage relay available, consult Eaton
- Contact closure ie: battery lowering/door opening system. The ‘B’ option prevents “nuisance” fire alarms, by allowing overriding of the “Control Power not Available” signal when the Eaton elevator control disconnect is

manually (intentionally) turned off, and distinctive signaling for ON-OFF-TRIPPED conditions.

#### Standards and Certifications

- UL 98 Enclosed and Deadfront Switch Guide 96NK3917, File No. E182262
- cUL® per Canadian Standards C22.2, No. 0-M91-CAN/CSA® C22.2, No. 4-M89 Enclosed Switch

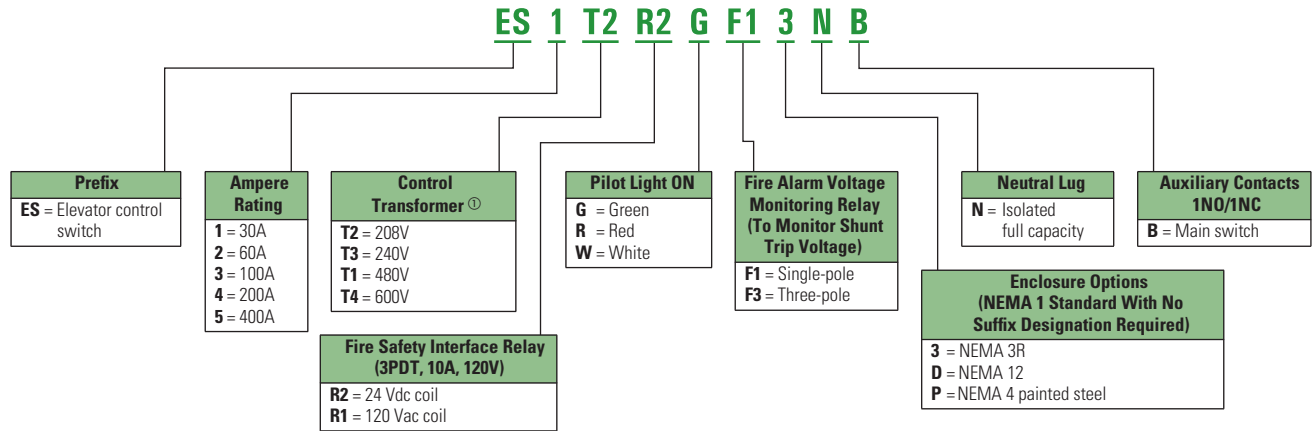


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### Catalog Numbering System

#### Elevator Control Switch



**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

#### Catalogue Number Example: ES3T1R1GF3

- 100A S.T. switch 480V-3P—ES3
- 480–120V CPT—T1
- 120 Vac coil fire safety interface relay—R1
- Pilot light—ON (Green)—G
- Fire alarm voltage monitoring relay (three-pole)—F3

### Technical Data and Specifications

#### Elevator Control Switch Maximum hp Rating—Sizing Based on Motor Type

Voltage Rating (Vac Three-Phase)	30A, ES1			60A, ES2			100A, ES3			200A, ES4			400A, ES5		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
208	5	5	3	10	10	10	20	15	15	40	40	30	—	—	—
240	5	5	5	10	10	10	20	20	15	50	40	30	—	—	—
280	10	10	10	30	25	20	50	40	30	100	75	75	—	—	—
600	15	15	10	30	30	25	60	50	40	125	100	100	—	—	—

### Dimensions

Approximate Dimensions in Inches (mm)

#### Elevator Control Switch Dimensions and Lug Data

Ampere Rating	NEMA 1 <sup>①</sup>			NEMA 3R, 12 <sup>②</sup>			Lug Size <sup>③</sup>	Catalogue Number
	Height	Width	Depth	Height	Width	Depth		
30	20.00 (508.0)	16.00 (406.4)	8.63 (219.2)	20.00 (508.0)	20.00 (508.0)	8.00 (203.2)	#14–#8 Al or Cu	ES1
60	20.00 (508.0)	16.00 (406.4)	8.63 (219.2)	20.00 (508.0)	20.00 (508.0)	8.00 (203.2)	#14–#2 Al or Cu	ES2
100	20.00 (508.0)	16.00 (406.4)	8.63 (219.2)	20.00 (508.0)	20.00 (508.0)	8.00 (203.2)	#8–1/0 Al or Cu	ES3
200	30.00 (762.0)	20.00 (508.0)	8.63 (219.2)	30.00 (762.0)	24.00 (609.6)	8.00 (203.2)	#6–250 kcmil Al or Cu	ES4
400	52.00 (320.8)	25.00 (635.0)	8.00 (203.2)	52.00 (1320.8)	25.00 (635.0)	8.00 (203.2)	(2) 1/0–(1) 750	ES5

<sup>①</sup> Standard oversize enclosure to mount control power transformer fire safety interface relay and control terminal blocks.

<sup>②</sup> Contact Eaton for dimensions for NEMA 4 enclosure.

<sup>③</sup> Optional neutral lug size same as line and load.

### Grounding Switch



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### Industrial Grounding Switch

#### Application Description

Used to isolate and ground 250 Vdc/600 Vac loads typically found but not limited to industrial DC applications such as door machines, rail cars and cranes. Grounding enables the current to be drained ie: drives, capacitors, discharging stray current on the machine doors, rails or cranes, increasing safety and people protection.

#### Product Description

- 30-600A 250 Vdc/600 Vac
- Non-Fusible, double-throw heavy duty switch design
- Grounded dead short
- Enclosures NEMA 12 and 4 painted steel and 4X stainless steel grade 304. NEMA 12 enclosure can be field converted to 3R when drain screw removed.
- Optional grade 316 stainless available
- Two viewing windows standard for visible blade indication of both main switch and grounded dead short
- Highly visible lamacoid nameplates standard, warning source 250 Vdc and grounded position
- Triple lockoff capability, all switch positions

#### Features & Benefits

- Safety - people protection - grounding enables the current to be drained discharging stray currents
- Cost and labour savings - eliminates the need for external hookstick ground clamps or ground bridles
- Reduces wear on existing breakers - eliminates the need to draw our breakers, lug out, tag out and apply ground bridle
- Increased uptime - all in one solution

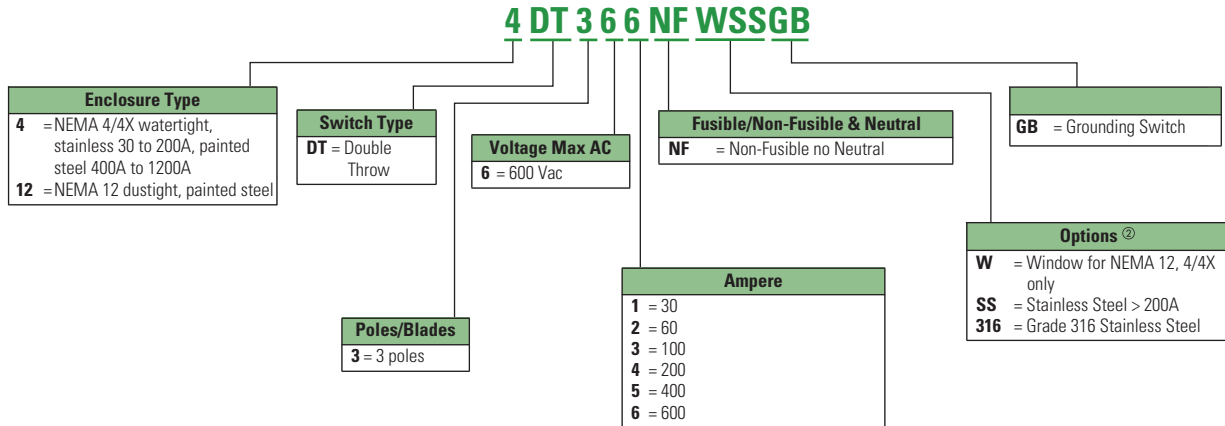
#### Standards & Certifications

- CSA certified
- Meets C22.2 No.4 standard for enclosed switches



### Catalog Numbering System

#### Industrial Grounding Switch



- ① Always verify the number of poles and wires required since catalogue numbers may appear in multiple tables.
- ② See **Pages 13 through 15** for additional Flex Centre options.

**Note:**

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

### Product Selection

#### 250 Vdc/600 Vac Heavy Duty, Non-Fusible, Grounding Switch

Ampere Rating Main and Standby	Maximum Horsepower Ratings			NEMA 12 <sup>Ⓞ</sup> Catalogue Number	NEMA 4X Stainless Steel Catalogue Number	NEMA 4 Painted Steel Catalogue Number
	Single-Phase AC 480V	600V	DC 250V			
<b>Two-Pole—600 Vac—250 Vdc</b>						
30	7-1/2	10	5	<b>12DT361NFWGB</b>	<b>4DT361NFWGB</b>	—
60	20	25	10	<b>12DT362NFWGB</b>	<b>4DT362NFWGB</b>	—
100	40	50	20	<b>12DT363NFWGB</b>	<b>4DT363NFWGB</b>	—
200	50	50	40	<b>12DT364NFWGB</b>	<b>4DT364NFWGB</b>	—
400	—	—	50	<b>12DT365NFWGB</b>	<b>4DT365NFWSSGB</b>	<b>4DT365NFWGB</b>
600	—	—	50	<b>12DT366NFWGB</b>	<b>4DT366NFWSSGB</b>	<b>4DT366NFWGB</b>

<sup>Ⓞ</sup> NEMA 12 enclosure can be field modified to 3R rating when drain screw from bottom of enclosure is removed.

### Technical Data and Specifications

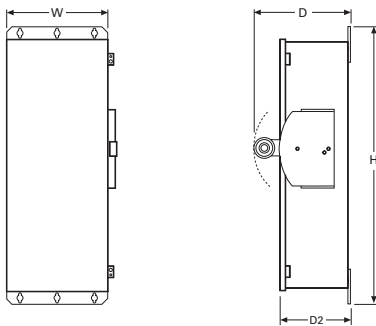
#### Dimensions

Approximate Dimensions in Inches (mm)

#### Heavy Duty, Non-Fusible, 250 Vdc and 600 Vac, Two-Pole

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
<b>NEMA 12, 4X Stainless Steel, 4 Painted Steel</b>					
30	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27)
60	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27)
100	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27)
200	19.50 (495.3)	41.00 (1041.4)	11.63 (295.4)	6.48 (164.6)	105 (48)
400	23.05 (585)	57.48 (1460)	12.5 (317.5)	7.25 (184.2)	160 (73)
600	23.7 (602)	67.02 (1702)	14.1 (358)	8.88 (225.6)	175 (79)

#### NEMA 12, 4X Double-Throw 30–1200A



#### Terminal Capacity for Grounding Switch

Ampere	Line/Load Terminal Capacity (per phase)	Ground terminal Capacity	Neutral Catalogue # <sup>Ⓞ</sup>	Neutral Terminal Capacity
30	#14 - #2	#14 - 4	<b>DT100NK</b>	1x #14 - #2 <b>AND</b> 3x #14 - #2
60	#14 - #2	#14 - 4	<b>DT100NK</b>	1x #14 - #2 <b>AND</b> 3x #14 - #2
100	#14 - 1/0	#14 - 4	<b>DT100NK</b>	1x #14 - #2 <b>AND</b> 3x #14 - #2
200	#6 - 250mcm	#14 - 4	<b>DT200NK</b>	3x #6 - 250mcm <b>AND</b> 1x #14 - #2
400 (non fusible)	(2) 1/0 - (2)300mcm <b>OR</b> (1) 1/0 - 750mcm	#6 - 250mcm	<b>DT400NK</b>	7x #6 - 250mcm
600 (non fusible)	(2)250mcm - (2)500mcm	#6 - 250mcm	<b>DT600NK</b>	6x 250mcm - 500mcm <b>AND</b> 1x #6 - 250mcm

<sup>Ⓞ</sup>Order neutral catalogue number when neutral required and not included with switch.

#### Note:

All terminals are rating Al/Cu unless otherwise noted.

#### Short-Circuit Rating (kA)

10 rms rating applies at 250 Vdc

For 600 Vac rms rating refer to **page 48**



# Switching Devices

## Safety Switches

### NEMA 1 Motor Disconnect



B330AGD



B330AND

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### NEMA 1 Motor Disconnect

#### Product Application

Suitable as a motor disconnect for indoor use when switching or isolating motor loads.

#### Product Description

- 30A 600 Vac, NEMA 1
- Compact size 3.2"W x 4.72"H x 3.09"D
- Lockable
- 10kA withstand rating at 600V when protected by 60A max. class J fusing
- K/O's top, bottom, back

#### Features

- Labeled suitable for motor disconnect
- Compact, economical
- Snap action toggle design

#### Standards and Certifications

- UL listed
- CSA certified to C22.2, No. 14



### Non-Fusible Two- and Three-Pole, 600 Vac

Ampere	Maximum Horsepower Single-Phase AC				Three-Phase AC				Catalogue Number
	120V	240V	480V	600V	120V	240V	480V	600V	
30	2	5	10	15					<b>B230BGD</b> <sup>Ⓞ</sup>
<b>Non-Fusible, 3 Pole, 600 Vac</b>									
30					3	75	15	20	<b>B330AGD</b> <sup>Ⓞ</sup>

<sup>Ⓞ</sup> Internal replacement switch B230BND

<sup>Ⓞ</sup> Internal replacement switch B330AND





# Switching Devices

## Motor Disconnects

### Enclosed Rotary Disconnect



### NEMA 12/3R, 4X Enclosed Rotary Disconnects

#### Application

Suitable as a motor disconnect. A compact and economical choice for switching and isolating motor loads. Provides users with the ability to lock directly to wired motor loads in the OFF position.

Environments such as outdoor, corrosive, dust, hose down, all possible with the wide variety of enclosures available.

#### Product Overview

- Available in 16–80A ratings
- 600 Vac, three- and four-pole non-fusible device
- Up to 65kA RMS short-circuit withstand rating
- Padlockable in the OFF position (up to three padlocks)
- Load break rated
- Accepts auxiliary contacts; capability to signal PLC controllers
- Ground lug connection provided as standard
- Possibility of adding one power pole and one auxiliary contact
- NEMA® Type 12/3R painted steel, 4X stainless steel, 4X non metallic, polycarbonate and thermoset polyester (krydon®)
- Labeled "Suitable for motor disconnect"

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#### Standards and Certifications

- CSA Certified, File 162136
- C22.2 No.14/UL 508
- Meets CEC rule 28-602(3)(b) suitable for motor disconnect



## Product Selection

## Enclosed Rotary Non-Fusible

Ampere Rating	Maximum Horsepower Ratings				NEMA 12 <sup>①</sup> Enclosure Dust-Tight/ Rainproof Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number	NEMA 4X Enclosure Corrosion-Resistant, Non-Metallic Krydon <sup>®</sup> Catalogue Number	NEMA 4X Enclosure Polycarbonate- Non-Metallic Catalogue Number
	Three-Phase AC							
	208V	240V	480V	600V				
<b>Three-Pole, 600 Vac</b>								
16	3	5	10	10	CER53016UD	CER53016UW	CER53016UX	—
25	7-1/2	7-1/2	15	20	CER53025UD	CER53025UW	CER53025UX	—
30	7-1/2	7-1/2	15	20	CER53030UD	CER53030UW	CER53030UX	ER53030UPGB <sup>②③</sup>
40	7-1/2	7-1/2	20	25	CER53040UD	CER53040UW	CER53040UX	—
60	15	15	30	30	CER53060UD	CER53060UW	CER53060UX	ER53060UPGB <sup>②③</sup>
80	15	20	40	40	CER53080UD	CER53080UW	CER53080UX	—

Accessories for Enclosed Rotary Disconnects <sup>④⑤</sup>

Disconnect Ampere Rating	Switched Fourth Pole	Auxiliary Contacts (Choose one)	Terminal Shrouds
16	S4PR516	1NO + 1NC	Single-pole TS1R5A
25	S4PR525	AC1NONC	
30	S4PR530	2NC	Three-pole TS3R5A
40	S4PR540	AC2NC	
60	—		Single-pole TS1R5B
80	—		Three-pole TS3R5B

<sup>①</sup> NEMA 12 enclosures (16–80A) can be field modified to meet NEMA 3R rainproof requirements when a factory-provided drain hole is opened.

<sup>②</sup> **GB** suffix = gray cover and black handle, **YR** suffix = yellow cover and red handle, **GR** suffix = gray cover and red handle.

<sup>③</sup> cULus.

<sup>④</sup> Ordered and shipped as separate components—not integral to enclosed device.

<sup>⑤</sup> Enclosed disconnects can accept one power pole, neutral or up to two auxiliary contacts (one mounted on either side of switch).

**Note:**

Contact Customer Support (1-800-268-3578) for factory-installed accessories, UL labelled product, or other special modifications.

# Switching Devices

## Motor Disconnects

### Technical Data and Specifications

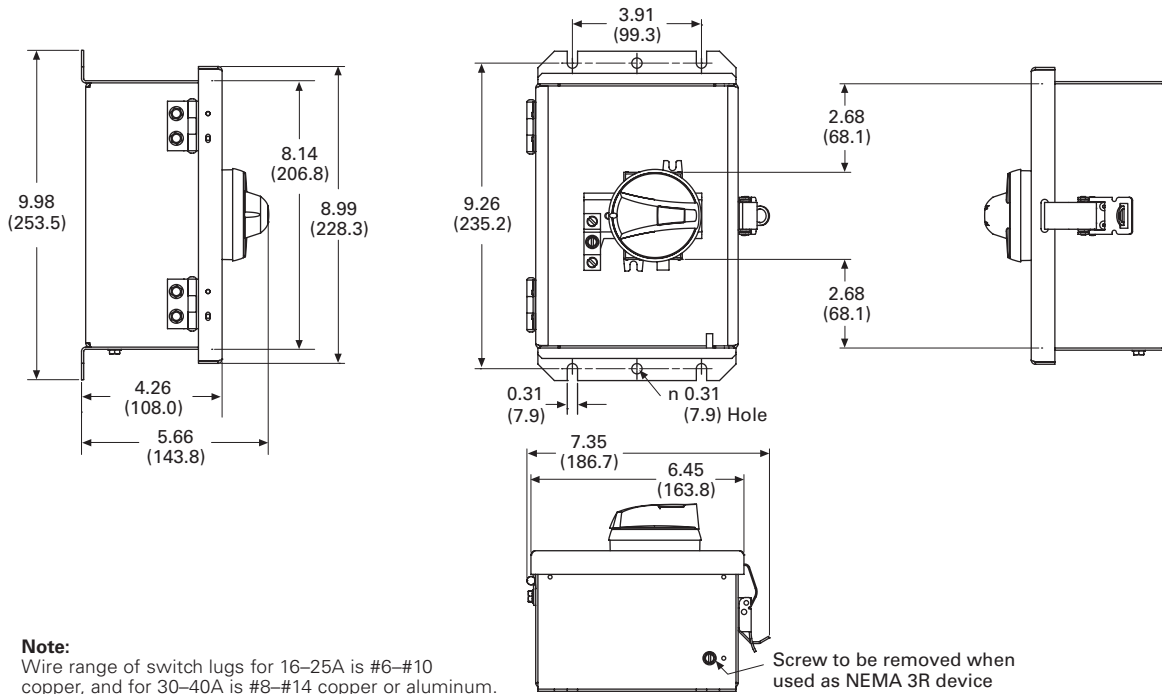
#### CSA 22.2 No.14/UL508 Manual Motor Controller “Suitable as Motor Disconnect” from 16-80A

Technical Characteristics	16A	25A	30A	40A	60A	80A
Approvals	UL 508/CSA 22.2 No. 14	UL 508/CSA 22.2 No. 14	UL 508/CSA 22.2 No. 14	UL 508/CSA 22.2 No. 14	UL 508/CSA 22.2 No. 14	UL 508/CSA 22.2 No. 14
Short-circuit rating at 600 Vac (kA)	10/65	10/65	10/65	10/65	50/65	50/65
Branch circuit fuse type	J	J	J	J	J	J
Maximum fuse rating	60/30A	60/30A	60/30A	60/30A	100/60A	100/60A
<b>Maximum CSA/UL Horsepower Ratings/Maximum Motor FLA Current, Three-Phase</b>						
208 Vac	3/10.6	7.5/24.2	7.5/24.2	7.5/24.2	15/46.2	15/46.2
220-240 Vac	5/15	7.5/22	7.5/22	7.5/22	15/42	20/54
440-480 Vac	10/14	15/21	15/21	20/27	30/40	40/52
600 Vac	10/11	20/22	20/22	25/27	30/32	40/41
<b>Connection</b>						
Wire range (AWG), solid, single cable	#14 - #10	#14 - #10	#14 - #10	#14 - #10	#14 - #10	#14 - #10
Wire range (AWG), solid, two cables	2x #12	2x #12	2x #12	2x #12	2x #12	2x #12
Wire range (AWG), stranded, single cable	#14 - #4	#14 - #4	#14 - #4	#14 - #4	#14 - #1	#14 - #1
Wire range (AWG), stranded, two cables	2x (#14-#12)	2x (#14-#12)	2x (#14-#12)	2x (#14-#12)	2x (#10-#6)	2x (#10-#6)
<b>Mechanical Characteristics</b>						
Endurance, number of mechanical cycles	10,000	10,000	10,000	10,000	10,000	10,000
<b>Auxiliary Contacts</b>						
Electrical characteristics	A300	A300	A300	A300	A300	A300

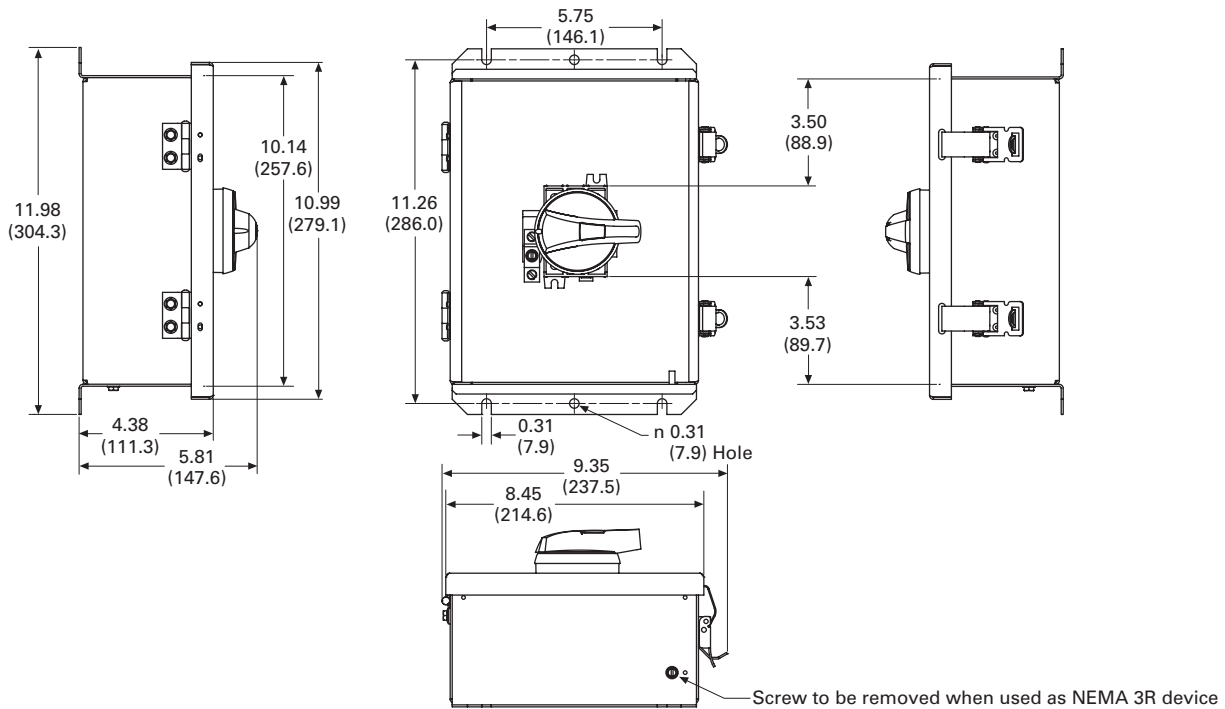
### Dimensions

#### Approximate Dimensions in Inches (mm)

#### NEMA 12/3R (16–40A)



#### NEMA 12/3R (60–80A)

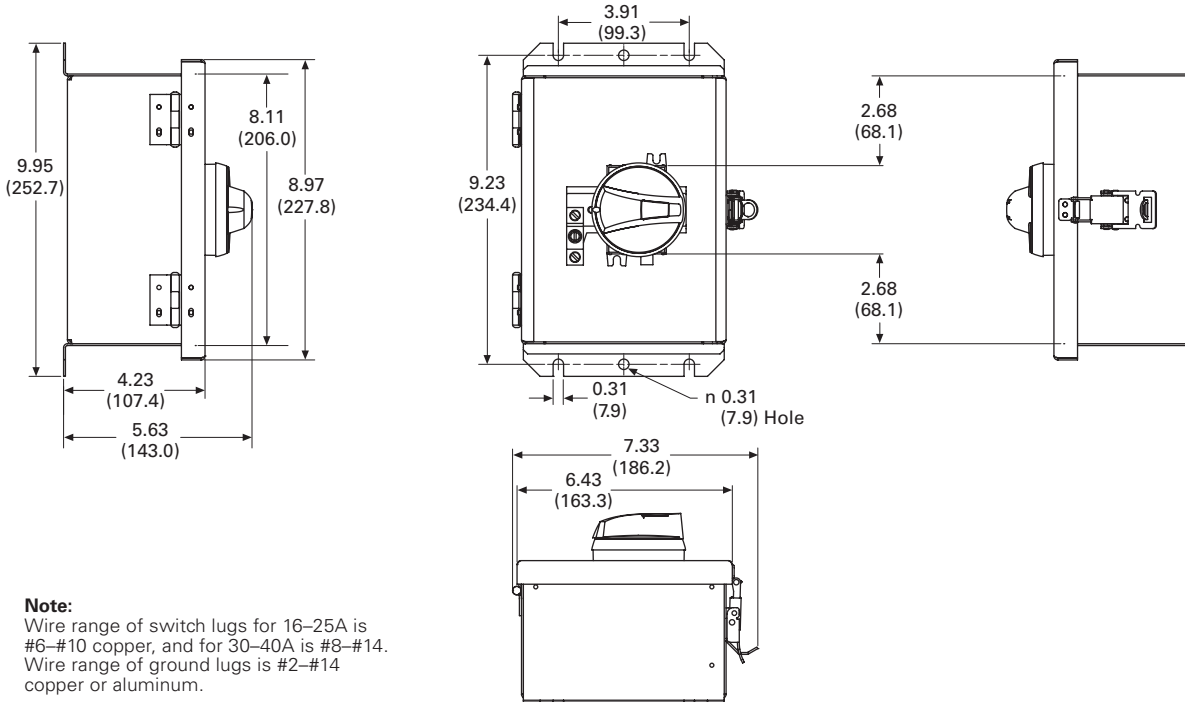


# Switching Devices

## Motor Disconnects

### Approximate Dimensions in Inches (mm)

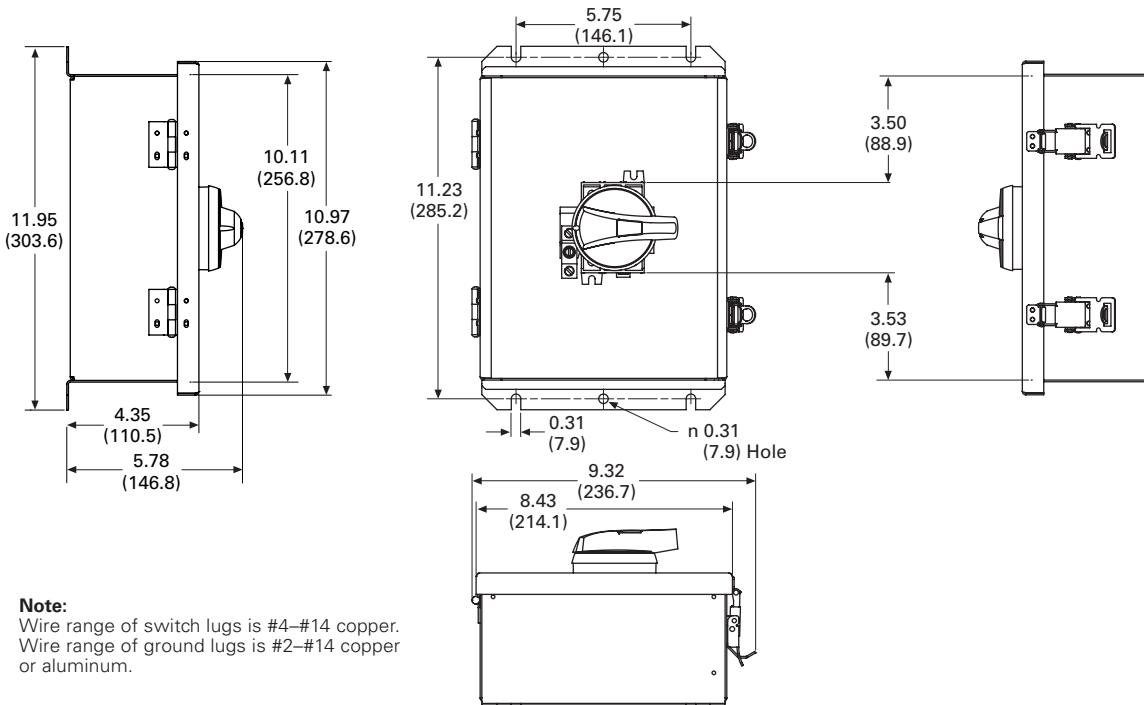
#### NEMA 4X Stainless (16–40A)



**Note:**

Wire range of switch lugs for 16–25A is #6–#10 copper, and for 30–40A is #8–#14. Wire range of ground lugs is #2–#14 copper or aluminum.

#### NEMA 4X Stainless (60–80A)

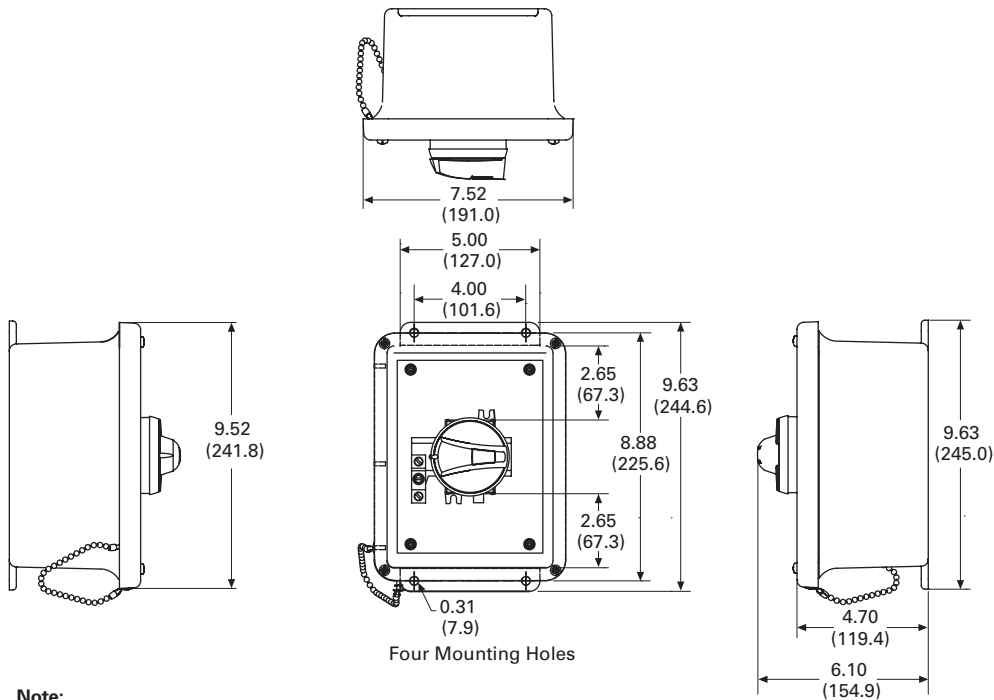


**Note:**

Wire range of switch lugs is #4–#14 copper. Wire range of ground lugs is #2–#14 copper or aluminum.

### Approximate Dimensions in Inches (mm)

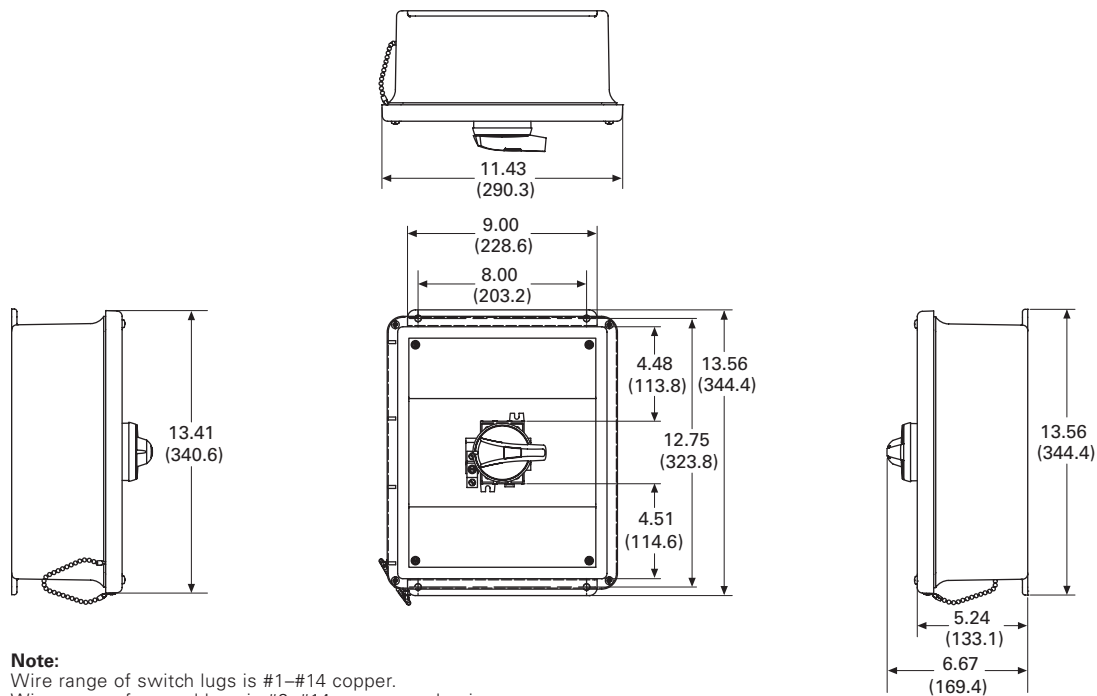
#### NEMA 4X Thermoset Polyester Krydon® (16 – 40A)



**Note:**

Wire range of switch lugs for 16–25A is #6–#10 copper, and for 30–40A is #8–#14. Wire range of ground lugs is #2–#14 copper or aluminum.

#### NEMA 4X Thermoset Polyester Krydon® (60 – 80A)



**Note:**

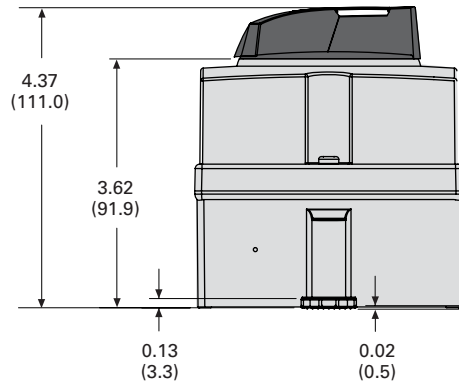
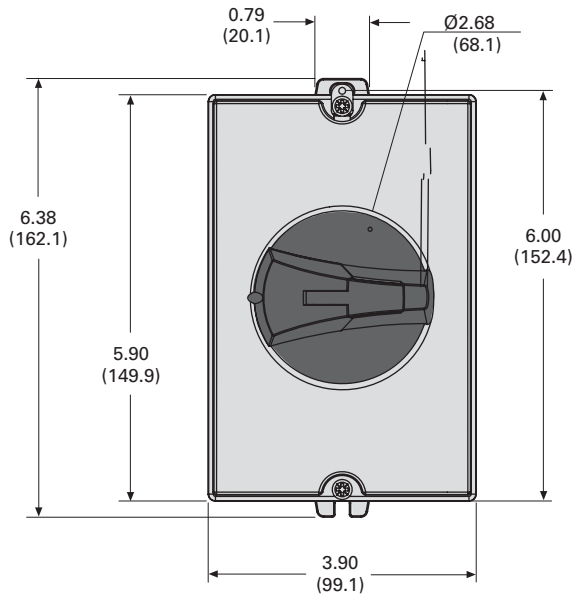
Wire range of switch lugs is #1–#14 copper. Wire range of ground lugs is #2–#14 copper or aluminum.

# Switching Devices

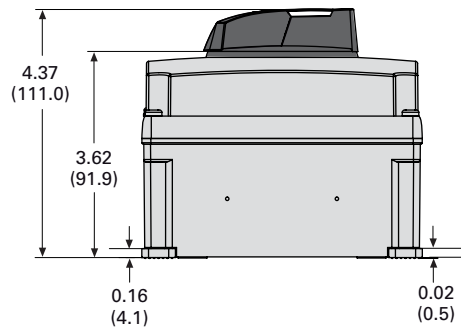
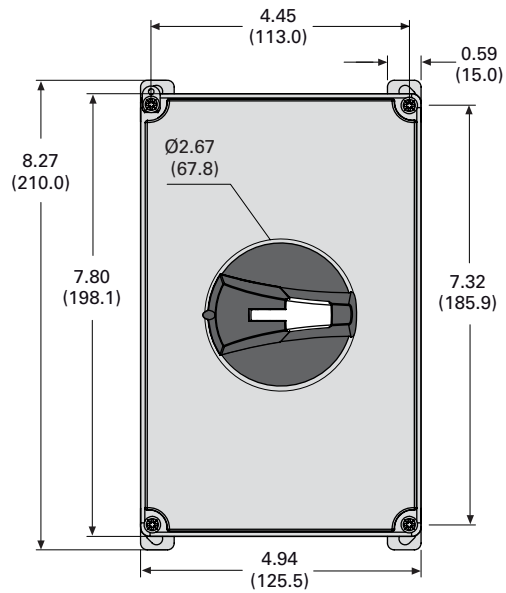
## Motor Disconnects

### Approximate Dimensions in Inches (mm)

#### NEMA 4X—Polycarbonate (30A)



#### NEMA 4X—Polycarbonate (60A)







# Switching Devices

## Bolted Pressure Switches

### Pringle Bolted Pressure Switches



CBC Type Switch



QA Type Switch



Mill Switch (PMS)

### Pringle Bolted Pressure Switch

#### Product Application

Typically sold as an open device to OEM's. **QA** and **CBC** type Pringle switches are typically used as the low voltage (600 Vac max.) fusible main service entrance device installed in a switchboard or an enclosure for commercial installations.

**PMS** designs are used for 250 Vdc or 600 Vac applications typically found in steel mills, foundries, shipyards, heavy equipment warehouses, mining, utilities.

Along with standard 600 Vac low voltage and 250 Vdc Pringle switches, custom Pringle switches are available for various, commercial, industrial, utility, port electrification, transit, applications. Medium voltage up to 15kV at 6 to 60kA. For DC applications (non load break rated) at 600, 750,

1000, 1200, 1600 Vdc custom Pringle switches are available.

#### Features

##### **Bolted Pressure Contacts**

All Pringle switches feature bolted pressure contacts. The result: blade contact surfaces are bolted closed at a pressure of 600 PSI - at both the hinge and jaw ends. The benefit: current conducting efficiency is the equivalent of a bolted bus bar connection.

##### **Spring Mechanism**

All quick action switches use a unique spring mechanism for improved reliability over traditional coil springs. The unique spring design is created by a series of concave-convex washers. The paired-washer spring design provides a higher force/distance ratio, making it easier to operate the mechanism.

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Should a pair of washers become inoperable for any reason, the entire spring assembly will still be operable by means of the remaining pairs. This is unlike the situation if a coil spring were to fracture or fatigue.



#### **Sample Spring Configuration**

- Bottom feed configurations simplify connections from underground services resulting in considerable savings by eliminating up-and-around bus and extra cubicle space required by conventional top feed devices.

- 200kAIC and 100% rated with Class "L" fuses.

#### **Standards and Certifications**

- 600 Vac
- CSA Certified "QA" & "CBC" type
- UL Listed switches available upon request



### Product Selection

**“QA”** – Manually operated contact switch with quick positive switching action

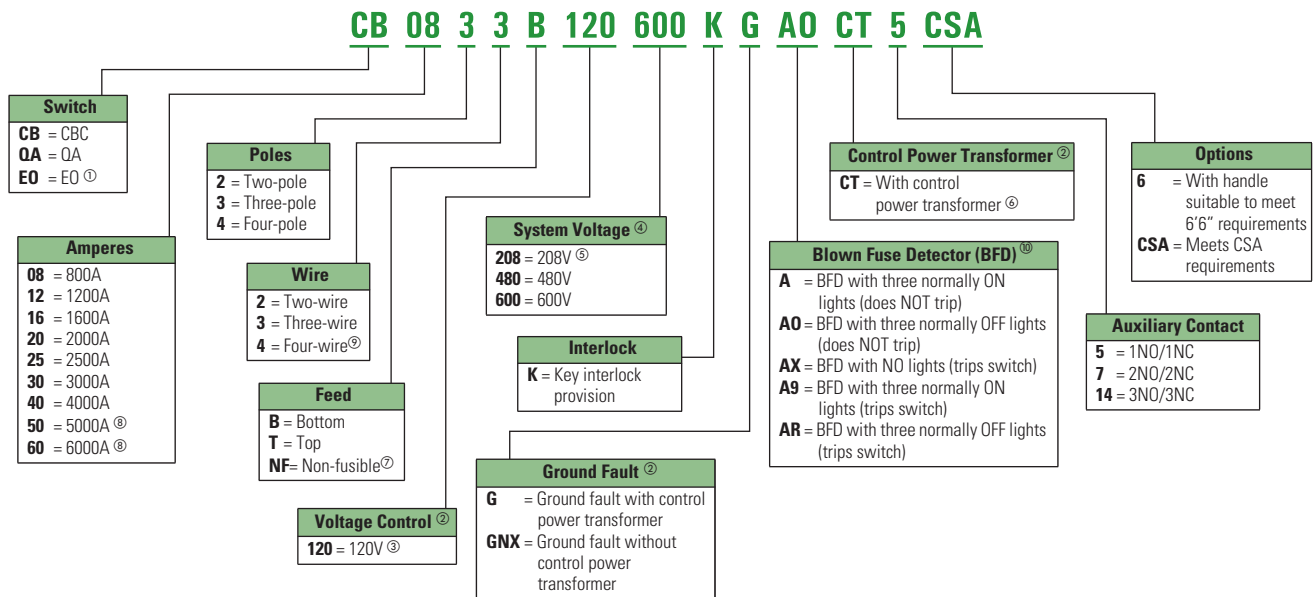
**“CBC”** – Electric trip contact switch with charge-before-close mechanism. Can be manually or electrically tripped. Optional blown fuse detector and phase failure relay with capacitor trip available.

**“EO”** – (Not UL or CSA)  
Similar to “CBC” design except pushbutton operated vs handle, also enables remote access to energize or shut down power to the switch

- 600 Vac maximum
- 800–6000A
- 800–4000A at 600 Vac- CSA
- Fusible
- Optional non-fusible “QA”
- Top or bottom fed
- Manually operated “QA” design
- Electric Trip “CBC” design
- 200kAIC and 100% load break rated with Class “L” fuses
- Top or bottom feed
- Two, three, or four pole
- Silver tipped contacts
- Various options available see page 119

### Catalog Numbering System

#### Pringle Bolted Pressure Switch



- ① Not CSA certified. A separate control box may be required when adding accessories.
- ② Not an option with QA type switches. GF option includes control power transformer.
- ③ 110 Vdc and 125 Vdc also available. Please contact Customer Service (1-800-268-3578).
- ④ For different system voltage requirements, please contact Customer Service (1-800-268-3578).
- ⑤ For QA switches, use 600V system catalogue number when referencing a 208V system.
- ⑥ Only applicable if ordering a CPT only, without ground fault.
- ⑦ Only available with QA switches and in a top-feed configuration.
- ⑧ Does not carry CSA marking.
- ⑨ Three-pole four-wire not available; if neutral required, customer to supply neutral or four-pole four-wire available as alternative.
- ⑩ For BFD that does not trip the switch, use QA switch design.  
For BFD that does trip the switch, use CB switch design.

#### Note:

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

# Switching Devices

## Bolted Pressure Switches

### Technical Data and Specifications

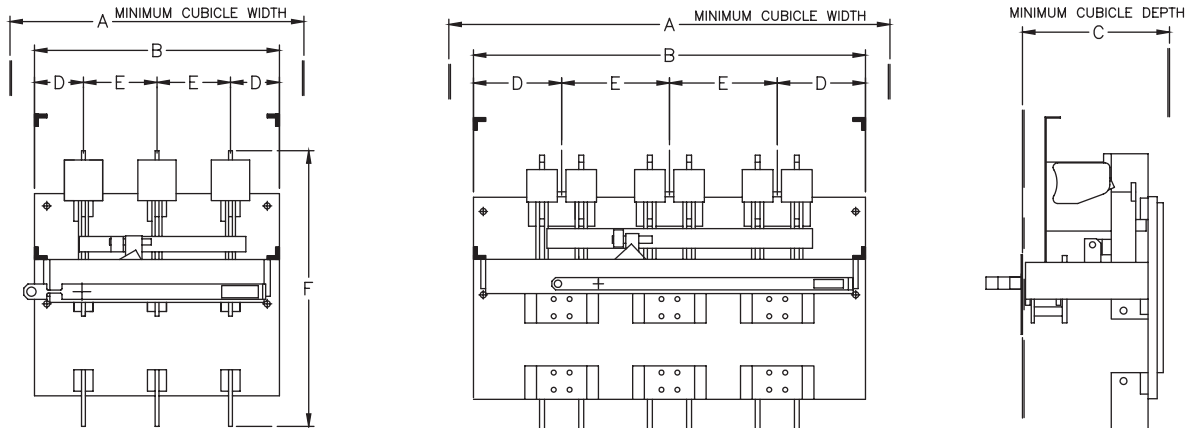
#### Dimensions

Approximate Dimensions in Inches (mm)

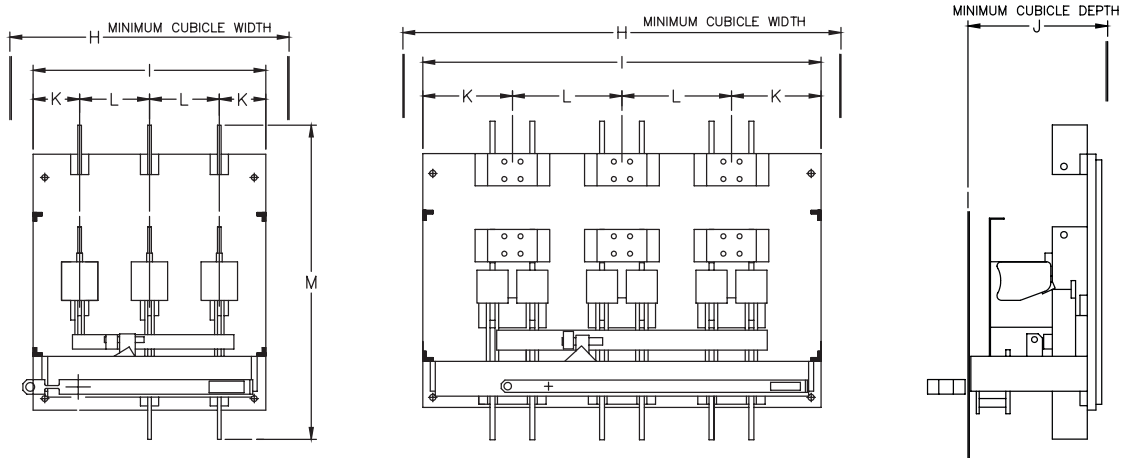
#### Manually Operated Bolted Contact Switches "QA" Design

Type	Feed	Ampere	Standard Catalogue Number	Dimensions						Weight (lb/kg)
				A	B	C	D	E	F	
				<b>Top</b>						
QA	T	800	QA0833T600CSA	24 (610)	20 (508)	12 (305)	4 (102)	6 (152)	22.5 (572)	95 (43)
QA	T	1200	QA1233T600CSA	28 (711)	20 (508)	14 (356)	5.5 (140)	6.5 (165)	28 (711)	160 (73)
QA	T	1600	QA1633T600CSA	28 (711)	20 (508)	14 (356)	5.5 (140)	6.5 (165)	28 (711)	160 (73)
QA	T	2000	QA2033T600CSA	28 (711)	20 (508)	14 (356)	5.5 (140)	6.5 (165)	28 (711)	160 (73)
QA	T	2500	QA2533T600CSA	32 (813)	28 (711)	15 (381)	6 (152)	8 (203)	28 (711)	190 (86)
QA	T	3000	QA3033T600CSA	44 (1118)	40 (1016)	20 (508)	9 (229)	11 (279)	28 (711)	350 (159)
QA	T	4000	QA4033T600CSA	44 (1118)	40 (1016)	20 (508)	9 (229)	11 (279)	28 (711)	350 (159)
				<b>Bottom</b>						
QA	B	800	QA0833B600CSA	24 (610)	20 (508)	12 (305)	4 (102)	6 (152)	27 (686)	110 (50)
QA	B	1200	QA1233B600CSA	28 (711)	24 (610)	14 (356)	5.5 (140)	6.5 (165)	32 (813)	180 (82)
QA	B	1600	QA1633B600CSA	28 (711)	24 (610)	14 (356)	5.5 (140)	6.5 (165)	32 (813)	180 (82)
QA	B	2000	QA2033B600CSA	28 (711)	24 (610)	14 (356)	5.5 (140)	6.5 (165)	32 (813)	180 (82)
QA	B	2500	QA2533B600CSA	32 (813)	28 (711)	15 (381)	6 (152)	8 (203)	32 (813)	215 (98)
QA	B	3000	QA3033B600CSA	44 (1118)	40 (1016)	20 (508)	9 (229)	11 (279)	32 (813)	400 (182)
QA	B	4000	QA4033B600CSA	44 (1118)	40 (1016)	20 (508)	9 (229)	11 (279)	32 (813)	400 (182)

#### 800 - 4000A QA Top Feed



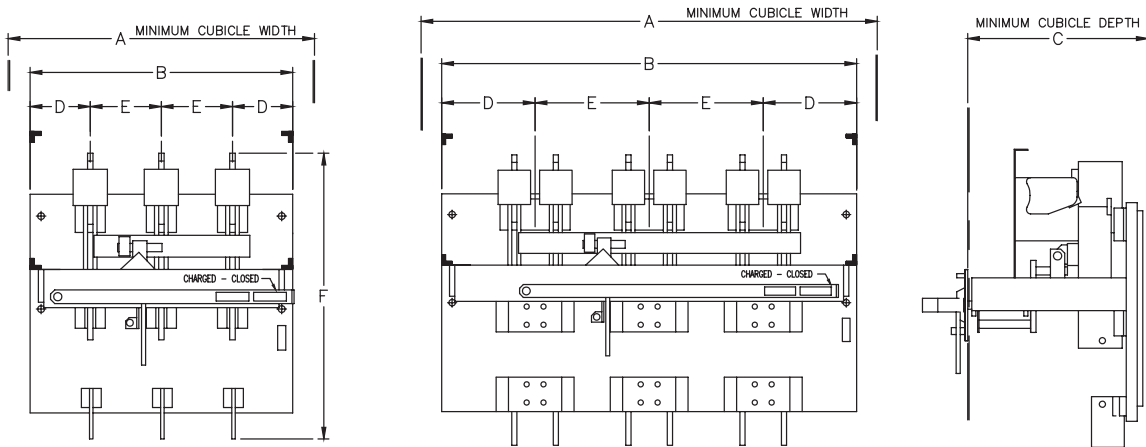
#### 800-4000A QA Bottom Feed



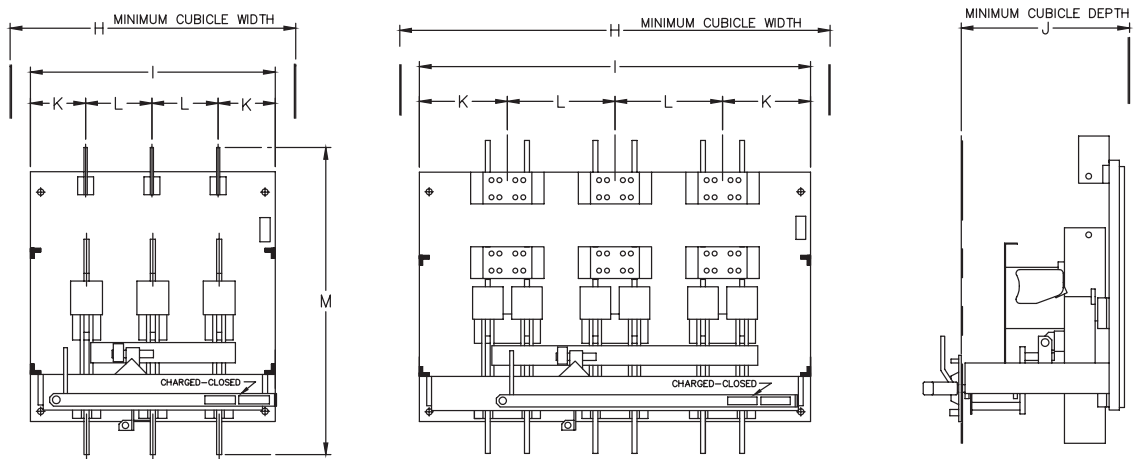
### Electrically Operated Bolted Contact Switches “CBC” Design

Type	Feed	Ampere	Standard Catalogue Number	Dimensions						Weight (lb/kg)
				A	B	C	D	E	F	
				<b>Top</b>						
CBC	T	800	<b>CB0833T120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	26.1 (663)	140 (64)
CBC	T	1200	<b>CB1233T120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	28 (711)	180 (82)
CBC	T	1600	<b>CB1633T120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	28 (711)	180 (82)
CBC	T	2000	<b>CB2033T120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	28 (711)	180 (82)
CBC	T	2500	<b>CB2533T120600CSA</b>	32 (813)	28 (711)	17.5 (445)	6 (152)	8 (203)	28 (711)	215 (98)
CBC	T	3000	<b>CB3033T120600CSA</b>	44 (1118)	40 (1016)	22.5 (572)	9 (229)	11 (279)	28 (711)	390 (177)
CBC	T	4000	<b>CB4033T120600CSA</b>	44 (1118)	40 (1016)	22.5 (572)	9 (229)	11 (279)	28 (711)	390 (177)
				<b>Bottom</b>						
CBC	B	800	<b>CB0833B120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	30.3 (765)	155 (70)
CBC	B	1200	<b>CB1233B120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	32 (813)	200 (91)
CBC	B	1600	<b>CB1633B120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	32 (813)	200 (91)
CBC	B	2000	<b>CB2033B120600CSA</b>	28 (711)	24 (610)	16.5 (419)	5.5 (140)	6.5 (165)	32 (813)	200 (91)
CBC	B	2500	<b>CB2533B120600CSA</b>	32 (813)	28 (711)	17.5 (445)	6 (152)	8 (203)	32 (813)	240 (109)
CBC	B	3000	<b>CB3033B120600CSA</b>	44 (1118)	40 (1016)	22.5 (572)	9 (229)	11 (279)	32 (813)	430 (195)
CBC	B	4000	<b>CB4033B120600CSA</b>	44 (1118)	40 (1016)	22.5 (572)	9 (229)	11 (279)	32 (813)	430 (195)

### 800-4000A CBC Top Feed



### 800-4000A CBC Bottom Feed



# Switching Devices

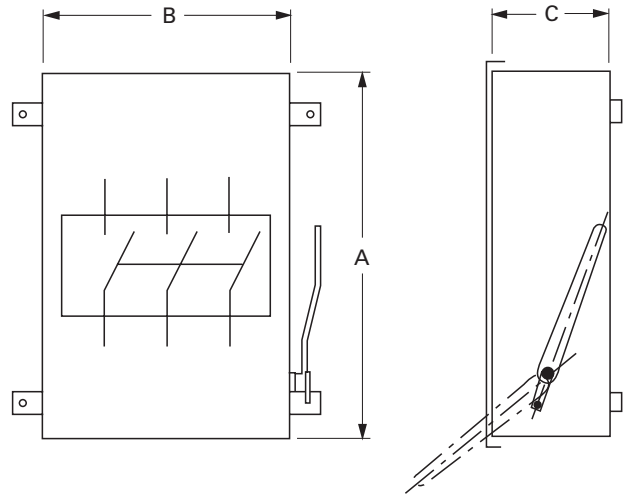
## Bolted Pressure Switches

### Product Selection

“PMS” – Pringle Mill switches are opened or closed by means of a side mounted operating handle, which compresses disc springs (Eaton Pringle exclusive) in the drive mechanism. The mechanism, in turn, quickly opens or closes the switch blades at a speed independent of the speed of handle movement. Additionally, the handle can override the springs for positive connection with the switch blades.

- PMS design is typically sold as an enclosed device
- 800–4000A
- 250 Vdc (does not carry UL or CSA)
- 600 Vac maximum (does not carry UL or CSA)
- Fusible or non fusible
- Two or three pole
- Load break rated
- Multiple entry and exit configurations

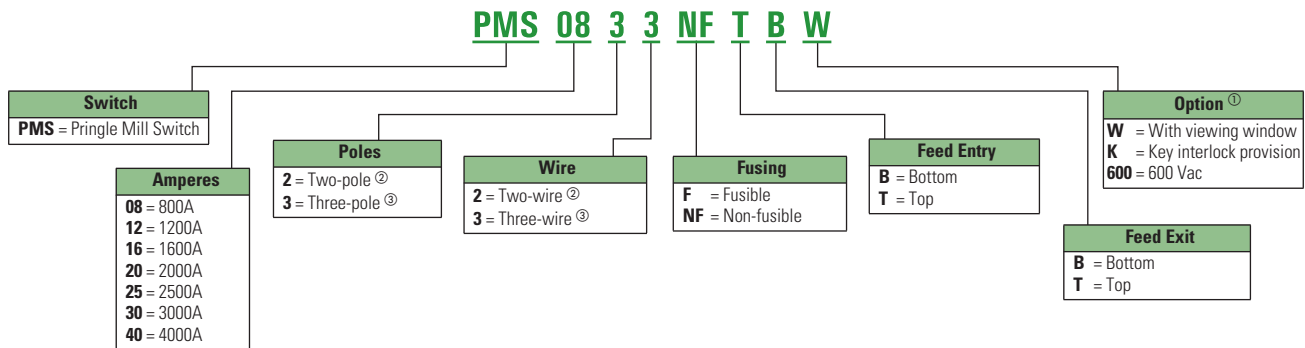
- Cable entry in the top and exit out the bottom (TB)
- Top entry and top exit (TT)
- Bottom entry and top exit (BT)
- Bottom entry and bottom exit (BB)
- NEMA 12 enclosure rating, 11-gauge steel, suitable for wall or column mounting
- Side operating handle
- Interlocking switch mechanism, prevents door from being opened when switch energized
- Defeatable door interlock (for use by trained personnel).
- Padlockable in open position – up to 3 padlocks.
- Window option available
- Provision for Key Interlocking option available



### Catalog Numbering System

#### Pringle Mill Switch

(NEMA 1/3R/12 Enclosed)



① Additional accessories/options available—door interlock, special nameplates, custom dimensions, special paint and auxiliary contacts. Please contact Customer Service (1-800-268-3578).

② 250 Vdc.

③ 480 Vac, note for 600 Vac must add '600' to suffix of cat#.

#### Note:

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

## Dimensions

Approximate Dimensions in Inches (mm)

## Two-Pole, 250 Vdc Mill Switches - Non-Fusible

Amperes	Catalogue Number	A	B	C
800	PMS0822NFTB	36.00 (914.4)	18.00 (457.2)	12.50 (317.5)
	PMS0822NFFT	36.00 (914.4)	28.00 (711.2)	15.50 (393.7)
	PMS0822NFBB	36.00 (914.4)	28.00 (711.2)	15.50 (393.7)
	PMS0822NFBT	36.00 (914.4)	28.00 (711.2)	15.50 (393.7)
1200	PMS1222NFTB	42.00 (1066.8)	19.00 (482.6)	14.00 (355.6)
	PMS1222NFFT	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
	PMS1222NFBB	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
	PMS1222NFBT	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
1600	PMS1622NFTB	42.00 (1066.8)	19.00 (482.6)	14.00 (355.6)
	PMS1622NFFT	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
	PMS1622NFBB	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
	PMS1622NFBT	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
2000	PMS2022NFTB	42.00 (1066.8)	19.00 (482.6)	14.00 (355.6)
	PMS2022NFFT	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
	PMS2022NFBB	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
	PMS2022NFBT	42.00 (1066.8)	31.50 (800.1)	17.00 (431.8)
2500	PMS2522NFTB	50.00 (1270.0)	27.00 (685.8)	14.00 (355.6)
	PMS2522NFFT	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
	PMS2522NFBB	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
	PMS2522NFBT	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
3000	PMS3022NFTB	50.00 (1270.0)	27.00 (685.8)	14.00 (355.6)
	PMS3022NFFT	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
	PMS3022NFBB	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
	PMS3022NFBT	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
4000	PMS4022NFTB	50.00 (1270.0)	27.00 (685.8)	14.00 (355.6)
	PMS4022NFFT	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
	PMS4022NFBB	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)
	PMS4022NFBT	50.00 (1270.0)	42.50 (1079.5)	17.00 (431.8)

## Two-Pole, 250 Vdc Mill Switches - Fusible

Amperes	Catalogue Number	A	B	C
800	PMS0822FTB	45.00 (1143.0)	19.00 (482.6)	12.50 (317.5)
	PMS0822FFT	45.00 (1143.0)	32.00 (812.8)	15.50 (393.7)
	PMS0822FBB	45.00 (1143.0)	32.00 (812.8)	15.50 (393.7)
	PMS0822FBT	45.00 (1143.0)	32.00 (812.8)	15.50 (393.7)
1200	PMS1222FTB	58.00 (1473.2)	21.00 (533.4)	14.00 (355.6)
	PMS1222FFT	58.00 (1473.2)	35.00 (889.0)	17.00 (431.8)
	PMS1222FBB	58.00 (1473.2)	35.00 (889.0)	17.00 (431.8)
	PMS1222FBT	58.00 (1473.2)	35.00 (889.0)	17.00 (431.8)
1600	PMS1622FTB	58.00 (1473.2)	21.00 (533.4)	14.00 (355.6)
	PMS1622FFT	58.00 (1473.2)	35.00 (889.0)	17.00 (431.8)
	PMS1622FBB	58.00 (1473.2)	35.00 (889.0)	17.00 (431.8)
	PMS1622FBT	58.00 (1473.2)	35.00 (889.0)	17.00 (431.8)
2000	PMS2022FTB	58.00 (1473.2)	21.00 (533.4)	15.00 (381.0)
	PMS2022FFT	58.00 (1473.2)	35.00 (889.0)	18.00 (457.2)
	PMS2022FBB	58.00 (1473.2)	35.00 (889.0)	18.00 (457.2)
	PMS2022FBT	58.00 (1473.2)	35.00 (889.0)	18.00 (457.2)
2500	PMS2522FTB	70.00 (1778.0)	29.00 (736.6)	15.00 (381.0)
	PMS2522FFT	70.00 (1778.0)	42.50 (1079.5)	17.50 (444.5)
	PMS2522FBB	70.00 (1778.0)	42.50 (1079.5)	17.50 (444.5)
	PMS2522FBT	70.00 (1778.0)	50.00 (1270.0)	17.50 (444.5)
3000	PMS3022FTB	70.00 (1778.0)	29.00 (736.6)	15.00 (381.0)
	PMS3022FFT	70.00 (1778.0)	42.50 (1079.5)	17.50 (444.5)
	PMS3022FBB	70.00 (1778.0)	42.50 (1079.5)	17.50 (444.5)
	PMS3022FBT	70.00 (1778.0)	50.00 (1270.0)	17.50 (444.5)
4000	PMS4022FTB	70.00 (1778.0)	29.00 (736.6)	15.00 (381.0)
	PMS4022FFT	70.00 (1778.0)	42.50 (1079.5)	17.50 (444.5)
	PMS4022FBB	70.00 (1778.0)	42.50 (1079.5)	17.50 (444.5)
	PMS4022FBT	70.00 (1778.0)	50.00 (1270.0)	17.50 (444.5)

Ⓞ For 600 Vac add "600" to suffix of catalogue number, same dimensions apply

Three-Pole, 480 Vac Mill Switches - Non-Fusible<sup>Ⓞ</sup>

Amperes	Catalogue Number	A	B	C
800	PMS0833NFTB	36.00 (914.4)	26.00 (660.4)	12.50 (317.5)
	PMS0833NFFT	36.00 (914.4)	26.00 (660.4)	23.00 (584.2)
	PMS0833NFBB	36.00 (914.4)	26.00 (660.4)	23.00 (584.2)
	PMS0833NFBT	36.00 (914.4)	26.00 (660.4)	23.00 (584.2)
1200	PMS1233NFTB	42.00 (1066.8)	28.00 (711.2)	14.00 (355.6)
	PMS1233NFFT	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
	PMS1233NFBB	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
	PMS1233NFBT	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
1600	PMS1633NFTB	42.00 (1066.8)	28.00 (711.2)	14.00 (355.6)
	PMS1633NFFT	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
	PMS1633NFBB	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
	PMS1633NFBT	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
2000	PMS2033NFTB	42.00 (1066.8)	28.00 (711.2)	14.00 (355.6)
	PMS2033NFFT	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
	PMS2033NFBB	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
	PMS2033NFBT	42.00 (1066.8)	28.00 (711.2)	24.00 (609.6)
2500	PMS2533NFTB	50.00 (1270.0)	44.00 (1117.6)	20.00 (508.0)
	PMS2533NFFT	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
	PMS2533NFBB	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
	PMS2533NFBT	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
3000	PMS3033NFTB	50.00 (1270.0)	44.00 (1117.6)	20.00 (508.0)
	PMS3033NFFT	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
	PMS3033NFBB	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
	PMS3033NFBT	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
4000	PMS4033NFTB	50.00 (1270.0)	44.00 (1117.6)	20.00 (508.0)
	PMS4033NFFT	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
	PMS4033NFBB	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)
	PMS4033NFBT	50.00 (1270.0)	44.00 (1117.6)	30.00 (762.0)

Three-Pole, 480 Vac Mill Switches - Fusible<sup>Ⓞ</sup>

Amperes	Catalogue Number	A	B	C
800	PMS0833FTB	45.00 (1143.0)	26.00 (660.4)	12.50 (317.5)
	PMS0833FFT	45.00 (1143.0)	26.00 (660.4)	23.00 (584.2)
	PMS0833FBB	45.00 (1143.0)	26.00 (660.4)	23.00 (584.2)
	PMS0833FBT	45.00 (1143.0)	26.00 (660.4)	23.00 (584.2)
1200	PMS1233FTB	58.00 (1473.2)	30.00 (762.0)	14.00 (355.6)
	PMS1233FFT	58.00 (1473.2)	30.00 (762.0)	24.00 (609.6)
	PMS1233FBB	58.00 (1473.2)	30.00 (762.0)	24.00 (609.6)
	PMS1233FBT	58.00 (1473.2)	30.00 (762.0)	24.00 (609.6)
1600	PMS1633FTB	58.00 (1473.2)	30.00 (762.0)	14.00 (355.6)
	PMS1633FFT	58.00 (1473.2)	30.00 (762.0)	24.00 (609.6)
	PMS1633FBB	58.00 (1473.2)	30.00 (762.0)	24.00 (609.6)
	PMS1633FBT	58.00 (1473.2)	30.00 (762.0)	24.00 (609.6)
2000	PMS2033FTB	58.00 (1473.2)	30.00 (762.0)	15.00 (381.0)
	PMS2033FFT	58.00 (1473.2)	30.00 (762.0)	25.00 (635.0)
	PMS2033FBB	58.00 (1473.2)	30.00 (762.0)	25.00 (635.0)
	PMS2033FBT	58.00 (1473.2)	30.00 (762.0)	25.00 (635.0)
2500	PMS2533FTB	85.00 (2159.0)	46.00 (1168.4)	20.00 (508.0)
	PMS2533FFT	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
	PMS2533FBB	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
	PMS2533FBT	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
3000	PMS3033FTB	85.00 (2159.0)	46.00 (1168.4)	20.00 (508.0)
	PMS3033FFT	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
	PMS3033FBB	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
	PMS3033FBT	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
4000	PMS4033FTB	85.00 (2159.0)	46.00 (1168.4)	20.00 (508.0)
	PMS4033FFT	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
	PMS4033FBB	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)
	PMS4033FBT	85.00 (2159.0)	46.00 (1168.4)	30.00 (762.0)



# Switching Devices

## Bolted Pressure Switches

### Pringle Switch Custom Capabilities

For engineered to order, or non-load break switch solutions with bolted pressure contact technology, contact Customer Service (1-800-268-3578).

- Enclosed “QA” or “CBC” design
- Non Load break rated
- Motor operated 800-6000A
- High current 6000A to 35,000A +
- Medium voltage 5kV, 15kV +
- DC voltages 250 Vdc to 3000 Vdc +
- Transit applications - single, two or three pole DC rated
- Manual transfer switches
- Live front switches
- Viewing windows
- Utility ground
- Special paint
- Provision for key interlocking
- Nameplates
- Custom dimensions
- Auxiliary contacts



### Service

Eaton’s Pringle switches have always been manufactured with precision-made parts, and, like any mechanical device, they do require routine maintenance in order to operate at the optimal level. Over time, contact surfaces may be exposed to dirt and other contaminants, which could result in improper mechanical and/or electrical operation of the switch.

Eaton maintains a dedicated service team that has over 100 years of combined experience in the exclusive service and repair of Pringle switches. A service call performed by a certified technician ensures that your equipment is cleaned, lubed, adjusted and repaired, and a one-year extended warranty is granted. General maintenance, repair/ refurbishment and troubleshooting are just some of the services provided.

### In-House Service

Eaton also offers in-house inspection, service and repair at our manufacturing facility in Cleveland, TN.

### Aftermarket Parts

Eaton has a full line of factory-specified aftermarket parts for Pringle switches, as well as complete, form, fit, function, replacement switches. Contact customer support 1-800-268-3578 or Eaton Sales for aftermarket parts information.





### OEM Line Isolation (OLI) Switch



### OEM Line Isolation (OLI) Switch

#### Product 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—another 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.

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.

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#### Features

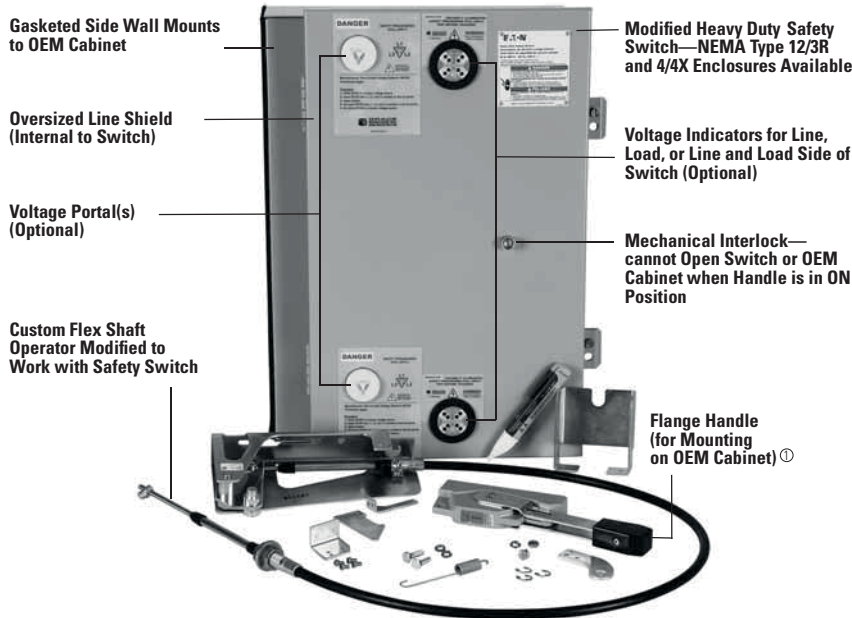
- 60–400A
- NEMA 12/3R and NEMA 4X 304 stainless steel enclosures
- Oversized line shield (internal to switch)
- Optional voltage portal(s)
- Gasketed side wall mounts to OEM cabinet
- Voltage indicators for line, load or line and load of switch (optional)
- Mechanical interlock—cannot open switch or OEM cabinet when handle is in the ON position
- Flange handle (for mounting on OEM cabinet)
- Custom Flex Shaft™ operator modified to work with safety switch

#### Standards and Certifications

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



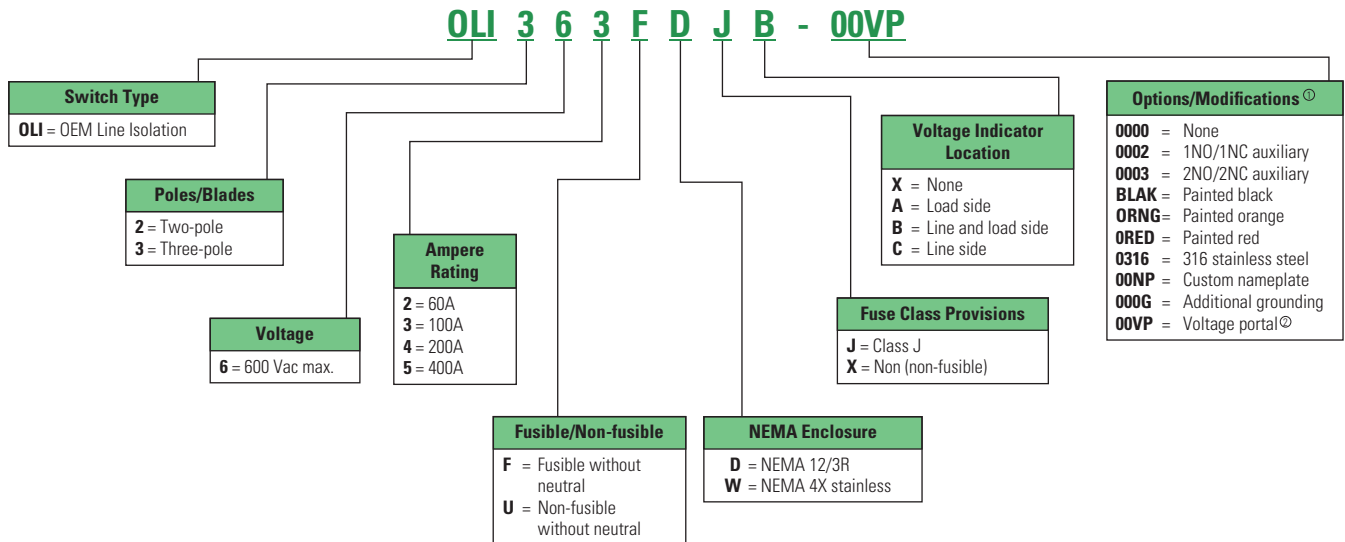
### Additional Features and Benefits



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

### Catalog Numbering System

#### OEM Line Isolation (OLI) Switch



① More combinations and options are available.

② One voltage portal for each voltage indicator specified.

#### Note:

This table is intended for use in breaking down existing catalogue numbers. It is not intended for building new catalogue numbers.

#### Modifications

Additions are available such as custom paint, 316-stainless enclosures, custom OEM labeling and more.

Call customer support at 1-800-268-3578 for more information.

# Switching Devices

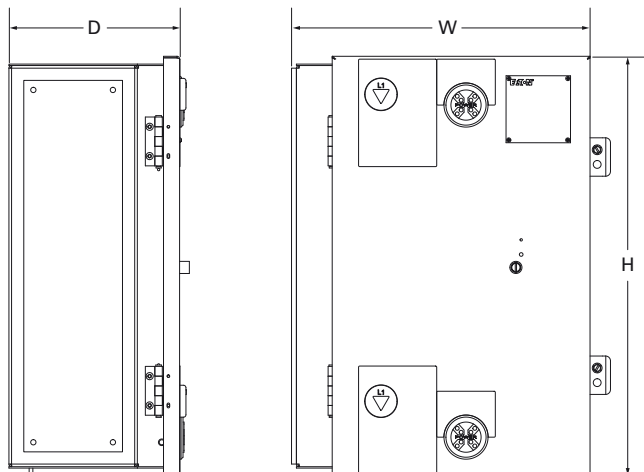
## Safety Switches

### Technical Data and Specifications

#### Dimensions

Approximate Dimensions in Inches (mm)

#### OEM Line Isolation (OLI) Switch



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

#### Short-Circuit Ratings (kA) and Terminal Capacities

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



### Complete Operating Mechanism—C361NE1



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### Flange Mounted—Operating Mechanisms with Disconnect and Breakers

#### Product Application

Suitable for OEM's and panelbuilders where main or branch circuit protection devices are required in enclosures having a right hand flange. These devices can be mounted in any commercially available enclosure. Before installing the device, obtain detailed mounting and other important information from the enclosure manufacturer.

#### Product Description

There are three types of flange mount operating mechanisms to select from:

- Variable Depth complete with non fusible or fusible disconnect
- Fixed Depth complete with non fusible or fusible disconnect
- Variable Depth for use with MCCB (moulded case

circuit breaker, or moulded case switch)

- Optional channel support, connecting rods, safety interlocks and door hardware
- Optional connecting rod to increase depth by five inches

#### Variable Depth complete with disconnect

- 250 Vdc/600 Vac maximum
- 30–200A, three phase
- Variable depth mounting range 7 to 16 inches
- For right hand flange enclosures
- Disconnect is Heavy Duty K switch design
- Fusible or Non-Fusible
- Fusible will accept R fuse as standard
- Field installable rejection kits supplied as standard for 100A and 200A

- UL/CSA recognized for use on systems up to 200kA RMS
- Handles rated for NEMA 1, 3R, 12, or 4 (non plastic) enclosures
- Padlockable – up to three padlocks in OFF position
- Optional field installable auxiliary contacts

#### Fixed Depth complete with disconnect

- Same as above except
- 30–100A, three phase
- Fixed depth
  - 30-60A = 6.5 inches
  - 100A = 7 inches

#### Variable Depth for use with MCCB's

- 150–1200A
- Three phase
- Breaker must be ordered separately

- Variable depth ranges from 6.5 inches to 22 inches (rating dependent)
- Handles rated for NEMA 1, 3R, 12, or 4 (non plastic) enclosures
- Padlockable – up to three padlocks in OFF position

#### Standards and Certifications

- UL—Component File E55492
- CSA—LR353-439



### Product Selection

#### C361NE1



#### Operating Mechanism Variable Depth with Disconnect Switch—Right-Hand Mounting

Disconnect Switch Size (Amperes)	Variable Depth Mtg. Range Min./Max. (Inches) <sup>①</sup>	Maximum Horsepower Ratings <sup>②</sup>					Fuse Clip Rating (Amperes) Non-interchangeable Type for Class H, J, K or R Type Fuses Only		Switch and Operating Mechanism Only DOES NOT Include Handle Catalogue Number	Switch and Operating Mechanism with 4-Inch Handle <sup>③</sup>	
		AC System Volts (Motor Volts)				DC Using Two Poles 250V Max.	250V	600V		For NEMA 1 or 12 Enclosure	For NEMA 4 Enclosure
		208 (200)	240 (230)	480 (460)	600 (575)						
30	7 to 16	7-1/2	7-1/2	15	20	5	Non-fusible		<b>C361NC</b>	<b>C361NC1</b>	<b>C361NC2</b>
							30	—	<b>C361SC21</b>	<b>C361SC121</b> <sup>④</sup>	<b>C361SC221</b> <sup>④</sup>
							60	30	<b>C361SC61</b>	<b>C361SC161</b> <sup>④</sup>	<b>C361SC261</b> <sup>④</sup>
60	7 to 16	15	15	30	50	10	Non-fusible		<b>C361ND</b>	<b>C361ND1</b>	<b>C361ND2</b>
							60	30	<b>C361SD22</b>	<b>C361SD122</b> <sup>④</sup>	<b>C361SD222</b> <sup>④</sup>
							—	60	<b>C361SD62</b>	<b>C361SD162</b> <sup>④</sup>	<b>C361SD262</b> <sup>④</sup>
100	7 to 16	25	30	60	75	20	Non-fusible		<b>C361NE</b>	<b>C361NE1</b>	<b>C361NE2</b>
							100	100	<b>C361SE263</b>	<b>C361SE1263</b>	<b>C361SE2263</b>
200	7 to 16	40	60	125	150	40	Non-fusible		<b>C361NF1</b>	<b>C361NF1</b>	<b>C361NF2</b>
							200	200	<b>C361SF264</b>	<b>C361SF1264</b>	<b>C361SF2264</b>

#### C361H1



#### Handle Only

Application	Operating Handle Length in Inches (mm)	NEMA Type Enclosure	Catalogue Number
For use with 30, 60, 100 and 200A disconnect switches	4.00 (101.6)	1-12	<b>C361H1</b>
	4.00 (101.6)	4	<b>C361H2</b>
	6.00 (152.4)	1-12	<b>C361H3</b>
	6.00 (152.4)	4	<b>C361H4</b>

<sup>①</sup> Dimension shown is from panel to flange surface.

<sup>②</sup> Refers to rating of switch only.

<sup>③</sup> Components individually boxed and shipped in overpack carton.

<sup>④</sup> For rejection clips, add Suffix Letter **R** to listed Catalogue Number. Example: C361SC121**R**.

# Switching Devices

## OEM Operating Mechanisms

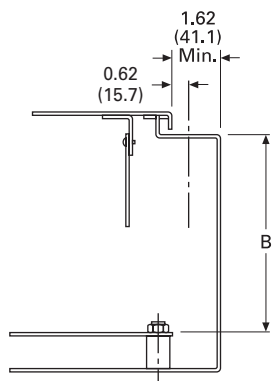
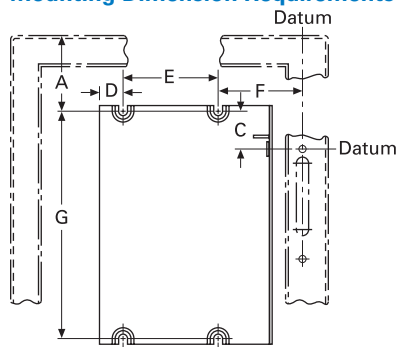
### Dimensions for Variable Depth Design

Approximate Dimensions in Inches (mm)

#### Mounting Dimension Requirements in Inches (mm)

Disconnect Switch Type	A	B	C	D	E	F	G
30A and 60A non-fusible	See dimensions below	See dimensions below	1.56 (39.6)	0.96 (24.4)	4.00 (101.6)	3.50 (88.9)	7.12 (180.8)
30A and 60A fusible			1.56 (39.6)	0.96 (24.4)	4.00 (101.6)	3.50 (88.9)	9.75 (247.7)
100A non-fusible			1.75 (44.5)	1.10 (27.9)	5.50 (139.7)	3.38 (85.9)	7.12 (180.8)
100A fusible			1.75 (44.5)	1.10 (27.9)	5.50 (139.7)	3.38 (85.9)	11.88 (301.8)
200A non-fusible and fusible			3.34 (84.8)	0.63 (16.0)	8.50 (215.9)	1.84 (46.7)	15.50 (393.7)

#### Mounting Dimension Requirements



#### Terminal Capacity

Disconnect Switch Size	Wire Size
30A	#14-#2 Cu/Al
60A	#14-#2 Cu/Al
100A	#14-1/0 Cu/Al
200A	#6-250 Cu/Al

**Dimension A** = The required wire bending spacing selected per CSA C22.2 No.12.

**Dimension B** = Minimum or maximum depth from inside of flange holding operating handle to panel where disconnect switch is mounted (variable 7 to 16 inches).

### Product Selection

#### Fixed Depth Application

#### Operating Mechanism Fixed Depth with Disconnect Switch—Right-Hand Mounting



**Maximum Horsepower Ratings<sup>①</sup>**

Disconnect Switch Size (Amperes)	AC System Volts (Motor Volts)				DC Using Two Poles 250V Maximum	Fuse Clip Rating (Amperes) Non-Interchangeable Type for Class H, J, K or R Type Fuses Only		Switch and Operating Mechanism with 4-Inch Handle For NEMA 1 or 12 Enclosure Catalogue Number
	208 (200)	240 (230)	480 (460)	600 (575)		250V	600V	
30	7-1/2	7-1/2	15	20	5	Non-fusible		<b>C361FNC1</b>
						30	—	<b>C361FSC121<sup>②</sup></b>
						60	30	<b>C361FSC161<sup>②</sup></b>
60	15	15	30	50	10	Non-fusible		<b>C361FND1</b>
						60	30	<b>C361FSD122<sup>②</sup></b>
						—	60	<b>C361FSD162<sup>②</sup></b>
100	25	30	60	75	20	Non-fusible		<b>C361FNE1</b>
						100	100	<b>C361FSE1263</b>

### Technical Data and Specifications

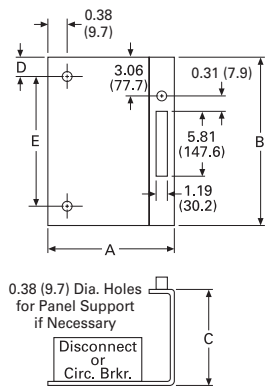
#### Dimensions

Approximate dimensions in Inches (mm)

#### Frame Size

Description	A	B	C	D	E
30–60A disconnect switch	8.63 (219.2)	11.38 (289.1)	6.50 (165.1)	1.50 (38.1)	9.50 (241.3)
150A circuit breaker	8.63 (219.2)	11.38 (289.1)	6.50 (165.1)	1.50 (38.1)	9.50 (241.3)
100A disconnect switch	9.88 (251.0)	13.38 (339.9)	7.00 (177.8)	1.25 (31.8)	11.75 (298.5)
250A circuit breaker	9.88 (251.0)	13.38 (339.9)	7.00 (177.8)	1.25 (31.8)	11.75 (298.5)
400A circuit breaker	9.88 (251.0)	13.38 (339.9)	7.00 (177.8)	1.25 (31.8)	11.75 (298.5)

#### Approximate Dimensions



<sup>①</sup> Refers to rating of switch only.

<sup>②</sup> For Rejection Clips, add Suffix Letter **R** to listed Catalogue Number. Example: C361FSC121**R**.

#### Terminal Capacity

Disconnect Switch Size	Wire Size
30A	#2–14 Cu/Al
60A	#2–14 Cu/Al
100A	1/0–14 Cu/Al
200A	250 kcmil—#6 Cu/Al



# Switching Devices

## OEM Operating Mechanisms

### Accessories

#### Type C361 NEMA 12 Safety Door Hardware

Type C361 door hardware kits are designed to function with all C361 and C371 disconnect switches and circuit breaker operating mechanisms.

These kits are designed for use with small enclosures up to 40 inches (1016 mm), intermediate 40–60 inches (1016–1524 mm) or larger floor cases over 60 inches (1524 mm) to provide enclosure sealing and protection against unauthorized entry. These kits can be used on enclosure flanges with

material thickness ranging from 16 gauge through 3/16 inches with flanges on the right side only. Door hardware kits are to be installed in a commercially available enclosure. Consult the enclosure manufacturer application data for proper kit selection.

NEMA 12 Safety Door Hardware



#### Type C361 NEMA 12 Safety Door Hardware

Handle Length (Inches)	Catalogue Number <sup>①</sup>
4	C361KJ4
6	C361KJ6
Roller Latch <sup>②</sup>	C361KR

- ① The 1/4-inch x 1/2-inch standard mill rectangular locking bar is not supplied with these kits.
- ② Third roller latch for use with 4 or 6-inch handle when three-point latching is required.

#### Note:

Consult enclosure manufacturer - Some enclosures have latch for handle to lock included, other enclosures have holes predrilled ready to mount this kit.

### Electrical Interlocks

Circuit	Catalogue Number
1NO-1NC	DS200EK1
2NO-2NC	DS200EK2

### Connecting Rods—Increase Maximum Allowable Depth by 5 Inches

Application	Catalogue Number
Disconnect switches 30, 60, 100 and 200A	C371CS1
Circuit breakers 150, 250 and 400A	
Circuit breakers 600, 800 and 1200A	C371CS2

### Fuse Clips for Variable or Flange Mount Operating Mechanisms

#### Fuse Clip Selection for C361 Series Disconnects



Starter Size	Motor Voltage	Dual Element Fuses	Maximum Horsepower (3-Phase)	Fuse Clip Rating		Fuse Clip Kit for Field Installation with Fusible Switches			
				Amperes	Volts	Catalogue Number For Non-rejection Type Fuses	Catalogue Number For use w/"R" Rejection Type Fuses	Catalogue Number For Form I Type "J" Fuses	Catalogue Number For Form II Type "C" Fuses
0	200/230	3	3	30	250	C351KC21	C351KC21R	—	—
	460/575	5		30	600	C351KD22-61	C351KD22-61R	C351KD71	C351KD81
1	200/230	7-1/2	7	30	250	C351KC21	C351KC21R	—	—
	460/575	10		30	600	C351KD22-61	C351KD22-61R	C351KD71	C351KD81
2	200	10	10	60	250	C351KD22-61	C351KD22-61R	—	—
	230	15		60	250	C351KD22-61	C351KD22-61R	—	—
	460/575	25		60	600	C351KD62	C351KD62R	C351KD72	C351KD82
3	200	25	25	100	250	C351KE23-63 <sup>①</sup>	C351KE23-63 <sup>①</sup>	—	—
	230	30		100	250	C351KE23-63 <sup>①</sup>	C351KE23-63 <sup>①</sup>	—	—
	460/575	50		100	600	C351KE23-63 <sup>①</sup>	C351KE23-63 <sup>①</sup>	C351KE73	C351KE83
4	200	40	40	200	250	C351KF24-64 <sup>①</sup>	C351KE24-64 <sup>①</sup>	—	—
	230	50		200	250	C351KF24-64 <sup>①</sup>	C351KE24-64 <sup>①</sup>	—	—
	460/575	100		200	600	C351KF24-64 <sup>①</sup>	C351KE24-64 <sup>①</sup>	C351KF74	C351KF84
5	200	75	75	400	250	Not available in kit form	Not available in kit form	Not available in kit form	Not available in kit form
	230	100		400	250				
	460/575	200		400	600				

① Fuse clip "R" rejection members for use with Class R fuses are supplied loose in the Fuse Clip Kits.

### Type C371

Circuit Breaker or Motor Circuit Protector	Frame Size	Variable Depth Mounting Range Min/Max	Operating Mechanism Only	Operating Mechanism w/ 4-Inch Handle	
			Catalogue Number	For NEMA 1-12 Enclosure Catalogue Number	For NEMA 4/4X Enclosure Catalogue Number
HMCP and Series C EHD, FDB, FD, FDC, HFD, ED	150	6.50-16 (165.1-406.4)	<b>C371E</b>	<b>C371E1</b>	<b>C371E2</b>
HMCP and Series C HJD, JD, JDB, JDC	250	6.50-16.63 (165.1-422.4)	<b>C371F</b>	<b>C371F5</b>	<b>C371F6</b>
HMCP and Series C DK, HKD, KD, KDB	400	6.50-16.63 (165.1-422.4)	<b>C371F</b>	<b>C371F5</b>	<b>C371F6</b>
Series C HLD, LD, LDC	600	8.50-22 (215.9-558.8)	<b>C371G</b>	<b>C371G5</b>	<b>C371G6</b>
Series C MD, MDS (No MDL)	800	8.75-22 (222.3-558.8)	<b>C371K</b>	<b>C371K5</b>	<b>C371K6</b>
Series C HND, ND, NDC	1200	9.75-22 (247.7-558.8)	<b>C371K</b>	<b>C371K5</b>	<b>C371K6</b>

**Note:** Breaker not included in kit.

### Handle Only

Circuit Breaker Frame Size (Amperes)	NEMA Enclosure Type	Operating Handle Length	Catalogue Number
150	1/3R/3/12	4.00 (101.6)	<b>C371H1</b>
	4	4.00 (101.6)	<b>C371H2</b>
	1/3R/3/12	6.00 (152.4)	<b>C371H3</b>
	4	6.00 (152.4)	<b>C371H4</b>
250-1200	1/3R/3/12	4.00 (101.6)	<b>C371H5</b>
	4	4.00 (101.6)	<b>C371H6</b>
	1/3R/3/12	6.00 (152.4)	<b>C371H7</b>
	4	6.00 (152.4)	<b>C371H8</b>



### Channel Support Kit (Rod Not Supplied)

For use to prevent bending of the operating handle mounting surface. This is especially useful when the operating handle is mounted on a channel in a multi-door enclosure.

Amperes	Catalogue Number
600-1200	<b>C371CS6</b>

### Connecting Rods

Application	Catalogue Number
Disconnect switches (30, 60, 100, 200A sizes)	C371CS1
Circuit breakers (150, 250, 400A sizes)	C371CS1
Circuit breakers (600, 800, 1200A sizes)	C371CS2

- ① For increased maximum allowable depth, see connecting rods left.
- ② Dimensions shown are from panel flange surface.
- ③ Does not include handle.
- ④ Increase maximum allowable depth by 5 inches (127 mm).

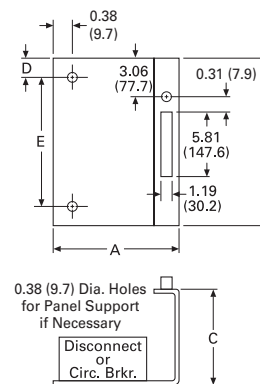
### Dimensions

Approximate dimensions in Inches (mm)

#### Frame Size

Description	A	B	C	D	E
30–60A disconnect switch	8.63 (219.2)	11.38 (289.1)	6.50 (165.1)	1.50 (38.1)	9.50 (241.3)
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#### Approximate Dimensions



# Switching Devices

## OEM Operating Mechanisms

### CSA Enclosure Designations (Canadian Electrical Code C22.1)

	Enclosure 1	Enclosure 2	Enclosure 3	Enclosure 4	Enclosure 5	Hazardous Loc. Class II Gr. E, F, G	Hazardous Loc. Class I Gr. C, D
NEMA DESIGNATION	General Purpose Encl.	Dripproof Encl.	Weatherproof Encl.	Weatherproof Encl.	Dusttight Encl. (Not Hazardous)	Dusttight Encl. (Hazardous Dust)	Refer to Canadian Electrical Code C22.1 Sec. 18
	(a) Protects against accidental contact with live parts.	(a) Same as (a) for Encl. 1 (b) Indoor use so constructed that is exposure to falling moisture, dirt, or drops of moisture due to condensation will not impair effectiveness of the enclosed equipment. (C22.2 No.94)	(a) Same as (a) for Encl. 1 (b) Outdoor use so constructed that exposure to weather, falling moisture, dirt, or extreme splashing will not impair effectiveness of the enclosed equipment. (C22.2 No.94)	(a) Same as (a) for Encl. 1 (b) Outdoor or Indoor use, so constructed that a stream of water will not enter the enclosure. (C22.2 No.94)	(a) Same as (a) for Encl. 1 (b) Indoor use, so constructed that dust, readily ignitable fibres or combustible flyings cannot enter the enclosure. (C22.2 No.94)		
Type 1 General Purpose - Indoor	Basically same - non-vent, Encl. protects against falling dirt.						
Type 2 Dripproof Indoor	Basically same						
Type 3 Windblown dust and water - indoor / outdoor	Basically same						
Type 3R Rainproof and sleet (ice) resistant - indoor / outdoor	Basically same, CSA does not specifically say sleet proof						
Type 3S Dusttight, raintight, and sleet (ice) proof, outdoor	Basically same, CSA does not specifically say sleet proof						
Type 4 Watertight and dusttight - indoor / outdoor	CSA Encl. 4 is for both indoor and outdoor service						
Type 4X Watertight, dusttight and corrosion resist, indoor / outdoor	CSA Encl. 4X does specify corrosion resistant						
Type 5 Supersedes by type 12 for control application	CSA Encl. 5 states settling dust, lint etc.						
Type 6 Submersible, watertight, dusttight and sleet (ice) resistant - indoor and outdoor							
Type 7 Class I Gr. A, B, C, or D, indoor hazardous locations - air break	Similar						
Type 8 Class I Gr. A, B, C or D, indoor hazardous locations - oil immersed	Similar						
Type 9 Class II Gr. E, F or G, indoor hazardous locations - air break	Similar						
Type 10 Bureau of Mines	<b>No CSA Equivalent;</b> specified for industrial control applications see C22.5 for use if electricity in mines						
Type 11 Corrosion resistant and dripproof - oil immersed indoor	Similar - but no CSA equivalent to Type 11						
Type 12 Industrial use dusttight and driptight - indoor	Similar in most features - Can Elect.						
Type 13 Oiltight and dusttight - indoor	CSA for oil and coolant seepage, spraying and splashing						

# Revision notes

## Volume 2

### Safety switches

<b>Revision date</b>	<b>Change page(s)</b>	<b>Description</b>
01/7/2021	Page 17	Content edits
01/7/2021	Page 18	Content edits
01/7/2021	Page 27	Content edits
01/7/2021	Page 42	Content edits
01/7/2021	Page 54	Content edits
01/7/2021	Page 68	Content edits
01/7/2021	Page 72	Content edits
14/7/2021	Page 8	Content edits
01/07/2020	All	Revision date changed to July 2020
10/11/2021	Page 2	Content edits
10/11/2021	Page 6	Content edits
10/11/2021	Page 8	Content edits
10/11/2021	Page 56	Created new page
22/11/2021	Page 34	Content edits
10/11/2021	All	Revision date changed to November 2021

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