Safety Switch Selection Guide

Type	Voltage	Fuse Type		Fuse Class	Ampere Rating	Number of Poles③	Enclosure Type: Type 1	Type 3R	Type 12①	Type 4 Painted Steel	Type 4X Stainless Steel	Type 4X Non Metallic	NEMA 7/9 Hazardous Location
Air Conditioning Disconnect	Max. 240Vac	Fusible	Cartridge	H	30 and 60	2	—	Yes	—	—	—	—	—
		Non-Fusible	—	—	60	2	—	Yes	—	—	—	—	—
	Max. 240Vac	Moulded Case Switch	—	—	60	2	—	Yes	—	—	—	—	—
	Max. 600Vac	Non-Fusible	—	—	30-80	3	—	Yes	—	—	—	—	—
General Duty	Single Throw	Fusible	Plug	—	30	1 and 2	Yes	Yes	—	—	—	—	—
	Max. 240Vac		Cartridge	H	30-600	2 and 3	Yes	Yes	—	—	—	—	—
		Non-Fusible	—	—	30-600	2 and 3	Yes	Yes	—	—	—	—	—
Heavy Duty	Single Throw	Fusible	Cartridge	H	30-600	2, 3, and 4	Yes	Yes	Yes①②	Yes②	Yes②	—	—
	Max. 600Vac			L	800-1200		Up to 1200A	Up to 1200A	Up to 1200A	400-1200A	Up to 1200A	—	—
	250 Vdc & 600 Vdc	Non-Fusible	—	—	30-1200	2, 3, and 4	Yes	Yes	Yes①② Up to 1200A	Yes② 400-1200A	Yes② Up to 1200A	—	—
6-Pole Motor Circuit②	Single Throw	Fusible	Cartridge	H	30-200	6	—	Yes	Yes①②	—	Yes②	—	—
	Max. 600Vac	Non-Fusible	—	—	30-200	6	—	Yes	Yes①②	—	Yes②	—	—
Double Throw③	Max. 600VAV 250Vdc	Fusible	Cartridge	H	30-200	2 and 3	Yes	Yes	Yes①②	Yes②	Yes②	—	—
				T (240V)	400-1200	3	Yes	Yes	400-600A	400-600A	400-600A		
				T (600V)		2, 3, 4, 6	Yes	Yes	Yes①②	Yes②	Yes②	—	—
		Non-Fusible③	—	—	30-1200	3	Yes	Yes	Up to 400A	400-600A	Up to 200A		
Enclosed Rotary Switches	Max. 600Vac	Non-Fusible	—	—	30-80	3			Yes①	—	Yes	Yes	—
Hazardous Location Disconnect Switch	Max. 600Vac 250Vdc	Fusible	Cartridge	J	30-100	3			—	—	—	—	Yes
		Non-Fusible	—	—	30-100	3			—	—	—	—	Yes
Enviroline All Stainless②	Single Throw	Fusible	Cartridge	H	30-400	2 and 3			—	—	Yes②	—	—
	Max. 600Vac/ DC	Non-Fusible	—	—	30-400	3			—	—	Yes②	—	—
Viewing Window	Single Throw	Fusible	Cartridge	H	30-1200	2, 3, 4, 6	—	—	Yes①	Yes	Yes	—	—
	Max. 600Vac/ DC	Non-Fusible	—	—	30-1200	2, 3, 4, 6	—	—	Yes①	Yes	Yes	—	—
Receptacle (Pin & Sleeve)②	Single Throw	Fusible	Cartridge	H	30-100	3	—	—	Yes①②	—	Yes②	—	—
	Max. 600Vac/ DC	Non-Fusible	—	—	60	3	—	—	Yes①②	—	Yes②	—	—
Quick Connect (Cam & Posi Lok)	Single Throw	Fusible	Cartridge	H	100-600	2, 3, and 4	Yes	Yes	—	—	—	—	—
	Max. 600Vac			L	800	2, 3, and 4	Yes	Yes	—	—	—	—	—
	Double Throw	Non-Fusible	—	—	100-800	2, 3, and 4	Yes	Yes					
	Max. 600Vac	w Non-Fusible	—	—	—	2, 3, and 4	Yes	Yes	—	—	—	—	—
		w Fuse	Cartridge	H	100-200	2, 3, and 4	Yes	Yes	—	—	—	—	—
				T	400-800	2, 3, and 4	Yes	Yes	—	—	—	—	—
Solar	Single Throw	Fusible		R	30-600	1 (3)	—	Yes	Yes①②	Yes②	—	—	—
	Max. 600Vdc	Non-Fusible		—	30-600	1 (3)	—	Yes	Yes①②	Yes②	—	—	—

Notes

① Type 12 enclosures (30-1200 amperes) can be field modified to meet Type 3R rainproof requirements when a factory provided drain screw is removed.

② Optional windows also available with type 12 or 4/4X enclosures.

③ 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 certified for use as service entrance equipment (unless noted)
- 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

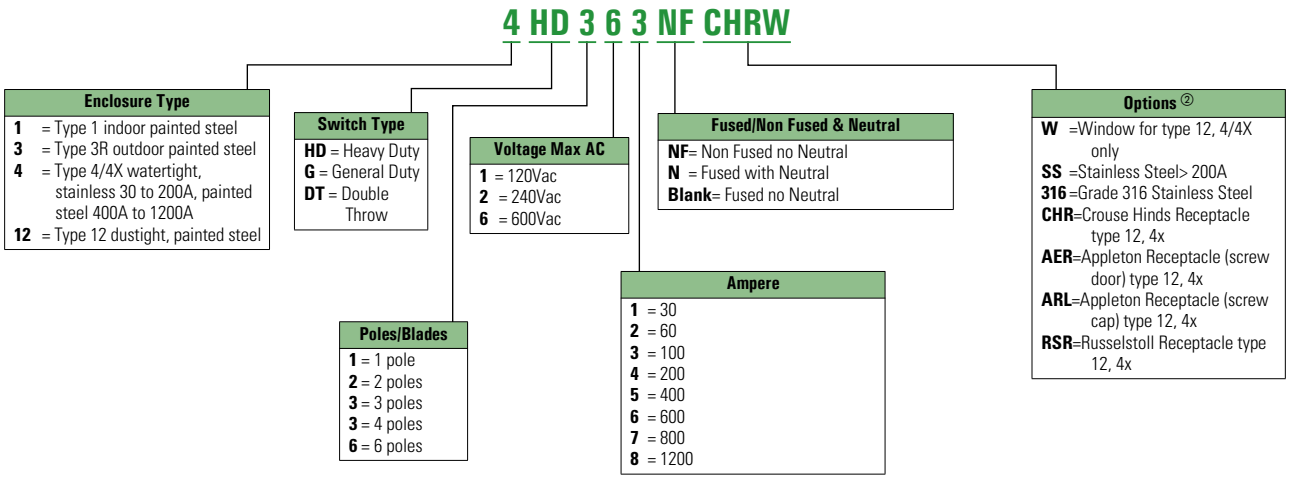
Fuse Clips/Class

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

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

Catalogue Number Selection

Safety Switch

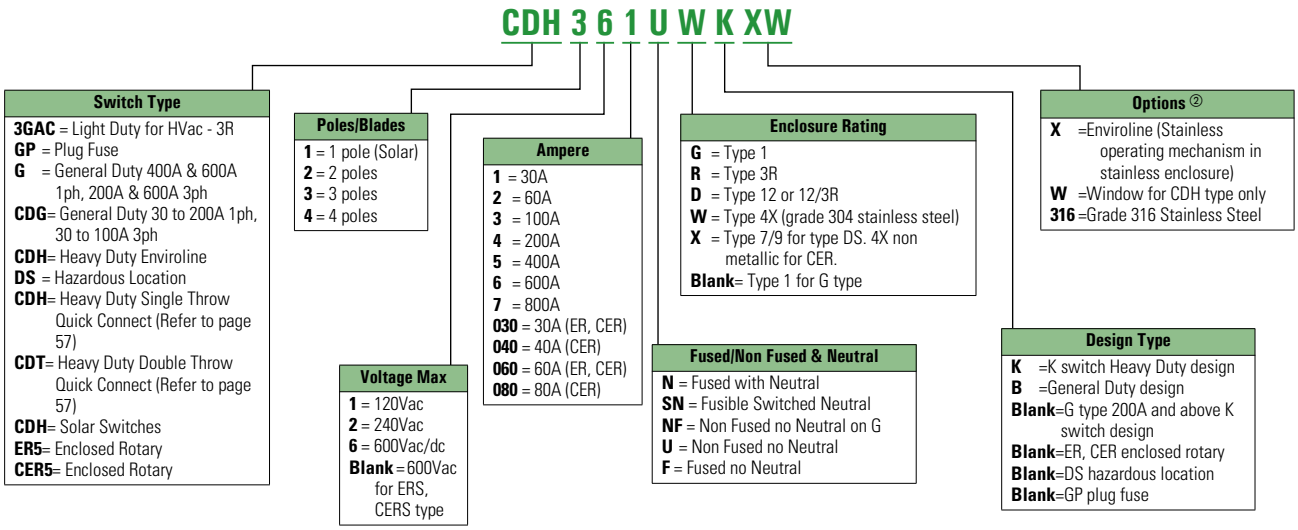


Notes

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

② See **Pages 12** through **14** 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.



General-Duty Safety Switch - Cartridge Fuse Design

Contents

General Duty

Application Description

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

Product Description

- 30–600A
- 30A Plug type fusible 120V and 120/240V
- 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 <60Vdc circuits
- Solid neutral standard on all fusible general duty switches
- Fusible, cartridge type suitable for service entrance applications
- Type 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 Type 3R enclosure.

Note: Plug fuse switches are not service entrance rated.

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

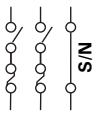
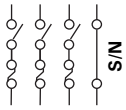
- Ample wire bending space provides for easier installation
- Visible double-break quick-make, quick-break rotary blade mechanism
- Side opening door on all enclosures
- Mechanically interlocked cover to prevent easy access when the switch is in the ON position
- Clearly visible and accessible neutral 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

Standards and Certifications

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

CDG321NRB

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

System	Ampere Rating	Fuse Type Provision	Maximum Horsepower Ratings① Single-Phase AC 120V	Single-Phase AC 240V	Three-Phase AC 240V	DC 250V	Type 1 Enclosure Indoor Catalogue Number	Type 3R Enclosure Rainproof Catalogue Number
Cartridge Type—Three-Wire (Two Blades, Two Fuses, S/N)—120/240 Vac								
	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**
Cartridge Type—Four-Wire (Three Blades, Three Fuses, S/N)—120/240 Vac								
	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 Ratings① Single-Phase AC 120V	Single-Phase AC 240V	Three-Phase AC 240V	DC 250V	Type 1 Enclosure Indoor Catalogue Number	Type 3R Enclosure Rainproof Catalogue Number
Two-Pole, Two-Wire (Two Blades)—240 Vac							
	30	2	3	—	—	**CDG221UGB**②	**CDG221URB**②
	60	3	10	—	—	**CDG222UGB**②	**CDG222URB**②
	100	—	15	—	—	—②	—②
	200	—	—	—	—	—②	—②
Three-Pole, Three-Wire (Three Blades)—240 Vac							
	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**

Notes

① Maximum hp ratings apply only when dual element time delay fuses are used.

② Use three-wire catalogue numbers below.

All general-duty safety switches are individually packaged.

Accessories are limited in scope on general-duty safety switches. See **Page 5 and 6** for selection. Clear line shields are available as an accessory on 200–600A general-duty switches.

Note: 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 5.

Technical Data and Specifications for General Duty Switches

Short-Circuit Ratings Using Class "R", "J" or "T" Fusing Where Applicable

Ampere Rating	Voltage Ratings Type 1	Type 3R
30	100k at 240	100k at 240
60	100k at 240	100k at 240
100	100k at 240	100k at 240
200	100k at 240	100k at 240
400	100k at 250	100k at 250
600	100k at 250	100k at 250

Dimensions

Approximate Dimensions in Inches (mm)

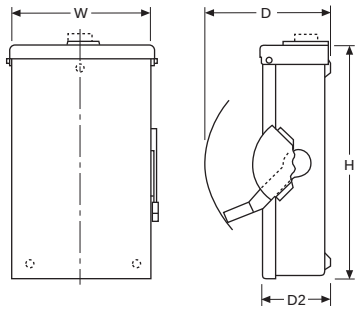
General Duty, Plug Fuse Type 120V, 120/240V, Single-, Two-Pole Solid Neutral, Single-Throw②

Ampere Rating	Height	Width	Depth	Weight Lbs/(kg)
30	6.88 (174.8)	4.94 (125.5)	3.44 (87.4)	2(.9)

General-Duty, Non-Fusible, 240V, Three-Pole, Single-Throw①

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
Type 1					
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)
Type 3R					
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)

Type 1-3R 30–100A General-Duty Non-Fusible and Fusible Single-Throw②



Notes

① Dimensions are for estimating purposes only.

② 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	**DG030NB**	3x #14 - #4
60	#14 - 1/0	#14 - 4	**DG100NB**	3x #14 - 1/0
100	#14 - 1/0	#14 - 4	**DG100NB**	3x #14 - 1/0
200	#6 - 250mcm	#14 - 4	**DG200NK**	2x #6 - 250mcm **AND** 2x #14 - #2
400	(2) 1/0 - (2)300mcm OR (1) 1/0 - 750mcm	#6 - 200mcm	**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 - 200mcm	**DS600NK**	2 x 1/0 - (1)750mcm **OR** 1/0 - (2) 300mcm **AND** 1 x #2 - 600mcm **AND** 3 x #6 - 250mcm

Notes

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 5

General-Duty, Fusible (cartridge type), 240V, Three-Pole Solid Neutral, Single-Throw①

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
Type 1					
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)
Type 3R					
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)

Type 1-3R 200–600A General-Duty Non-Fusible and Fusible Single-Throw