

Type VBII Safety Switches

Guide Form Specifications

Product Overview

	General Duty	Heavy Duty	Double Throw																																	
Application	General Duty Switches are intended for applications where reliable performance and continuity of service are needed, but where duty requirements are not severe and usual service conditions prevail. (These switches are intended for use primarily with supply circuits rated 240V AC or less where the available fault current is less than 100,000A when used with Class R or T fuses or 10,000A max. when used with Class H fuses.)	Heavy Duty Switches are intended for use in applications where: <ol style="list-style-type: none"> 1. Rugged construction, reliable performance, continuity of service and ease of maintenance are emphasized, or 2. Available fault currents higher than 10,000A are likely to be encountered, such as in manufacturing plants, mass production industries, and commercial, institutional and other large buildings served by network systems or transformers of higher capacities. 3. System voltage is 600V AC or DC Max. 4. A Type 12 or 4/4X enclosure is required. 	Double throw switches are intended to transfer loads from one power source to another. All double throw switches are CSA certified. Switches are rated for use on systems with an available fault current of up to 10,000 AIC when protected with Class H fuses or 200,000 AIC when protected with Class R, J or Class T fuses. They can also be used to connect a single source of power to either of two loads. In this application it is necessary to field modify fusible switches so that the fuses are on the load side of the switching mechanism.																																	
Short Circuit Withstand Ratings	Suitable for use on systems capable of delivering not more than 100,000 RMS symmetrical amperes of fault current as follows: <table border="1"> <thead> <tr> <th>Sw. Rating</th> <th>AIC Rating</th> <th>Protective Device[Ⓞ]</th> </tr> </thead> <tbody> <tr> <td>30-200A</td> <td>10,000</td> <td>Circuit Breaker</td> </tr> <tr> <td>30-200A</td> <td>10,000</td> <td>Class H Fuse</td> </tr> <tr> <td>30-200A</td> <td>100,000</td> <td>Class R Fuse</td> </tr> <tr> <td>100-200A</td> <td>100,000</td> <td>Class J or T Fuse</td> </tr> </tbody> </table>	Sw. Rating	AIC Rating	Protective Device [Ⓞ]	30-200A	10,000	Circuit Breaker	30-200A	10,000	Class H Fuse	30-200A	100,000	Class R Fuse	100-200A	100,000	Class J or T Fuse	Suitable for use on systems capable of delivering not more than 200,000 RMS symmetrical amperes of fault current as follows: <table border="1"> <thead> <tr> <th>Sw. Rating & Type</th> <th>AIC Rating</th> <th>Protective Device[Ⓞ]</th> </tr> </thead> <tbody> <tr> <td>All Heavy Duty & DT</td> <td>10,000</td> <td>Circuit Breaker</td> </tr> <tr> <td>30-600A HD & DT</td> <td>10,000</td> <td>Class H Fuse</td> </tr> <tr> <td>30-600A HD</td> <td>200,000</td> <td>Class R, J or T Fuse</td> </tr> <tr> <td>30-600A DTFC & DTNFC DT</td> <td>200,000</td> <td>Class R, J or T Fuse</td> </tr> <tr> <td>800 & 1200A HD</td> <td>200,000</td> <td>Class L or T Fuse</td> </tr> </tbody> </table>	Sw. Rating & Type	AIC Rating	Protective Device [Ⓞ]	All Heavy Duty & DT	10,000	Circuit Breaker	30-600A HD & DT	10,000	Class H Fuse	30-600A HD	200,000	Class R, J or T Fuse	30-600A DTFC & DTNFC DT	200,000	Class R, J or T Fuse	800 & 1200A HD	200,000	Class L or T Fuse	
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30-600A DTFC & DTNFC DT	200,000	Class R, J or T Fuse																																		
800 & 1200A HD	200,000	Class L or T Fuse																																		
Fuses	Fusible switches will accept the following CSA class fuses: 30 "LF" - 30A max plug Fuses 30-200A "GD" Class H & K, Class R with kit 100-200A "GD" Class J-move base 100-200A "GD" Class T with kit	Fusible switches will accept the following CSA class fuses: 30-600A "HD" Class H & K, Class R with kit 30-600A, 600V "HD" Class J-move base 100-600A, 240V "HD" Class J-move base 100-200A "HD" Class T with kit 400-600A "HD" Class T-move bases 800-1200A "HD" Class L, Class T with kit [Ⓜ]	Fusible switches will accept the following CSA class fuses: 30-200A "DT" - Class H & K, Class R with kit 30 & 60A 600V "DT" - Class J-move base 100-200A "DT" - Class J-move base, Class T with kit 400-600A "DT" - Class J-standard, Class T-move bases																																	
Cover Interlocks	Voidable – cover interlocks on switches prevent the switch door from being opened when in the "ON" position. No cover interlock on plug fuse type switches.	Voidable dual cover interlocks standard on all heavy duty switches. Prevents cover from being opened when switch is in the "ON" position and prevents switch from being turned "ON" when door is opened.	Dual cover interlocks standard on all double throw switches. Prevents cover from being opened when switch is in the "ON" position and prevents switch from being turned "ON" when door is opened.																																	
Specifications	CSA certified under file #24563 as enclosed switches. Fusible switches also suitable as service entrance when neutral bonded to the enclosure is installed. Meets CSA C22.2 No.4 Enclosed Switches. Meet NEMA standard KS-1-2001 for type GD switches.	Meet NEMA standard KS-1-2001 for type HD switches.	CSA certified under file #24563 as enclosed switches. Meets CSA C22.2 No.4 Enclosed switches. Meet NEMA standard KS-1-2001 type HD for "DT" switches.																																	
Seismic Qualifications	All GD & HD switches and "DT" type double throw switches have been tested and comply with the 2010 California Building Code (CBC) and with the 2009 International Building Code (IBC) - Compliance Level SDS = 1.85 g																																			
Groundable Neutral (All neutrals are bondable for service entrance use.)	Fusible switches have groundable neutral blocks factory installed.	All switches (both Fusible and Non-Fusible) are either supplied with factory installed neutrals or accept field addable neutrals.	All 2-3 pole DT will accept field addable neutrals.																																	
Padlocks	Padlockable cover latch. OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.																																	
HP & Load Break Ratings	All General Duty, Heavy Duty and Double Throw Switches are both load break and horsepower rated.																																			

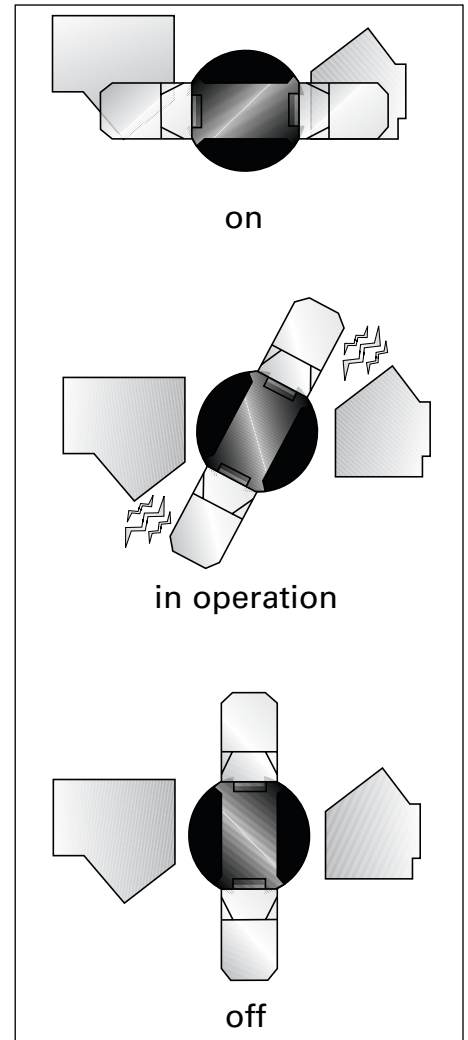
[Ⓞ] The protective device can either be a fuse installed in a fusible switch or an upstream fuse or circuit breaker protecting a non-fusible switch. The ampere rating of the upstream protective device must not exceed the switch ampere rating.

[Ⓜ] Class T kit available for 240V max. applications on 1200A switches.

Feature Comparison

Product Overview

General Duty	Heavy Duty	Double Throw	Features / Ratings
▪	▪	▪	30 thru 600 Amps
–	▪	–	800 and 1200 Amps
▪	▪	▪	240 Volt AC
–	▪	▪	600 Volt AC
▪	▪	▪	250 Volt DC
–	▪	–	600 Volt DC
▪	▪	▪	Double-break visible blade design (30-200A)
▪	▪	▪	Quick-make, quick-break switching action
▪	▪	▪	Highly visible ON/OFF handle indication
–	▪	–	Handle design for hook stick operation
▪	▪	▪	Padlockable cover latch
▪	▪	▪	Padlockable handle
▪ ^③	–	▪	Single voidable cover interlock
–	▪	▪	Dual voidable cover interlock
▪	▪	▪	Type 1 enclosure
▪	▪	▪	Type 3R enclosure
–	▪	–	Type 12 enclosure
–	▪	–	Type 4/4X enclosures
▪	▪	▪	Generous wiring gutters that meet CSA and CEC wire-bending space requirements
▪	▪	▪	Lugs suitable for copper or aluminum at 60° or 75°C
▪	▪	▪	CU/AL wire lugs that meet CSA C22.2 No.65-03 requirements
–	▪	▪	Suitable for field-convertible compression connectors
▪ ^④	▪	▪	All plated copper current carrying parts (except lugs)
▪	▪	▪	Spring reinforced Fuse Clips (except 30A general duty) ^②
–	▪	▪	Clear pivoting line terminal shield
▪	▪	▪	Replacement parts
–	▪	–	Field addable 200% neutral
▪ ^⑦	▪ ^{①⑦}	▪ ^{①⑦}	Provisions for CSA Class T, R and H Fuses
–	▪	▪ ^①	Provisions for CSA Class J and L Fuses
–	▪	▪	Metal nameplate
60-200A	▪	▪	Aux. switch kits
–	▪ ^④	–	Type 4X with stainless steel interior parts
▪ ^⑤	▪	–	Rolled flange enclosure design (30-200A)
–	▪	▪	Isolated ground kits



Double Break Switching Action

Like the time-proven Vacu-Break Design, the Siemens VBI double break switching action breaks the arc in two places in 30-200A ratings. This reduces heat generation and increases switching speed by doubling the breaking distance. The result is enhanced performance and increased longevity. We also provide the most visible blade design available today. Unlike conventional knife blade switches, the blades are self-aligning to ensure positive contact. In addition, they have no wear and friction point since the “electrical hinge” has been eliminated. The result is a very fast, positive and reliable switching action for even the most severe applications.

① 400, 600V & 600A fusible, double-throw switches accept only Class J or T fuses. Only 800 & 1200A HD switches will accept Class L fuses.

② 30A general duty switches have fuse clips constructed of spring type copper.

③ Not supplied on 30A outdoor & plug fuse switches.

④ 30-200A Type VBI in stainless steel enclosures.

⑤ 60-200A.

⑥ 200A general duty switches have aluminum neutral assemblies.

⑦ 100-200A GD, 100-600A DT and 100-1200A HD switches will accept Class T fuses.

Safety Switches

General Duty and Heavy Duty

Product Overview

Enclosure Types

- A** **Type 1** enclosures are intended for indoor use primarily to provide protection against contact with the enclosed equipment in locations where unusual service conditions do not exist.
- B** **Type 3R** enclosures are intended for outdoor use primarily to provide a degree of protection against falling rain and sleet and must remain undamaged by the formation of ice on the enclosure. They are not intended to provide protection against conditions such as dust, internal condensation, or internal icing.
- C** **Type 4, 4X** enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust, rain, splashing water and hose-directed water. They are not intended to provide protection against conditions such as internal condensation or internal icing. Also meets 4X definition by providing a high degree of protection against corrosion. Siemens 30-200A stainless steel 4X switches are supplied stainless interior parts and hardware as standard.
- D** **Type 4** enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust, rain, splashing water and hose-directed water. They are not intended to provide protection against conditions such as internal condensation or internal icing.
- E** **Type 12[®]** enclosures are intended for indoor use primarily to provide a degree of protection against dust, falling dirt and dripping water. They are not intended to provide protection against conditions such as internal condensation.



Load Break Ratings

All Siemens safety switches are load break rated. The load break rating is assigned by CSA after the switching unit has successfully performed the following tests:

Switch Ampere Rating	Number of ON/OFF Operations per Minute	Number of Operations		
		With Current	Without Current	Total
30-100	6	6000	4000	10000
200	5	6000	2000	8000
400	4	1000	5000	6000
600	3	1000	4000	5000
800	2	500	3000	3500
1200	1	500	2000	2500

Horsepower Ratings

All Siemens safety switches, where appropriate, are horsepower rated. The assignment of such ratings is made by CSA only after the switching unit has undergone testing to determine its acceptability which includes repeated interruption of the locked rotor current of the motor for which it is to be rated as follows:

Max HP Rating	Number of ON/OFF Operations per minute	Number of Cycles of Operation
100	6	50
500	1	10

Non-Fusible Safety Switch AIC Ratings When Protected by a Circuit Breaker^{2,3}

Breaker Frame	Non-Fused Switch	Short Circuit Current Rating
NEG, NGB, ED4	30 DT (240V)	18 kA Thru 240 VAC
NEB, NEG, NGG, NGB, ED4	60-100A GD & DT (240V)	18 kA Thru 240 VAC
NEB, NEG, NGG, NGB, ED4	30-100A HD & DT (600V)	18 kA Thru 480 VAC
ED6	30-100A HD & DT (600V)	18 kA Thru 600 VAC
FD6-A, JD6-A	200A HD & DT (600V)	18 kA Thru 600 VAC
JD6-A, LD6-A	400A DT (240V)	18 kA Thru 240 VAC
JD6-A, LD6-A	400A HD & DT (600V)	18 kA Thru 600 VAC
LD6-A	600A DT (240V)	25kA Thru 240 VAC
LD6-A	600A HD & DT (600V)	25kA Thru 600 VAC
NNG	1200A HD (600V)	25 kA Thru 600 VAC

¹ VBII Type 12 switches are also rated 3R & 3S for outdoor use. Type 3R is defined in B above. 3S rated enclosures provide a degree of protection against windblown dust and allow operation when the enclosure is ice laden.
² All switches above are rated at 10 KA when protected by any CSA certified or cUL Listed CB
³ Circuit breaker trip rating must not exceed switch ampere rating

Catalogue Numbering System

Type VBII Safety Switch Catalogue Numbering System

Product Overview

SAFETY SWITCHES 1

H F C 3 6 4 N R CH

Switch Type

- L** = General Duty
10k AIC Max.
(Plug Fused &
60A Max
Non-Fused)
- G** = Gen. Duty
- H** = Heavy Duty
- DT** = Double Throw

Special Applications With:

- CH** = Crouse-Hinds Receptacle
- W** = Viewing Window

Fused or Non-Fused

- F** = Fused
- NF** = Non-Fused

Enclosure Type

- Omit** = Type 1, Indoor
- R** = Type 3R, Outdoor
- S** = Type 4/4X, Stainless Steel
- J** = Type 12, Industrial

C = Built to meet Canadian requirements

Number of Poles

- 1** = 1
- 2** = 2
- 3** = 3
- 4** = 4
- 6** = 6

With or Without Neutral

- Omit** = Less Neutral
- N** = With Neutral

Voltage

- 1** = 120V or 120/240V
- 2** = 240V
- 6** = 600V

Amperes

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

Type VBII Accessories Catalogue Numbering System

H R 6 4

Switch Type

- H** = Heavy Duty
- G** = General Duty

Amperes

- 1** = 30A
- 2** = 60A
- 12** = 30/60A
- 3** = 100A
- 23** = 60/100A
- 123** = 30/60/100A
- 1234** = 30/60/100/200A
- 4** = 200A
- 56** = 400/600A
- 5678** = 400/600/800/1200A
- 78** = 800/1200A

Accessory Type

- A1** = Auxiliary Switch 1/NO and 1/NC
- A2** = Auxiliary Switch 2/NO and 2/NC
- A3** = Auxiliary Switch Low Current
- CL** = Compression Lug Barrier /
Mounting Kit
- G** = Ground Lug Kit
- G2** = Insulated Ground Lug Kit
- LC** = Copper Lug Kit
- NC** = Neutral
- NC2** = 200% Neutral
- P** = Fuse Puller Kit
- R** = Class R - Fuse Clip Kit
- T** = Class T - Fuse Kit

Maximum Voltage

- 2** = 240V Max
- 6** = 600V Max

Heavy Duty Safety Switches

Selection

1 SAFETY SWITCHES



System	Ampere Rating	Indoor – Type 1		Outdoor – Type 3R			Horsepower Ratings							
		Catalogue Number	Ship. Wt. (lbs.)	Catalogue Number	Ship. Wt. (lbs.)	Hub [®] Type	240 Volt		480 Volt		600 Volt		250V DC	600V DC
							1-Phase	3-Phase	1-Phase	3-Phase	1-Phase	3-Phase		

600 Volt Non-Fusible

2-Pole ^③		480 Volt AC / 600 Volt AC / 600 Volt DC													
	30	HNFC261	12	HNFC261R	13	ECHS	—	—	7 ^{1/2}	—	10	—	5	15	
	60	HNFC262	19	HNFC262R	20		—	—	20	—	25	—	10	30	
	100	HNFC263	24	HNFC263R	25		—	—	30	—	40	—	20	50	
	400	HNFC265	109	HNFC265R	113	ECHV	15	—	50	—	50	—	40	50	
	600	HNFC266■	111	HNFC266R■	115		15	—	50	—	50	—	50	50	

3-Pole		480 Volt AC/600 Volt AC/250 Volt DC													
	30	HNFC361	12	HNFC361R	13	ECHS	5	10	7 ^{1/2}	20	10	30	5	—	
	60	HNFC362 ^①	18	HNFC362R ^①	19		10	20	20	50	25	60	10	30 ^②	
	100	HNFC363 ^①	23	HNFC363R ^①	24		15	40	30	75	40	100	20	50 ^②	
	200	HNFC364 ^①	46	HNFC364R ^①	47	15	60	50	125	50	150	40	50		
	400	HNFC365	114	HNFC365R	118	ECHV	15	125	50	250	50	350	50	—	
	600	HNFC366	116	HNFC366R	120		15	200	50	400	50	500	50	—	
	800	HNFC367	295	HNFC367R	295		15	250	50	500	50	500	50	—	
1200	HNFC368	305	HNFC368R	307	15		250	50	500	50	500	50	—		

600 Volt Non-Fusible^②

2-Pole ^③		480 Volt AC / 600 Volt AC / 600 Volt DC													
		Type 4/4X Stainless ^②		Type 12 Industrial ^②		Hub Type ^{②③}									
		HNFC261S	13	HNFC261J	13	SSH									
	30	HNFC261S	13	HNFC261J	13	SSH	—	—	7 ^{1/2}	—	10	—	5	15	
	60	HNFC262S	20	HNFC262J	20		—	—	20	—	25	—	10	30	
	100	HNFC263S■	25	HNFC263J■	25		—	—	30	—	40	—	20	50	
	400	HNFC265S■	113	HNFC265J■	114	*	15	—	50	—	—	—	40	50	
	600	HNFC266S■	115	HNFC266J■	120		15	—	50	—	—	—	50	50	

3-Pole		480 Volt AC / 600 Volt AC / 250 Volt DC													
	30	HNFC361S	13	HNFC361J	13	SSH	5	10	7 ^{1/2}	20	10	30	5	—	
	60	HNFC362S ^①	19	HNFC362J ^①	19		10	20	20	50	25	60	10	30 ^②	
	100	HNFC363S ^①	24	HNFC363J ^①	24		15	40	30	75	40	100	20	50 ^②	
	200	HNFC364S ^①	47	HNFC364J ^①	47	15	60	50	125	50	150	40	50		
	400	HNFC365S	118	HNFC365J	119	*	15	125	50	250	50	350	50	—	
	600	HNFC366S	120	HNFC366J	120		15	200	50	400	50	500	50	—	
	800	HNFC367S	295	HNFC367J■	295		15	250	50	500	50	500	50	—	
1200	—	—	HNFC368J■	310	15		250	50	500	50	500	50	—		

■ Built to order.

① Also rated 600V DC.

② When neutral is required, use neutral kit displayed on p.1-19

③ Use 3-Pole switch for 200A application.

④ Hub catalogue numbers available p.1-21

⑤ Also rated for Type 3S/3R application. Factory provided drain plug must be removed from the bottom of the enclosure for type 3S/3R application.

⑥ 600V DC horsepower rating shown requires (2) poles to be connected in series.

⑦ 304 grade stainless steel.

⑧ Hub type SSH are suitable for type 4/4X and type 12 applications.

*Consult Siemens representative.

General and Heavy Duty Safety Switches

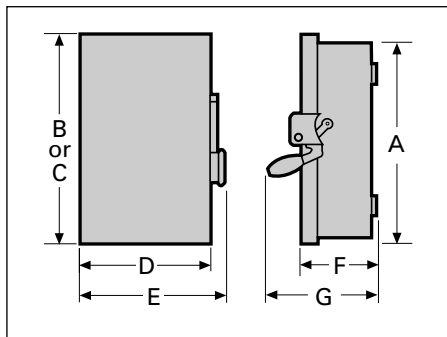
Dimensions

Safety Switch Dimensions & Shipping Weights

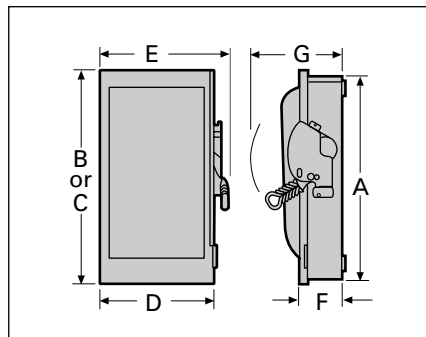
SAFETY SWITCHES 1

Catalogue Number	Height - Inches (mm)			Width - Inches (mm)		Depth - Inches (mm)		Knockout Diagram [®]	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
HNFC365	44.00 (1118)	44.57 (1132)	—	24.65 (626)	26.21 (626)	9.23 (234)	14.68 (373)	S14	114
HNFC365J, JW	44.14 (1121)	44.57 (1132)	—	24.82 (630)	26.44 (672)	9.19 (233)	14.64 (372)	—	114
HNFC365R	44.07 (1119)	—	45.19 (1148)	24.65 (626)	26.95 (685)	9.23 (234)	14.68 (373)	S15	118
HNFC365S, SW	44.14 (1121)	44.57 (1132)	—	24.82 (630)	26.44 (672)	9.19 (233)	14.64 (372)	—	118
HNFC366	44.00 (1118)	44.57 (1132)	—	24.65 (626)	26.21 (626)	9.23 (234)	14.68 (373)	S14	116
HNFC366J, S	44.14 (1121)	44.57 (1132)	—	24.82 (630)	26.44 (672)	9.19 (233)	14.64 (372)	—	115
HNFC366R	44.07 (1119)	—	45.19 (1148)	24.65 (626)	26.95 (685)	9.23 (234)	14.68 (373)	S15	120
HNFC367, J	54.67 (1389)	55.16 (1401)	—	38.40 (975)	39.96 (1015)	9.24 (235)	14.68 (373)	—	302
HNFC367R	54.67 (1389)	—	55.70 (1515)	38.40 (975)	40.25 (1022)	9.24 (235)	14.68 (373)	—	304
HNFC367S	54.67 (1389)	55.16 (1401)	—	38.40 (975)	39.96 (1015)	9.24 (235)	14.68 (373)	—	302
HNFC368, J	54.67 (1389)	55.16 (1401)	—	38.40 (975)	39.96 (1015)	9.24 (235)	14.68 (373)	—	305
HNFC368R	54.67 (1389)	55.16 (1401)	—	38.40 (975)	40.25 (1022)	9.24 (235)	14.68 (373)	—	307
LFC11N	7.97 (202)	8.13 (207)	—	5.50 (140)	5.94 (151)	3.00 (76)	5.38 (137)	S2	36 [®]
LFC211N	7.97 (202)	8.13 (207)	—	5.50 (140)	5.94 (151)	3.00 (76)	5.38 (137)	S1	35 [®]
LFC211NR	8.07 (205)	—	8.16 (207)	5.16 (131)	5.94 (151)	3.13 (80)	5.38 (137)	S3	35 [®]
LNFC222R	8.07 (205)	—	8.16 (207)	5.16 (131)	5.94 (151)	3.13 (80)	5.38 (137)	S5	35 [®]

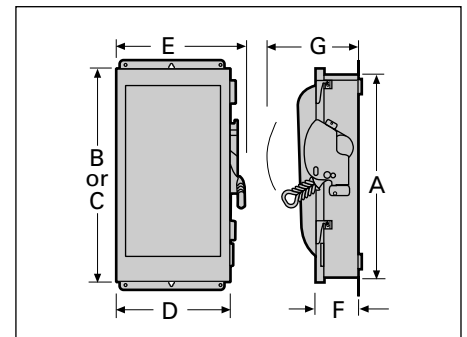
Type 1 or 3R
30A GD Type VBII, LFC & LNFC



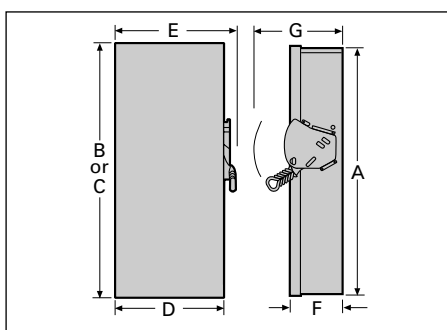
Type 1 or 3R
60-200A GD, 30-200A HD Type VBII



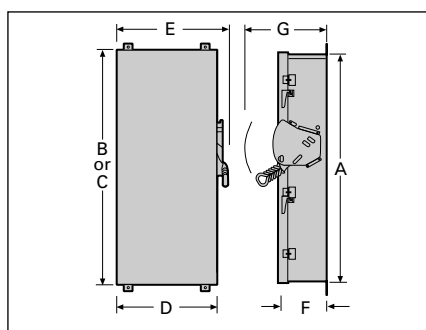
Type 4/4X or 12
30-200A HD Type VBII



Type 1 or 3R
400-1200A HD Type VBII



Type 4/4X or 12
400-1200A HD Type VBII



[®] Knocks not provided on Type 4 / 4X and 12 or on 800 & 1200A switches.