

Catalogue Numbering System

Type VBII Safety Switch Catalogue Numbering System

Product Overview

H F C 3 6 4 N J W A

Switch Type

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

Fused or Non-Fused

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

C = CSA certified only

Number of Poles

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

Voltage

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

Series Type

- A** = 400A, 600A
- Omit** = 30A - 200A, 800A - 1200A

Special Applications With:

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

Enclosure Type

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

With or Without Neutral

- Omit** = Less Neutral
- N** = With Neutral - rated for service entrance

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 A

Switch Type

- H** = Heavy Duty
- G** = General Duty[Ⓢ]

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
- CU** = Copper Lug[Ⓢ]
- G** = Ground Lug Kit
- G2** = Insulated Ground Lug Kit
- LC** = Copper Lug Kit[Ⓢ]
- NC** = Neutral
- NC2** = 200% Neutral[Ⓢ]
- NCM** = Field Replacement Lug Kit[Ⓢ]
- P** = Fuse Puller Kit
- R** = Class R - Fuse Clip Kit
- T** = Class T - Fuse Kit

Series Type

- A** = 400A, 600A
- Omit** = 30A - 200A, 800A - 1200A

Amperes

- 1** = 30A
- 2** = 60A
- 12** = 30/60A
- 3** = 100A
- 23** = 60/100A
- 123** = 30/60/100A
- 1234** = 30/60/100/200A
- 4** = 200A
- 5** = 400A
- 6** = 600A
- 56** = 400/600A
- 5678** = 400/600/800/1200A
- 78** = 800/1200A

Maximum Voltage

- 2** = 240V Max[Ⓢ]
- 6** = 600V Max

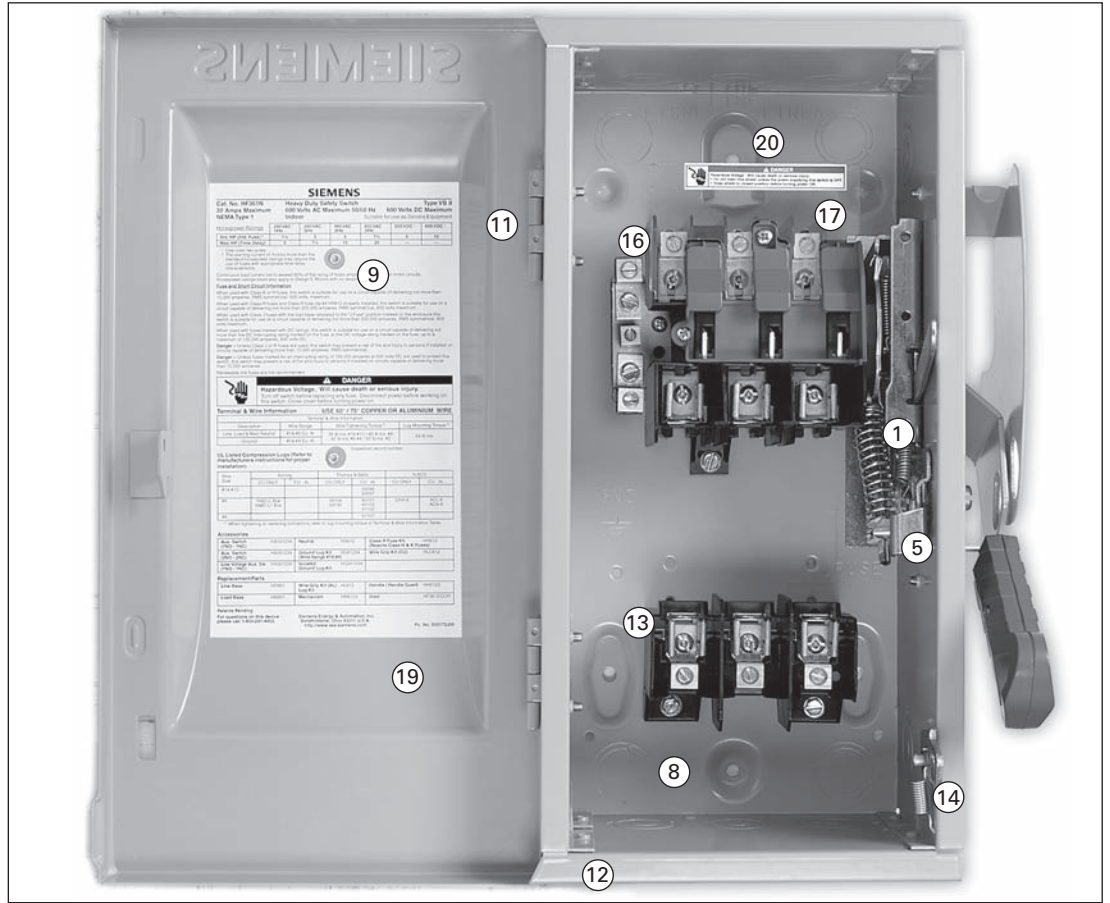
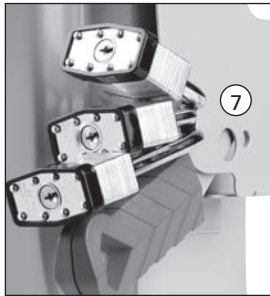
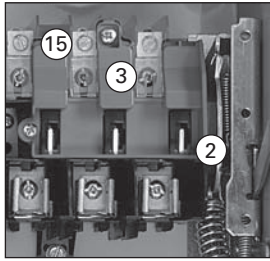
[Ⓢ] For 400A, 600A use 600V max accessories except for T fuse kit.

[Ⓢ] Only offered for 400A, 600A.

[Ⓢ] For 30A-200A, 800A-1200A.

Heavy Duty Safety Switches

Features



1. Quick-make, quick-break operating mechanism that ensures positive operation.
2. Visible blade, double-break switching action.
3. Arc chutes dissipate heat and prolong switch life.
4. Highly visible red handle grip. Designed for hook stick operation.
5. Defeatable dual cover interlock.
6. Center punch provided for field drilling to allow ON padlocking.
7. Handle can be padlocked in the OFF position with up to (3) padlocks with 5/16" hasps.
8. Generous top, bottom and side gutters that meet or exceed CEC wire-bending space requirements.
9. Informative door labeling which includes replacement parts list.
10. Tangential knockouts through 600A for easy conduit lineup.
11. Side-hinged door that opens past 180 degrees for easier wiring.
12. Unique enclosure design increases rigidity and prevents cuts and scrapes to conductors and installer's hands.
13. Spring reinforced fuse clips that assure reliable contact for cool operation.
14. Door latch securely holds door closed and allows cover padlocking.
15. Front removable mechanical lugs that are suitable for CU/Al 60 or 75° C conductors.
16. Lugs are field convertible to copper body and to a wide variety of compression connectors.
17. Hinged clear line terminal shield with probe holes for inspecting or testing line side terminals.
18. Embossed aluminum nameplate on Heavy Duty Switches.
19. Drawn cover for increased rigidity and resistance to abuse.
20. Top key hole and bottom mounting holes provide easy 2 or 3 point mounting.

Heavy Duty Safety Switches

Selection



SAFETY SWITCHES

System	Ampere Rating	Indoor – Type 1		Outdoor – Type 3R			Horsepower Ratings [®]				
		Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.	Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.	Hub Type ^④	240V AC				250 Volt DC
							1-Phase, 2-Wire		3-Phase, 3-Wire		
Std.	Max.	Std.	Max.								

240 Volt Fusible^①

2-Pole, 2-Fuse and Solid Neutral (Also used for 2-Pole, 2-Wire Applications) 240 Volt AC/250 Volt DC

Ampere Rating	Indoor Catalogue Number	Indoor Ship. Wt. (lbs.) Std. Pkg.	Outdoor Catalogue Number	Outdoor Ship. Wt. (lbs.) Std. Pkg.	Hub Type ^④	1-Phase, 2-Wire		3-Phase, 3-Wire		250 Volt DC
						Std.	Max.	Std.	Max.	
30	HFC221N	12	HFC221NR	13	ECHS	1 ^{1/2}	3	3	7 ^{1/2}	5
60	HFC222N	18	HFC222NR	19		3	10	7 ^{1/2}	15	10
100	HFC223N	23	HFC223NR	24		7 ^{1/2}	15	15	30	20
200	HFC224N	47	HFC224NR	48	ECHV	15	—	25	60	40
400	HFC225NA	91.1	HFC225NRA	91.1		15	—	50	125	50
600	HFC226NA	95.6	HFC226NRA	95.6		15	—	75	200	50
800	HFC227N	365	HFC227NR	365		—	—	100	250	50
1200	HFC228N■	385	HFC228NR■	385	—	—	100	250	50	

3-Pole, 3-Fuse and Solid Neutral (Also used for 3-Pole, 3-Wire Applications) 240 Volt AC/250 Volt DC

Ampere Rating	Indoor Catalogue Number	Indoor Ship. Wt. (lbs.) Std. Pkg.	Outdoor Catalogue Number	Outdoor Ship. Wt. (lbs.) Std. Pkg.	Hub Type ^④	1-Phase, 2-Wire		3-Phase, 3-Wire		250 Volt DC
						Std.	Max.	Std.	Max.	
30	HFC321N	14	HFC321NR	15	ECHS	1 ^{1/2}	3	3	7 ^{1/2}	5
60	HFC322N	19	HFC322NR	20		3	10	7 ^{1/2}	15	10
100	HFC323N	25	HFC323NR	26		7 ^{1/2}	15	15	30	20
200	HFC324N	49	HFC324NR	50	ECHV	15	—	25	60	40
400	HFC325NA	94.6	HFC325NRA	94.6		15	—	50	125	50
600	HFC326NA	99.6	HFC326NRA	99.6		15	—	75	200	50
800	HFC327N	375	HFC327NR	375		—	—	100	250	50
1200	HFC328N	395	HFC328NR	388	—	—	100	250	50	

240 Volt Fusible

2-Pole, 2-Fuse 240 Volt AC/250 Volt DC

Ampere Rating	Type 4/4X Stainless		Type 12 Industrial ^⑤		Hub Type ^⑥	Horsepower Ratings [®]				
	Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.	Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.		1-Phase, 2-Wire	3-Phase, 3-Wire	250 Volt DC		
30	HFC221S	13	HFC221J	13	SSH	1 ^{1/2}	3	3	7 ^{1/2}	5
60	HFC222S	19	HFC222J	19		3	10	7 ^{1/2}	15	10
100	HFC223S	24	HFC223J	24		7 ^{1/2}	15	15	30	20
200	HFC224S	48	HFC224J	48		15	—	25	60	40

3-Pole, 3-Fuse (Also used for 2-Pole, 2-Wire Applications in 400–800A Ratings) 240 Volt AC/250 Volt DC

Ampere Rating	Indoor Catalogue Number	Indoor Ship. Wt. (lbs.) Std. Pkg.	Outdoor Catalogue Number	Outdoor Ship. Wt. (lbs.) Std. Pkg.	Hub Type ^④	1-Phase, 2-Wire		3-Phase, 3-Wire		250 Volt DC
						Std.	Max.	Std.	Max.	
30	HFC321S	14	HFC321J	14	SSH	1 ^{1/2}	3	3	7 ^{1/2}	5
60	HFC322S	20	HFC322J	20		3	10	7 ^{1/2}	15	10
100	HFC323S	25	HFC323J	25		7 ^{1/2}	15	15	30	20
200	HFC324S	49	HFC324J	49	*	15	—	25	60	40
400	HF325SA ^⑦	93	HF325JA ^⑦	93		15	—	50	125	50
600	HF326SA ^⑦	98	HF326JA ^⑦	98		15	—	75	200	50
800	HFC327S■	370	HFC327J■	365		—	—	100	250	50

■ Built to order.

① Suitable for use as service equipment when neutral is bonded to the enclosure.

② Dual horsepower ratings: Std.- applies when non-time delay fuses are installed. Max.- applies when time-delay fuses are installed.

③ Hub type SSH are suitable for type 4/4X and type 12 applications.

④ Hub catalogue numbers available p. 3-26

⑤ 304 grade stainless steel.

⑥ 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.

⑦ For equipment suitable as service entry, order HFC325NSA, HFC326NSA, HFC325NJA or HFC326NJA based on the amperage and enclosure type required.

* Consult Siemens representative.

Heavy Duty Safety Switches

Selection



System	Ampere Rating	Indoor – Type 1		Outdoor – Type 3R			Horsepower Ratings ^④									
		Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.	Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.	Hub Type ^⑥	480V AC				600V AC				250 Volt DC	600 Volt DC
							1-Phase, 2-Wire		3-Phase, 3-Wire		1-Phase, 2-Wire		3-Phase, 3-Wire			
Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.			

600 Volt Fusible

2-Pole, 2-Fuse^③

480 Volt AC/600 Volt AC/600 Volt DC

	30	HFC261	15	HFC261R	15	ECHS	3	7 ^{1/2}	–	–	3	10	–	–	5	15
	60	HFC262	20	HFC262R	20		10	20	–	–	10	25	–	–	10	30
	100	HFC263	26	HFC263R	27		15	30	–	–	15	40	–	–	20	50

3-Pole, 3-Fuse

480 Volt AC/600 Volt AC/250 Volt DC^①

	30	HFC361	14	HFC361R	15	ECHS	3	7 ^{1/2}	5	15	3	10	7 ^{1/2}	20	5	–
	60	HFC362	19	HFC362R	20		5	20	15	30	10	25	15	50	10	30 ^②
	100	HFC363	24	HFC363R	25		5	20	25	60	15	40	30	75	20	50 ^②
	200	HFC364	48	HFC364R	49	ECHV	25	50	50	125	30	50	60	150	40	50
	400	HF365A ^⑧	93	HF365RA ^⑧	93		–	–	100	250	–	–	125	350	50	–
	600	HF366A ^⑧	98	HF366RA ^⑧	98		–	–	150	400	–	–	200	500	50	–
	800	HFC367	365	HFC367R	365		–	–	200	500	–	–	250	500	50	–
1200	HFC368	383	HFC368R	385	–	–	200	500	–	–	250	500	50	–		

3-Pole, 3-Fuse and Solid Neutral^③

480 Volt AC/600 Volt AC/250 Volt DC^①

	30	HFC361N	14	HFC361NR	15	ECHS	3	7 ^{1/2}	5	15	3	10	7 ^{1/2}	20	5	–
	60	HFC362N	19	HFC362NR	20		5	20	15	30	10	25	15	50	10	30 ^②
	100	HFC363N	25	HFC363NR	26		10	30	25	60	15	40	30	75	20	50 ^②
	200	HFC364N	49	HFC364NR	50	ECHV	25	50	50	125	30	50	60	150	40	50
	400	HFC365NA	94.6	HFC365NRA	94.6		–	–	100	250	–	–	125	350	50	–
	600	HFC366NA	99.6	HFC366NRA	99.6		–	–	150	400	–	–	200	500	50	–
	800	HFC367N	375	HFC367NR	375		–	–	250	500	–	–	250	500	50	–
1200	HFC368N	395	HFC368NR	388	–	–	250	500	–	–	250	500	50	–		

600 Volt Fusible^⑦ (For 2-Pole Applications use outside poles of 3-Pole Switches)

2-Pole, 2-Fuse^③

480 Volt AC/600 Volt AC/600 Volt DC

	Ampere Rating	Type 4/4X Stainless ^⑨		Type 12 Industrial ^⑦		Hub Type ^⑥	Horsepower Ratings ^④									
		Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.	Catalogue Number	Ship. Wt. (lbs.) Std. Pkg.		480V AC				600V AC				250 Volt DC	600 Volt DC
Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.		
	30	HFC261S	15	HFC261J■	15	SSH	3	7 ^{1/2}	–	–	3	10	–	–	5	15
	60	HFC262S	20	HFC262J■	20		5	20	–	–	10	25	–	–	10	30
	100	HFC263S■	27	HFC263J■	27		10	30	–	–	15	40	–	–	20	50

3-Pole, 3-Fuse

480 Volt AC/600 Volt AC/250 Volt DC^①

	30	HFC361S	13	HFC361J	14	SSH	–	–	5	15	–	–	7 ^{1/2}	20	5	–
	60	HFC362S	20	HFC362J	20		–	–	15	30	–	–	15	50	10	30 ^②
	100	HFC363S	25	HFC363J	25		–	–	25	60	–	–	30	75	20	50 ^②
	200	HFC364S	49	HFC364J	49	*	–	–	50	125	–	–	60	150	40	50
	400	HF365SA ^⑧	93	HF365JA ^⑧	93		–	–	100	250	–	–	125	350	50	–
	600	HF366SA ^⑧	98	HF366JA ^⑧	98		–	–	150	400	–	–	200	500	50	–
	800	HFC367S	370	HFC367J■	365		–	–	200	500	–	–	250	500	50	–
1200	HFC368S■	388	HFC368J■	388	–	–	250	500	–	–	250	500	50	–		

■ Built to order.

① 60-600A 3-Pole switches are also rated 600V DC.

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

③ Use 3-Pole switch for 200A applications.

④ Dual horsepower ratings: Std.- applies when non-time delay fuses are installed. Max.- applies when time-delay fuses are installed.

⑤ Suitable for use as service equipment when neutral is bonded to the enclosure.

⑥ Hub catalogue number available p. 3-26

⑦ When a neutral is required use neutral kit displayed on p. 3-24

⑧ 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.

⑨ 304 grade stainless steel. For switches with enclosures constructed from 316 grade stainless steel, consult Siemens representative.

⑩ Hub type SSH are suitable for type 4/4X and type 12 applications.

⑪ For equipment suitable as service entry, order HFC365NSA, HFC366NSA, HFC365NJA or HFC366NJA based on the amperage and enclosure type required.

* Consult Siemens representative

Heavy Duty Safety Switches

Selection



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

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	HNFC365A	75	HNFC365RA	75	ECHV	15	125	50	250	50	350	50	—
	600	HNFC366A	77	HNFC366RA	77		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 ^⑤		Hub Type ^{⑥⑧}								
		Catalogue Number	Ship. Wt. (lbs.)	Catalogue Number	Ship. Wt. (lbs.)									
	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

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	HNFC365SA	75	HNFC365JA	75	*	15	125	50	250	50	350	50	—
	600	HNFC366SA	77	HNFC366JA	77		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. 3-24

③ Use 3-Pole switch for 200A application.

④ Hub catalogue numbers available p. 3-26

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. For switches with enclosures constructed from 316 grade stainless steel, consult Siemens representative.

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

*Consult Siemens representative.

Heavy Duty Safety Switches

Type 4/4X & 12 with Viewing Window

Selection

Description

30–600A, 3-pole 600V max. in fusible and non-fusible versions in Type 4/4X stainless steel and Type 12 enclosures.

All allow viewing of visible blade position. 30–200A also allow viewing of indicating type fuses.

Features

- Rugged installer-friendly enclosure design features a gasket flange with continuously welded seams
- Tool-free cover latches
- Two, three and four point mounting

- Metal handle with large insulating grip features a positive stop in both ON and OFF position
- Ground lugs provided as standard
- Type 12 enclosures are fabricated from galvanized steel and are also rated for 3R/3S outdoor applications
- Type 4X stainless steel switches are 304 grade stainless steel and 30-200A are provided with stainless steel interior parts
- The widest range of accessories available including 200% neutrals, gold plated PLC auxiliary contacts and isolated ground kits



System	Ampere Rating	Catalogue Number	Hub Type	Ship. Wt. (lbs.)	Maximum Horsepower Ratings ^②						
					240V AC		480V AC	600V AC		250V DC	600V DC
					1-Phase, 2-Wire	3-Phase, 3-Wire	3-Phase, 3-Wire	3-Phase, 3-Wire			
3-Pole, 3-Wire Fusible, Type 12^③ (For 2-Pole Applications use outside poles of 3-Pole Switches)					600 Volt AC / 250 Volt DC^①						
	30 60 100 200 400 600	HFC361JW HFC362JW HFC363JW HFC364JW HF365JWA ^④ HF366JWA ^④	SSH *	17 22 26 53 93 98	3 10 15 — — —	7 ^{1/2} 15 30 60 125 200	15 30 60 125 250 400	20 50 75 150 350 500	5 10 20 40 50 50	— 30 ^⑤ 30 ^⑤ 50 — —	
3-Pole, 3-Wire Non-Fusible, Type 12^③					600 Volt AC / 250 Volt DC^①						
	30 60 100 200 400	HNFC361JW HNFC362JW HNFC363JW HNFC364JW HNF365JWA	SSH *	14 21 25 51 75	3 10 15 15 15	10 20 40 60 125	20 50 75 125 250	30 60 100 150 350	5 10 20 40 50	— 30 ^⑤ 50 ^⑤ 50 —	
3-Pole, 3-Wire Fusible, Type 4X Stainless^⑥ (For 2-Pole Applications use outside poles of 3-Pole Switches)					600 Volt AC / 250 Volt DC^①						
	30 60 100 200 400 600	HFC361SW HFC362SW HFC363SW HFC364SW HF365SWA ^④ HF366SWA	SSH *	17 23 28 55 75 98	3 10 15 — 15 —	7 ^{1/2} 15 30 60 125 200	15 30 60 125 250 400	20 50 75 150 350 500	5 10 20 40 50 50	— 30 ^⑤ 50 ^⑤ 50 — —	
3-Pole, 3-Wire Non-Fusible, Type 4X Stainless^⑥					600 Volt AC / 250 Volt DC^①						
	30 60 100 200 400	HNFC361SW HNFC362SW HNFC363SW HNFC364SW HNF365SWA	SSH *	15 23 27 54 75	3 10 15 15 15	10 20 40 60 125	20 50 75 125 250	30 60 100 150 350	5 10 20 40 50	— 30 ^⑤ 50 ^⑤ 50 —	

① 200A switches are also rated 600V DC.

② Maximum HP ratings listed apply only when time delay fuses are used.

③ 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.

④ For equipment suitable as service entry, order HFC365NJWA, HFC366NJWA or HFC365NSWA based on the amperage and enclosure type required.

⑤ 600V DC horsepower rating shown requires (2) poles to be connected in series.

⑥ 304 grade stainless steel. For switches with enclosures constructed from 316 grade stainless steel, consult Siemens representative.

* Consult Siemens representative.

Heavy Duty Safety Switches

Type VBII 4 & 6-Pole Heavy Duty Safety Switches

Selection

Application

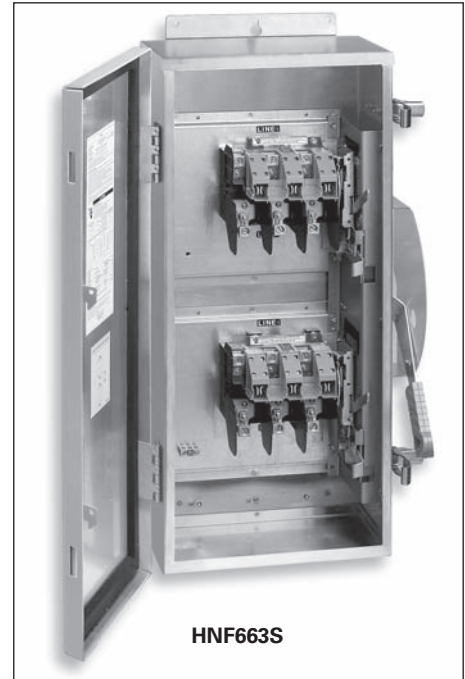
4 & 6-pole Switches are commonly used as a disconnecting means for two-speed, two-winding motors. Fused switches provide both over current and short circuit protection. Non-fusible switches normally provide a local disconnection means for two-speed motors which are remote from their motor controller. 4-pole switches are also used in 3-phase, 4-wire circuits when a switching neutral is required.

Standards

- cUL & UL listed under file #E4776
- Meets UL98 for enclosed switches
- Meets NEMA Standard KS-1 for enclosed switches
- Meets CEC wire bending space requirements

Features

- Visible blade, double break switching action
- Highly visible ON/OFF indication
- Defeatable dual cover interlock
- Padlock option in OFF position
- All copper current carrying parts^①
- Tangential knockouts (Type 1, 4-pole switches)



HNF663S

Description

4 & 6-pole switches are available in 30-200A ratings and in both fusible and non-fusible versions. 4-pole switches are supplied with either Type 1 or Type 12/3R enclosures.

6-pole switches are available with either Type 12/3R or Type 4X stainless steel enclosures.

4-Pole Type VBII Switches^①

System	Ampere Rating	Indoor Type 1		Type 12/3R Industrial ^②			Horsepower Ratings ^③								
		Catalogue Number	Ship. Wt. (lbs.)	Catalogue Number	Ship. Wt. (lbs.)	Hub Type ^④	240V, 2Ø, 4W		240V 3Ø		480V, 3Ø		600V, 3Ø		250V DC
							Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	

Fusible 600 Volt AC, 250 Volt DC — 4-Pole, 4 Fuse^③

Rating	Indoor Type 1	Type 12/3R Industrial	Hub Type	240V, 2Ø, 4W	240V 3Ø	480V, 3Ø	600V, 3Ø	250V DC
30	HF461	HF461J	SSH	3	7½	5	7½	5
60	HF462	HF462J		10	15	15	15	10
100	HF463	HF463J		15	30	15	30	15
200	HF464	HF464J		25	50	25	60	150

Non-fusible 600 Volt AC, 250 Volt DC — 4-Pole

Rating	Indoor Type 1	Type 12/3R Industrial	Hub Type	240V, 2Ø, 4W	240V 3Ø	480V, 3Ø	600V, 3Ø	250V DC
30	HNF461	HNF461J	SSH	—	10	—	20	—
60	HNF462	HNF462J		—	20	—	50	—
100	HNF463	HNF463J		—	30	—	75	—
200	HNF464	HNF464J		—	50	—	125	—

6-Pole Type VBII Switches^{①④}

System	Ampere Rating	Type 12 Industrial		Type 4X Stainless Steel			Horsepower Ratings ^③						
		Catalogue Number	Ship. Wt. (lbs.)	Catalogue Number	Ship. Wt. (lbs.)	Hub Type ^④	240V 3Ø		480V, 3Ø		600V, 3Ø		250V DC
							Std.	Max.	Std.	Max.	Std.	Max.	

Fusible 600 Volt AC, 250 Volt DC — 6-Pole, 6 Fuse^③

Rating	Type 12 Industrial	Type 4X Stainless Steel	Hub Type	240V 3Ø	480V, 3Ø	600V, 3Ø	250V DC
30	HF661J	HF661S	SSH	3	5	7½	5
60	HF662J	HF662S		7½	15	15	10
100	HF663J	HF663S		15	30	25	15
200	HF664J	HF664S		25	60	50	150

Non-fusible 600 Volt AC, 250 Volt DC — 6-Pole

Rating	Type 12 Industrial	Type 4X Stainless Steel	Hub Type	240V 3Ø	480V, 3Ø	600V, 3Ø	250V DC
30	HNF661J	HNF661S	SSH	—	20	—	30
60	HNF662J	HNF662S		—	50	—	60
100	HNF663J	HNF663S		—	75	—	100
200	HNF664J	HNF664S		—	125	—	150

■ Built to order.

① Lugs are aluminum alloy as standard. Optional copper body lugs are available.

② Dual horsepower ratings: Std. – applies when non-time-delay fuses are installed. Max. – applies when time delay fuses are installed.

③ Fusible switches accept Class H Fuses as the standard. Class R & J fuses can also be installed and increase the rating from 10,000 to 200,000 AIC. For Class J, the load base is moved upward. For Class R fuses, rejection kits are required.

④ Supplied with factory installed ground lugs.

⑤ Hub catalogue number available p. 3-26

⑥ Hub type SSH are suitable for type 4/4X and type 12 applications.

Heavy Duty Safety Switches

Special Application Switches / Interlocked Receptacle Switches

Selection

Application

Receptacle Safety Switches provide cord connection protection of heavy-duty portable equipment (welders, infrared ovens, batch feeders, portable conveyors, assembly line fixtures and tools, refrigerator trucks, etc.) under load or fault conditions.

Standards

All receptacle switches with a viewing window are CSA certified under file #24563 and UL listed under file #E4776.

Description^{①②}

Type 12 and 4/4X Receptacle Safety Switches are available with 3-phase, 4-wire grounded type Crouse-Hinds Arkite™, pre-wired and mounted with interlock linkage to the switch mechanism. Insertion or removal of the plug is prevented by the interlock linkage while the switch is in the "ON" position. Receptacle prevents operation of switch if incorrect plug is inserted.



3

SAFETY SWITCHES

Crouse-Hinds Interlocked Receptacle Switches

Ampere Rating ^③	Type 12 ^②	Type 4/4X ^②	Hub Type ^④	Shipping Wt. (lbs.) Std. Pkg.	Accepts Crouse-Hinds Arkite ^① Plug Catalogue Number
	Catalogue Number	Catalogue Number			

600V Fusible, 3-Pole, 3-Wire with Viewing Window

30	HF361JCHW	HF361SCHW	SSH	24	APJ3485 & NPJ3485
60	HF362JCHW	HF362SCHW		30	APJ6485 & NPJ6485
100	HF363JCHW	HF363SCHW		36	APJ10487 & NPJ10487

600V Non-Fusible, 3-Pole, 3-Wire with Viewing Window

30	HNF361JCHW	HNF361SCHW	SSH	22	APJ3485 & NPJ3485
60	HNF362JCHW	HNF362SCHW		29	APJ6485 & NPJ6485
100	HNF363JCHW	HNF363SCHW		35	APJ10487 & NPJ10487

Receptacle switches dimensions

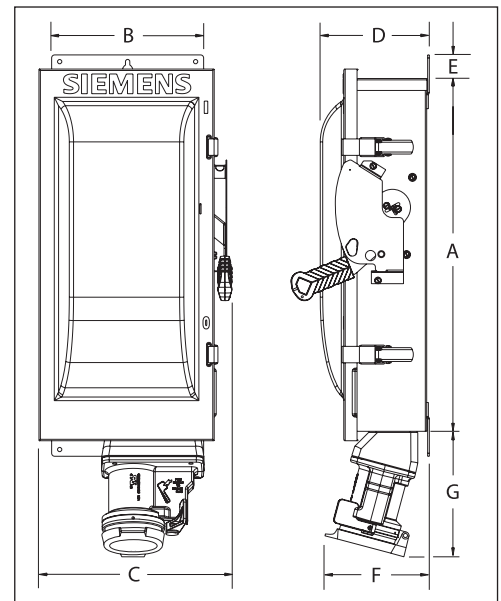
Ampere Rating	Dimensions - Inches (mm)						
	A	B	C	D	E	F	G

Cr-H Type Fusible (240 & 600V)

30	14.27 (363)	7.42 (188)	9.02 (229)	6.22 (158)	1.52 (39)	6.1 (155)	6.0 (152)
60	16.27 (413)	9.17 (233)	11.47 (291)	6.34 (161)	1.52 (39)	6.4 (163)	7.4 (188)
100	21.96 (558)	9.65 (245)	12.02 (305)	6.80 (172)	1.52 (39)	6.5 (165)	7.6 (193)

Cr-H Type Non-Fused (600V max.)

30	14.27 (363)	7.42 (188)	9.02 (229)	6.22 (158)	1.52 (39)	6.1 (155)	6.0 (152)
60	16.27 (413)	9.17 (233)	11.47 (291)	6.34 (161)	1.52 (39)	6.4 (163)	7.4 (188)
100	21.96 (558)	9.65 (245)	12.02 (305)	6.80 (172)	1.52 (39)	6.5 (165)	7.6 (193)



① Arkite™ is a registered trademark of the Crouse-Hinds Company. Plugs are not sold or supplied by Siemens.

② Also rated Type 3R/3S.

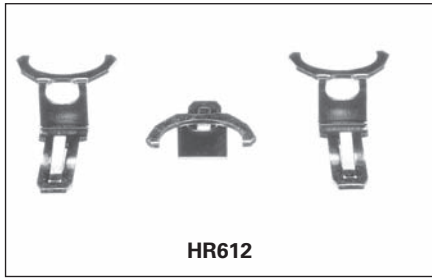
③ Enclosure is constructed of Type 304 stainless steel.

④ Hub catalogue available p. 3-26

Heavy Duty Safety Switches

Accessories

Selection



HR612

Class R Fuse Clip Kits

All Heavy Duty Switches are field convertible to accept Class R Fuse Clip Kits. The kits prevent the installation of Class H and K fuses (one kit required per 3-pole switch).

Class R Fuse Clip Kits

Catalogue Number	Description
HR21	30A, 240V Kit (HD only)
HR612	30A, 600V Kit/60A, 240V Kit
HR62	60A, 600V Kit
HR63	100A Kit
HR64	200A Kit
HR65A	400A Kit
HR66A	600A Kit

Class J Fusing

All 30-600A, 600V and 100-600A, 240V fusible Heavy Duty Switches are field convertible to accept Class J fuses by moving the load base to a pre-drilled J fuse position. 600A Heavy Duty switches require Class J fuse clip kit HJ66A to accept class J fuses. (one kit required per 3-pole switch).

Class J Fuse Kits

Catalogue Number	Description
HJ66A	600A, 240V/600V Kit

Internal Shield Kits (for fusible switches)

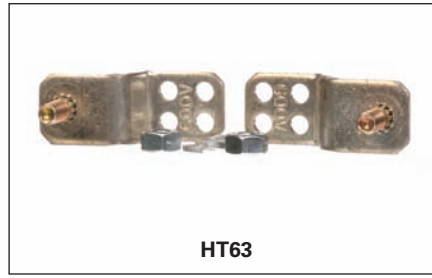
Kits provide a clear plastic inner door to prevent accidental contact with live parts. Test probe holes are provided and fuses can be replaced without removal of kit.

NEW Internal Shield Kits[®]

Switch Ampere Rating	Kit Catalogue Number
30A HD	HSK61SSW
60A HD	HSK62SSW
100A HD	HSK63SSW
200A HD	HSK64SSW

▲ Built to order. Allow 6-8 weeks for delivery.

© One kit per pole required.



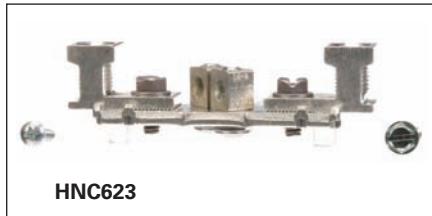
HT63

Class T Fuse Adapter Kits

All 100-200Amp and 1200Amp Heavy Duty Switches are field convertible to accept Class T fuses. 800A switches are field convertible to accept Class T fuses by moving the load base to a pre-drilled T fuse position.

Class T Fuse Adapter Kits[®]

Catalogue Number	Description
HT23	100A, 240V Kit
HT63	100A, 600V Kit
HT24	200A, 240V Kit
HT64▲	200A, 600V Kit
HT25A	400A, 240V Kit
HT65A	400A, 600V Kit
HT26A	600A, 240V Kit
HT66A	600A, 600V Kit
TFAK82	1200A, 240V Kit



HNC623

Neutral Kits

Standard Neutral Kits can be field installed in Heavy Duty Switches.

Neutral Kits

Switch Ampere Rating	Kit Catalogue Number
30 HD	HNC612
60, 100 HD	HNC623
200	HNC64
400 & 600	HNC656A
800 & 1200	HNC678

© Not designed for use with Auxiliary Contacts.



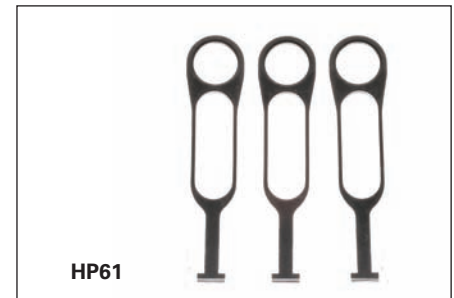
HN264

200% Neutral Kits

CSA certified 200% Neutrals are available on 100-600A Heavy Duty Switches. They are typically used with non-linear transformers or where increased neutral ampacity/lug capacity is required.

200% Neutral Kits

Switch Ampere Rating	Kit Catalogue Number	Wire Range Line & Load Lugs (Cu/Al)
100	HNC263	(2) #14-1/0 AWG
200	HNC264	(2) #6 AWG-300 Kcmil
400	HNC656A	(2) 1/0 AWG-600 Kcmil (2) #6 AWG-300 Kcmil
600	HNC678A	(2) 1/0 AWG-600 Kcmil (2) #6 AWG-300 Kcmil



HP61

Fuse Puller Kits

Fuse Puller Kits are field installable in 30-100A Type VBII Heavy Duty Switches (one kit required per 3-pole switch).

Fuse Puller Kits

Switch Ampere Rating	Fuse Puller Kit Catalogue Number
30	HP61
60	HP62▲
100	HP63▲

Heavy Duty Safety Switches

Accessories

Selection



HA261234



HA261234



HLC612

HG261234

Auxiliary Contacts

Auxiliary Contacts are available only for Heavy Duty Switches. The auxiliary contacts are available in 1 normally open and 1 normally closed or 2 normally open and 2 normally closed configurations. Siemens offers a PLC Auxiliary Switch (30-200A) that has very low resistance for low voltage and current typical in PLC circuits. All auxiliary contacts make after and break before main switch contacts.

Auxiliary Contacts

Switch Ampere	Aux. Switch Catalogue Number	Kit Ampere Rating			Horsepower Rating	
		125V AC Max.	250V AC Max.	28V DC Max.	125V AC Max.	250V AC Max.
30-600	HA161234	10	10	7	1/2	3/4
800-1200	HA165678	10	10	—	1/2	3/4

With 1 NO & 1 NC Isolated Contacts

30-600	HA161234	10	10	7	1/2	3/4
800-1200	HA165678	10	10	—	1/2	3/4

With 2 NO & 2 NC Isolated Contacts

30-600	HA261234	10	10	7	1/2	3/4
800-1200	HA265678	10	10	7	1/2	3/4

Low Current PLC Type with 1 NO & 1 NC Gold Plated Contacts

30-600	HA361234	10	10	7	1/2	3/4
800-1200	HA365678	10	10	—	1/2	3/4

Copper Lug Kits

Heavy duty switches are CSA certified to accept field installed copper lug kits.

Copper Lug Kits

Switch Ampere Rating	Copper Lug Catalogue Number	Description
30-60	HLC612	(9) Lugs/Kit #14-4 AWG Cu
100	HLC63▲	(9) Lugs/Kit #14-1/0 AWG Cu
200	HLC64▲	(9) Lugs/Kit #6 AWG-300 Kcmil Cu
400-600	HCU656A■	(1) Lugs/Kit #1/0 AWG-600 Kcmil Cu
800-1200	HLC65678	(1) Lugs/Kit #1/0 AWG-600 Kcmil Cu

▲ Built to order. Allow 6-8 weeks for delivery.

■ Purchase field replacement kit along with lugs.

NEW Quick Connects

They provide two point control power take-off capability and are normally used on two poles on the line side when it is required to have control power available when the switch is in the OFF position. They provide a mounting provision for standard 1/4" quick connect terminal. Installed in the line or load side. 30A VBII switches have lugs CSA certified to accept (2) wires per pole as standard so a 30A kit is not required.

Quick Connects

Catalogue Number	Description
HCQ62	60A 2 wire quick connect kit
HCQ63	100A 2 wire quick connect kit
HCQ64	200A 2 wire quick connect kit

Isolated Ground Kits

Isolated Ground Kits are available on 30-600A Heavy Duty Switches. They are normally used on circuits with a high content of computer or other electronic loading which require a ground which is isolated from the building ground and neutral circuits. The kit includes both isolated and grounded terminals as listed below.

Isolated Ground Kits

Switch Ampere Rating	Catalogue Number	Number of Terminals		Wire Range Per Terminal (Cu/Al)
		Isolated	Grounded	
30-200	HG261234	2	2	#14-4 AWG
400-600	HG2656A	4	4	2/0-14 AWG 2/0-6 AWG

Equipment Ground Kits

Equipment Ground Lug Kits are available for all Heavy Duty Switches. They are field installable in Type 1 and Type 3R Switches and are factory installed as standard in Type 4 / 4X and Type 12 and also in all VBII 4&6-pole Switches.

Equipment Ground Kits

Switch Ampere Rating	Catalogue Number	Number of Terminals	Wire Range Per Terminal (Cu/Al)
30-200 HD	HG61234	2	#14-4 AWG
400 & 600	HG656A	4	2/0-6 AWG
800-1200	HG678	8	#6 AWG-250 Kcmil

Heavy Duty

Hub and Lug Data

Selection

Interchangeable Hubs

Conduit hubs are available for Type 3R, 12 and 4 / 4X applications. 30-200A Type 3R Switches are provided with a conduit hub provision and a removable hub plate on their top rainshed.

Conduit Size (inches)	Catalogue Number	Used On
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Type 3R^①

Cover	Catalogue Number	Used On
3/4	ECHA000	30A GD Only
1	ECHA075	
1 1/4	ECHA100	
1 1/2	ECHA125	
3/4	ECHS000	60-200A GD 30-200A HD
1	ECHS075	
1 1/4	ECHS100	
1 1/2	ECHS125	
2	ECHS150	
2 1/2	ECHS200	
2 1/2	ECHS250	400-1200A
3	ECHV250	
3 1/2	ECHV300	
4	ECHV350	
4	ECHV400	

Type 4/4X^②

Cover	Catalogue Number	Used On
3/4	SSH075	30-200A
1	SSH100	
1 1/4	SSH125	
1 1/2	SSH150	
2	SSH200	
2 1/2	SSH250	400-600A
3	SSH300	
3 1/2	SSH350	
4	SSH400	

Note: 30 thru 200A. Type 3R Switches have removable hub plates on rainshed. 400A and larger Type 3R Switches have no provisions for mounting hubs. Drill or punch hole in the field to accommodate hub size desired.

Field Replacement Kits and Neutral Barrier Kits

All Heavy Duty Switches are field convertible for (Crimp) type lugs. When compression lugs are required for 30-100A switches, a neutral barrier kit is required for 1-Phase, 3W or 3-Phase, 4W applications. When compression lugs are required on 400-1200A switches, lug mounting kits are required.

Field Replacement Kits and Neutral Barrier Kits

Switch Ampere Rating	Catalogue Number	Kit Description
30	HCL612	Neutral Barrier Kit
60 & 100	HCL623	Neutral Barrier Kit
400	HCM65A	240V/600V Fusible Kit
400	HNCM65A	240/600V Non-Fusible Kit
600	HCM66A	240V/600V Fusible Kit
600	HNCM66A	240V/600V Non-Fusible Kit
800 & 1200 ^③	HCL65678■	1 Pole, Compression Lug Mounting Kit

Lugs

30 & 60A Switches are suitable for use with 60° or 75°C wire. 100-1200A are suitable for use with 75°C rated wire.

Multiple Padlock Accessory

A tamper-proof device to provide for multiple padlocking to meet OSHA or plant requirements. Accepts up to 6 1/4" padlocks. Catalog number **SL0420**. Standard Carton-12.



Wire Ranges (Line, Load and Standard Neutral)

Switch Ampere Rating	Wire Range with Wire Bending Space Per NEC Requirements	Lug Wire Range
30GD	#14-8 AWG (Cu/Al) ^④	#14-6 AWG (Cu/Al)
30HD	#14-6 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
60 ^⑤	#14-3 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
100 ^⑥	#14-1/0 AWG (Cu/Al)	#14-1/0 AWG (Cu/Al)
200 ^⑦	#6 AWG-250 Kcmil (Cu/Al)	#6 AWG-300 Kcmil (Cu/Al)
400 ^⑧	(1) 1/0 AWG-600 Kcmil (Cu/Al) (2) 1/0 AWG-500 Kcmil (Cu/Al)	(2) 1/0 AWG-600 Kcmil (Cu/Al)
600 ^⑨	(1) 1/0 AWG-600 Kcmil (Cu/Al) (2) 1/0 AWG-500 Kcmil (Cu/Al)	(2) 1/0 AWG-600 Kcmil (Cu/Al)
800	(3) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral	(3) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral
1200	(4) 3/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral	(4) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral

■ Built to order. Allow 3-4 weeks for delivery.

- ① Hubs suitable for 3R Switches.
- ② Also suitable for Type 12 applications.
- ③ Neutral Barrier kits are required on 30-100A switches only and only with 1-Phase / 3W or 3-Phase / 4W loads. Compression Lugs mounting kits are required on 400-1200A switches only.
- ④ Provides mounting for a single line or load lug.
- ⑤ Provides mounting for (2) compression lugs per phase on line or load.
- ⑥ Line base lugs (only) are CSA certified to accept #14-6 CU/Al cable.
- ⑦ Max. wire size for height reduced switches is 500 kcmil (Cu/Al).
- ⑧ All but 60A GD & Compact HD NF switches are also CSA certified for #2 Cu/Al conductors.
- ⑨ All 200A Heavy Duty Switches have a wire range & wire bending space for (1) #6-300 Kcmil (Cu/Al).
- ⑩ Also for 30A oversized heavy duty switches.
- ⑪ Also for 60A oversized heavy duty switches.

General and Heavy Duty

VBII Safety Switch Replacement Parts

Selection

VBII Safety Switch Replacement Parts

Ampere Rating	Line Base	Load Base	Handle / Handle Guard	
			General Duty	Heavy Duty
			Catalogue Number	Catalogue Number

Fusible 2- and 3-Pole 60-400A General Duty & 30-1200A Heavy Duty^{⑤⑥}

Ampere Rating	Line Base	Load Base	General Duty	Heavy Duty
30 HD 240V	HFB21 ^②	HBB21 ^②	—	HH6123 ^⑦
60 GD	HFB612 ^②	HBB612 ^②	GH223	—
60 HD 240V	HFB22 ^②	HBB22 ^②	—	HH6123 ^⑦
30 600V	HFB612 ^②	HBB612 ^②	—	HH6123 ^⑦
60 600V	HFB62 ^②	HBB62 ^②	—	HH6123 ^⑦
100	HFB63 ^②	HBB63 ^②	GH223	HH6123 ^⑦
200	HFB64 ^②	HBB64 ^②	GH24	HH64 ^⑦
400	HFB65 ^{③④}	HBB656 ^{③④}	HH65678	HH65678 ^⑦
600	HFB66 ^{③④}	HBB656 ^{③④}	HH65678	HH65678 ^⑦
800	HFB67A ^{②④}	HBB67A ^{②④}	—	HH65678 ^⑦
1200	HFB68 ^{②④}	HBB68 ^{②④}	—	HH68 ^⑦



Non-Fusible 3-Pole 60-400A General Duty & 30-1200A Heavy Duty^{⑤⑥}

Ampere Rating	Line Base	Load Base	General Duty	Heavy Duty
30 HD	HNB612 ^②	—	—	HH6123 ^⑦
60 GD	HNB612 ^②	—	GH223	—
60 HD	HNB623 ^②	—	—	HH6123 ^⑦
100	HNB623 ^②	—	GH223	HH6123 ^⑦
200	HNB64 ^②	—	GH24	HH64 ^⑦
400	HNB65 ^{③④}	—	HH65678	HH65678 ^⑦
600	HNB66 ^{③④}	—	HH65678	HH65678 ^⑦
800	HNB67A ^{②④}	—	—	HH65678 ^⑦
1200	HNB678 ^②	—	—	HH68 ^⑦



Ampere Rating	Mechanism Assembly	Line & Load Lugs
	Catalogue Number	Catalogue Number

Fusible 2- and 3-Pole 60-400A General Duty & 30-1200A Heavy Duty^{⑤⑥}

Ampere Rating	Mechanism Assembly	Line & Load Lugs
30 HD 240V	HM6123 ^⑦	HL612 ^①
60 GD	HM6123	HL612 ^①
60 HD 240V	HM6123 ^⑦	HL612 ^①
30 600V	HM6123 ^⑦	HL612 ^①
60 600V	HM6123 ^⑦	HL612 ^①
100	HM6123 ^⑦	HL63 ^①
200	HM64 ^⑦	HL64 ^①
400	HM65	HL65678 ^④
600	HM66	HL65678 ^④
800	HM67A	HL67A ^{⑥⑦}
1200	HM678	⑨

Non-Fusible 3-Pole, 30-1200A Heavy Duty^{⑤⑥}

Ampere Rating	Mechanism Assembly	Line & Load Lugs
30 HD	HM6123 ^⑦	HL612 ^①
60 HD	HM6123 ^⑦	HL612 ^①
100	HM6123 ^⑦	HL63 ^①
200	HM64 ^⑦	HL64 ^①
400	HM65	HL65678 ^④
600	HM66	HL65678 ^④
800	HM67A	HL67A ^{⑥⑦}
1200	HM678	⑨

Internal Shield Kits

These kits provide an inner door on safety switches to prevent accidental contact with live parts. All kits are constructed from clear plastic, provide test probe holes and allow replacement of fuses without the removal of the kit.

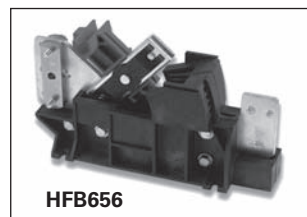
Catalogue Number	Switch Ampere Rating	UPC Code 040892_____
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For use with Fusible Type 1, 3R, 12 and 4X Stainless Steel Enclosed Safety Switches

HSK61SSW	30	79020
HSK62SSW	60	79021
HSK63SSW	100	79002
HSK64SSW	200	79023

For use with Fusible Type VBII Disconnect Switches

HSK61	30	79024
HSK623	60 & 100	79025
HSK64	200	79026



① Three lugs included in kit.
 ② Includes lugs.
 ③ Lugs not included.
 ④ One lug per kit.

⑤ One per switch required unless otherwise noted.
 ⑥ One required per pole.
 ⑦ For type 4/4X stainless steel switches add "S" to end of catalogue number.

⑧ For replacement door for heavy duty switches add "DOOR" to end of switch catalogue number.
 ⑨ Lugs included with line and load bases.

Heavy Duty Safety Switches

Dimensions

Safety Switch Dimensions & Shipping Weights

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		
HFC221J also HFC261J	14.27 (364)	17.33 (442)	—	6.65 (170)	9.02 (230)	5.32 (136)	10.46 (266)	—	13
HFC221N also HFC261	14.26 (364)	15.45 (394)	—	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S6	12
HFC221NR also HFC261R	14.39 (366)	—	15.77 (402)	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S8	13
HFC221S also HFC261S	14.27 (364)	17.33 (442)	—	6.65 (170)	9.02 (230)	5.32 (136)	10.46 (266)	—	13
HFC222J also HFC262J	16.22 (412)	19.31 (492)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	19
HFC222N also HFC262	16.26 (414)	17.46 (444)	—	9.15 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S16	18
HFC222NR also HFC262R	16.26 (414)	—	17.77 (452)	9.16 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S17	19
HFC222S also HFC262S	16.22 (412)	19.31 (492)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	19
HFC223J also HFC263J	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	24
HFC223N also HFC263	21.95 (558)	23.15 (590)	—	9.64 (246)	12.01 (306)	5.05 (130)	10.17 (260)	S10	23
HFC223NR also HFC263R	21.95 (558)	—	23.46 (596)	9.64 (246)	11.97 (306)	5.05 (130)	10.17 (260)	S11	24
HFC223S also HFC263S	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	24

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

Heavy Duty Safety Switches

Dimensions

Safety Switch Dimensions & Shipping Weights

Catalogue Number	Height - Inches (mm)			Width - Inches (mm)		Depth - Inches (mm)		Knockout Diagram ^①	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
HFC224J	29.96 (762)	31.07 (790)	—	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	48
HFC224N	29.9 (760)	31.07 (790)	—	14.62 (372)	16.98 (432)	6.36 (162)	12.33 (314)	S12	47
HFC224NR	29.9 (760)	—	31.42 (800)	14.61 (372)	16.99 (432)	6.36 (162)	12.33 (314)	S13	48
HFC224S	29.96 (762)	31.07 (790)	—	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	48
HFC225NRA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	91.1
HFC225NA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	91.1
HFC226NA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	95.6
HFC226NRA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	95.6
HFC227N	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	360
HFC227NR	66.67 (1694)	—	67.74 (1722)	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	362
HFC228N	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	362
HFC228NR	66.67 (1694)	—	67.74 (1722)	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	364
HFC321J	14.27 (364)	17.33 (442)	—	6.65 (170)	9.02 (230)	5.32 (136)	10.46 (266)	—	14
HFC321N	14.26 (364)	15.45 (394)	—	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S6	14
HFC321NR	14.39 (366)	—	15.77 (402)	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S8	15
HFC321S	14.27 (364)	17.33 (442)	—	6.65 (170)	9.02 (230)	5.32 (136)	10.46 (266)	—	14
HFC322J	16.27 (414)	19.31 (492)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	20
HFC322N	16.26 (414)	17.46 (444)	—	9.15 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S16	19
HFC322NR	16.26 (414)	—	17.77 (452)	9.16 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S17	20
HFC322S	16.27 (414)	19.31 (492)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	20
HFC323J	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	25
HFC323N	21.95 (558)	23.15 (590)	—	9.64 (246)	12.01 (306)	5.05 (130)	10.17 (260)	S10	25
HFC323NR	21.95 (558)	—	23.46 (596)	9.64 (246)	11.97 (306)	5.05 (130)	10.17 (260)	S11	26
HFC323S	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	25
HFC324J	29.96 (762)	31.07 (790)	—	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	49
HFC324N	29.9 (760)	31.07 (790)	—	14.62 (372)	16.98 (432)	6.36 (162)	12.33 (314)	S12	49
HFC324NR	29.9 (760)	—	31.42 (800)	14.61 (372)	16.99 (432)	6.36 (162)	12.33 (314)	S13	50
HFC324S	21.96 (558)	31.07 (790)	—	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	49
HF325JA also HFC325NJA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	93
HFC325NA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	94.6
HFC325NRA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	94.6
HF325SA also HFC325NSA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	7.34 (188)	10.347 (264)	—	93
HF326JA also HFC326NJA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	98
HFC326NA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	99.6
HFC326NRA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	99.6
HF326SA also HFC326NSA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	7.34 (188)	10.347 (264)	—	98
HFC327J	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	367
HFC327N	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	380
HFC327NR	66.67 (1694)	—	67.74 (1722)	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	383
HFC327S	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	367
HFC328N	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	382
HFC328NR	66.67 (1694)	—	67.74 (1722)	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	385
HFC361	14.26 (364)	15.45 (394)	—	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S6	14
HFC361J, JW	14.27 (364)	17.33 (442)	—	6.65 (170)	9.02 (230)	5.32 (136)	10.46 (266)	—	14
HFC361N	14.26 (364)	15.45 (394)	—	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S6	14
HFC361NR	14.39 (366)	—	15.77 (402)	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S8	15
HFC361R	14.39 (366)	—	15.77 (402)	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S8	15
HFC361S, SW	14.27 (364)	17.33 (442)	—	6.65 (170)	9.02 (230)	5.32 (136)	10.46 (266)	—	15

① Knocks not provided on Type 4/4X and 12 or on 800 & 1200A switches.

Heavy Duty Safety Switches

Dimensions

Safety Switch Dimensions & Shipping Weights

Catalogue Number	Height - Inches (mm)			Width - Inches (mm)		Depth - Inches (mm)		Knockout Diagram ^①	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
HFC362	16.26 (414)	17.46 (444)	—	9.15 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S16	19
HFC362J, JW	16.27 (414)	19.31 (492)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	20
HFC362N	16.26 (414)	17.46 (444)	—	9.15 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S16	19
HFC362NR	16.26 (414)	—	17.77 (452)	9.16 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S17	20
HFC362R	16.26 (414)	—	17.77 (452)	9.16 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S17	20
HFC362S, SW	16.27 (414)	19.31 (492)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	20
HFC363	21.95 (558)	23.15 (590)	—	9.64 (246)	12.01 (306)	5.05 (130)	10.17 (260)	S10	24
HFC363J, JW	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	25
HFC363N	21.95 (558)	23.15 (590)	—	9.64 (246)	12.01 (306)	5.05 (130)	10.17 (260)	S10	25
HFC363NR	21.95 (558)	—	23.46 (596)	9.64 (246)	11.97 (306)	5.05 (130)	10.17 (260)	S11	26
HFC363R	21.95 (558)	—	23.46 (596)	9.64 (246)	11.97 (306)	5.05 (130)	10.17 (260)	S11	25
HFC363S, SW	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	25
HFC364	29.9 (760)	31.07 (790)	—	14.62 (372)	16.98 (432)	6.36 (162)	12.33 (314)	S12	48
HFC364J, JW	29.96 (762)	31.07 (790)	—	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	49
HFC364N	29.9 (760)	31.07 (790)	—	14.62 (372)	16.98 (432)	6.36 (162)	12.33 (314)	S12	49
HFC364NR	29.9 (760)	—	31.42 (800)	14.61 (372)	16.99 (432)	6.36 (162)	12.33 (314)	S13	48
HFC364R	29.9 (760)	—	31.42 (800)	14.61 (372)	16.99 (432)	6.36 (162)	12.33 (314)	S13	49
HFC364S, SW	29.96 (762)	31.07 (790)	—	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	49
HF365A	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	93
HF365JA, HF365JWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	93
HFC365NJA, HFC365NJWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	94.6
HFC365NA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	94.6
HFC365NRA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	94.6
HF365RA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	93
HF365SA, HF365SWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	7.34 (188)	10.347 (264)	—	93
HFC365NSA, HFC365NSWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	7.34 (188)	10.347 (264)	—	94.6
HF366A	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	98
HF366JA, HF366JWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	98
HFC366NJA, HFC366NJWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	99.6
HFC366NA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S18	99.6
HFC366NRA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	99.6
HF366RA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	98
HF366SA, HF366SWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	7.34 (188)	10.347 (264)	—	98
HFC366NSA	45.32 (1152)	45.81 (1164)	—	38.4 (976)	23.404 (596)	7.34 (188)	10.347 (264)	—	99.6
HFC367	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	380
HFC367J	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	380
HFC367N	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	382
HFC367NR	66.67 (1694)	—	67.74 (1722)	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	386
HFC367R	66.67 (1694)	—	67.74 (1722)	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	382
HFC367S	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	380
HFC368, J, S	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	383
HFC368N	66.67 (1694)	67.16 (1706)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	385
HFC368NR	66.67 (1694)	—	67.74 (1722)	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	388
HFC368R	66.67 (1694)	—	67.74 (1722)	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	385
HNFC361 also HNFC261	11.11 (284)	12.31 (314)	—	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S7	12
HNFC361J, JW also HNFC261J	11.12 (284)	14.14 (360)	—	6.65 (170)	9.02 (230)	5.56 (142)	10.46 (266)	—	13
HNFC361R also HNFC261R	11.11 (284)	—	12.63 (322)	6.64 (170)	9.01 (230)	5.05 (130)	10.17 (260)	S9	13
HNFC361S, SW also HNFC261S	11.12 (284)	14.14 (360)	—	6.65 (170)	9.02 (230)	5.56 (142)	10.46 (266)	—	13
HNFC362 also HNFC262	16.26 (414)	17.46 (444)	—	9.15 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S16	18
HNFC362J, JW also HNFC262J	16.27 (414)	17.46 (444)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	19
HNFC362R also HNFC262R	16.26 (414)	—	17.77 (452)	9.16 (234)	11.53 (294)	5.05 (130)	10.17 (260)	S17	19
HNFC362S, SW also HNFC262S	16.27 (414)	17.46 (444)	—	9.17 (234)	11.47 (292)	5.33 (136)	10.46 (266)	—	19
HNFC363 also HNFC263	21.95 (558)	23.15 (590)	—	9.64 (246)	12.01 (306)	5.05 (130)	10.17 (260)	S10	23
HNFC363J, JW also HNFC263J	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	24
HNFC363R also HNFC263R	21.95 (558)	—	23.46 (596)	9.64 (246)	11.97 (306)	5.05 (130)	10.17 (260)	S11	24
HNFC363S, SW also HNFC263S	21.96 (558)	23.16 (590)	—	9.65 (246)	12.02 (306)	5.34 (136)	10.46 (266)	—	24
HNFC364	29.9 (760)	31.07 (790)	—	14.62 (372)	16.98 (432)	6.36 (162)	12.33 (314)	S12	46
HNFC364J, JW	31.07 (790)	—	14.62 (372)	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	47
HNFC364R	29.9 (760)	—	31.42 (800)	14.61 (372)	16.99 (432)	6.36 (162)	12.33 (314)	S13	47
HNFC364S, SW	29.96 (762)	31.07 (790)	—	14.62 (372)	16.95 (432)	6.63 (170)	12.58 (320)	—	47

① Knocks not provided on Type 4 / 4X and 12 or on 800 & 1200A switches.

Heavy Duty Safety Switches

Dimensions

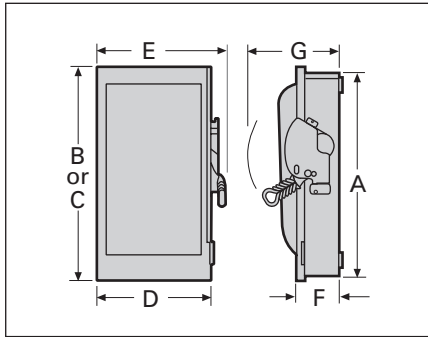
Safety Switch Dimensions & Shipping Weights

Catalogue Number	Height - Inches (mm)			Width - Inches (mm)		Depth - Inches (mm)		Knockout Diagram ^①	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
HNFC365A, JA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	75
HNFC365JWA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	75
HNFC365RA	33.47 (852)	33.96 (864)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	75
HNFC365SA, HNF365SWA	33.47 (852)	33.96 (864)	—	22.4 (570)	23.404 (596)	7.34 (188)	10.347 (264)	—	75
HNFC366A, JA	45.32 (1152)	45.81 (1164)	—	22.4 (570)	23.404 (596)	6.97 (178)	10.05 (256)	—	77
HNFC366RA	33.47 (852)	33.96 (864)	—	22.4 (570)	23.404 (596)	6.94 (178)	9.93 (254)	S19	77
HNFC366SA	33.47 (852)	33.96 (864)	—	22.4 (570)	23.404 (596)	7.34 (188)	10.347 (264)	—	77
HNFC367, J	54.67 (1390)	55.16 (1402)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	302
HNFC367R	54.67 (1390)	—	55.7 (1416)	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	304
HNFC367S	54.67 (1390)	55.16 (1402)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	302
HNFC368, J, S	54.67 (1390)	55.16 (1402)	—	38.4 (976)	39.96 (1016)	9.24 (236)	14.68 (374)	—	305
HNFC368R	54.67 (1390)	55.16 (1402)	—	38.4 (976)	40.25 (1024)	9.24 (236)	14.68 (374)	—	307

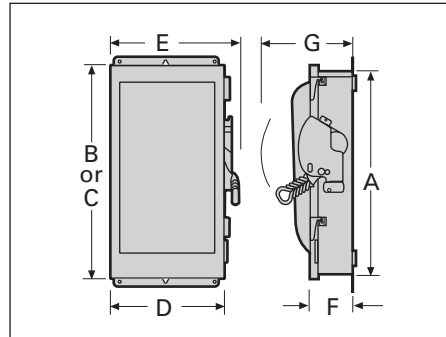
3

SAFETY SWITCHES

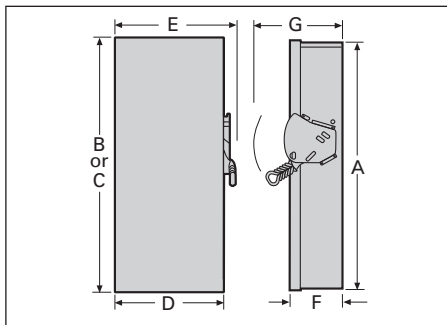
Type 1 or 3R
100-200A GD, 30-200A HD Type VBII



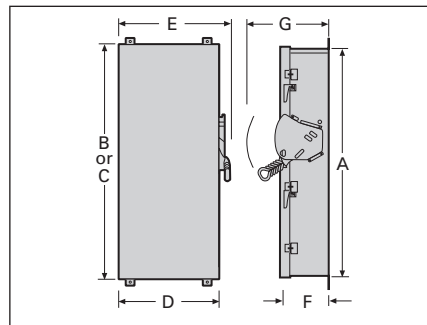
Type 4/4X or 12
30-200A HD Type VBII



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



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

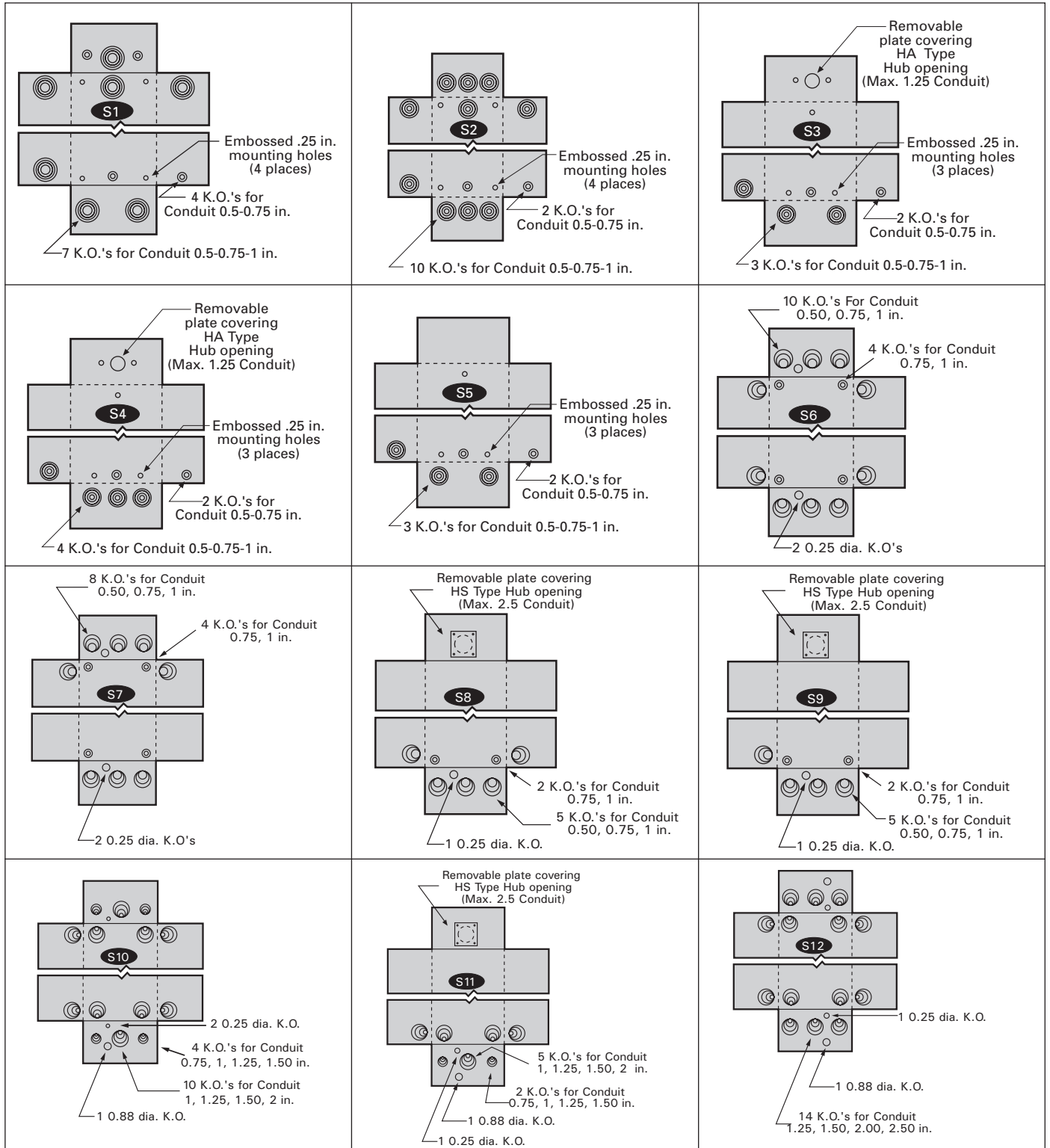


① Knocks not provided on Type 4 / 4X and 12 or on 800 & 1200A switches.

Heavy Duty Safety Switches

Knockout Diagrams

Type 1 & 3R Enclosures

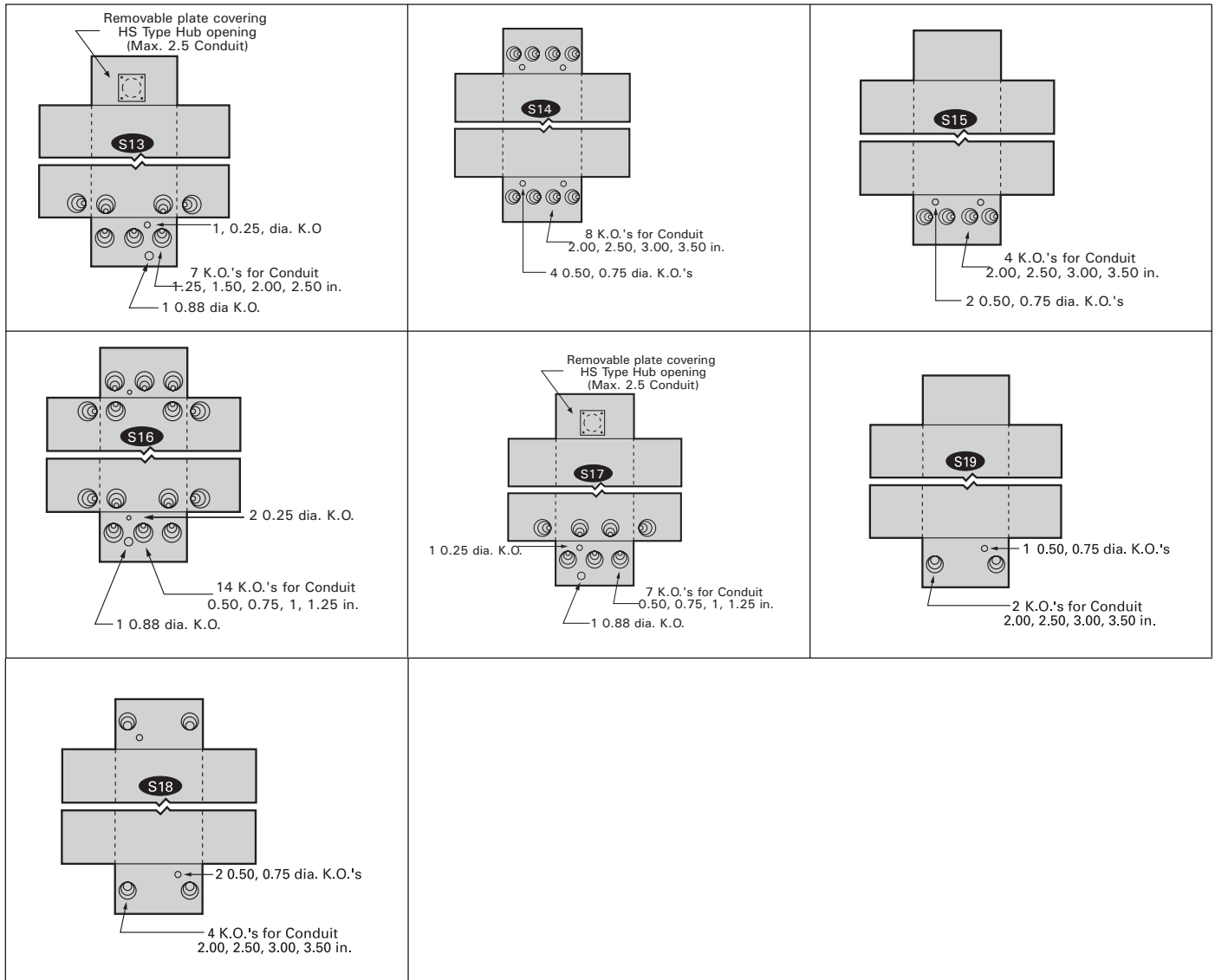


*For inches / millimeters conversion, multiply inches by 25.4.

Heavy Duty Safety Switches

Knockout Diagrams

Type 1 & 3R Enclosures



*For inches / millimeters conversion, multiply inches by 25.4.

Special Application Safety Switches Dimension Drawings

4-Pole & 6-Pole

Dimensions

4 & 6-Pole Safety Switch Dimensions

Catalogue Number	Enclosure - Inches (mm)			Mounting - Inches (mm)		
	A	B	C	D	E	F

Figure 1, 4-Pole Fusible and Non-fusible, Type 1

HNF461	24.50 (622)	9.53 (242)	6.09 (155)	19.00 (483)	6.75 (171)	0.268 (7)
HF461	29.12 (740)	9.53 (242)	6.09 (155)	23.50 (597)	6.75 (171)	0.268 (7)
HNF462	24.88 (632)	11.50 (292)	6.09 (155)	19.00 (483)	9.38 (238)	0.268 (7)
HF462	33.53 (852)	11.50 (292)	6.09 (155)	27.50 (699)	9.38 (238)	0.268 (7)
HNF463	27.62 (702)	12.18 (309)	6.09 (155)	19.36 (492)	8.00 (203)	0.268 (7)
HF463	36.44 (926)	12.18 (309)	6.09 (155)	28.11 (714)	8.00 (203)	0.268 (7)
HNF464	36.00 (914)	19.12 (486)	6.42 (163)	30.88 (784)	15.00 (381)	0.44 (11)
HF464	49.48 (1257)	19.12 (486)	6.42 (163)	45.50 (1130)	15.00 (381)	0.44 (11)

Figure 2, 4 & 6-Pole Fusible Type 12/3R and 4X

HF461J, HF661J, HF661S	29.50 (622)	9.53 (242)	6.48 (165)	31.65 (804)	5.47 (139)	0.27 (7)
HF462J, HF662J, HF662S	33.53 (852)	11.50 (292)	6.48 (165)	35.69 (907)	8.00 (203)	0.27 (7)
HF463J, HF663J, HF663S	36.44 (926)	12.18 (309)	6.48 (165)	38.67 (982)	8.47 (215)	0.27 (7)
HF464J, HF664J, HF664S	49.48 (1257)	19.12 (486)	6.78 (172)	51.64 (1312)	13.44 (341)	0.33 (8)

Figure 2, 4 & 6-Pole Non-fusible Type 12/3R and 4X

HNF461J, HNF661J, HNF661S	24.50 (622)	9.53 (242)	6.48 (165)	26.65 (667)	5.47 (139)	0.27 (7)
HNF462J, HNF662J, HNF662S	24.88 (632)	11.50 (292)	6.48 (165)	27.03 (687)	8.00 (203)	0.27 (7)
HNF463J, HNF663J, HNF663S	27.54 (700)	12.18 (309)	6.48 (165)	29.77 (756)	8.47 (215)	0.27 (7)
HNF464J, HNF664J, HNF664S	36.00 (914)	19.12 (486)	6.78 (172)	38.16 (969)	13.44 (341)	0.33 (8)

