

### Contents

### Pages

#### Heavy Duty Safety Switches

Safety Switch Features	18/2
Selection, 240V Fusible	18/3
Selection, 600V Fusible	18/4
Selection, 600V Non-Fusible	18/5
Selection Window Switches	18/6
Selection 4 & 6 Pole Switches	18/7
Selection Receptacle Switches	18/8
Selection Non-Metallic & 316 Grade Stainless Steel Switches	18/9
Accessories	18/10–18/13
Enclosed Rotary Switches	18/14–18/15

### Contents

### Pages

#### Disconnect Switches

Compact UL508 Non-Fusible	18/16–18/19
Type VBII UL98 Fusible	18/20–18/24
Type MCS UL98 Fusible	18/25–18/26
Compact Fusible Type CFS	18/27–18/30

## Heavy Duty Safety Switch Standards and Ratings

### Standards

- UL98 approved per file #E4776
- Suitable for use as service entrance equipment (where applicable)
- Meets NEMA standard KS-1-1990 for Type HD switches
- Seismic qualification – all switches have been tested and comply with the 2007 California Building Code CBC (Zone 4)

### Ratings

- 30-1200A, 240V and 600V AC and DC
- 2, 3, 4 and 6 pole fusible and non-fusible
- All HD safety switches are both HP and load break rated
- Enclosures are available to meet NEMA 1, 3R, 12 & 4/4X requirements
- Short Circuit ratings

### Fusible switches (and non-fusible when protected by fuses)

- 30-600A – 10,000 AIC with Class H fuses
- 30-600A – 200,000 AIC with Class R, J or T fuses
- 800 & 1200A – 200,000 AIC with Class L or T fuse

### Fuse Provisions supplied in fusible switches

- 30 & 60A 240V – Class H standard, Class R with kit
- 100-600A 240V – Class H standard, Class J by moving load base, Class R with kit
- 30-600A 600V - Class H standard, Class J by moving load base, Class R with kit
- 100 & 200A - Class T with kit
- 400 & 600A - Class H standard, Class J & T by moving load base, Class R with kit
- 800A – Class L standard, Class T by moving load base
- 1200A – Class L standard, Class T with kit (240V max)

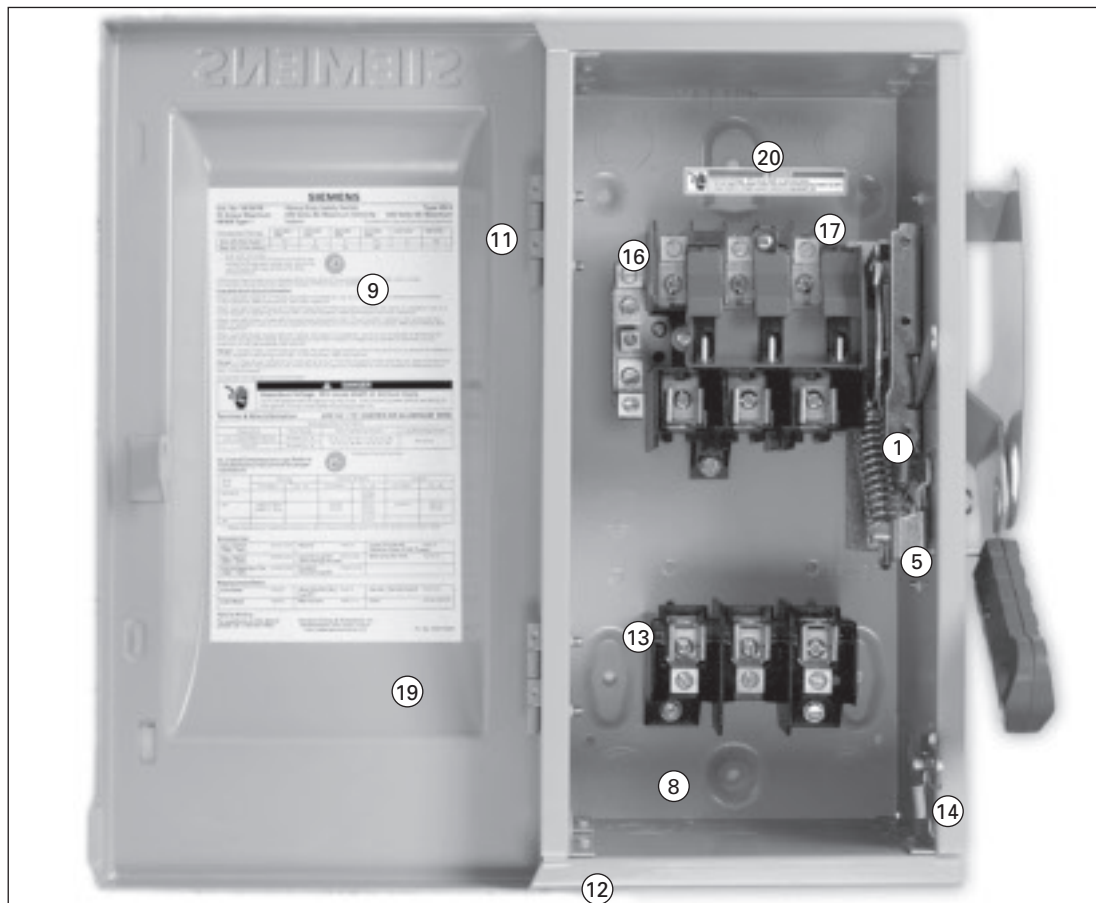
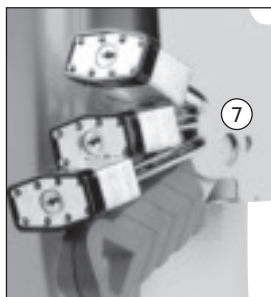
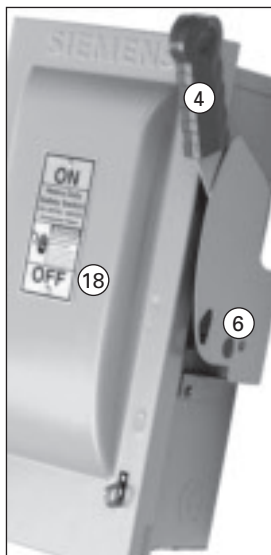
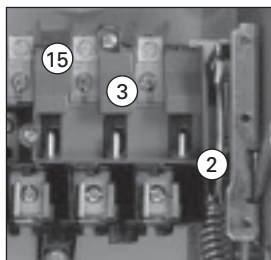
### Non-fusible switches when protected by a circuit breaker

Switch Ampere Rating	Breaker Frame	UL Listed Short Circuit Rating
30-1200A	All UL listed circuit breakers	10,000 AIC thru 600 VAC
30-100A	NEB, NEG, NGG, NBG & ED4	18,000 AIC thru 480 VAC
30-100A	ED6	18,000 AIC thru 600 VAC
200A	FD6-A & JD6-A	18,000 AIC thru 600 VAC
400A	JD6-A & LD6-A	18,000 AIC thru 600 VAC
600A	LD6-A	25,000 AIC thru 600 VAC
1200A	NNG	25,000 AIC thru 600 VAC

# Switches

## 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 NEC 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 provides highly visible ON/OFF indication.
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.

# Switches

## Heavy Duty Safety Switches

Selection



System	Ampere Rating	Indoor — Type 1		Outdoor — Type 3R			Horsepower Ratings <sup>Ⓣ</sup>						
		Catalog Number	List Price \$	Ship Wt.* Std. Pkg.	Catalog Number	List Price \$	Ship Wt.* Std. Pkg.	240V AC					
								1 Phase, 2 Wire		2 Phase, 4 Wire		3 Phase, 3 Wire	

### 240 Volt Fusible<sup>Ⓟ</sup>

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

	30	HF221N	12	HF221NR	13	1½	3	—	—	3	7½	5
	60	HF222N	18	HF222NR	19	3	10	—	—	7½	15	10
	100	HF223N	23	HF223NR	24	7½	15	—	—	15	30	20
	200	HF224N	47	HF224NR	48	15	—	—	—	25	60	40
	400	HF225NH <sup>Ⓞ</sup>	129	HF225NRH <sup>Ⓞ</sup>	131	15	—	—	—	50	125	50
	400	HF225N	153	HF225NR	157	15	—	—	—	50	125	50
	600	HF226NH <sup>Ⓞ</sup>	133	HF226NRH <sup>Ⓞ</sup>	135	15	—	—	—	75	200	50
	600	HF226N	155	HF226NR	159	15	—	—	—	75	200	50
	800	HF227N	365	HF227NR	365	—	—	—	—	100	250	50
1200	HF228N■	385	HF228NR■	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

	30	HF321N	14	HF321NR	15	1½	3	—	—	3	7½	5
	60	HF322N	19	HF322NR	20	3	10	—	—	7½	15	10
	100	HF323N	25	HF323NR	26	7½	15	—	—	15	30	20
	200	HF324N	49	HF324NR	50	15	—	—	—	25	60	40
	400	HF325NH <sup>Ⓞ</sup>	137	HF325NRH <sup>Ⓞ</sup>	138	15	—	—	—	50	125	50
	400	HF325N	158	HF325NR	162	15	—	—	—	50	125	50
	600	HF326NH <sup>Ⓞ</sup>	139	HF326NRH <sup>Ⓞ</sup>	142	15	—	—	—	75	200	50
	600	HF326N	161	HF326NR	165	15	—	—	—	75	200	50
	800	HF327N	375	HF327NR	375	—	—	—	—	100	250	50
1200	HF328N	395	HF328NR	388	—	—	—	—	100	250	50	

### 240 Volt Fusible<sup>Ⓟ</sup>

#### 2-Pole, 2-Fuse<sup>Ⓞ</sup> Type 4/4X Stainless<sup>Ⓡ</sup> Type 12 Industrial<sup>Ⓞ</sup> 240 Volt AC/250 Volt DC

	30	HF221S	13	HF221J	13	1½	3	—	—	3	7½	5
	60	HF222S	19	HF222J	19	3	10	—	—	7½	15	10
	100	HF223S	24	HF223J	24	7½	15	—	—	15	30	20
	200	HF224S	48	HF224J	48	15	—	—	—	25	60	40

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

	30	HF321S	14	HF321J	14	1½	3	—	—	3	7½	—
	60	HF322S	20	HF322J	20	3	10	—	—	7½	15	10
	100	HF323S	25	HF323J	25	7½	15	—	—	15	30	20
	200	HF324S	49	HF324J	49	15	—	—	—	25	60	40
	400	HF325S	154	HF325J■	110	15	—	—	—	50	125	50
	600	HF326S	157	HF326J■	161	15	—	—	—	75	200	50
	800	HF327S■	370	HF327J■	365	—	—	—	—	100	250	50

■ Built to order. Allow 2–3 weeks for delivery.

\* In pounds (lbs).

Ⓞ Height reduced switch (45.25 rather than 56 inches in height) for use with 500MCM or smaller conductors.

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

Ⓝ These switches are UL-listed for application on grounded B-phase systems and are suitable for 3-phase motor applications.

Ⓞ When a neutral is required use a field installed neutral kit.

Ⓞ Suitable for use as service entrance equipment.

Ⓞ Also rated Type 3S/3R.

Ⓡ 304 grade stainless steel. See page 18/9 for switches with enclosures constructed from 316 grade stainless steel.

# Switches

## Heavy Duty Safety Switches

### Selection



System	Ampere Rating	Indoor — Type 1			Outdoor — Type 3R			Horsepower Ratings <sup>④</sup>									
		Catalog Number	List Price \$	Ship Wt.* Std. Pkg.	Catalog Number	List Price \$	Ship Wt.* Std. Pkg.	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			

### 600 Volt Fusible<sup>⑤</sup>

2-Pole, 2-Fuse <sup>⑥</sup>		480 Volt AC/600 Volt AC/600 Volt DC															
	30	HF261		15	HF261R		15	3	7½	—	—	3	10	—	—	5	15
	60	HF262		20	HF262R		20	5	20	—	—	10	25	—	—	10	30
	100	HF263		26	HF263R		27	10	30	—	—	15	40	—	—	20	50
	400	HF265■		149	HF265R■		152	—	50	—	—	50	—	—	—	40	50
	600	HF266■		150	HF266R■		155	—	50	—	—	50	—	—	—	50	50

3-Pole, 3-Fuse		480 Volt AC/600 Volt AC/250 Volt DC <sup>①</sup>															
	30	HF361		14	HF361R		15	3	7½	5	15	3	10	7½	20	5	—
	30	HF361L <sup>②</sup>		19	HF361RL <sup>②</sup>		20	3	7½	5	15	3	10	7½	20	5	—
	60	HF362		19	HF362R		20	5	20	15	30	10	25	15	50	10	30 <sup>③</sup>
	60	—	—	—	HF362RL <sup>②</sup>		25	5	20	15	30	10	25	15	50	10	30 <sup>③</sup>
	100	HF363		24	HF363R		25	5	20	25	60	15	40	30	75	20	50 <sup>③</sup>
	200	HF364		48	HF364R		49	25	50	50	125	30	50	60	150	40	50
	400	HF365H <sup>②</sup>		136	HF365RH <sup>②</sup>		137	—	—	100	250	—	—	125	350	50	—
	400	HF365		154	HF365R		157	—	—	100	250	—	—	125	350	50	—
	600	HF366H <sup>②</sup>		138	HF366RH <sup>②</sup>		141	—	—	150	400	—	—	200	500	50	—
	600	HF366		157	HF366R		161	—	—	150	400	—	—	200	500	50	—
800	HF367		365	HF367R		365	—	—	200	500	—	—	250	500	50	—	
1200	HF368		383	HF368R		385	—	—	200	500	—	—	250	500	50	—	

3-Pole, 3-Fuse and Solid Neutral		480 Volt AC/600 Volt AC/250 Volt DC <sup>①</sup>															
	30	HF361N		14	HF361NR		15	3	7½	5	15	3	10	7½	20	5	—
	60	HF362N		19	HF362NR		20	5	20	15	30	10	25	15	50	10	30 <sup>③</sup>
	100	HF363N		25	HF363NR		26	10	30	25	60	15	40	30	75	20	50 <sup>③</sup>
	200	HF364N		49	HF364NR		50	25	50	50	125	30	50	60	150	40	50
	400	HF365N		158	HF365NR		162	—	—	100	250	—	—	125	350	50	—
	600	HF366N		161	HF366NR		165	—	—	150	400	—	—	200	500	50	—
	800	HF367N		375	HF367NR		375	—	—	250	500	—	—	250	500	50	—
1200	HF368N		395	HF368NR		388	—	—	250	500	—	—	250	500	50	—	

### 600 Volt Fusible<sup>⑤</sup> (For 2-Pole Applications use outside poles of 3-Pole Switches)

2-Pole, 2-Fuse <sup>⑥</sup>		480 Volt AC/600 Volt AC/600 Volt DC															
Ampere Rating	Catalog Number	Type 4/4X Stainless <sup>⑦</sup>			Type 12 Industrial <sup>⑧</sup>			3	7½	—	—	3	10	—	—	5	15
		List Price \$	Ship Wt.* Std. Pkg.	Catalog Number	List Price \$	Ship Wt.* Std. Pkg.											
30	HF261S		15	HF261J■		15	—	—	—	—	3	10	—	—	5	15	
60	HF262S		20	HF262J■		20	—	—	—	—	10	25	—	—	10	30	
100	HF263S■		27	HF263J■		27	—	—	—	—	15	40	—	—	20	50	
400	HF265S■		153	HF265J■		155	—	—	—	—	50	—	—	—	40	50	
600	HF266S■		156	HF266J■		156	—	—	—	—	50	—	—	—	50	50	

3-Pole, 3-Fuse		480 Volt AC/600 Volt AC/250 Volt DC <sup>①</sup>															
	30	HF361S		13	HF361J		14	—	—	5	15	—	—	7½	20	5	—
	60	HF362S		20	HF362J		20	—	—	15	30	—	—	15	50	10	30 <sup>③</sup>
	100	HF363S		25	HF363J		25	—	—	25	60	—	—	30	75	20	50 <sup>③</sup>
	200	HF364S		49	HF364J		49	—	—	50	125	—	—	60	150	40	50
	400	HF365S		158	HF365J		160	—	—	100	250	—	—	125	350	50	—
	600	HF366S		161	HF366J		161	—	—	150	400	—	—	200	500	50	—
	800	HF367S		370	HF367J■		365	—	—	200	500	—	—	250	500	50	—
1200	HF368S■		388	HF368J■		388	—	—	250	500	—	—	250	500	50	—	

■ Built to order. Allow 2–3 weeks for delivery.

\* In pounds (lbs).

① 60-200A 3-Pole switches are also rated 600V DC.

② Height reduced switch (45.25 rather than 56 inches in height) for use with 500MCM or smaller conductors.

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 entrance equipment except for 1200 when used on 480 or 600V grounded wye system.

⑥ Also rated Type 3S/3R.

⑦ Indicates oversized enclosure (30A switch with 60A lugs in a 60A enclosure or 60A switch with 100A lugs in a 100A enclosure).

⑧ 600V DC & 600V DC horsepower rating shown requires (2) poles to be connected in series.

⑨ 304 grade stainless steel. For switches with enclosures constructed from 316 grade stainless steel see page 18/9.

# Switches

## Heavy Duty Safety Switches

Selection



System	Ampere Rating	Indoor - Type 1			Outdoor - Type 3R			Horsepower Ratings							
		Catalog Number	Ship. Wgt.	List Price \$	Catalog Number	Ship. Wgt.	List Price \$	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<sup>④</sup>

#### 2-Pole<sup>③</sup> 480 Volt AC / 600 Volt AC / 600 Volt DC

	30	HNF261	12		HNF261R	13	—	—	7 1/2	—	10	—	5	15
	60	HNF262	19		HNF262R	20	—	—	20	—	25	—	10	30
	100	HNF263	24		HNF263R	25	—	—	30	—	40	—	20	50
	400	HNF265■	109		HNF265R	113	15	—	50	—	50	—	40	50
	600	HNF266■	111		HNF266R■	115	15	—	50	—	50	—	50	50

#### 3-Pole 480 Volt AC / 600 Volt AC / 250 Volt DC

	30	HNF361	12		HNF361R	13	5	10	7 1/2	20	10	30	5	—
	30	—	—	—	HNF361RL <sup>⑥</sup>	19	5	10	7 1/2	20	10	30	5	—
	60	HNF362H <sup>⑦</sup>	11		HNF362RH <sup>⑦</sup>	11	10	20	20	50	20	40	10	—
	60	HNF362 <sup>⑦⑧</sup>	18		HNF362R <sup>⑦⑧</sup>	19	10	20	20	50	25	60	10	30 <sup>②</sup>
	60	—	—	—	HNF362RL <sup>⑦⑧</sup>	24	10	20	20	50	25	60	10	30 <sup>②</sup>
	100	HNF363 <sup>⑦⑧</sup>	23		HNF363R <sup>⑦⑧</sup>	24	15	40	30	75	40	100	20	50 <sup>②</sup>
	200	HNF364 <sup>①</sup>	46		HNF364R <sup>①</sup>	47	15	60	50	125	50	150	40	50
	400	HNF365	114		HNF365R	118	15	125	50	250	50	350	50	—
	600	HNF366	116		HNF366R	120	15	200	50	400	50	500	50	—
	800	HNF367	295		HNF367R	295	15	250	50	500	50	500	50	—
1200	HNF368	305		HNF368R	307	15	250	50	500	50	500	50	—	

### 600 Volt Non-Fusible<sup>④</sup>

#### 2-Pole<sup>③</sup> 480 Volt AC / 600 Volt AC / 600 Volt DC

	Ampere Rating	Type 4 / 4X Stainless <sup>⑧</sup>		Type 12 Industrial <sup>⑤</sup>		1-Phase	3-Phase	240 Volt	480 Volt	600 Volt	250V DC	600V DC	
		Cat. No.	Wgt.	Cat. No.	Wgt.								
	30	HNF261S	13	HNF261J	13	—	—	7 1/2	—	10	—	5	15
	60	HNF262S	20	HNF262J	20	—	—	20	—	25	—	10	30
	100	HNF263S■	25	HNF263J■	25	—	—	30	—	40	—	20	50
	400	HNF265S■	113	HNF265J■	114	15	—	50	—	—	—	40	50
	600	HNF266S■	115	HNF266J■	120	15	—	50	—	—	—	50	50

#### 3-Pole 480 Volt AC / 600 Volt AC / 250 Volt DC

	30	HNF361S	13	HNF361J	13	5	10	7 1/2	20	10	30	5	—
	60	HNF362SH <sup>⑦</sup>	15	HNF362JH <sup>⑦</sup>	14	10	20	20	50	20	40	10	—
	60	HNF362S <sup>⑦⑧</sup>	19	HNF362J <sup>⑦⑧</sup>	19	10	20	20	50	25	60	10	30 <sup>②</sup>
	100	HNF363S <sup>⑦⑧</sup>	24	HNF363J <sup>⑦⑧</sup>	24	15	40	30	75	40	100	20	50 <sup>②</sup>
	200	HNF364S <sup>①</sup>	47	HNF364J <sup>①</sup>	47	15	60	50	125	50	150	40	50
	400	HNF365S	118	HNF365J	119	15	125	50	250	50	350	50	50
	600	HNF366S	120	HNF366J	120	15	200	50	400	50	500	50	50
	800	HNF367S	295	HNF367J■	295	15	250	50	500	50	500	50	50
	1200	HNF368S	310	HNF368J	310	15	250	50	500	50	500	50	50

■ Built to order. Allow 2-3 weeks for delivery.

① Also rated 600V DC.

② Compact switch (11.1"H, 6.6"W box less cover and handle).

③ Short circuit withstand rating—100,000 RMS sym. amps.

④ Use 3-Pole switch for 200A application.

⑤ Suitable for use as service entrance equipment except for 1200 when used on a 480 or 600V grounded wye system.

⑥ Also rated type 3S / 3R.

⑦ Indicates oversized enclosure (30A switch in a 60A enclosure or a 60A switch in a 100A enclosure).

⑧ 600V DC and 600V DC horsepower rating shown requires (2) poles to be connected in series.

⑨ 304 grade stainless steel. For switches with enclosures constructed from 316 grade stainless steel see page 18/9.

# Switches

## Heavy Duty Safety Switches

### Type 4/4X & 12 with Viewing Window

#### 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 (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	Catalog Number	List Price \$	Ship. Weight <sup>①</sup>	Maximum Horsepower Ratings <sup>③</sup>					
					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	DC	DC
<b>3-Pole, 3 Wire Fusible, Type 12<sup>④⑤</sup></b>					<b>600 Volt AC / 250 Volt DC<sup>②</sup></b>					
	30	HF361JW		17	3	7 1/2	15	20	5	—
	60	HF362JW		22	10	15	30	50	10	30 <sup>⑥</sup>
	100	HF363JW		26	15	30	60	75	20	50 <sup>⑥</sup>
	200	HF364JW		53	—	60	125	150	40	50
	400	HF365JW		166	—	125	250	350	50	—
	600	HF366JW		168	—	200	400	500	50	—
<b>3-Pole, 3 Wire Non-Fusible, Type 12<sup>④⑤</sup></b>					<b>600 Volt AC / 250 Volt DC<sup>②</sup></b>					
	30	HNF361JW		14	3	10	20	30	5	—
	60	HNF362JW		21	10	20	50	60	10	30 <sup>⑥</sup>
	100	HNF363JW		25	15	40	75	100	20	50 <sup>⑥</sup>
	200	HNF364JW		51	15	60	125	150	40	50
	400	HNF365JW		133	15	125	250	350	50	—
<b>3-Pole, 3 Wire Fusible, Type 4X Stainless Steel<sup>⑥⑦</sup></b>					<b>600 Volt AC / 250 Volt DC<sup>②</sup></b>					
	30	HF361SW		17	3	7 1/2	15	20	5	—
	60	HF362SW		23	10	15	30	50	10	30 <sup>⑥</sup>
	100	HF363SW		28	15	30	60	75	20	50 <sup>⑥</sup>
	200	HF364SW		55	—	60	125	150	40	50
	400	HF365SW		168	15	125	250	350	50	—
<b>3-Pole, 3 Wire Non-Fusible, Type 4X Stainless Steel<sup>⑥⑦</sup></b>					<b>600 Volt AC / 250 Volt DC<sup>②</sup></b>					
	30	HNF361SW		15	3	10	20	30	5	—
	60	HNF362SW		23	10	20	50	60	10	30 <sup>⑥</sup>
	100	HNF363SW		27	15	40	75	100	20	50 <sup>⑥</sup>
	200	HNF364SW		54	15	60	125	150	40	50
	400	HNF365SW		134	15	125	250	350	50	—

① In pounds (lbs).

② 200A switches are also rated 600V DC.

③ Maximum HP ratings listed apply only when time delay fuses are used.

④ Also rated 3S/3R for outdoor use.

⑤ All switches are suitable for use as service entrance equipment. Use outside poles of 3-pole switch for 2-pole application.

⑥ 600V DC and 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 see page 18/9.

# Switches

## Heavy Duty Safety Switches

### Type VBII 4 & 6 Pole Heavy Duty Safety Switches

#### 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. All 4 & 6 pole switches are service entrance rated.

#### Description

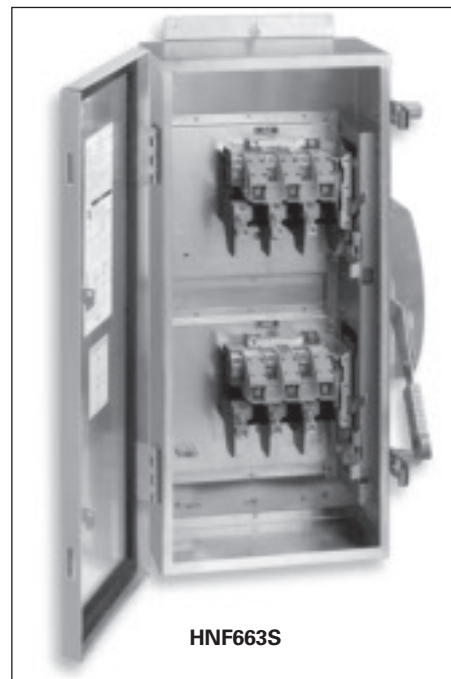
4 & 6 pole switches are available in 30-200A ratings and in both fusible and non-fusible versions. 4-pole switches are supplied with either Type 1 or Type 12/3R enclosures. 6-pole switches are available with either Type 12/3R or Type 4X stainless steel enclosures.

#### Standards

- UL & CUL listed under file #E4776
- Meets UL98 for enclosed switches
- 4 & 6 Pole switches are suitable for use as service entrance
- Meets NEMA Standard KS-1 for enclosed switches
- Meets NEC 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<sup>①</sup>
- Tangential knockouts (Type 1, 4-pole switches)



HNF663S

#### 4 Pole Type VBII Switches<sup>①②</sup>

System	Amp Rating	Indoor Type 1			Type 12/3R Industrial			Horsepower Ratings <sup>③</sup>								
		Catalog Number	List Price \$	Ship Wt. (lbs.)	Catalog Number	List Price \$	Ship Wt. (lbs.)	240V, 2Ø, 4W		240V 3Ø		480V, 3Ø		600V, 3Ø		250V DC
								Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	
<b>Fusible 600 Volt AC, 250 Volt DC — 4 Pole, 4 Fuse<sup>④</sup></b>																
	30	HF461		36	HF461J		36	3	10	3	7½	5	15	7½	20	5
	60	HF462		40	HF462J		40	7½	20	7½	15	15	30	15	50	10
	100	HF463		43	HF463J		43	15	30	15	30	25	60	30	75	20
	200	HF464		88	HF464J		88	25	50	25	60	50	125	60	150	40

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

	30	HNF461		32	HNF461J		32	—	10	—	10	—	20	—	30	5
	60	HNF462		34	HNF462J		34	—	20	—	20	—	50	—	60	10
	100	HNF463		36	HNF463J		36	—	30	—	40	—	75	—	100	20
	200	HNF464		78	HNF464J		78	—	50	—	60	—	125	—	150	40

#### 6 Pole Type VBII Switches<sup>①②</sup>

System	Amp Rating	Type 12/3R Industrial			Type 4X Stainless Steel			Horsepower Ratings <sup>③</sup>								
		Catalog Number	List Price \$	Ship Wt. (lbs.)	Catalog Number	List Price \$	Ship Wt. (lbs.)	240V 3Ø		480V, 3Ø		600V, 3Ø		250V DC		
								Std.	Max.	Std.	Max.	Std.	Max.			
<b>Fusible 600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse<sup>④</sup></b>																
	30	HF661J		37	HF661S		37	3	7½	5	15	7½	20	5		
	60	HF662J		41	HF662S		41	7½	15	15	30	15	50	10		
	100	HF663J		44	HF663S		44	15	30	25	60	30	75	20		
	200	HF664J		90	HF664S		90	25	60	50	125	60	150	40		

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

	30	HNF661J		33	HNF661S		33	—	10	—	20	—	30	5
	60	HNF662J		35	HNF662S		35	—	20	—	50	—	60	10
	100	HNF663J		37	HNF663S		37	—	40	—	75	—	100	20
	200	HNF664J		80	HNF664S		80	—	60	—	125	—	150	40

■ Built to order. Allow 2-3 weeks for delivery.

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

② All 4 & 6 pole VBII switches are suitable for use as service equipment when a neutral is installed or equipment ground kit is properly connected.

③ Dual horsepower ratings: Std. – applies when non-time-delay fuses are installed. Max. – applies when time delay fuses are installed.

④ 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.

# Switches

## Heavy Duty Safety Switches

### Special Application Switches / Interlocked Receptacle Switches

#### 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 are UL listed under file #E4776. Those with a viewing window are also CSA certified under file #1079316.

#### Description<sup>①②</sup>

Type 12 and 4/4X Receptacle Safety Switches are available with 3-phase, 4-wire grounded type Crouse-Hinds Arkite™ 2 or Pyle-National receptacle, 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.



### Crouse-Hinds Interlocked Receptacle Switches

Ampere Rating <sup>⑤</sup>	Type 12 <sup>⑥</sup>		Type 4/4X <sup>⑥</sup>		Shipping Weight Std. Pkg. <sup>④</sup>	Accepts Crouse-Hinds Arkite <sup>®</sup> Plug Catalog Number
	Catalog Number	List Price \$	Catalog Number	List Price \$		

#### 240V Fusible, 3-Pole, 3-Wire

30	HF321JCH		HF321SCH▲		23	APJ3485 & NPJ3485
60	HF322JCH		HF322SCH▲		30	APJ6485 & NPJ6485
100	HF323JCH		HF323SCH▲		36	APJ10487 & NPJ10487

#### 600V Fusible, 3-Pole, 3-Wire

30	HF361JCH		HF361SCH		24	APJ3485 & NPJ3485
60	HF362JCH		HF362SCH		30	APJ6485 & NPJ6485
100	HF363JCH		HF363SCH▲		36	APJ10487 & NPJ10487

#### 600V Non-Fusible, 3-Pole, 3-Wire

30	HNF361JCH▲		HNF361SCH▲		22	APJ3485 & NPJ3485
60	HNF362JCH		HNF362SCH		29	APJ6485 & NPJ6485
100	HNF363JCH▲		HNF363SCH▲		35	APJ10487 & NPJ10487

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

30	HF361JCHW▲		HF361SCHW▲		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▲		22	APJ3485 & NPJ3485
60	HNF362JCHW		HNF362SCHW▲		29	APJ6485 & NPJ6485
100	HNF363JCHW▲		HNF363SCHW▲		35	APJ10487 & NPJ10487

### Pyle-National Interlocked Receptacle Switches 3-Poles Fusible and Non-Fusible

Ampere Rating		Voltage Rating	Type 12 Catalog Number <sup>⑥</sup>	List Price \$	Type 12	List Price \$	Shipping Weight Std. Pkg. <sup>④</sup>	Accepts Pyle-National QuelArc™ <sup>②③</sup> Plugs Plug Catalog Number
Switch	Receptacle				Stainless Steel Catalog Number <sup>⑦</sup>			
30	30	600 (F) 600 (N-F)	HF361JPN▲		HF361SPN▲		23	JPD-83046
			HNF361JPN		HNF361SPN		21	
60	60	240 (F) 600 (F) 600 (N-F)	HF322JPN▲		—		28	JPD-116046
			HF362JPN▲		HF362SPN▲		28	
			HNF362JPN		HNF362SPN		27	

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

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

② Indicates plug with maximum diameter cable bushing.

③ QuelArc™ is a registered trademark of the Pyle-National Company.

④ In pounds (lbs.).

⑤ Ampere rating of both switch and receptacle.

⑥ Also rated Type 3R/3S.

⑦ Enclosure is constructed of Type 304 stainless steel.



### Application

Siemens Non-metallic and 316 grade stainless steel switches provide a superior level of corrosion resistance to assure trouble free performance in the most severe conditions. 316 grade stainless steel provides increased corrosion resistance when compared to 304 grade, especially in atmospheres containing a high level of chlorine commonly encountered in marine and waste management applications. Our non-metallic enclosures are constructed from fiberglass reinforced polyester and are extremely resistant to a wide range

of corrosive atmospheres. They allow a wide range of operating temperatures and their insulating properties virtually eliminate problems caused by internal condensation.

### Description

30-200A, 600V Max, fusible and non-fusible switches are available in both non-metallic and 316 grade stainless steel versions. All are supplied with factory installed ground bars as standard. Viewing windows are also available in the stainless offering.



### Type 4/4X Non-Metallic

Ampere Rating	Catalog Number	Ship Weight Std. pkg. (lbs.)	List Price \$	Horsepower Rating—3-Phase						250 Volts DC	600 Volts DC
				240 Volt AC		480 Volt AC		600 Volt AC			
				Std.	Max.	Std.	Max.	Std.	Max.		
<b>3-Pole, 4-Wire, 240 Volt Fusible, Type 4X<sup>⑤</sup></b>											
30	HF321NX	21		3	7½	—	—	—	—	5	—
60	HF322NX▲	22		7½	15	—	—	—	—	10	—
<b>3-Pole, 4-Wire, 600 Volt AC Fusible, Type 4X<sup>②③⑤</sup></b>											
30	HF361NX	21		3	7½	5	15	7½	20	5	15 <sup>④</sup>
60	HF362NX	22		7½	15	15	30	15	50	10	30 <sup>④</sup>
100	HF363NX▲ <sup>①</sup>	39		15	30	25	60	30	75	20	50 <sup>④</sup>
200	HF364NX▲ <sup>①</sup>	83		25	60	50	125	60	150	40	50
<b>3-Pole, 3-Wire, 600 AC Volt Non-Fusible,<sup>①</sup> Type 4X<sup>②③</sup></b>											
30	HNF361X	20		—	7½	—	20	—	30	5	15 <sup>④</sup>
60	HNF362X	20		—	15	—	50	—	60	10	30 <sup>④</sup>
100	HNF363X▲	38		—	30	—	75	—	100	20	50 <sup>④</sup>
200	HNF364X▲	81		—	60	—	125	—	150	40	50

### Type 4/4X 316 Grade Stainless Steel

Ampere Rating	Standard		With Viewing Window		Ship Weight (lbs.)	Horsepower Rating—3-Phase						250 Volts DC	600 Volts DC
	Catalog Number	List Price \$	Catalog Number	List Price \$		240 Volt AC		480 Volt AC		600 Volt AC			
						Std.	Max.	Std.	Max.	Std.	Max.		
<b>240V AC, 250V DC Fusible 3-Pole, 3-Wire</b>													
30	HF321SS▲		—	—	15	3	7½	—	—	—	—	5	—
60	HF322SS▲		—	—	19	7½	15	—	—	—	—	10	—
100	HF323SS▲		—	—	27	15	30	—	—	—	—	20	—
200	HF324SS▲		—	—	48	25	60	—	—	—	—	40	—
<b>600V AC, 250V DC Fusible 3-Pole, 3-Wire<sup>③</sup></b>													
30	HF361SS		HF361SSW		17	3	7½	5	15	7½	20	5	—
60	HF362SS		HF362SSW▲		21	7½	15	10	30	15	50	10	30 <sup>④</sup>
100	HF363SS		HF363SSW▲		28	15	30	25	60	30	75	20	50 <sup>④</sup>
200	HF364SS		HF364SSW▲		54	25	60	50	125	60	150	40	50
<b>600V AC, 250 V DC Non-Fusible 3-Pole, 3-Wire<sup>①③</sup></b>													
30	HNF361SS		HNF361SSW		15	—	10	—	20	—	30	5	—
60	HNF362SS		HNF362SSW▲		21	—	20	—	50	—	60	10	30 <sup>④</sup>
100	HNF363SS		HNF363SSW▲		26	—	40	—	75	—	100	20	50 <sup>④</sup>
200	HNF364SS		HNF364SSW▲		51	—	60	—	125	—	150	40	50

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

① Also used for 240 volt applications.

② Add "L" to end of catalog number for switches less line & load lugs with mounting hardware for crimp type or copper body lugs.

③ 200A switches are also rated 600V DC max.

④ 600V DC voltage and horsepower rating shown requires (2) poles to be connected in series.

⑤ Supplied with factory installed neutral.

# Switches

## General and Heavy Duty Safety Switches

### Accessories



HR612

#### Class R Fuse Clip Kits

All General Duty and 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

Catalog Number	List Price \$	Description
GSRK321		30A, 240V Kit (GD only)
HR21		30A, 240V Kit (HD only)
HR612		30A, 600V Kit/60A, 240V Kit
HR62		60A, 600V Kit
HR63		100A Kit
HR64		200A Kit
HR656		400A/600A Kit

#### Class J Fuse

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. All 200-600A, 240V fusible General Duty switches can also be field converted to accept Class J fuses.



HT63

#### Class T Fuse Adapter Kits

All 200-600A, General Duty and 100-1200A Heavy Duty Switches are field convertible to accept Class T fuses. 400-800A 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<sup>①</sup>

Catalog Number	List Price \$	Description
HT23		100A, 240V Kit
HT63		100A, 600V Kit
HT24		200A, 240V Kit
HT64▲		200A, 600V Kit
TFAK82		1200A, 240V Kit

#### Neutral Kits

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

#### Neutral Kits

Switch Ampere Rating	Kit Catalog Number	List Price \$
30 GD	W410190	
30 HD, 60 GD	HN612	
60, 100 HD, 100 GD	HN623	
200	HN64	
400 & 600	HN656	
800 & 1200	HN678	



HN612

HN264

#### 200% Neutral Kits

UL listed 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

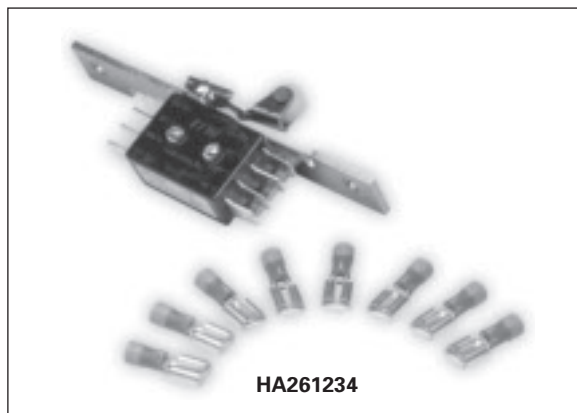
Switch Ampere Rating	Kit Catalog Number	List Price \$	Wire Range Line & Load Lugs (Cu/Al)
100	HN263		(2) #14-1/0 AWG
200	HN264		(2) #6 AWG-300 Kcmil
400	HN656		(2) 1/0 AWG-750 Kcmil or (4) 1/0 AWG-250 Kcmil
600	HN678		(4) 1/0 AWG-750 Kcmil

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

① One kit per pole required.



HA161234



HA261234

### 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 Rating	Aux. Switch Catalog Number	List Price \$	Kit Ampere Rating			Kit Horsepower Rating		
			125V AC Max.	250V AC Max.	28V DC Max.	125V AC Max.	250V AC Max.	28V DC Max.

#### With 1 NO & 1 NC Isolated Contacts

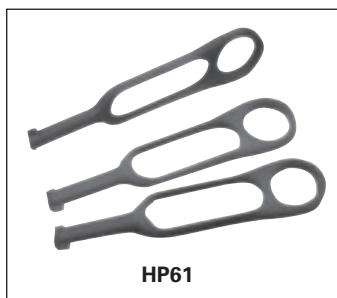
30-200	HA161234		10	10	—	1/2	3/4	—
400-1200	HA165678		10	10	—	1/2	3/4	—

#### With 2 NO & 2 NC Isolated Contacts

30-200	HA261234		10	10	7	1/2	3/4	—
400-1200	HA265678		10	10	7	1/2	3/4	—

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

30-200	HA361234		10	10	—	1/2	3/4	—
400-1200	HA365678		10	10	—	1/2	3/4	—



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 Catalog Number	List Price \$
30	HP61	
60	HP62▲	
100	HP63▲	

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

# Switches

## General and Heavy Duty Safety Switches

### Accessories

#### Copper Lug Kits

Heavy duty switches are UL approved to accept field installed copper lug kits.

#### Copper Lug Kits

Switch Ampere Rating	Copper Lug Catalog Number	List Price \$	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
400-1200	HLC65678		(1) Lugs/Kit #1/0 AWG-600 Kcmil Cu

#### Equipment Ground Kits

Equipment Ground Lug Kits are available for all General and 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

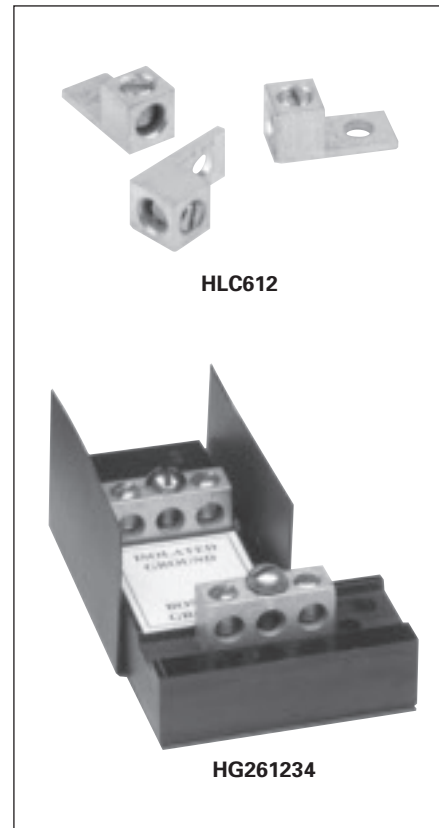
Switch Ampere Rating	Catalog Number	List Price \$	Number of Terminals	Wire Range Per Terminal (Cu/Al)
30A GD	GSGK60		2	#14-8 AWG
60-200 GD	HG61234		2	#14-4 AWG
30-200 HD	HG61234		2	#14-4 AWG
400 & 600	HG656		4	#6 AWG-250 Kcmil
800-1200	HG678		8	#6 AWG-250 Kcmil

#### 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	Catalog Number	List Price \$	Number of Terminals		Wire Range Per Terminal (Cu/Al)
			Isolated	Grounded	
30-200	HG261234		2	2	#14-4 AWG
400-600	HG2656		4	4	#14-2/0 AWG



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



SSH150



ECHV300



ECHS200



SL0420

### 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 rained.

### Hubs

Conduit Size (inches)	Catalog Number	List Price \$	Used On
-----------------------	----------------	---------------	---------

#### Type 3R<sup>①</sup>

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

#### Type 4/4X<sup>②</sup>

Cover	Catalog Number	List Price \$	Used On
3/4	SSH075		30-200A
1	SSH100		
1 1/4	SSH125		
1 1/2	SSH150		
2	SSH200		

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

### Compression Lug Mounting & Neutral Barrier Kit

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.

### Compression Lug Mounting<sup>③</sup> and Neutral Barrier Kits

Switch Ampere Rating	Catalog Number	List Price \$	Kit Description
30	HCL612		Neutral Barrier Kit
60 & 100	HCL623		Neutral Barrier Kit
400 <sup>④</sup>	HCL65		1 Pole, Compression Lug Mounting Kit
400 & 600 <sup>⑤</sup>	HCL65678■		1 Pole, Compression Lug Mounting Kit
800 & 1200 <sup>⑥</sup>	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. List Price **\$83.00**.

### Kirk-Key Interlocks

Kirk-Key Interlocks can be factory-installed only on Type VBII Heavy Duty Safety Switches. Interlocks are used to prevent the operator from making an unauthorized operation. The interlock system is a simple method of applying key interlocks to safety switches so as to require operation in a predetermined sequence. List Price **\$1925.00**.

Before consulting the factory, the following information is required:

- User name and address
- Key number from lock assemblies on any existing locks to be interlocked with
- Complete locking scheme

Consult factory for delivery.

### 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) <sup>⑥</sup>	#14-8 AWG (Cu/Al)
30HD	#14-6 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
60 <sup>⑦⑧</sup>	#14-3 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
100 <sup>⑨</sup>	#14-1/0 AWG (Cu/Al)	#14-1/0 AWG (Cu/Al)
200 <sup>⑩</sup>	#6 AWG-250 Kcmil (Cu/Al)	#6 AWG-300 Kcmil (Cu/Al)
400 <sup>⑪</sup>	1/0 AWG-750 Kcmil (Cu/Al) or (2) 1/0 AWG-250 Kcmil (Cu/Al)	(1) 1/0 AWG-750 Kcmil (Cu/Al) or (2) 1/0 AWG-250 Kcmil (Cu/Al)
600 <sup>⑫</sup>	(2) 1/0 AWG-750 Kcmil (Cu/Al) or (4) 1/0 -250 Kcmil (Cu/Al)	(2) 1/0 AWG-750 Kcmil (Cu/Al) or (4) 1/0 AWG-250 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 2-3 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 lugs are UL approved 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 UL approved 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.

# Switches

## Enclosed Switches

### Rotary Disconnect Switches in Non-Metallic Enclosures

#### Application

Siemens Rotary Disconnect switches are ideally suited for use as "in sight" disconnects for motor loads and other electrical equipment which is remotely located from its branch circuit protective device. All are supplied in non-metallic enclosures which are UL & CUL or CSA approved for a wide range of both indoor and outdoor environments. All meet UL508 requirements.

#### Description

16–125A non-fusible switches are available in fiberglass reinforced polycarbonate enclosures which are UL approved as Type 12 & 4X and for either indoor or outdoor use. All are horsepower and load break rated. All are panel mounted and are either supplied with factory installed aux. contacts or will accept contact kits. All are compact in size while providing ample wiring space for copper line & load conductors.

#### Siemens Enclosed Rotary Disconnect Switches

- 16–125A, Non-Fusible
- 600VAC max. rated (except catalog no. HNF3100CX is rated 480VAC max.)
- Available in both Type 12 and 4X non-metallic enclosures
- Both screw and hinged cover designs available
- Listed and marked "suitable for use as motor disconnect" per NEC Section 430-109
- Screw cover switches are UL listed under File No. E47705 and are CSA certified under File No. 203576
- IEC 60947-3 rated and CE marked (enclosures are IP65 rated)
- Hinged door switches are UL listed for multiple line and load conductors per phase in 30–100A ratings. They are UL & CUL listed under File No. E191706



- HP rated
- Rotary handles are available in black, red, and yellow and in pistol grip designs
- 16–63A screw cover switches have factory installed ground bars. All hinge cover switches accept ground lug kits
- Screw cover switches are provided with knockouts
- Padlockable in OFF position with up to (3) padlocks

Ampere Rating	Catalog Number				Shipping Weight <sup>①</sup>	Horsepower Ratings			
	3 Pole, 3 Wire	List Price \$	3 Pole, 3 Wire with (1) NO & (1) NC Aux. Contact <sup>②③</sup>	List Price \$		240V AC		480V AC	600V AC
						1 Phase	3 Phase	3 Phase	3 Phase

#### Non-Fusible, Type 1, 4X & 12K<sup>②</sup> with Screw Cover and Black Rotary Handle 600V AC Max.<sup>⑤</sup>

16	3LD2064-0TB51-0US2		3LD2064-1GP51-0US2		1	1½	3	7½	10
25	3LD2164-0TB51-0US2		3LD2164-1GP51-0US2		1	3	7½	10	15
30	3LD2264-0TB51-0US2		3LD2264-1GP51-0US2		1	3	10	20	20
30	—	—	3LD2264-1TS51-0US2 <sup>⑥</sup> ▲		1	3	10	20	20
30	—	—	3LD2264-2TW51-0US2 <sup>⑦</sup> ▲		1	3	10	20	20
63	3LD2565-0TB51-0US2		3LD2565-1GP51-0US2▲		3	10	15	40	50
100	3LD2766-0TB51-0US2		3LD2766-1GP51-0US2▲		6	—	30	60	75
125	3LD2866-0TB51-0US2		3LD2866-1GP51-0US2▲		6	—	40	75	100

#### Non-Fusible, Type 1, 4X & 12K<sup>②</sup> with Screw Cover and Red and Yellow Rotary Handle 600V AC Max.<sup>⑤</sup>

16	3LD2064-0TB53-0US2		3LD2064-1GP53-0US2		1	1½	3	7½	10
25	3LD2164-0TB53-0US2		3LD2164-1GP53-0US2		1	3	7½	10	15
30	3LD2264-0TB53-0US2		3LD2264-1GP53-0US2		1	3	10	20	20
30	—	—	3LD2264-1TS53-0US2 <sup>⑥</sup> ▲		1	3	10	20	20
30	—	—	3LD2264-2TW53-0US2 <sup>⑦</sup> ▲		1	3	10	20	20
63	3LD2565-0TB53-0US2		3LD2565-1GP53-0US2▲		3	10	15	40	50
100	3LD2766-0TB53-0US2▲		3LD2766-1GP53-0US2▲		6	—	30	60	75
125	3LD2866-0TB53-0US2▲		3LD2866-1GP53-0US2▲		6	—	40	75	100

#### Non-Fusible, Type 4X<sup>④</sup> with Hinged Door and Black Pistol Grip Rotary Handle 480V AC Max.<sup>③⑤</sup>

30	HNF3030CX		—		4	3	7½	15	20
60	HNF3060CX		—		4	10	15	40	50
100	HNF3100CX		—		5	15	25	50	—

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

① Carton quantity of (1). Shipping weight in pounds (lbs.).

② Approved for both indoor and outdoor use. No cover interlock provided.

③ 30 and 60A switches are also rated 600V AC.

④ Also rated as Type 12 and UL approved for both indoor and outdoor use. Defeatable cover interlock provided.

⑤ Screw cover enclosures are constructed from Makrolon 9425. Hinged cover enclosures are constructed from fiberglass reinforced polycarbonate.

⑥ Switch is supplied with (2) NO and no NC aux. contacts.

⑦ Switch is supplied with (4) NO and no NC aux. contacts. Ground bar is not provided or available.

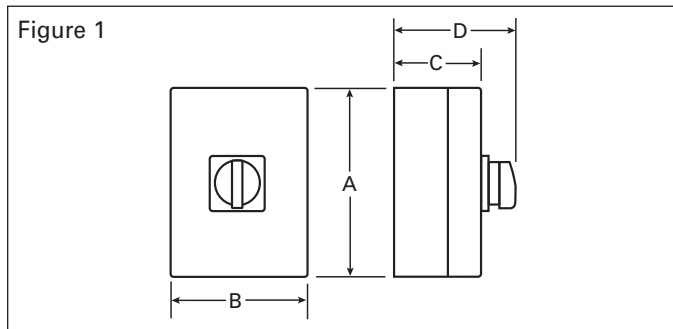
⑧ Aux. contacts break about 3 Ms before and make about 3 Ms after main switch contacts.

⑨ 6P, 25A, switch with 1 NO & 1 NC aux. contacts and a black operating handle is also available. Order catalog number 3LD2165-4VD51 (Discount Code: Pilot Devices).

#### Enclosed Disconnect Switch Dimensions (Inches)\*

Catalog Number	Ampere Rating	Fig. No.	Dimensions			
			A	B	C	D
3LD2064-	16	1	5.52 <sup>④</sup>	3.94	3.19	4.57
3LD2164-	25		5.52 <sup>④</sup>	3.94	3.19	4.57
3LD2264-	30		5.52 <sup>④</sup>	3.94	3.19	4.57
3LD2565-	63		6.93 <sup>⑤</sup>	5.75	4.10	5.87
3LD2766-	100		11.90	8.35	5.36	7.13
3LD2866-	125	11.90	8.35	5.36	7.13	
HNF3030CX	30	2	7.87	7.87	5.20	7.29
HNF3060CX	60		11.77	7.87	5.20	7.29
HNF3100CX	100		11.77	7.87	5.20	7.29

Note: 3LD2 Type switches only have top and bottom end KOs as follows:  
16-30A - 1/2" & 3/4", 63A - 3/4" & 1", 100 & 25A - 1" & 1 1/4"



#### UL and CUL Short Circuit Withstand Ratings

Ampere Rating	Short Circuit Withstand Rating and Fuse Class				
	With Line Side Fusing			With Load Side Fusing <sup>①</sup>	
	5 kA at 600V Max	10 kA at 600V Max	18 kA at 480V Max	5 kA at 480V Max	18 kA at 480V Max
16	—	—	—	—	—
25 & 30	—	—	—	—	—
63	—	—	—	—	—
100 & 125	—	—	—	—	—

#### 3LD2 Type Switches<sup>②</sup>

16	RK5 (50A Max)	—	—	—	—
25 & 30	RK5 (80A Max)	—	—	—	—
63	RK5 (175A Max)	—	—	—	—
100 & 125	—	RK5 (200A Max)	—	—	—

#### HNF Type Switches

30	—	H, K & RK5 (100A Max)	J, T & CC (100A Max)	H, K & RK5 (30A Max)	Ferraz Shawmut A50P or lower let-through semiconductor fuses (60A Max)
60	⑥	H, K & RK5 (150A Max)		H, K & RK5 (60A Max)	Ferraz Shawmut A50P or lower let-through semiconductor fuses (100A Max)
100		⑥			

- ① For use as supplemental protection on the load side of the branch circuit over current protective device.
- ② Ground lug kit has two lugs for #14-4 Cu/Al wire.
- ③ Factory installed ground lugs supplied as follows: 16-30A #14-10 Cu, 63A #14-8 Cu. Ground lug not provided and is not available on catalog numbers 3LD2264-2TW51-0US2 and 3LD2264-2TW53-0US2.
- ④ 6.38 inches high including mounting feet.
- ⑤ 7.85 inches high including mounting feet.
- ⑥ 60 & 100A HNF switches are rated 10kA at 480V max. with line side Class H, K & RK5 150A max. fuses.
- ⑦ Wire range (1) #14-2 AWG 60/75 °C Cu only.
- ⑧ 16-63A 3LD switches are also rated 5kA at 600VAC max when protected by a 3RV type MSP of the same or lesser ampere rating.

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

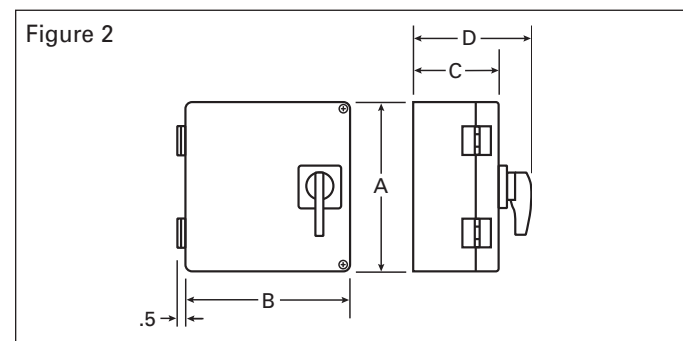
#### Wire ranges 60/75°C Cu Only

#### 3LD2 Type Switches<sup>③</sup>

16 Amps	(1) #18-10 AWG
25-30 Amps	(1) #14-10 AWG
63 Amps	(1) #14-6 AWG
100-125 Amps	(1) #12-1 AWG

#### HNF Type Switches

30 Amps	(1) #14-#10 AWG Solid (1) #14-#4 AWG Stranded Up to (4) #12 AWG Solid Up to (3) #12 AWG Stranded Up to (6) #14 AWG Stranded Up to (4) #14 AWG Stranded with (1) #10 AWG Stranded
60 & 100 Amps	(1) #14-#10 AWG Solid (1) #14-#1 AWG Stranded (2) #6 AWG Stranded Up to (3) #8 AWG Stranded Up to (6) #10 AWG Stranded Up to (6) #12 AWG Solid



#### IEC Fuse and Withstand Ratings

Ampere Rating	gG Fuse Size	Short Circuit Rating
---------------	--------------	----------------------

#### 3LD2 Screw Cover Switches

16	20A	5k Arms
25	25A	10k Arms
32	50A	10k Arms
63	63A	15k Arms
100	100A	20k Arms
125	125A	20k Arms

#### HNF Hinged Cover Switches

30	63A	10k Arms
60	100A	10k Arms
100	100A	10k Arms

#### Accessories

Switch Ampere Rating	Catalog Number	List Price \$	Description
----------------------	----------------	---------------	-------------

#### 3LD2 Type Switches<sup>③</sup>

16-30A	3LD9220-2C	Neutral Kit
63A	3LD9250-2CA	Neutral Kit
100-125A	3LD9280-2C	Neutral Kit

#### HNF Type Switches

30-100A	GSGK60	Ground Lug Kit <sup>②</sup>
30A	LBRA1	Auxiliary Contact Kit (1 NO-1 NC)
60-100A	LBRA2	Auxiliary Contact Kit (1 NO-1 NC)
30-100A	HF63CX <sup>⑦</sup>	Neutral Kit

# Switches

## Disconnect Switches

### Compact Non-Fusible — Rotary and Toggle

#### Features

- 25 -125 Ampere, to 75 hp 480V and 600V
- Rotary and Toggle actuation models
- LBR Type switches are padlockable in the OFF position and are UL & CUL listed under File No. E191706 as manual motor controllers per UL Standard UL508
- 3LD2 Type switches are padlockable in the OFF position and are UL listed under File No. E47705 per UL508 and are CSA certified under File No. 203576
- Base, DIN-rail and door mounting
- Multiple conductor, distribution terminal type rating LBR & LBT Type (40A -100A only)
- IEC 947-1 rated, CE marked
- Listed and marked "suitable as motor disconnect" per NEC Section 430-109

#### Application

Siemens Load Break Switches are listed as manual motor controllers and are suitable as motor disconnects. They are load break rated and act as enclosure disconnects when short circuit protection is provided upstream of the switch. If upstream over current protection is not provided, use a Siemens fusible Type VBII, CFS or MCS Disconnect Switch.

#### Ordering Information

**Door Mounted Switches (Rotary Type Only)** — Order either complete "3LD2" assemblies or individual "LBR" components as follows:

**Complete Assemblies** include switch, handle, and shaft. Certain 25 and 32A assemblies are also available with factory installed neutral blocks and/or aux. contacts. These accessories can also be ordered as field installed kits.

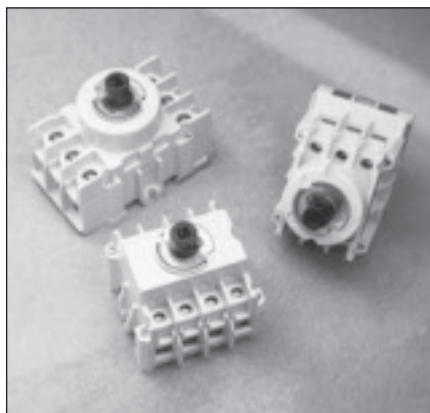
**Individual Components** are ordered as follows:

**25A** — LBR3025D switch + LBRH3 or 4 handle.

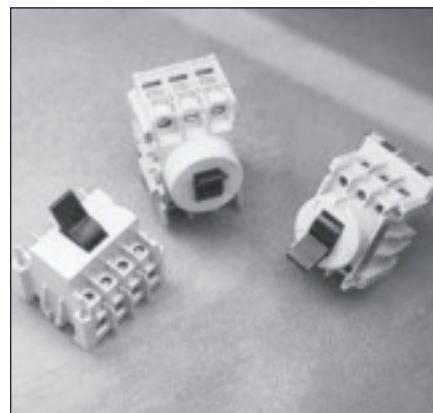
**40–100A** — LBR switch + LBRH3 or 4 handle + LBRD1.

Notes: (LBR Type switches only)

- Aux contacts are available as field installed kits on 25A units only.
- Lugs on 25A units face to the rear and lugs on 40–100A units face toward the front.



Type LBR Rotary Switches



Type LBT Toggle Switches



3LD2254-0TK51

#### Base/DIN Rail Mounted Switches (Rotary or Toggle Type) — Order individual components as follows:

**Toggle** — Order the LBT switch required and a toggle switch cover plate if needed.

**Rotary, Base Mounted with Door Mounted Handle** — Order "LBR" switch + door mounted handle + shaft + any accessories.

**Rotary, Base Mounted with Direct Mounted Handle** — Order "LBR" switch + direct mounted handle.

#### Short Circuit Withstand Ratings

Switch Rating & Type	Max. Line Side Fuse Rating
----------------------	----------------------------

#### 5kA with Line Side Class H, K, or RK5 Fuses

25 & 32A 3LD2	80A Max. at 600V AC Max.
63A 3LD2	175A Max. at 600V AC Max.

#### 10kA with Line Side Class H, K, or RK5 Fuses

25A LBR	30A Max. at 480V AC Max.
40A, 4P LBR & LBT	60A Max. at 480V AC Max.
40 & 60A, 3P LBR & LBT	100A Max. at 480V AC Max.
80 & 100A LBR & LBT	150A Max. at 480V AC Max.

#### 18kA with Line Side Class J, T, or CC Fuses

40–100A, 3P LBR & LBT	100A Max. at 480V AC Max.
-----------------------	---------------------------

**Note:** 3LD2 switches are also rated 5kA at 600V AC Max. when protected by a 3RV motor starter with a FLA rating equal to or less than the switch ampere rating.

#### Door Mounted Complete Assemblies (Operator, Shaft, & Switch) 600V AC Max. ②

Shaft Mounted		4 Hole Mounted		Number of Poles	Ampere Rating	AC Horsepower Ratings				
Catalog Number <sup>③</sup>	List Price \$	Catalog Number <sup>③</sup>	List Price \$			120V 1Ø	240V 1Ø 3Ø	480V 3Ø	600V 3Ø	
—	—	3LD2003-1TP53 <sup>①</sup>		3	16	½	1½	3	7½	10
3LD2154-0TK__		3LD2103-0TK__		3	25	2	3	7½	10	15
3LD2154-1TP__		3LD2103-1TP__		3 <sup>①</sup>						
3LD2154-1TL__		3LD2103-1TL__		3 + N						
3LD2154-2EP__		3LD2103-2EP__		3 + N <sup>①</sup>						
3LD2254-0TK__		3LD2203-0TK__		3	32	2	3	10	20	20
3LD2254-1TL__		3LD2203-1TL__		3 + N						
3LD2555-0TK__		3LD2504-0TK__		3	63	—	10	15	40	50
—	—	3LD2704-0TK__		3	100	—	—	30	60	75
—	—	3LD2804-0TK__		3	125	—	—	40	75	100

■ Built to order. Allow 6–8 weeks for delivery.

① Includes auxiliary contacts (1 NO and 1 NC).

② Handles are IP65 rated and are also UL listed for Type 1, 4X and 12 applications.

③ Add 51 for a black handle or 53 for a red & yellow handle to the end of the catalog number.



# Switches

## Disconnect Switches

Compact Non-Fusible —  
Rotary and Toggle

### 3LD Type Base Mounted Complete Assemblies (Operator, Shaft, & Switch) 600V AC Max.②

Handle Mounting <sup>②</sup>				Number of Poles	Ampere Rating	AC Horsepower Ratings				
Shaft (center hole)		4 Hole				120V 1Ø	240V 1Ø 3Ø	480V 3Ø	600V 3Ø	
Catalog Number <sup>③</sup>	List Price \$	Catalog Number <sup>③</sup>	List Price \$							
—	—	3LD2013-0TK_		3	16	½	1½	3	7½	10
3LD2144-0TK_		3LD2113-0TK_		3	25	2	3	7½	10	15
3LD2144-1TL_		3LD2113-1TL_		3 + N						
3LD2244-0TK_		3LD2213-0TK_		3	32	2	3	10	20	20
3LD2244-1TL53		3LD2213-1TL53		3 + N						
3LD2545-0TK_		3LD2514-0TK_		3	63	—	10	15	40	50
—	—	3LD2714-0TK_		3	100	—	—	30	60	75
—	—	3LD2814-0TK_		3	125	—	—	40	75	100

Note: Shaft length allows a maximum depth from switch mounting surface to the outside of the cover of 15.25" on 25 & 32A switches and of 15.75" on 63-125A switches.



3LD2213-0TK53

### Accessories for Front Mounted 3LD2 Switches

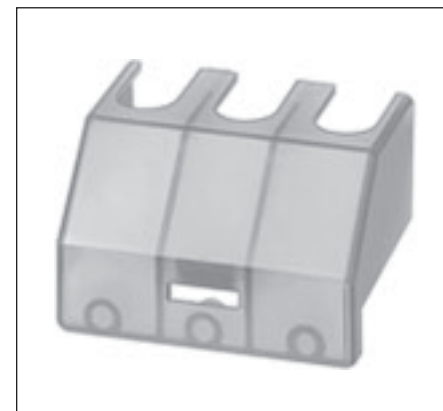
Catalog Number	Description	Switches Used With	List Price \$
3LD9200-5B <sup>⑤</sup> 3LD9200-5BF <sup>⑤</sup>	1 NO, 1 NC Aux. Contact 1 NO, 1 NC Aux. with Gold Plated Contacts	25-125A 25-125A	
3LD9220-2B 3LD9250-2BA 3LD9280-2B	Neutral/Ground Terminal Neutral/Ground Terminal Neutral/Ground Terminal	25 & 32A 63A 100 & 125A	
3LD9220-0B 3LD9250-0BA 3LD9280-0B	4th Pole (leading ON, lagging OFF) 4th Pole (leading ON, lagging OFF) 4th Pole (leading ON, lagging OFF)	25 & 32A 63A 100 & 125A	
3LD9224-1B <sup>①</sup> 3LD9284-1B <sup>①</sup> 3LD9224-3B <sup>①</sup> 3LD9284-3B <sup>①</sup>	Black Handle (4 hole mtg.) Black Handle (4 hole mtg.) Red/Yellow Handle (4 hole mtg.) Red/Yellow Handle (4 hole mtg.)	25 & 32A 63-125A 25 & 32A 63-125A	
3LD9224-1D <sup>①</sup> 3LD9284-1D <sup>①</sup> 3LD9224-3D <sup>①</sup> 3LD9284-3D <sup>①</sup>	Black Handle (shaft mtg.) <sup>④</sup> Black Handle (shaft mtg.) <sup>④</sup> Red/Yellow Handle (shaft mtg.) <sup>④</sup> Red/Yellow Handle (shaft mtg.) <sup>④</sup>	25 & 32A 63-125A 25 & 32A 63-125A	
3LD9221-2A <sup>①</sup> 3LD9251-2A <sup>①</sup> 3LD9281-2A <sup>①</sup> 3LD9221-0A <sup>①</sup> 3LD9251-0A <sup>①</sup>	Terminal Cover 1P (Pack of 4) Terminal Cover 1P (Pack of 4) Terminal Cover 1P (Pack of 4) Terminal Cover 3P (Pack of 4) Terminal Cover 3P (Pack of 4)	25 & 32A 63A 100-125A 25 & 32A 63A	



3LD9220-2C

### Accessories for Base Mounted 3LD2 Switches

Catalog Number	Description	Switches Used With	List Price \$
3LD9200-5C <sup>⑤</sup> 3LD9200-5CF <sup>⑤</sup>	1 NO, 1 NC Aux. Contact 1 NO, 1 NC Aux. with Gold Plated Contacts	25-125A 25-125A	
3LD9220-2C 3LD9250-2CA 3LD9280-2C	Neutral/Ground Terminal Neutral/Ground Terminal Neutral/Ground Terminal	25 & 32A 63A 100 & 125A	
3LD9220-0C 3LD9250-0CA 3LD9280-0C	4th Pole (leading ON, lagging OFF) 4th Pole (leading ON, lagging OFF) 4th Pole (leading ON, lagging OFF)	25 & 32A 63A 100 & 125A	
3LD9224-1B <sup>①</sup> 3LD9284-1B <sup>①</sup> 3LD9224-3B <sup>①</sup> 3LD9284-3B <sup>①</sup>	Black Handle (4 hole mtg.) Black Handle (4 hole mtg.) Red/Yellow Handle (4 hole mtg.) Red/Yellow Handle (4 hole mtg.)	25 & 32A 63-125A 25 & 32A 63-125A	
3LD9224-1D <sup>①</sup> 3LD9284-1D <sup>①</sup> 3LD9224-3D <sup>①</sup> 3LD9284-3D <sup>①</sup>	Black Handle (shaft mtg.) Black Handle (shaft mtg.) Red/Yellow Handle (shaft mtg.) Red/Yellow Handle (shaft mtg.)	25 & 32A 63-125A 25 & 32A 63-125A	
3LD9221-2A <sup>①</sup> 3LD9251-2A <sup>①</sup> 3LD9281-2A <sup>①</sup> 3LD9221-0A <sup>①</sup> 3LD9251-0A <sup>①</sup>	Terminal Cover 1P (Pack of 4) Terminal Cover 1P (Pack of 4) Terminal Cover 1P (Pack of 4) Terminal Cover 3P (Pack of 4) Terminal Cover 3P (Pack of 4)	25 & 32A 63A 100-125A 25 & 32A 63A	



3LD9251-0A

① Handles and line side terminal covers are supplied as standard with 3LD2 switches.

② Add suffix 51 for a black handle or 53 for a red & yellow handle to the catalog number. Handles are 1P65 rated and are also UL listed for Type 1, 4X & 12 applications.

③ Add 51 for a black handle or 53 for a red & yellow handle to the end of the catalog number.

④ Can be used as replacement handles on enclosed 3LD2 switches.

⑤ Aux. contacts break about 30 Ms before and make about 3 Ms after main switch contacts.

Ratings	10A	at 120V AC
	6A	at 240V AC
	1.4A	at 480V AC

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18

# Switches

## Disconnect Switches

### Compact Non-Fusible — Rotary and Toggle

#### Individual Components

#### Rotary and Toggle Switches

Catalog Number	Switch Type	No. of Poles	Ampere Rating	Max AC Volt	AC Horsepower Ratings					List Price \$	
					115V		240V		480V		600V
					1Ø	1Ø	3Ø	3Ø	3Ø		
LBR3025	Rotary	3	25	480	¾	2	5	10	—		
LBR3025D <sup>⑥</sup>	Rotary	3	25	480	¾	2	5	10	—		
LBR3040 <sup>②</sup>	Rotary	3	40	600	2	3	7½	20	25		
LBR3060 <sup>②</sup>	Rotary	3	60	480	2	5	10	25	—		
LBR3080 <sup>②</sup>	Rotary	3	80	600	3	10	20	40	50		
LBR3100 <sup>②</sup>	Rotary	3	100	480	5	15	25	50	—		
LBR4040	Rotary	4	40	480	2	3	7½	20	—		
LBT3040	Toggle	3	40	600	2	3	7½	20	25		
LBT3060	Toggle	3	60	480	2	5	10	25	—		
LBT3080	Toggle	3	80	600	3	10	20	40	50		
LBT3100	Toggle	3	100	480	5	15	25	50	—		
LBT4040	Toggle	4	40	480	2	3	7½	20	—		



Standard Duty Rotary Switch Door Handles



Heavy Duty Rotary Switch Door Handle

#### LBR Type Handles

Catalog Number	Used on Rotary Switches	NEMA Type	Mounting	Marking	Color	Cover Interlock Supplied	Padlockable	List Price \$
<b>Standard Duty</b>								
LBRH2 <sup>②</sup>	All	1	Door	ON/OFF	Black	No	No	
LBRH3 <sup>②</sup>	All	1, 3R, 12, 4X	Door	O/I, ON/OFF	Black	Yes <sup>①</sup>	Yes	
LBRH4 <sup>②</sup>	All	1, 3R, 12, 4X	Door	O/I, ON/OFF	Red/Yel	Yes <sup>①</sup>	Yes	
LBRH9 <sup>②</sup>	All (Pistol Grip Type)	1, 3R, 12, 4X	Door	O/I, ON/OFF	Black	Yes	Yes	
LBRH10 <sup>②</sup>	All (Pistol Grip Type)	1, 3R, 12, 4X	Door	O/I, ON/OFF	Red/Yel	Yes	Yes	
LBRH5	25 Amps	1	Direct Mount	O/I	Black	—	Yes	
LBRH6	3-Pole, 40-60 Amps	1	Direct Mount	O/I	Black	—	Yes	
LBRH7	3-Pole, 80-100 Amps	1	Direct Mount	O/I	Black	—	Yes	
LBRH8	4-Pole, 40-60 Amps	1	Direct Mount	O/I	Black	—	Yes	
<b>Heavy Duty</b>								
CFSSH10B12	All	1, 3R, 12	Door	O/I, ON/OFF	Black	Yes	Yes	
CFSSH10R12	All	1, 3R, 12	Door	O/I, ON/OFF	Red/Yel	Yes	Yes	

#### LBR Type Rotary Shafts

Catalog No	Length In. (mm)	List Price \$
<b>For Standard Duty Handles</b>		
LBR5040	1.57 (40)	
LBR5050	1.97 (50)	
LBR5055	2.17 (55)	
LBR5080	3.15 (80)	
LBR5120	4.72 (120)	
LBR5180	7.09 (180)	
LBR5305	12.00 (305)	
<b>For Heavy Duty Handles</b>		
CFSS5200H	7.9 (200)	
CFSS5400H	15.7 (400)	



Rotary Shafts



Rotary Switch Direct Mount Handles



Toggle Switch Cover Plates

#### 25 Amp, 4th Pole

Used on Catalog No	Catalog No	List Price \$
LBR3025	LBRP25	
LBR3025D	LBRP25D	

#### Auxiliary Switch Kits

Used on Rotary Switch	Catalog Number	Contact Arrangement	List Price \$
LBR3025	LBRA25 <sup>④</sup>	1 NO & 1 NC	
LBR3025D	LBRA25D <sup>④</sup>	1 NO & 1 NC	
LBR3040, LBR3060	LBRA1 <sup>④</sup>	1 NO/1 NC with common point	
LBR3080, LBR3100	LBRA2 <sup>④</sup>	1 NO/1 NC with common point	

#### LBR Type Toggle Switch Cover Plate

Used on Toggle Switches	Catalog Number	List Price \$
LBT3040, LBT3060 LBT3080, LBT3100 LBT4040	LBTCP1 LBTCP2 LBTCP3	

#### LBR Type Rotary Switch Door Mounting Kit (For use with LBRH3 & LBRH4 only)

Used on Rotary Switch	Catalog Number	List Price \$
40-100 Amps	LBRD1	

#### LBR/LBT Neutral Kit<sup>⑤</sup>

Used with Catalog Number	Catalog Number	List Price \$
All	HF63CX	

<sup>①</sup>No cover interlock defeat mechanism provided. To eliminate cover interlock, order additional catalog number LBRDC1.

<sup>②</sup>LBRH2 is IP54 rated. All others are IP65.

<sup>③</sup>Ratings

15.1A resistive at 250V AC max.  
.5A at 125V DC  
.25A at 250V DC  
.5 HP at 250V AC max.

<sup>④</sup>Auxiliary switch contacts break about 30 Ms before and make about 3 Ms after main switch contacts.

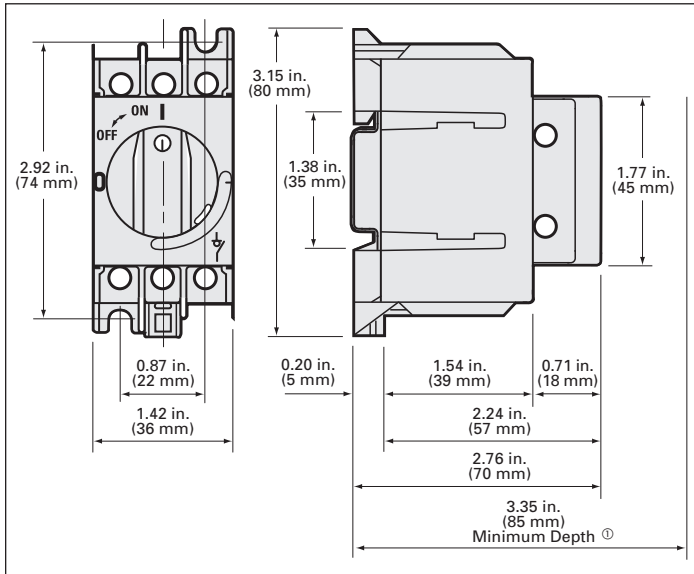
<sup>⑤</sup>Lug wire ranges:

HF63CX — (1) #14-2 AWG 60/75°C Cu only

<sup>⑥</sup>Only door mountable and for use with LBRH3 & 4 handles only.

<sup>⑦</sup>For door mounting of 40–100A LBR switches use door mounting kit LBRD1 & LBRH3 or 4 handle.

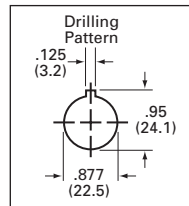
### Dimension Drawings and Wire Ranges



LBR 3025

### Wire Ranges 60/75°C Cu only

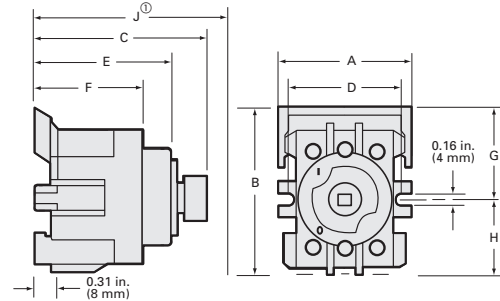
25 Amps LBR	(1) #14 - #10 AWG Solid (1) #14 - #8 AWG Stranded
40 & 60 Amps LBR & LBT	(1) #14 - #10 AWG Solid (1) #14 - #4 AWG Stranded Up to (4) #12 AWG Solid Up to (3) #12 AWG Stranded Up to (6) #14 AWG Stranded Up to (4) #14 AWG Stranded with (1) #10 AWG Stranded
80 & 100 Amps LBR & LBT	(1) #14 - #10 AWG Solid (1) #14 - #1 AWG Stranded (2) #6 AWG Stranded Up to (3) #8 AWG Stranded Up to (6) #10 AWG Stranded Up to (6) #12 AWG Solid
25A, 3LD21 32A, 3LD22 63A, 3LD25 100, 125A, 3LD2	(1) #14-8 AWG (1) #14-8 AWG (1) #14-6 AWG (1) #12-1 AWG



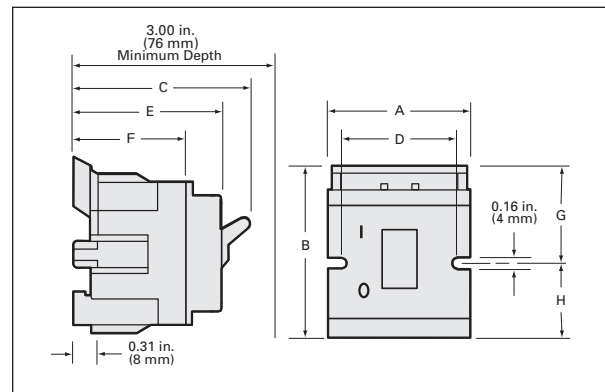
Shaft Mounted 3LD2 Handle Cutout

### Dimension J Minimum Depth<sup>①</sup>

Switch	Dimension J
LBR 40-100A	3.35 (85)
3LD2 25 & 32A Front Shaft Mounted	3.07 (78)
3LD2 63 Front Shaft Mounted	3.35 (85)
3LD2 25 & 32A Front 4-hole Mounted	2.13 (54)
3LD2 63A Front 4-hole Mounted	2.48 (63)
3LD2 100 & 125A Front 4-hole Mounted	2.56 (65)
3LD2 25 & 32A Base w/shaft Mtg. Handle	6.46 (164)
3LD2 63A Base w/shaft Mtg. Handle	6.77 (172)
3LD2 25 & 32A Base w/4-hole Mtg. Handle	5.59 (142)
3LD2 63A Base w/4-hole Mtg. Handle	5.99 (152)
3LD2 100 & 125A Base w/hole Mtg. Handle	6.07 (154)



LBR 40-100 Amps & 3LD2 25-125A



LBT Toggle — 40-100 Amps

Switch Type	Switch Catalog Number	Dimensions Inches (mm)							
		A	B	C	D	E	F	G	H
Rotary	LBR3040	2.00 (51)	2.72 (69)	2.72 (69)	1.78 (45)	2.16 (55)	1.67 (42)	1.50 (38)	1.22 (31)
Rotary	LBR3060	2.00 (51)	2.72 (69)	2.72 (69)	1.78 (45)	2.16 (55)	1.67 (42)	1.50 (38)	1.22 (31)
Rotary	LBR3080	2.09 (53)	3.32 (84)	2.92 (74)	1.97 (50)	2.29 (58)	1.69 (42)	1.66 (42)	1.66 (42)
Rotary	LBR3100	2.09 (53)	3.32 (84)	2.92 (74)	1.97 (50)	2.29 (58)	1.69 (42)	1.66 (42)	1.66 (42)
Rotary	LBR4040	2.42 (61)	2.72 (69)	2.72 (69)	2.28 (58)	2.16 (55)	1.67 (42)	1.50 (38)	1.22 (31)
Rotary Front Mtg.	3LD21 & 2 <sup>②</sup>	1.81 (46)	2.17 (55)	1.97 (50)	—	—	—	—	—
Rotary Front Mtg.	3LD25 <sup>②</sup>	2.36 (60)	2.52 (64)	2.32 (59)	—	—	—	—	—
Rotary Front Mtg.	3LD27 & 8	2.40 (61)	3.27 (83)	2.40 (61)	—	—	—	—	—
Rotary Base Mtg.	3LD21 & 2	1.81 (46)	2.17 (55)	2.29 (58)	—	—	—	—	—
Rotary Base Mtg.	3LD25	2.36 (60)	2.52 (64)	2.68 (68)	—	—	—	—	—
Rotary Base Mtg.	3LD27 & 8	2.80 (71)	3.27 (83)	2.76 (70)	—	—	—	—	—
Toggle	LBT3040	2.00 (51)	2.72 (69)	2.75 (70)	1.78 (45)	2.16 (55)	1.67 (42)	1.50 (38)	1.22 (31)
Toggle	LBT3060	2.00 (51)	2.72 (69)	2.75 (70)	1.78 (45)	2.16 (55)	1.67 (42)	1.50 (38)	1.22 (31)
Toggle	LBT3080	2.09 (53)	3.32 (84)	2.90 (74)	1.97 (50)	2.29 (58)	1.69 (42)	1.66 (42)	1.66 (42)
Toggle	LBT3100	2.09 (53)	3.32 (84)	2.90 (74)	1.97 (50)	2.29 (58)	1.69 (42)	1.66 (42)	1.66 (42)
Toggle	LBT4040	2.42 (61)	2.72 (69)	2.75 (70)	2.28 (58)	2.16 (55)	1.67 (42)	1.50 (38)	1.22 (31)

① Depth from outside of cover to back of switch.

② Handle front plate dimensions:  
3LD21 & 2—2.64 inches square  
3LD25, 7 & 8—3.55 inches square

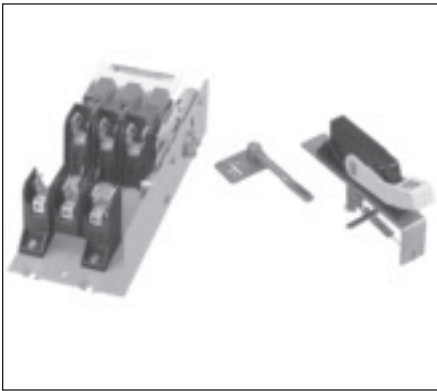
# Switches

## Disconnect Switches

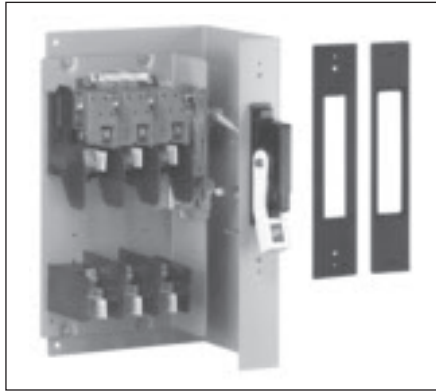
### Type VBII (30-600A) with Flange Mounted Operating Handle

#### Features

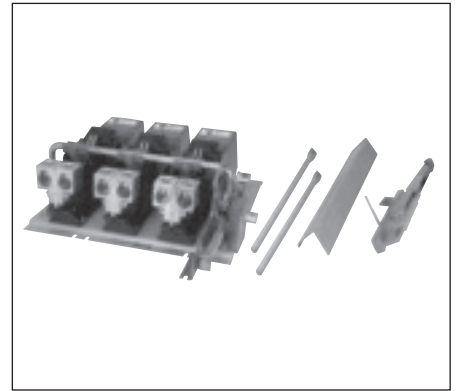
- 30-600A, 600VAC and DC ratings
- UL Recognized (file # E121152 vol. 3) and CSA Certified under file number 154852
- Visible blade quick make and break switching action
- Panel and Flange mounted assemblies facilitate installation
- Panel mounted switches are variable depth
- Short circuit rating of 10,000 AIC with class H fuse, and of 200,000 AIC with class R or J fuses
- Flange mounted handles rated as either Type1, 3R & 12 or 4X are padlockable in the off position with up to (3) padlocks with 5/16 hasps
- Meets UL98 requirements and suitable for both main and branch circuit applications
- A complete line of aux contacts are available
- Load break and horsepower rated
- Defeatable cover interlock standard with all handles
- Meets NFPA79 requirements
- Seismic qualified – complies with 2007 California Building Code (CBC)–Zone 4



**VBFS361, VBLK1 & VBH1**



**VBFS363F**



**VBNFS366, VBLK4 & VBH2R**

#### Ordering Information

1. Determine the ratings required (amps, volts, HP, Fusible, NF), the mounting needed (Panel or Flange), and select the appropriate switch.
2. For panel mounted switches with a rigid operating shaft (30-600A), order panel mounted switch flange mounted operating handle & rigid linkage kit based on depth required.
3. For panel mounted switches with a Max-Flex operator, order panel mounted switch, Max-Flex Handle & Adapter Kit and drive cable.
4. Select accessories if required.

# Switches

## Disconnect Switches

### Type VBII Switch, Handle and Linkage Kit Selection

#### Switches

Switch Ampere Rating	Max. AC Voltage Rating	Catalog Number	Horsepower Rating, Switches and 3-Phase <sup>④</sup>						600 Volts DC (max) <sup>④</sup>	List Price \$
			240 Volts AC		480 Volts AC		600 Volts AC			
			Standard	Max.	Standard	Max.	Standard	Max.		
<b>Fusible Panel Mounted Variable Depth Switches - 3-Pole<sup>⑤</sup></b>										
30	240	VBFS321	3	7 1/2	—	—	—	—	— <sup>①</sup>	
60	240	VBFS322	7 1/2	15	—	—	—	— <sup>②</sup>		
30	600	VBFS361	—	—	5	15	7 1/2	20	15 <sup>③</sup>	
60	600	VBFS362	—	—	15	30	15	50	30 <sup>③</sup>	
100	600	VBFS363	—	—	25	60	30	75	50 <sup>③</sup>	
200	600	VBFS364	—	—	50	125	60	150	50	
400	600	VBFS365	—	—	100	250	125	350	— <sup>②</sup>	
600	600	VBFS366	—	—	150	400	200	500	— <sup>②</sup>	
<b>Non-fusible Panel Mounted Variable Depth Switches - 3-Pole<sup>⑤</sup></b>										
30	600	VBNS361	—	10	—	20	—	30	15 <sup>③</sup>	
60	600	VBNS362	—	20	—	50	—	60	30 <sup>③</sup>	
100	600	VBNS363	—	40	—	75	—	100	50 <sup>③</sup>	
200	600	VBNS364	—	60	—	125	—	150	50	
400	600	VBNS365	—	125	—	250	—	300	— <sup>②</sup>	
600	600	VBNS366	—	200	—	400	—	500	— <sup>②</sup>	
<b>Fusible Flange Mounted Switches - 3-Pole<sup>⑤</sup></b>										
30	240	VBFS321F	3	7 1/2	—	—	—	—	— <sup>①</sup>	
60	240	VBFS322F	7 1/2	15	—	—	—	—	— <sup>②</sup>	
30	600	VBFS361F	—	—	5	15	7 1/2	20	15 <sup>③</sup>	
60	600	VBFS362F	—	—	15	30	15	50	30 <sup>③</sup>	
100	600	VBFS363F	—	—	50	60	30	75	50 <sup>③</sup>	
200	600	VBFS364F	—	—	100	125	60	150	50	
<b>Non-fusible Flange Mounted Switches - 3-Pole<sup>⑤</sup></b>										
30	600	VBNS361F	—	10	—	20	—	30	15 <sup>③</sup>	
60	600	VBNS362F	—	20	—	50	—	60	30 <sup>③</sup>	
100	600	VBNS363F	—	40	—	75	—	100	50 <sup>③</sup>	
200	600	VBNS364F	—	60	—	125	—	150	50	

**Note:** Fusible switches include fuse provisions for Class H Fuses. The load base can be moved to pre-drilled holes for Class J Fuses. If Class R Fuses are required add a Class R Fuse Clip Kit.

#### Flange Mounted Operating Handles

For use with Panel Mounted Switches and Rigid Linkage Kits. Included with Flange Mounted Switches as standard.

Catalog Number	Handle Assembly Description	List Price \$
VBH1	30-200A Type 1, 3R & 12	
VBH14X	30-200A Type 4X	
VBH2	400 Type 1 & 12	
VBH2R	400 & 600A Type 1, 3R & 12	
VBH24X	400 & 600A Type 4X	

#### Rigid Linkage Kits

For use with Panel Mounted Switches. Not required for Flange Mounted Switches.

Catalog Number	Switch Ampere Rating	Enclosure Depth <sup>⑦</sup>		List Price \$
		Min	Max.	
VBLK1	30-200	6.94 <sup>⑧</sup>	6.94 <sup>⑧</sup>	
VBLK2	30-200	6.94 <sup>⑧</sup>	19.0	
VBLK3	400 & 600	9.00	9.00	
VBLK4	400 & 600	9.00	19.0	

#### Max-Flex™ Handle and Adapter Kit

(Type 1, 12, 3R & 4X)

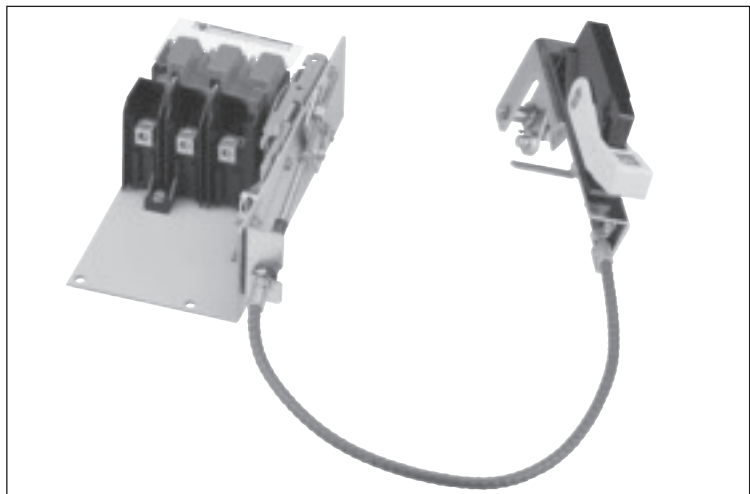
Use with 30-200A panel mounted switches and cable kit.

Catalog Number	Description	List Price \$
VBHM1	30-200A Max-Flex Adapter Kit	

#### Cable Kit

For use with 30-200A panel mounted switches and Max-Flex handle and adapter kit.

Catalog Number	Description	List Price \$
FHOEC036	36" long drive cable	
FHOEC048	48" long drive cable	



VBNS361, VBHM1 & FHOEC036

① Rated 5 HP at 250V DC.

② Rated 10 HP at 250V DC.

③ 600V DC & 600V DC horsepower rating shown requires (2) poles to be connected in series.

④ Std. - applies when non-time delay fuses are used.

Max. - applies when time delay fuses are used.

⑤ Includes line base, load base, operating mechanism and line and load lugs. Order operating handle and linkage kits from tables on this page.

⑥ Complete assembly, includes line base, load base, operating mechanism line and load lugs, operating handle and required linkage.

⑦ Dimensions (min. & max.) from enclosure mounting pan to outside surface of enclosure handle mounting flange.

⑧ 7.12 for 200A switches.

⑨ Rated 250V DC Max and 50HP at 250V DC.

# Switches

## Disconnect Switches

### Accessories Type VBII



HR612

#### Class R Fuse Clip Kits

These kits prevent the installation of Class H and K fuses (one kit required per switch).

#### Class R Fuse Clip Kits

Catalog Number	List Price \$	Description
HR21		30A, 240V Kit (HD only)
HR612		30A, 600V Kit/60A, 240V Kit
HR62		60A, 600V Kit
HR63		100A Kit
HR64		200A Kit
HR656		400A/600A Kit

#### Class J Fuse Provisions

All 30-600A, 600V fusible switches are field convertible to accept Class J fuses by moving the load base to a pre-drilled J fuse position.

#### Internal Door Latch Kits

For use with enclosures with door mounted latching bar. Required when a flange mounted switch is mounted in a Hoffmann or Rittal enclosure provided with an AB cutout.

Catalog Number	Description	List Price \$
DKR2	2 point (for use with enclosures less than 40" high)	
DKR3	3 point (for use with enclosures 40" or larger in height)	



HT63

#### Class T Fuse Adapter Kits

100-600A fusible switches are field convertible to accept Class T fuses. 400-600A 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<sup>Ⓞ</sup>

Catalog Number	List Price \$	Description
HT23		100A, 240V Kit
HT63		100A, 600V Kit
HT24		200A, 240V Kit
HT64▲		200A, 600V Kit

#### Neutral Kits<sup>Ⓜ</sup>

Standard Neutral Kits can be field installed in 30-100A switches.

#### Neutral Kits

Switch Ampere Rating	Kit Catalog Number	List Price \$
30A 600V, 60A 240V	HN612	
60A, 600V & 100A	HN623	

#### Window Kits (Type 1, 12, 3R and 4x)

Allows viewing of visible blades and of indicating fuses through 200A.

Catalog Number	Description	List Price \$
VBWK1	30A Window Kit	
VBWK2	60 & 100A Window Kit	
VBWK3	200-600A Window Kit	



HN612

#### 200% Neutral Kits<sup>Ⓜ</sup>

UL listed 200% neutrals are available on 60 & 100A switches. They are typically used with non-linear transformers or where increased neutral ampacity/lug capacity is required.

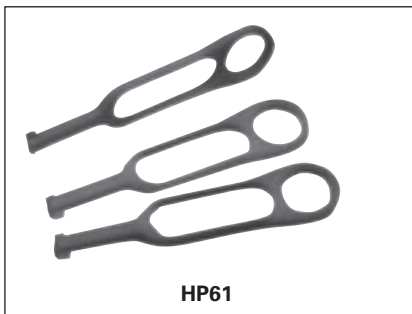
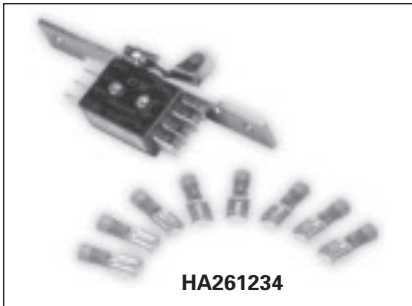
#### 200% Neutral Kits

Switch Ampere Rating	Kit Catalog Number	List Price \$	Wire Range Line & Load Lugs (Cu/Al)
60 & 100	HN263		(2) #14-1/0 AWG

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

Ⓞ One kit per pole required.

Ⓜ UL approved (not CSA certified).



### Auxiliary Contacts

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.

Switch Ampere Rating	Aux. Switch Catalog Number	List Price \$	Kit Ampere Rating			Kit Horsepower Rating		
			125V AC Max.	250V AC Max.	28V DC Max.	125V AC Max.	250V AC Max.	28V DC Max.

#### With 1 NO & 1 NC Isolated Contacts

30-200	HA161234		10	10	—	1/2	3/4	—
400-600	HA165678		10	10	—	1/2	3/4	—

#### With 2 NO & 2 NC Isolated Contacts

30-200	HA261234		10	10	7	1/2	3/4	—
400-600	HA265678		10	10	7	1/2	3/4	—

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

30-200	HA361234		10	10	—	1/2	3/4	—
400-600	HA365678		10	10	—	1/2	3/4	—

### Fuse Puller Kits

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

Switch Ampere Rating	Fuse Puller Kit Catalog Number	List Price \$
30	HP61	
60	HP62▲	
100	HP63▲	

### Copper Lug Kits

All switches are UL approved to accept field installed copper lug kits.

Switch Ampere Rating	Copper Lug Catalog Number	List Price \$	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
400-600A	HLC65678▲		(1) Lugs/Kit #1/0 AWG-600 Kcmil Cu

### Equipment Ground Kits

Equipment Ground Lug Kits are available for all switches.

Switch Ampere Rating	Catalog Number	List Price \$	Number of Terminals	Wire Range Per Terminal (Cu/Al)
30-200	HG61234		2	#14-4 AWG
400 & 600	HG656		4	#6 AWG-250 Kcmil

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

# Switches

## Disconnect Switches

### Type VBII Lug Wire Ranges & Dimensions

#### Lugs

30 & 60A switches are suitable for use with 60° or 75°C wire. 100–600A switches are suitable for use with 75°C rated wire. All switches are supplied with factory installed line and load lugs.

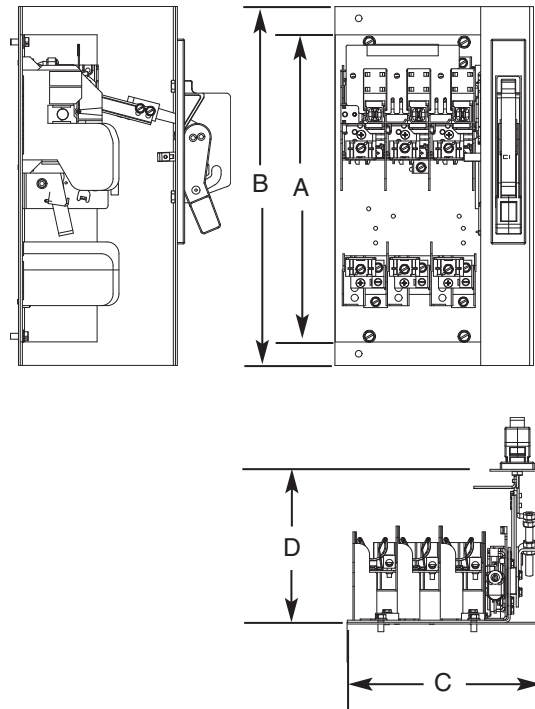
#### Wire Ranges (Line, Load and Standard Neutral)

Switch Ampere Rating	UL Approved Wire Range	Lug Wire Range
30	#14-6 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
60	#14-2 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
100	#14-1/0 AWG (Cu/Al)	#14-1/0 AWG (Cu/Al)
200	#6 AWG-300 Kcmil (Cu/Al)	#6 AWG-300 Kcmil (Cu/Al)
400	1/0 AWG-750 Kcmil (Cu/Al) or (2) 1/0 AWG-250 Kcmil (Cu/Al)	(1) 1/0 AWG-750 Kcmil (Cu/Al) or (2) 1/0 AWG-250 Kcmil (Cu/Al)
600	(2) 1/0 AWG-750 Kcmil (Cu/Al) or (4) 1/0 -250 Kcmil (Cu/Al)	(2) 1/0 AWG-750 Kcmil (Cu/Al) or (4) 1/0 AWG-250 Kcmil (Cu/Al)

#### Approximate Dimensions

Mounting bracket shown with handle installed is supplied with Flange Mounted Switches only. All Panel Mounted Switches have a "L" shaped mounting pan with a line base, load base (if fusible) and mechanism installed.

Catalog Number	Dimensions				
	A	B	C <sup>①</sup>	D (min)	D (max)
<b>Fusible, Panel Mounted</b>					
VBFS321	11.88	N/A	7.47	6.94	19
VBFS322	13.12	N/A	8.50	6.94	19
VBFS361	11.88	N/A	7.47	6.94	19
VBFS362	13.12	N/A	8.50	6.94	19
VBFS363	13.12	N/A	8.50	6.94	19
VBFS364	17	N/A	12.33	7.12	19
VBFS365	26.25	N/A	16.50	8.63	19
VBFS366	26.25	N/A	16.50	8.63	19
<b>Non-fusible, Panel Mounted</b>					
VBNFS361	9.79	N/A	7.47	6.94	19
VBNFS362	9.79	N/A	8.50	6.94	19
VBNFS363	9.79	N/A	8.50	6.94	19
VBNFS364	10.77	N/A	12.33	7.12	19
VBNFS365	13	N/A	16.50	8.63	19
VBNFS366	13	N/A	16.50	8.63	19
<b>Fusible, Flange Mounted</b>					
VBFS321F	11.88	14.08	7.47	7.27	N/A
VBFS322F	13.12	15.83	8.85	7.27	N/A
VBFS361F	11.88	14.08	7.47	7.27	N/A
VBFS362F	13.12	15.83	8.85	7.27	N/A
VBFS363F	13.12	15.83	8.85	7.27	N/A
VBFS364F	17	18.20	12.68	7.57	N/A
<b>Non-fusible, Flange Mounted</b>					
VBNFS361F	9.79	11.78	7.47	7.27	N/A
VBNFS362F	9.79	11.78	8.85	7.27	N/A
VBNFS363F	9.79	11.78	8.85	7.27	N/A
VBNFS364F	10.77	11.97	12.68	7.57	N/A



① Dimension C for panel mounted switches indicates the minimum width from the left hand edge of the switch mounting pan to the right hand inside surface of the enclosure.



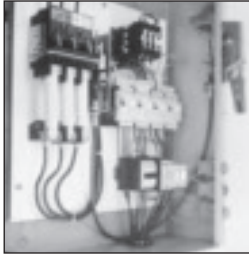
# Switches

## Disconnect Switches

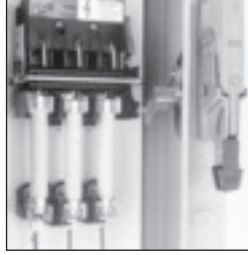
### Type MCS (30-200A) — Switches, Fuse and No Fuse Kits

### Features

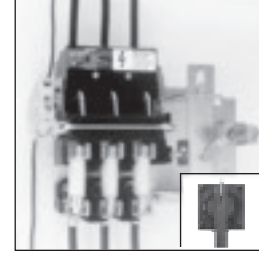
- 30, 60, 100 and 200 Ampere Switches
- UL Recognized (file# 121152 vol. 1 & 2) and CSA Certified
- Simple Mounting — with an integral switch and over center mechanism
- Horsepower & load break rated
- Compact Size
- Visible Blade Contacts
- Rugged Construction — with a short circuit current rating of 10,000 amps with Class H or 200,000 amps at 600V maximum AC, when fused with Class R or Class J fuses
- Available with three operator handle options, allowing flexible placement of switch
- Field Installable Auxiliary Contacts
- Flexible Fuse Class Configurations



Type MCS Disconnect Switch with Max-Flex™ handle operator



Type MCS Disconnect Switch with fixed-depth, flange-mounted handle



Type MCS Disconnect Switch with rotary handle

### Ordering Information

- Select the basic switch size you need (30, 60, 100 or 200 ampere).
- Check the switch selected against the maximum horsepower rating required for your application. "L" or "R" suffix on switch catalog numbers denotes left or right-handed mechanism drive.
- Choose either fuse or no fuse kit from chart below.
- Check "Minimum Dimensions" on page 18/26 for installation space requirements.
- Select from the list of handle operators, the type which best suits your application. Handle operators can be selected from the next page.

### Basic Switches

Switch Ampere Rating	Maximum Voltage Rating	Catalog Number Right Hand	Catalog Number Left Hand	Maximum Horsepower Rating, 3 Phase <sup>Ⓞ</sup>						250 Volts DC (max) <sup>Ⓞ</sup>	List Price \$
				240 Volts AC		480 Volts AC		600 Volts AC			
				Standard Fuse	Time Delay Fuse	Standard Fuse	Time Delay Fuse	Standard Fuse	Time Delay Fuse		
30	600	MCS603R	MCS603L	3	7½	5	15	7½	20	5	
60	600	MCS606R	MCS606L	7½	15	15	30	15	50	10	
100	600	MCS610R	MCS610L▲	15	30	25	60	30	75	20	
200	600	MCS620R	MCS620L▲	25	60	50	125	60	150	40	

### Fuse And No Fuse Kits (Includes load base plus line and load fuse clips)<sup>Ⓞ</sup>

Basic Switch Ampere Rating	Switch Catalog Number	Kit Description	No Fuse Kits				For Class H		For Class J		For Class R		Lug Wire Size
			Standard		Cu Only <sup>Ⓞ</sup>		Catalog Number <sup>Ⓞ</sup>	Std List Price \$	Catalog Number <sup>Ⓞ</sup>	Std List Price \$	Catalog Number <sup>Ⓞ</sup>	Std List Price \$	
			Catalog Number	List Price \$	Catalog Number	List Price \$							
30	MCS603R or MCS603L	No Fuse	TMK606	—	—	—	—	—	—	—	—	#14 to #4 AWG Cu/Al	
		30A, 250V	—	—	—	FCK203▲	—	—	—	FCRK203	—		
		30A, 600V	—	—	—	FCK206	—	—	—	FCRK206	—		
		60A, 250V	—	—	—	FCK206	—	—	—	FCRK206	—		
60	MCS606R or MCS606L	No Fuse	TMK606	—	—	—	—	—	—	—	—	#14 to #4 AWG Cu/Al	
		60A, 250V	—	—	—	FCK206	—	—	—	FCRK206	—		
		60A, 600V	—	—	—	FCK606	—	—	—	FCRK606	—		
		100A, 250V	—	—	—	OFCK661▲	—	—	—	OFCK661▲	—		
100	MCS610R or MCS610L	No Fuse	TMK610	—	—	—	—	—	—	—	—	#14 to #2/0 AWG Cu/Al	
		100A, 250V	—	—	—	FCK610	—	—	—	FCRK610	—		
		100A, 600V	—	—	—	FCK610	—	—	—	FCRK610	—		
		200A, 250V	—	—	—	OFCK620	—	—	—	OFCK620	—		
200	MCS620R or MCS620L	No Fuse	TMK620	—	—	—	—	—	—	—	—	#6 to 300 kcmil Cu/Al	
		200A, 250V	—	—	—	FCK620	—	—	—	FCRK620	—		
		200A, 600V	—	—	—	FCK620	—	—	—	FCRK620	—		
		200A, 600V	—	—	—	OFCK620	—	—	—	OFCK620	—		

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

Ⓞ For "copper only" connectors, order as follows:

**Fusible**—order standard switch, standard fuse kit and copper only no fuse kit.

**Non-Fusible**—order standard switch and copper only no fuse kit.

Ⓞ Includes both line and load lugs.

Ⓞ For Class R fuses order Class H kit from this table and the Class R conversion kit from the next page.

Ⓞ HP ratings for time delay fuses and for 250V DC also apply to Non-fusible switches.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18

# Switches

## Disconnect Switches

### Type MCS (30-200A)

#### Auxiliary Switch Kits

Switch Catalog Number	Contact Arrangement			
	1 NO/1 NC		2 NO/2 NC	
	Catalog Number	List Price \$	Catalog Number	List Price \$
MCS603R	MCSAKR136		MCSAKR236	
MCS603L	MCSAKL136		MCSAKL236▲	
MCS606R	MCSAKR136		MCSAKR236	
MCS606L	MCSAKL136		MCSAKL236▲	
MCS610R	MCSAK116		MCSAK216	
MCS610L	MCSAK116		MCSAK216	
MCS620R	MCSAK126		MCSAK226	
MCS620L	MCSAK126		MCSAK226	

#### Class R Fuse Conversion Kits

Fuse Clip Rating	Catalog Number	List Price \$
100A, 600V	SSRK33	
200A, 600V	SSRK34	

#### Fuse Ejector Kits

Switch Catalog Number	Fuse Ejector Kit Catalog Number	List Price \$
MCS610	FE100▲	
MCS620	FE200▲	

#### Handle Operators

##### Fixed Depth, Flange Mounted, Types 1, 3, 3R, 12<sup>①⑥</sup>

Switch Catalog Number	Complete Handle Mechanism		Handle Only		Switch Operator Only	
	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
MCS603R	FDFS06R		FDH10		FDS06R	
MCS603L	FDFS06L		FDH10		FDS06L	
MCS606R	FDFS06R		FDH10		FDS06R	
MCS606L	FDFS06L		FDH10		FDS06L	
MCS610R	FDFS06R		FDH10		FDS06R	
MCS610L	FDFS06L		FDH10		FDS06L	
MCS620R	FDFS20R		FDH20		FDS20R	
MCS620L	FDFS20L		FDH20		FDS20L	

##### Variable Depth, Flange Mounted Max-Flex™, Types 1, 3, 3R, 12<sup>②</sup>

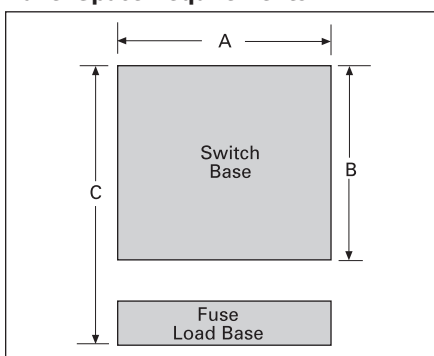
Switch Catalog Number	Complete Handle Mechanism		Handle Only		Switch Operator Only		Cable Only <sup>③</sup>	
	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
MCS603R	FHOS06036R		FHOHS		FHOS06R		FHOEC036	
MCS603L	FHOS06036L		FHOHS		FHOS06L		FHOEC036	
MCS606R	FHOS06036R		FHOHS		FHOS06R		FHOEC036	
MCS606L	FHOS06036L		FHOHS		FHOS06L		FHOEC036	
MCS610R	FHOS06036R		FHOHS		FHOS06R		FHOEC036	
MCS610L	FHOS06036L		FHOHS		FHOS06L		FHOEC036	
MCS620R	FHOS20036R		FHOHS		FHOS20R		FHOJC036	
MCS620L	FHOS20036L		FHOHS		FHOS20L		FHOJC036	

##### Variable Depth Rotary, Through-The-Door-Mounted, Types 1, 12<sup>④⑤</sup>

Variable Depth						Shaft Only Variable Depth		
MCS603R	CRHOS06VD		CRHOH		RHOS06		RHOSVD	
MCS606R	CRHOS06VD		CRHOH		RHOS06		RHOSVD	
MCS610R	CRHOS06VD		CRHOH		RHOS06		RHOSVD	
MCS620R	CRHOS20VD		CRHOH		RHOS20		RHOSVD	

#### MCS Disconnect Switch Panel Space Requirements

##### Panel Space Requirements



##### Minimum Dimensions (inches\*)

Switch Catalog Number	Size	"A"	"B"	"C"	Fuse Class
MCS603	30A/240V	6.13	5.52	8.11	H, K, R
	30A/600V	6.13	5.52	10.11	H, K, R
	30A/600V	6.13	5.52	8.48	J
MCS606	60A/240V	6.13	5.52	7.86	H, K, R
	60A/600V	6.13	5.52	10.38	H, K, R
	60A/600V	6.13	5.52	8.35	J
MCS610	100A/240V	7.38	7.59	11.85	H, K, R
	100A/600V	7.38	7.59	13.85	H, K, R
	100A/600V	7.38	7.59	10.6	J
MCS620	200A/240V	9.17	9.00	14.7	H, K, R
	200A/600V	9.17	9.00	17.2	H, K, R
	200A/600V	9.17	9.00	13.32	J

"A" – Dimension is measured from each cross bail pin.

"B" – Dimension is measured from line side barrier to load side barrier.

"C" – Dimension is measured from line side terminal of switch to load side terminal of fuse load base.

- ▲ Built to order. Allow 6–8 weeks for delivery.
- ① For Type 4 and 4X applications, order handle only Catalog Number 100A - FDH104 (list price \$) 200A - FDH204 (list price \$)
- ⑥ For Type 4 and 4X applications, order handle only Catalog Number FHOHS4, List Price \$

- ③ Standard cable length is 36 inches. Alternate lengths are available as follows:
- | Length | Amps   | Cat. No. | List Price \$ |
|--------|--------|----------|---------------|
| 48"    | 30–100 | FHOEC048 |               |
| 60"    | 30–100 | FHOEC060 |               |
| 48"    | 200    | FHOJC048 |               |
| 60"    | 200    | FHOJC060 |               |

- ④ For Type 4 and 4X applications, order handle only Catalog Number RHOH4, List Price \$

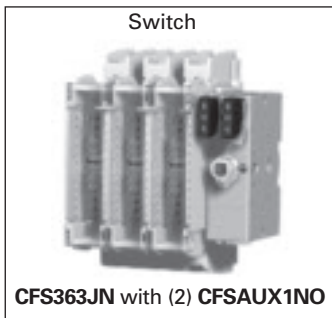
- ⑤ For Type 3 and 3R applications, order handle only Catalog Number RHOH, List Price \$

- ⑥ Min. enclosure depth from mounting pan to handle mounting surfaces: 30-100A 6.44 Inches 200A 10.93 Inches

\*For millimeters multiply inches by 25.4.

### Features

- 30–800A ratings
- UL Listed & CSA Certified
- IEC 60 947-3 Certified & CE marked
- Door mounted rotary handles with defeatable cover interlock
- Meets UL requirements for both main and branch circuit applications
- Compact size
- 65 or 100KA with Class CC fuses or up to 200KA with Class J fuses
- Load break and horsepower rated
- Quick make and break operation
- All handles are padlockable with up to (3) padlocks with 5/16" hasps in the OFF position
- Catalog number **CFS361C5**, **CFS361J5** & **CNFS361** can be DIN-rail mounted and can be either front or side operated with standard rotary handles
- Handles are available in Type 1, 3R, 4/4X & 12 ratings
- NFPA 79 field installed kits are available



### Ordering Information

1. Select the panel mounted switch required based on Ampere, HP and AIC requirements. Switches with a right hand mechanism are standard. 30-100A switches with a left hand mechanism are available.
2. Select handle based on environmental rating required.
3. Select operating shaft (200 or 400mm in length). For enclosure depths of 9.0" or less from panel mounting surface to inside of door use 200mm long shafts. For deeper enclosures use 400mm long shafts. 30A 65kA switches can be used in 10" deep enclosures (panel to inside of door) with 200mm shaft and CFSH5N handles.
4. Line & load lugs are provided as standard on 30–100A switches. Terminal kits are available for 200–800A switches if needed.
5. Auxiliary contacts are available if needed as follows:
  - A. 30A, 65kA switch CFS361C5 and non-fusible 30A switch CNFS361 will accept up to (4) aux contacts.
  - B. 30A, 65kA switch CFS361J5 will accept up to (2) aux contacts without an aux contact holder. If more than (2) aux contacts are required order aux contacts PLUS aux contact holder kit CFSAuxH1. All other switches will accept up to (4) aux contacts.
6. If non-fusible switch is required order a shorting bar for 60-600A switches or catalog number **CNFS361** for 30A.
7. 30–100A switches are designed to prevent inadvertent contact with live parts and shields are not required. 200–800A switches are supplied as standard with line shields and terminal shroud kits are available for the load side.

Note: Be sure to check shaft and handle compatibility with the switch selected by using the information provided in the selection tables.

**Note: Availability of new style 200 & 400A switches, catalog numbers CFS364JN & CFS365JN to be announced.**

# Switches

## Disconnect Switches

### Type CFS Compact Fusible Switches

Fusible Switches, 3-Pole 600V AC Max, 250V DC Max<sup>⑤</sup>  
(CFS364JN & CFS365JN availability to be announced)

Switch Ampere Rating	Catalog Number	List Price \$	Fuse Provisions Provided	Max Horsepower Ratings				AC Short Circuit Rating
				240V 3Ø AC	480V 3Ø AC	600V 3Ø AC	250V DC	

#### Standard - with Right Hand Mounted Mechanism

30 <sup>①</sup>	CFS361C5		Class CC	7.5	15	20	5 <sup>③</sup>	65kA
30 <sup>①</sup>	CFS361J5		Class J	7.5	15	20	5 <sup>③</sup>	65kA
30 <sup>①</sup>	CFS361CN		Class CC	7.5	15	20	5 <sup>③</sup>	100kA
30 <sup>①</sup>	CFS361JN		Class J	7.5	15	20	5 <sup>③</sup>	200kA
30 <sup>①</sup>	CNFS361 <sup>②</sup>		None	7.5	15	20	5 <sup>③</sup>	65kA
60 <sup>①</sup>	CFS362JN1		Class J	15	30	50	10 <sup>③</sup>	100kA
60 <sup>①</sup>	CFS362JN		Class J	15	30	50	10 <sup>③</sup>	200kA
100 <sup>①</sup>	CFS363JN			30	60	75	20 <sup>③</sup>	
200 <sup>②</sup>	CFS364JN			60	125	150	40 <sup>④</sup>	
400 <sup>②</sup>	CFS365JN			125	250	350	50 <sup>④</sup>	
600 <sup>②</sup>	CFS366J <sup>③</sup>			200	400	500	—	
800 <sup>②</sup>	CFS367L <sup>③</sup>		Class L	200	400	500	—	200kA

#### Optional - with Left Hand Mounted Mechanism

30 <sup>①</sup>	CFS361JLN		Class J	7.5	15	20	5 <sup>③</sup>	200kA
60 <sup>①</sup>	CFS362JLN			15	30	50	10 <sup>③</sup>	
100 <sup>①</sup>	CFS363JLN			30	60	75	20 <sup>③</sup>	

#### Operating Shafts for 30–400A switches<sup>⑤</sup>

Catalog Number	List Price \$	Shaft Length In. (mm)	Switch & Handle Compatibility
CFSS5200N		7.9 (200)	5mm x 5mm for use with CFS361C5, CFS361J5 & CNFS361 switches & with "CFSS5" handles only
CFSS5400N		15.7 (400)	
CFSS5200HN		7.9 (200)	5mm x 5mm for use with all "CFSS10" handles & with CFS361C5, CFS361J5 & CNFS361 switches only
CFSS5400HN		15.7 (400)	
CFSS10200HN		7.9 (200)	10mm x 10mm for use with all "CFSS10" handles & with all 30–400A switches except CFS361C5, CFS361J5 & CNFS361
CFSS10400HN		15.7 (400)	

#### Rotary Operating Handles—Door Mounted (for use with 65kA CFS361C5, CFS361J5 & CNFS361 switches only)<sup>⑥</sup>

Catalog Number	List Price \$	Color	UL Type	Operating Shaft Compatibility
CFSS5B12N		Blue & Black	1, 3R & 12	CFSS5200N or CFSS5400N
CFSS5R12N		Yellow & Red		
CFSS5B4N		Blue & Black	1, 3R, 12 & 4/4X	
CFSS5R4N		Yellow & Red		

#### Rotary Operating Handles—Door Mounted (for use with CFSS5200HN, CFSS5400HN, CFSS10200HN & CFSS10400HN)

Catalog Number	List Price \$	Color	Description
----------------	---------------	-------	-------------

#### Type 1, 3R & 12<sup>⑦</sup>

CFSS10B12N		Blue & Black	Heavy duty pistol grip (2.75" long for use with 30A switches & CFS362JN1)
CFSS10R12N		Yellow & Red	
CFSS10BL12N		Blue & Black	Heavy duty pistol grip (4.92" long for 30–400A switches)
CFSS10RL12N		Yellow & Red	

#### Type 1, 3R, 4/4X & 12<sup>⑦</sup>

CFSS10B4N		Blue & Black	Heavy duty pistol grip (2.75" long for use with 30A switches & CFS362JN1)
CFSS10R4N		Yellow & Red	
CFSS10BL4N		Blue & Black	Heavy duty pistol grip (4.92" long for 30–400A switches)
CFSS10RL4N		Yellow & Red	

<sup>①</sup>Line and load lugs included.

<sup>②</sup>Line and load lugs are not included.

Order from table on next page if required.

<sup>③</sup>DC HP rating shown requires (2) poles to be connected in series.

<sup>④</sup>DC HP rating shown requires (3) poles to be connected in series.

<sup>⑤</sup>Catalog numbers CFS361C5 & CFS361J5 accept 5mm x 5mm operating shafts. All other 30–400A switches accept 10mm x 10mm operating shafts.



<sup>⑥</sup> Compact pistol grip design (2.75" long) with defeatable cover interlock. Cover can be opened when handle is padlocked in the OFF position.

<sup>⑦</sup> Defeatable cover interlock provided. Cover cannot be opened when handle is padlocked in the OFF position.

<sup>⑧</sup> Catalog number CNFS361 is a non-fusible switch.

<sup>⑨</sup> 4-Pole 600 & 800A switches, CFS466J & CFS467L are also available.

#### 600 & 800A Rotary Operating Handles—Door Mounted (8.27" long)Ⓣ

Catalog Number	List Price \$	Color	UL Type
CFSH12BL12		Blue & Black	1, 3R & 12
CFSH12RL12		Yellow & Red	1, 3R & 12
CFSH12BL4		Blue & Black	1, 3R, 12 & 4/4X
CFSH12RL4		Yellow & Red	1, 3R, 12 & 4/4X

#### 600 & 800A Operating Shafts (Cross section 12X12 mm)

Catalog Number	List Price \$	Shaft Length In. (mm)	Enclosure Depth (switch mounting surface to door OD)
CFSS12200H		12.59 (320)	10.43 — 16.68 inches
CFSS12400H		15.75 (400)	10.43 — 19.84 inches



CFSL200 & 400

#### Type CFS Fusible Switch Accessories

Catalog Number	List Price \$	Description
----------------	---------------	-------------

##### Terminals<sup>①</sup>

CFSL200		200A Lug Kit (6 lugs per kit) (1)#6-3/0
CFSL400N		400A Lug Kit (6 lugs per kit) (1)#2-600kcmil
CFSL400		600-800A Lug Kit (6 lugs per kit) (2)#2-600kcmil

##### Shorting Bars (no fuse kits)

CFSSB60		60A Shorting Bar Kit (3 links per kit)
CFSSB100		100A Shorting Bar Kit (3 links per kit)
CFSSB200		200A Shorting Bar Kit (3 links per kit)
CFSSB400		400A Shorting Bar Kit (3 links per kit)
CFSSB680		600 & 800A Shorting Bar Kit (1 link per kit)

##### Auxiliary Contacts (NEMA ratings AC A600 DC N600)

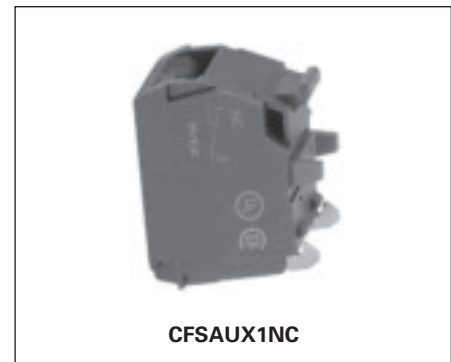
CFAUXH1 <sup>Ⓣ</sup>		Aux Contact Holder (30A 50kA Sws)
CFAUX1NO		Aux Contact 1 NO (30-800A Sws)
CFAUX1NC		Aux Contact 1 NC (30-800A Sws)
CFS11AUX		1NO, 1NC Aux Contact Kit for use with CFSNFPA2N & 3N (side mount)
CFS22AUX		2NO, 2NC Aux Contact Kit for use with CFSNFPA2N & 3N (side mount)

##### Terminal Shrouds (line or load)

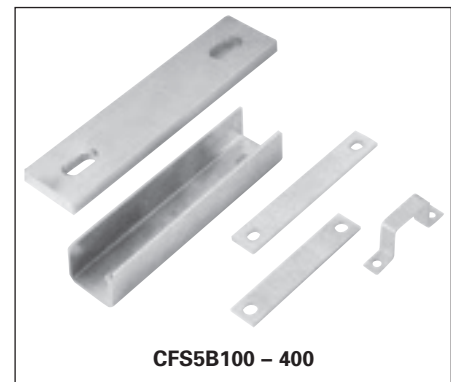
CFST200N <sup>Ⓣ</sup>		200A Shroud Kit (Line or load 3-Pole kit)
CFST400N <sup>Ⓣ</sup>		400A Shroud Kit (Line or load 3-Pole kit)
CFSTS680 <sup>Ⓣ</sup>		600/800A 3-Pole Shroud Kit
CFSTS6804 <sup>Ⓣ</sup>		600/800A 4-Pole Shroud Kit

##### 30A Compact Switch Kits

CFSPK		Shaft Padlocking Kit for 30A Compact Switch when door is open <sup>Ⓣ</sup>
CFSH5CDM		Direct Mount Handle Kit for CFS361C5
CFSH5JDM		Direct Mount Handle Kit for CFS361J5



CFAUX1NC



CFST200N - 400

##### NFPA 79 Kits

Kits provide an operating shaft suitable for use with all heavy duty handles (not for use with CFSH5 handles). Kits also provide an internal operating handle & an internal OFF padlocking provision.

CFSNFPA1 <sup>Ⓣ</sup>		For use with CFS361C5, CFS361J5 & CNFS361
CFSNFPA2N <sup>Ⓣ</sup>		For use with CFS361JN, CFS361CN, CFS362JN & CFS363JN
CFSNFPA3N		For use with CFS364JN & CFS365JN

**Note:** CFSNFPA2N & CFSNFPA3N cannot be used in combination with CFAUX1NO or CFAUX1NC auxiliary contacts.

<sup>①</sup> Supplied as standard on 30-100A switches.

<sup>Ⓣ</sup> CFS361C5 and CNFS361 will accept (4) aux contacts without an aux contact holder. CFS361J5 will accept (2) aux contacts without an aux contact holder.

<sup>Ⓣ</sup> Supplied as standard on all but 30A compact switches.

<sup>Ⓣ</sup> 12.6 inch (320 mm) long operating shaft included.

<sup>Ⓣ</sup> 11.3 inch (288 mm) long operating shaft included.

<sup>Ⓣ</sup> Line side terminal shrouds supplied with switch.

<sup>Ⓣ</sup> Defeatable cover interlock provided. Cover cannot be opened when the handle is padlocked in the OFF position.

# Switches

## Disconnect Switches

### Type CFS Compact Fusible Switches

#### UL & CSA Technical Characteristics and Panel Space Requirements

Catalog Number	Amps	Fuse Class	AC Short Circuit Rating	Electrical Endurance	Mechanical Endurance	Panel Space Requirements – Inches (mm)		
						Height	Width	Depth <sup>①</sup>
CFS361C5	30	CC	65kA	6000	10000	4.56 (116)	3.78 (96)	6.00 (152)
CFS361J5	30	J	65kA	6000	10000	4.56 (116)	4.15 (96)	6.00 (152)
CFS361CN	30	CC	100kA	6000	10000	5.87 (149)	4.92(125)	6.00 (152)
CFS361JN	30	J	200kA	6000	10000	5.35 (136)	5.89 (150)	6.00 (152)
CFS361JLN	30	J	200kA	6000	10000	5.35 (136)	5.89 (150)	6.00 (152)
CNFS361	30	None	65kA	6000	10000	4.56 (116)	3.78 (96)	6.00 (152)
CFS362JN1	60	J	100kA	6000	10000	5.35 (136)	5.89 (150)	6.00 (152)
CFS362JN	60	J	200kA	6000	10000	7.32 (186)	5.89 (150)	6.00 (152)
CFS362JNL	60	J	200kA	6000	10000	7.32 (186)	5.89 (150)	6.00 (152)
CFS363JN	100	J	200kA	6000	10000	7.32 (186)	5.89 (150)	6.00 (152)
CFS363JNL	100	J	200kA	6000	10000	7.32 (186)	5.89 (150)	6.00 (152)
CFS364JN	200	J	200kA	6000	8000	11.46 (291)	7.72 (196)	6.00 (152)
CFS365JN	400	J	200kA	1000	6000	15.35 (390)	10.19 (259)	8.00 (203)
CFS366J	600	J	200kA	1000	5000	11.81 (300)	14.33 (364)	11 (280)
CFS466J	600	J	200kA	1000	5000	11.81 (300)	18.03 (458)	11 (280)
CFS367L	800	L	200kA	500	3500	11.81 (300)	14.33 (364)	11 (280)
CFS467L	800	L	200kA	500	3500	11.81 (300)	18.03 (458)	11 (280)

#### Wire Ranges Line & Load Lugs

Switch Ampere Rating	UL Approved Wire Size (75°C)	Mechanical Wire Range of Lug (75°C)
30	#6–10 Cu	#14–10 Cu
60	#6–10 Cu	#10–3 Cu
100	#12–1 Cu	#12–1 Cu
200	#3/0 Cu	#6–3/0 Cu/Al
400	(1) 500 or 600 kcmil Cu	(1)#2–600 kcmil Cu/Al
600	(2) 350 kcmil Cu	(2)#2–600 kcmil Cu/Al
800	(2) 600 kcmil Cu	(2)#2–600 kcmil Cu/Al

<sup>①</sup> Minimum dimension from mounting surface to inside of cover. Dimensions shown can be decreased if aux contacts are not required.