

# Safety and Disconnect Switches

Industrial Control Product Catalog 2021



General Duty Switch



Heavy Duty Switch



## contents

Safety Switch Guide Form Specifications	18/3
Feature Comparison	18/4
Enclosure Types	18/5
Catalog Numbering System	18/6
<b>General Duty Safety Switches</b>	
Plug Fuse Enclosed Type, 120/240V Fusible—Selection	18/7
60A Special Application Type, 240V Non-Fusible—Selection	18/7
General Duty Switches—Features	18/8
240V Fusible and Non-Fusible—Selection	18/9
<b>Heavy Duty Safety Switches</b>	
Heavy Duty Switches—Features	18/10
240V Fusible—Selection	18/11
600V Fusible—Selection	18/12
600V Non-Fusible—Selection	18/13
Type 4/4X and 12 with Viewing Window—Selection	18/14
<b>Special Applications Safety Switches</b>	
Type ECS Elevator Control Switches	18/15 – 18/16
4-Pole and 6-Pole—Selection	18/17
Interlocked Receptacle—Selection	18/18
Non-Metallic and 316 Grade Stainless—Selection	18/19
Enclosed Solar PV Disconnects	18/20
<b>Accessories—General and Heavy Duty Switches</b>	
Class R Fuse Clips, Class J Fusing, Class T Fuse Adapter Kits	18/21
Neutral Kits, 200% Neutral Kits, Fuse Puller Kits	18/21
Auxiliary Contacts, Copper Lug Kits	18/22
Equipment Ground Kits, Isolated Ground Kits	18/22
Interchangeable Hubs	18/23
Compression Lug, Neutral Barrier Kits, Lugs and Wire Ranges	18/23
Multiple Padlocks, Kirk-Key Interlocks	18/23
<b>Dimensions and Weights</b>	
General and Heavy Duty Switches	18/24 – 18/27
Type 1 and 3R Knockout Diagrams	18/28 – 18/29
Non-Metallic and Receptacle Switch Dimensions	18/30
4-Pole and 6-Pole Switch Dimensions	18/31
<b>Double-Throw Switches</b>	
Selection	18/32 – 18/33
Dimensions	18/34
VBII Safety Switch Replacement Parts	18/35

# Safety and Disconnect Switches



## contents

### Compact Non-Fusible Switches

Rotary Switch—Selection	18/36 – 18/37
Dimensions and Wire Ranges	18/38

### Enclosed Rotary Disconnect Switches

Enclosed Rotary Disconnect Switch—Selection	18/39
Technical information	18/40

### Type VBII (30-600A)

Features and Ordering Information	18/41
Switch and Handle Selection	18/42
Accessories	18/43 – 18/44
Dimensions and Lug Wire Ranges	18/45

### Type MCS (30-200A)

Switches, Fuse, and No Fuse Kit—Selection	18/46
Handle Operators and Accessories	18/47

### Type CFS Compact Fusible Switches

General information and catalog numbering system	18/48
Features and ordering information	18/49
Switch, shaft and handle selection	18/50
Selection and accessories	18/51
Technical Characteristics	18/52

### Type CNFS Compact Non-Fusible Switches

General information and catalog numbering system	18/53
Features and ordering information	18/54
Switch, shaft and handle selection	18/55
Additional accessories	18/56

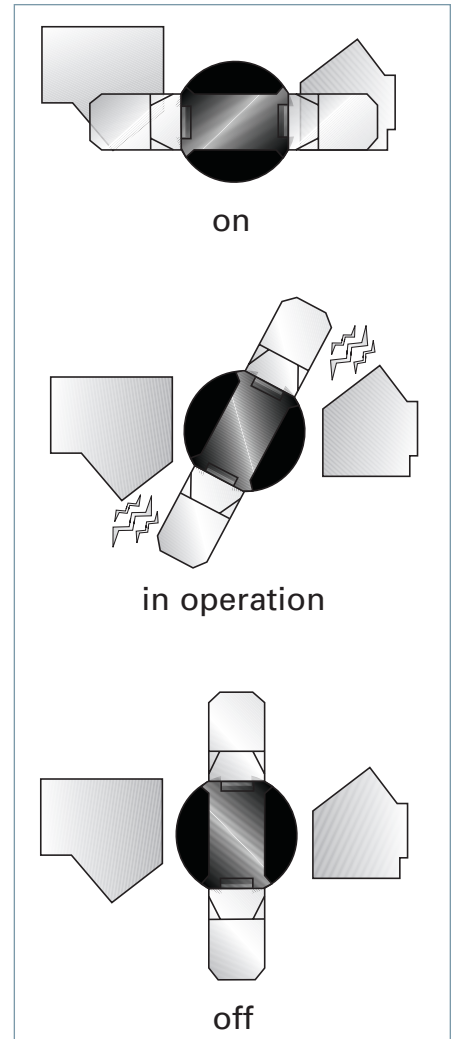
	General Duty	Heavy Duty	Double Throw																																							
<b>Application</b>	General Duty Switches are intended for applications where reliable performance and continuity of service are needed, but where duty requirements are not severe and usual service conditions prevail. (These switches are intended for use primarily with supply circuits rated 240V AC or less where the available fault current is less than 100,000A when used with Class R or T fuses or 10,000A max. when used with Class H fuses.)	Heavy Duty Switches are intended for use in applications where: <ol style="list-style-type: none"> <li>1. Rugged construction, reliable performance, continuity of service and ease of maintenance are emphasized, or</li> <li>2. Available fault currents higher than 10,000A are likely to be encountered, such as in manufacturing plants, mass production industries, and commercial, institutional and other large buildings served by network systems or transformers of higher capacities.</li> <li>3. System voltage is 600V AC or DC Max.</li> <li>4. A Type 12 or 4 / 4X enclosure is required.</li> </ol>	Double throw switches are intended to transfer loads from one power source to another. All 2 & 3 pole double throw switches are suitable for use as service equipment. All are UL Listed. Switches are rated for use on systems with an available fault current of up to 10,000 AIC when protected with Class H fuses or either 100,000 or 200,000 AIC when protected with Class R, J or Class T fuses. They can also be used to connect a single source of power to either of two loads. In this application it is necessary to field modify fusible switches so that the fuses are on the load side of the switching mechanism.																																							
<b>Short Circuit Withstand Ratings</b>	Suitable for use on systems capable of delivering not more than 100,000 RMS symmetrical amperes of fault current as follows: <table border="1"> <thead> <tr> <th>Sw. Rating</th> <th>AIC Rating</th> <th>Protective Device<sup>Ⓞ</sup></th> </tr> </thead> <tbody> <tr> <td>30-600A</td> <td>10,000</td> <td>Circuit Breaker</td> </tr> <tr> <td>30-600A</td> <td>10,000</td> <td>Class H Fuse</td> </tr> <tr> <td>30-600A</td> <td>100,000</td> <td>Class R Fuse</td> </tr> <tr> <td>100-600A</td> <td>100,000</td> <td>Class J or T Fuse</td> </tr> </tbody> </table>	Sw. Rating	AIC Rating	Protective Device <sup>Ⓞ</sup>	30-600A	10,000	Circuit Breaker	30-600A	10,000	Class H Fuse	30-600A	100,000	Class R Fuse	100-600A	100,000	Class J or T Fuse	Suitable for use on systems capable of delivering not more than 200,000 RMS symmetrical amperes of fault current as follows: <table border="1"> <thead> <tr> <th>Sw. Rating &amp; Type</th> <th>AIC Rating</th> <th>Protective Device<sup>Ⓞ</sup></th> </tr> </thead> <tbody> <tr> <td>All Heavy Duty &amp; DT</td> <td>10,000</td> <td>Circuit Breaker</td> </tr> <tr> <td>30-600A HD &amp; DT</td> <td>10,000</td> <td>Class H Fuse</td> </tr> <tr> <td>60A Compact HD</td> <td>100,000</td> <td>Class R, J or T Fuse</td> </tr> <tr> <td>GD &amp; 4P DT</td> <td>100,000</td> <td>Class R, J or T Fuse</td> </tr> <tr> <td>30-600A HD</td> <td>200,000</td> <td>Class R, J or T Fuse</td> </tr> <tr> <td>30-600A DTF &amp; DTNF DT<sup>Ⓢ</sup></td> <td>200,000</td> <td>Class R, J or T Fuse</td> </tr> <tr> <td>800 &amp; 1200A HD &amp; DT<sup>Ⓢ</sup></td> <td>200,000</td> <td>Class L or T Fuse</td> </tr> </tbody> </table>	Sw. Rating & Type	AIC Rating	Protective Device <sup>Ⓞ</sup>	All Heavy Duty & DT	10,000	Circuit Breaker	30-600A HD & DT	10,000	Class H Fuse	60A Compact HD	100,000	Class R, J or T Fuse	GD & 4P DT	100,000	Class R, J or T Fuse	30-600A HD	200,000	Class R, J or T Fuse	30-600A DTF & DTNF DT <sup>Ⓢ</sup>	200,000	Class R, J or T Fuse	800 & 1200A HD & DT <sup>Ⓢ</sup>	200,000	Class L or T Fuse	
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<b>Fuses</b>	Fusible switches will accept the following UL class fuses: <ul style="list-style-type: none"> <li>30 "LF" - 30A max plug Fuses</li> <li>30-600A "GF" Class H &amp; K, Class R with kit</li> <li>100-600A "GF" Class J-move base</li> <li>100-200 "GF" Class T with kit</li> <li>400-600A "GF" Class T-move bases</li> </ul>	Fusible switches will accept the following UL class fuses: <ul style="list-style-type: none"> <li>30-600A "HF" Class H &amp; K, Class R with kit</li> <li>30-600A, 600V "HF" Class J-move base</li> <li>100-600A, 240V "HF" Class J-move base</li> <li>100-200A "HF" Class T with kit</li> <li>400-600A "HF" Class T-move bases</li> <li>800-1200A "HF" Class L, Class T with kit<sup>Ⓢ</sup></li> </ul>	Fusible switches will accept the following UL class fuses: <ul style="list-style-type: none"> <li>30-200A "DT" &amp; "F" Class H &amp; K, Class R with kit</li> <li>30 &amp; 60A 600V "DT" Class J-move base</li> <li>100-200A "DT" Class J-move base, Class T with kit</li> <li>400-600A "DT" Class J-standard, Class T-move bases</li> <li>400A 240v "F" Class H-standard</li> <li>400A, 600V &amp; 600A "F" Class T-Standard</li> </ul>																																							
<b>Cover Interlocks</b>	Voidable – cover interlocks on switches prevent the switch door from being opened when in the "ON" position. No cover interlock on 30-60A GD or on plug fuse type switches.	Voidable dual cover interlocks standard on all heavy duty switches. Prevents cover from being opened when switch is in the "ON" position and prevents switch from being turned "ON" when door is opened.	Dual cover interlocks standard on all double throw switches. Prevents cover from being opened when switch is in the "ON" position and prevents switch from being turned "ON" when door is opened.																																							
<b>Underwriters' Laboratories, Inc.</b>	Listed by UL under file #E4776 as enclosed switches and also suitable for use as service equipment (where applicable). UL98 Enclosed and Deadfront Switches.																																									
<b>NEMA Specifications</b>	Meet NEMA standard KS-1-2001 for type GD switches.	Meet NEMA standard KS-1-2001 for type HD switches.	Meet NEMA standard KS-1-2001 type GD for "DTG" & type HD for "DT", "F" & "NF" switches.																																							
<b>Seismic Qualifications</b>	100-600A GD & all HD switches and "DT" type double throw switches have been tested and comply with the 2010 California Building Code (CBC) and with the 2009 International Building Code (IBC) - Compliance Level SDS = 1.85 g																																									
<b>Groundable Neutral</b> (All neutrals are bondable for service entrance use.)	Fusible switches have groundable neutral blocks factory installed. Non-fusible switches accept field addable neutrals.	All switches (both Fusible and Non-Fusible) are either supplied with factory installed neutrals or accept field addable neutrals.	All except 4 pole switches will accept field addable neutrals except that "DTG" 100 & 200A switches are also available with factory installed neutrals.																																							
<b>Padlocks</b>	Padlockable cover latch. OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.																																							
<b>HP &amp; Load Break Ratings</b>	All General Duty, Heavy Duty and Double Throw Switches are both load break and horsepower rated.																																									

<sup>Ⓞ</sup> The protective device can either be a fuse installed in a fusible switch or an upstream fuse or circuit breaker protecting a non-fusible switch. The ampere rating of the

upstream protective device must not exceed the switch ampere rating.  
<sup>Ⓢ</sup> All 4 pole and fusible double switches with catalog numbers starting with "F" are rated 100,000 AIC max.

<sup>Ⓣ</sup> Class T kit available for 240V max. applications on 1200A switches.

General Duty	Heavy Duty	Double Throw	Features / Ratings
▪	▪	▪	30 thru 600 Amps
	▪	▪	800 and 1200 Amps
▪	▪	▪	240 Volt AC
	▪	▪	600 Volt AC
▪	▪	▪	250 Volt DC
	▪		600 Volt DC
▪	▪	▪	Double-break visible blade design (30-200A)
▪	▪	▪	Quick-make, quick-break switching action (excludes 30A GD)
	▪		Handle design for hook stick operation
▪	▪	▪	Padlockable cover latch
▪	▪	▪	Padlockable handle
▪		▪	Single voidable cover interlock (excludes 30-60A GD)
	▪	▪	Dual voidable cover interlock
▪	▪	▪	Type 1 enclosure
▪	▪	▪	Type 3R enclosure
	▪	▪	Type 12 enclosure
	▪	▪	Type 4 / 4X enclosures
▪	▪	▪	Generous wiring gutters that meet UL and NEC wire-bending space requirements
▪ <sup>⑤</sup>	▪	▪	Lugs suitable for copper or aluminum at 60° or 75°C
▪	▪	▪	CU/AL wire lugs that meet UL 486B requirements
	▪	▪	Suitable for field-convertible compression connectors
▪ <sup>④</sup>	▪	▪	All plated copper current carrying parts (except lugs)
▪	▪	▪	Spring reinforced Fuse Clips (except 30-60A GD) <sup>②</sup>
	▪	▪	Clear pivoting line terminal shield
▪	▪	▪	Replacement parts (except 30-60A GD)
	▪	▪	200% neutral available for purchase separately
▪ <sup>⑦</sup>	▪ <sup>①⑦</sup>	▪ <sup>①⑦</sup>	Provisions for UL Class T, R and H Fuses
	▪	▪ <sup>①</sup>	Provisions for UL Class J and L Fuses
	▪	▪	Metal nameplate
▪	▪	▪	Aux. switch kits (excludes 30-60A GD)
	▪ <sup>③</sup>		Type 4X with stainless steel interior parts
▪ <sup>④</sup>	▪		Rolled flange enclosure design (30-200A)
	▪	▪	Isolated ground kits



### Double Break Switching Action

Like the time-proven Vacu-Break Design, the Siemens VBII double break switching action breaks the arc in two places in 30-600A ratings. This reduces heat generation and increases switching speed by doubling the breaking distance. The result is enhanced performance and increased longevity. We also provide the most visible blade design available today. Unlike conventional knife blade switches, the blades are self-aligning to ensure positive contact. In addition, they have no wear and friction point since the “electrical hinge” has been eliminated. The result is a very fast, positive and reliable switching action for even the most severe applications.

① 400, 600V & 600A fusible, double-throw switches accept only Class J or T fuses. Only 800 & 1200A HD switches will accept Class L fuses.  
 ② 30-60A general duty switches have fuse clips constructed of spring type copper.

③ 30-200A Type VBII in stainless steel enclosures.  
 ④ 100-200A.  
 ⑤ 60A only suitable for Cu at 75°.

⑥ 200A general duty switches have aluminum neutral assemblies.  
 ⑦ 100-600A GD & DT and 100-1200A HD switches will accept Class T fuses.

Enclosure Types

- A Type 1** enclosures are intended for indoor use primarily to provide protection against contact with the enclosed equipment in locations where unusual service conditions do not exist.
  - B Type 3R** enclosures are intended for outdoor use primarily to provide a degree of protection against falling rain and sleet and must remain undamaged by the formation of ice on the enclosure. They are not intended to provide protection against conditions such as dust, internal condensation, or internal icing.
  - C Type 4, 4X** enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust, rain, splashing water and hose-directed water. They are not intended to provide protection against conditions such as internal condensation or internal icing. Also meets 4X definition by providing a high degree of protection against corrosion. Siemens 30-200A stainless steel 4X switches are supplied stainless interior parts and hardware as standard.
  - D Type 4** enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust, rain, splashing water and hose-directed water. They are not intended to provide protection against conditions such as internal condensation or internal icing.
  - E Type 12<sup>ⓐ</sup>** enclosures are intended for indoor use primarily to provide a degree of protection against dust, falling dirt and dripping water. They are not intended to provide protection against conditions such as internal condensation.
- Type 7/9** enclosures for use in hazardous locations. Use with molded case switches listed in Section 7.



Load Break Ratings

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

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

Horsepower Ratings

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

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

Non-Fusible Safety Switch AIC Ratings When Protected by a Circuit Breaker<sup>ⓐⓑ</sup>

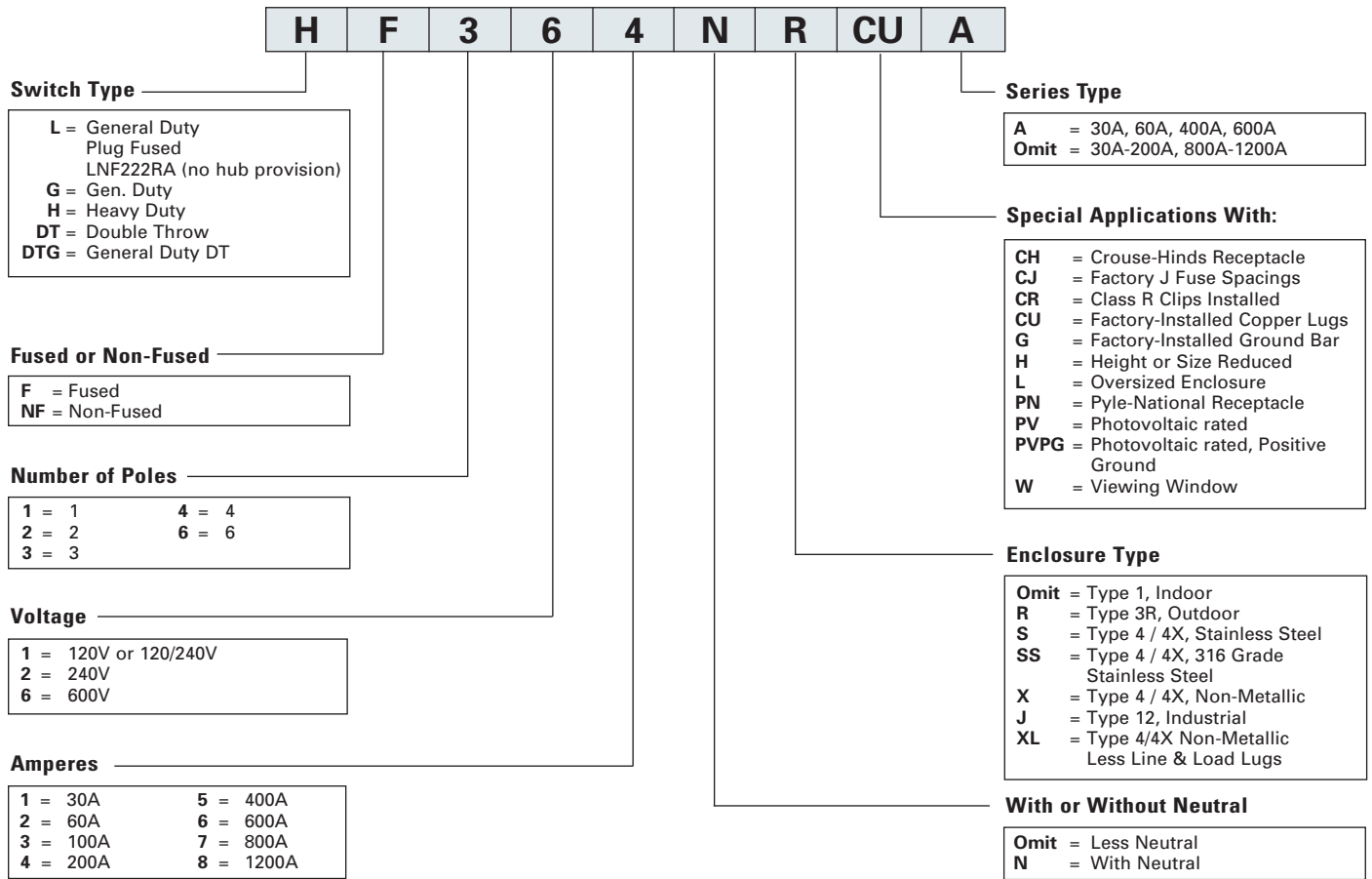
Breaker Frame	Non-Fused Switch	UL Listed Short Circuit Current Rating
NEG, NGB, ED4	30 DT (240V)	18 kA Thru 240 VAC
NEB, NEG, NGG, NGB, ED4	100A GD & DT (240V)	18 kA Thru 240 VAC
NEB, NEG, NGG, NGB, ED4	30-100A HD & DT (600V)	18 kA Thru 480 VAC
ED6	30-100A HD & DT (600V)	18 kA Thru 600 VAC
FD6-A, JD6-A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

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

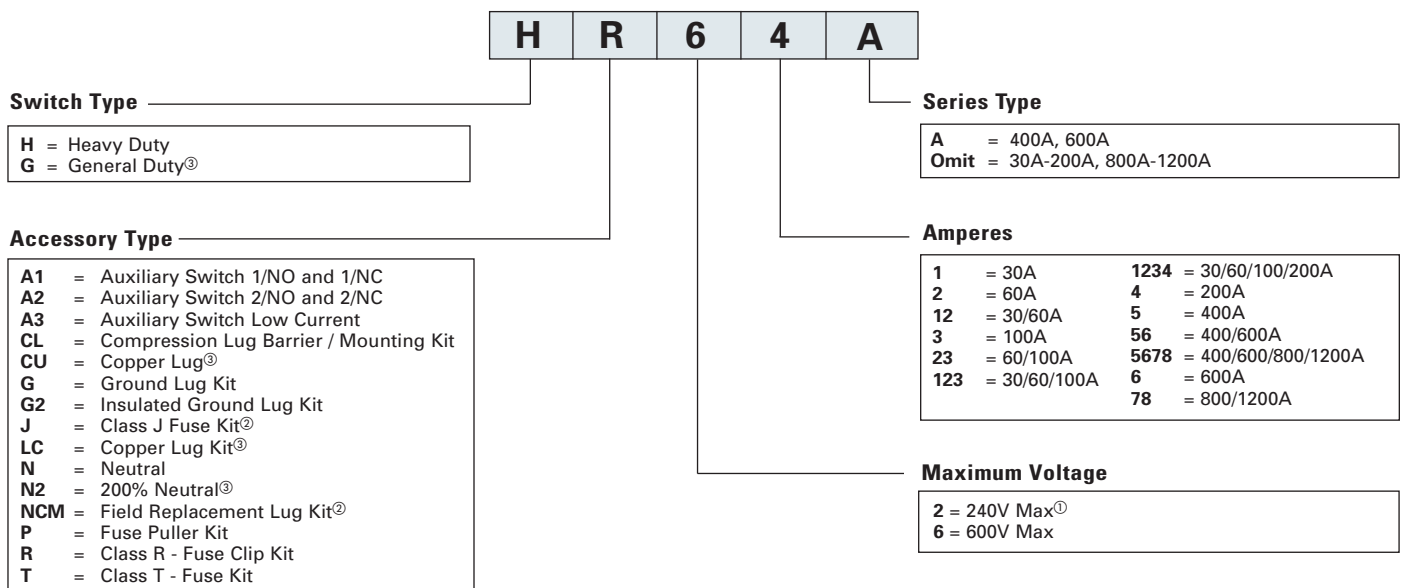
# Safety Switches

## Type VBII Safety Switch Catalog Numbering System

### Product Overview



### Type VBII Accessories Catalog Numbering System



Note: Catalog numbering systems above do not apply to 4-pole & Type "F" & "FR" double throw switches & accessories.

① For 400A, 600A use 680V max accessories except for T Fuse Kit.  
 ② Only offered for 400A, 600A.

③ For 30A-200A, 800A-1200A.

## Safety Switches

# Plug Fuse and 60A Special Application Type

### Selection

#### Features

- Compact size
- Horsepower rated
- Indoor and outdoor enclosures
- Quick make-quick break mechanism
- Visible "ON"-"OFF" indications
- Padlock-off handle feature
- Door padlock provision
- Bondable neutral (where indicated)
- Lugs suitable for copper or aluminum wire
- UL Listed
- Fuses — not included
- Switches accept Edison base plug fuses
- Hubs — see page 18/23
- Lugs — see page 18/23

#### Dimensions (inches)

Type	Height	Width	Depth
1	8 $\frac{1}{4}$	5 $\frac{1}{2}$	3
3R	8 $\frac{1}{4}$	5 $\frac{1}{2}$	3 $\frac{1}{2}$

#### Wire Range Table

Switch Type	Wire Range
120/240 Volt Fusible 30 Amp	Cu/Al #14 to #8 AWG <sup>ⓐ</sup>
240 Volt Non-Fusible 60 Amp	Cu #14 to #6 AWG



Ampere Rating	Indoor — Type 1		Outdoor — Type 3R		Horsepower Ratings <sup>ⓑ</sup>	
	Catalog Number	Ship. Wt. (lbs.) Pkg. of 10	Catalog Number	Ship. Wt. (lbs.) Pkg. of 10	1-Phase, 2-Wire	
					Standard	Maximum

#### 120/240 Volt Fusible

##### 1-Pole and Solid Neutral<sup>ⓐ</sup>

##### 120 Volt — 1-Phase, 2-Wire

30	LF111N	35	LF111NR	35	$\frac{1}{2}$	2
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##### 2-Pole and No Neutral

##### 120/240 Volt — 1-Phase, 2-Wire

30	Use 2-Pole and Solid Neutral				
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##### 2-Pole and Solid Neutral<sup>ⓐ</sup>

##### 120/240 Volt — 1-Phase, 3-Wire

30	LF211N	35	LF211NR	35	1 $\frac{1}{2}$	3
----	--------	----	---------	----	-----------------	---

#### 240 Volt Non-Fusible

##### 2-Pole Special Application Switch

##### 1 or 2-Pole — No Fuse

##### 240 Volt — 1-Phase, 2-Wire

60	—	—	LNF222RA <sup>ⓐ</sup>	30	—	10
60	—	—	LNF222RL <sup>ⓐ</sup>	40	3	10

For inches / millimeters conversion, multiply inches by 25.4.

<sup>ⓐ</sup>Dual horsepower ratings:

Std. — applies when non-time delay plug fuses are installed.

Max — applies when time-delay plug fuses are installed.

<sup>ⓑ</sup>Has service entrance label.

UL Listed as "Enclosed Switches" (suitable for use as service equipment where indicated) under File #E4776. (NEMA) — Type G.D.

Federal Spec. — W-S-865C — type LD or type NDS

<sup>ⓐ</sup>Bottom cable entry and exit only. No hub provision supplied. Ground lug is included and factory installed.

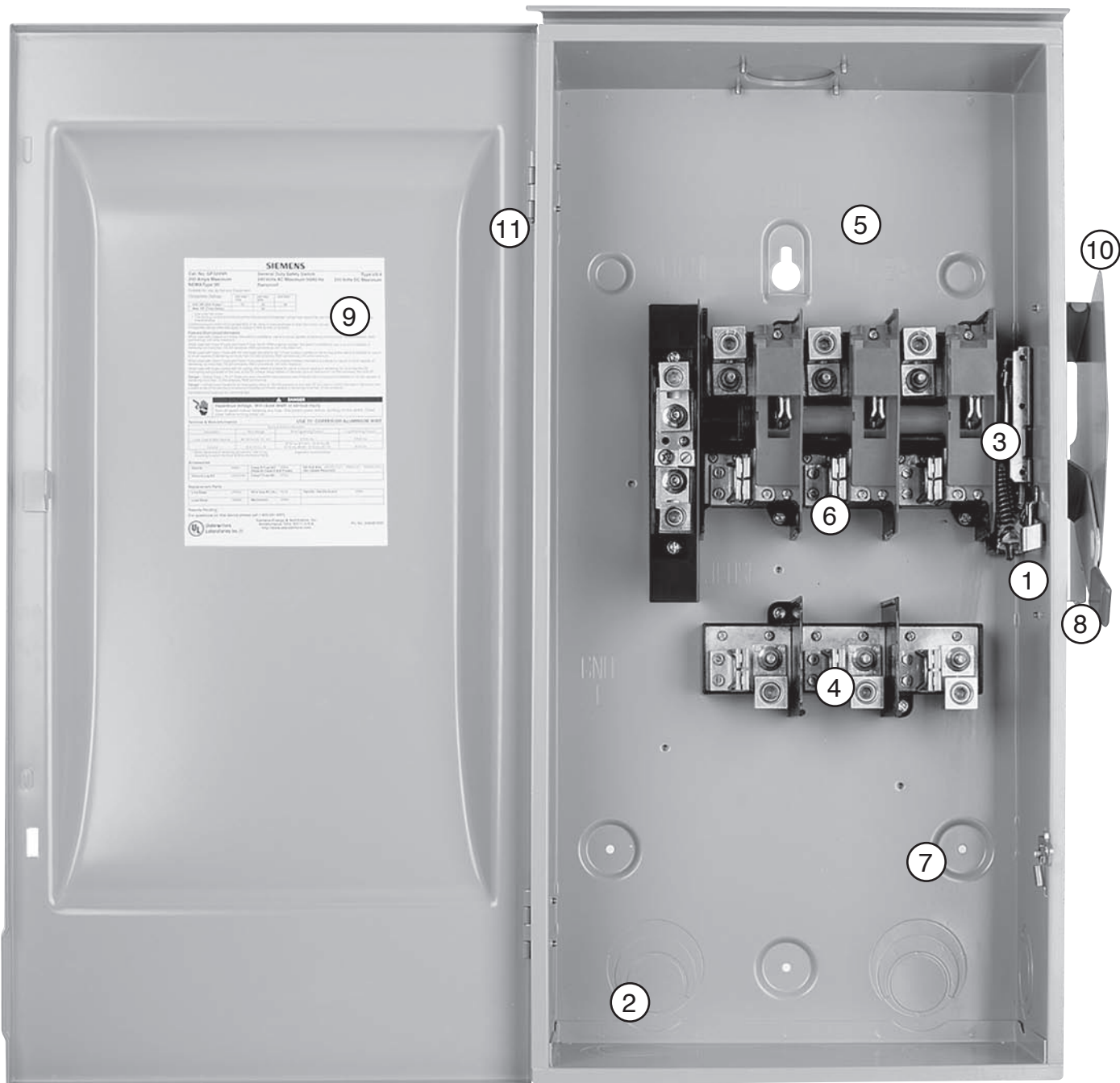
<sup>ⓑ</sup>Line lugs will accept and are UL approved for #14 to #6 Cu/Al cable.

<sup>ⓐ</sup>Legacy style, oversize enclosure. Ground lug is included and factory installed.

## Safety Switches

# General Duty Safety Switches

Features (60-600A)



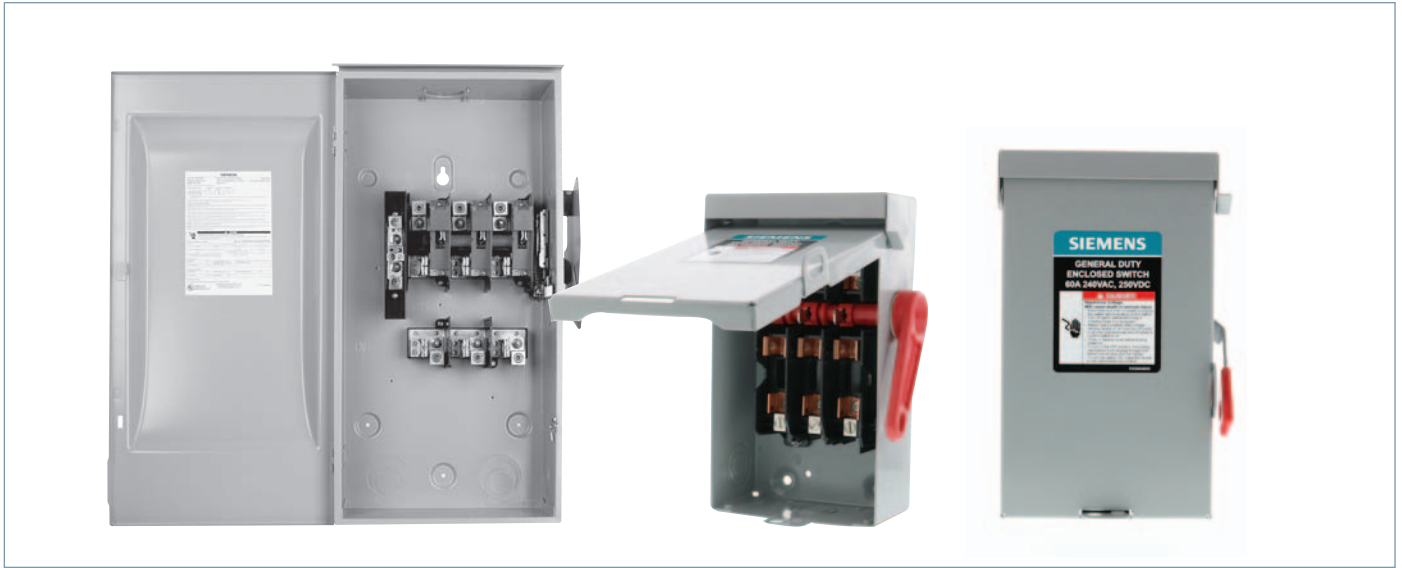
1. Cover interlock
2. Tangential knockouts 100-600A for easy conduit lineup
3. Quick-make, quick-break operating mechanism that ensures positive operation
4. Provisions for T, R, J, H, and K class fuses (T & J 100-600A)
5. Wiring gutters that meet or exceed NEC wire-bending space requirements
6. Visible blade, double-break switch action
7. Positive 2 or 3 point mounting
8. Highly visible red handle grip
9. Informative door labeling which includes replacement parts list
10. Handle and cover padlocking provisions
11. 100A and above have side-hinged door that opens 180 degrees for easier wiring



# Safety Switches

## General Duty Safety Switches

### Selection



System	Ampere Rating	Indoor — Type 1		Outdoor — Type 3R		Horsepower Rating <sup>①</sup>						
		Catalog Number	Ship Wt. (lbs.) Std. Pkg	Catalog Number	Ship Wt. (lbs.) Std. Pkg	240V AC		250 Volt DC				
						1-Phase, 2-Wire	2-Phase, 4-Wire	3-Phase, 3-Wire	Std.	Max.	Std.	Max.

### 240 Volt Fusible

#### 2-Pole, 2-Fuse, and Solid Neutral<sup>②③④</sup>

#### 240 Volt AC/250 Volt DC

	30	GF221NA	30 <sup>②</sup>	GF221NRA <sup>⑤</sup>	30 <sup>②</sup>	1½	3	—	—	3	7½	5
	60	GF222NA	20 <sup>⑥</sup>	GF222NRA <sup>⑤</sup>	20 <sup>⑥</sup>	3	10	—	—	7½	15	10
	100	GF223N	23	GF223NR	23	7½	15	—	—	15	30	20
	200	GF224N	47	GF224NR	48	15	—	—	—	25	60	40

#### 3-Pole, 3-Fuse, and Solid Neutral<sup>④</sup>

#### 240 Volt AC/250 Volt DC

	30	GF321NA	30 <sup>②</sup>	GF321NRA <sup>⑤</sup>	30 <sup>②</sup>	1½	3	—	—	3	7½	5
	60	GF322NA	20 <sup>⑥</sup>	GF322NRA <sup>⑤</sup>	20 <sup>⑥</sup>	3	10	—	—	7½	15	10
	100	GF323N	25	GF323NR	25	7½	15	—	—	15	30	20
	200	GF324N	49	GF324NR	50	15	—	—	—	25	60	40
	400	GF325NA	94.6	GF325NRA	94.6	15	—	—	—	50	125	50
	600	GF326NA	95.6	GF326NRA	95.6	15	—	—	—	75	200	—

### 240 Volt Non-Fusible<sup>③④</sup>

#### 2-Pole or 3-Pole

#### 240 Volt AC/250 Volt DC

	30	GNF221A	20 <sup>②</sup>	GNF221RA <sup>⑤</sup>	20 <sup>②</sup>	—	3	—	—	—	—	5
	30	GNF321A <sup>⑥</sup>	20 <sup>②</sup>	GNF321RA <sup>⑤⑥</sup>	20 <sup>②</sup>	—	3	—	—	7½	—	5
	30	GNF321LA <sup>⑥</sup>	30 <sup>②</sup>	GNF321RLA <sup>⑤⑥</sup>	30 <sup>②</sup>	—	3	—	—	7½	—	5
	60	GNF222A	30 <sup>②</sup>	GNF222RA <sup>⑤</sup>	30 <sup>②</sup>	—	10	—	—	15	—	10
	60	GNF322A	30 <sup>②</sup>	GNF322RA <sup>⑤</sup>	30 <sup>②</sup>	—	10	—	—	15	—	10
	100	GNF323	23	GNF323R	24	—	15	—	—	30	—	20
	200	GNF324	46	GNF324R	47	—	15	—	—	60	—	40
	400	GNF325A	114	Use 600V Switch — HNF365RA	—	—	15	—	—	125	—	50
	600	GNF326A	116	Use 600V Switch — HNF366RA	—	—	15	—	—	200	—	—

① Dual horsepower ratings: Std.- applies when non-time delay fuses are installed. Max.- applies when time-delay fuses are installed.

② These switches are UL-listed for application on grounded B-phase systems.

③ Suitable for use on 3-phase motor loads.

④ Service entrance labeled.

⑤ Has provision for ECHA type hub.

⑥ 5 switches per standard package.

⑦ 10 switches per standard package.

⑧ Height reduced switch (45.25 rather than 56 inches in height) for use with 500MCM or smaller conductors.

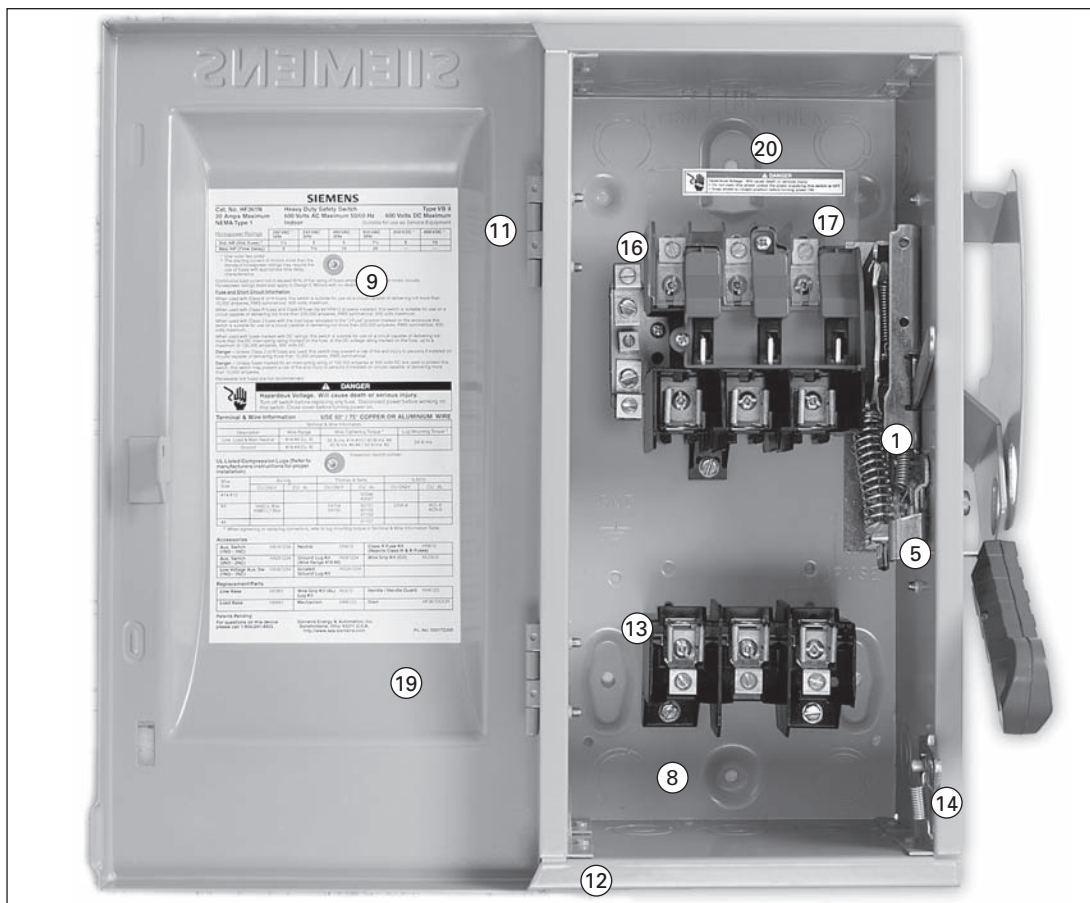
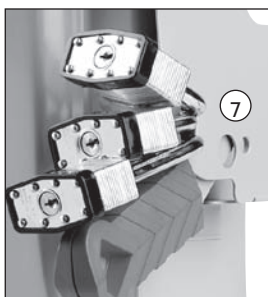
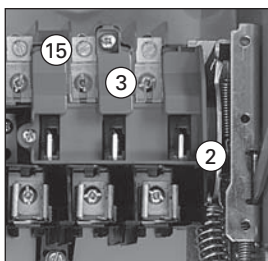
⑨ Not suitable for service entrance.

⑩ Indicates oversized enclosure.

## Safety 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.

# Safety Switches

## Heavy Duty Safety Switches

### Selection



System	Ampere Rating	Indoor — Type 1		Outdoor — Type 3R		Horsepower Rating <sup>①</sup>					
		Catalog Number	Ship Wt. (lbs.) Std. Pkg	Catalog Number	Ship Wt. (lbs.) Std. Pkg	240V AC				250 Volt DC	
						1-Phase, 2-Wire	2-Phase, 4-Wire	3-Phase, 3-Wire			
Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.			

### 240 Volt Fusible<sup>⑤</sup>

#### 2-Pole, 2-Fuse, and Solid Neutral<sup>③</sup> (Also used for 2-Pole, 2-Wire Applications) 240 Volt AC/250 Volt DC

Ampere Rating	Indoor Type 1 Catalog Number	Indoor Type 1 Ship Wt. (lbs.) Std. Pkg	Outdoor Type 3R Catalog Number	Outdoor Type 3R Ship Wt. (lbs.) Std. Pkg	1-Phase, 2-Wire Std.	1-Phase, 2-Wire Max.	2-Phase, 4-Wire Std.	2-Phase, 4-Wire Max.	3-Phase, 3-Wire Std.	3-Phase, 3-Wire Max.	250 Volt DC Std.
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	HF225NA	91.1	HF225NRA	91.1	15	—	—	—	50	125	50
600	HF226NA	95.6	HF226NRA	95.6	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

Ampere Rating	Indoor Type 1 Catalog Number	Indoor Type 1 Ship Wt. (lbs.) Std. Pkg	Outdoor Type 3R Catalog Number	Outdoor Type 3R Ship Wt. (lbs.) Std. Pkg	1-Phase, 2-Wire Std.	1-Phase, 2-Wire Max.	2-Phase, 4-Wire Std.	2-Phase, 4-Wire Max.	3-Phase, 3-Wire Std.	3-Phase, 3-Wire Max.	250 Volt DC Std.
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	HF325NA	94.6	HF325NRA	94.6	15	—	—	—	50	125	50
600	HF326NA	99.6	HF326NRA	99.6	15	—	—	—	75	200	50
800	HF327N	375	HF327NR	375	—	—	—	—	100	250	50
1200	HF328N	395	HF328NR	388	—	—	—	—	100	250	50

### 240 Volt Fusible<sup>⑤</sup>

#### 2-Pole, 2-Fuse<sup>④</sup> 240 Volt AC/250 Volt DC

Ampere Rating	Type 4/4X Stainless <sup>⑦</sup>		Type 12 Industrial <sup>⑥</sup>		1-Phase, 2-Wire Std.	1-Phase, 2-Wire Max.	2-Phase, 4-Wire Std.	2-Phase, 4-Wire Max.	3-Phase, 3-Wire Std.	3-Phase, 3-Wire Max.	250 Volt DC Std.
	Catalog Number	Ship Wt. (lbs.) Std. Pkg	Catalog Number	Ship Wt. (lbs.) Std. Pkg							
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>④</sup> (Also used for 2-Pole, 2-Wire Applications in 400–800A Ratings) 240 Volt AC/250 Volt DC

Ampere Rating	Indoor Type 1 Catalog Number	Indoor Type 1 Ship Wt. (lbs.) Std. Pkg	Outdoor Type 3R Catalog Number	Outdoor Type 3R Ship Wt. (lbs.) Std. Pkg	1-Phase, 2-Wire Std.	1-Phase, 2-Wire Max.	2-Phase, 4-Wire Std.	2-Phase, 4-Wire Max.	3-Phase, 3-Wire Std.	3-Phase, 3-Wire Max.	250 Volt DC Std.
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	HF325SA	93	HF325JA	93	15	—	—	—	50	125	50
400	HF325SSA	93	—	—	15	—	—	—	50	125	50
600	HF326SA	98	HF326JA	98	15	—	—	—	75	200	50
600	HF326SSA	98	—	—	15	—	—	—	75	200	50
800	HF327S■	370	HF327J■	365	—	—	—	—	100	250	50

■ Built to order. Allow 3-5 weeks for delivery.

① Height reduced switch (45.25 rather than 56 inches in height) for use with 500MCM or smaller conductors.

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

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

④ When a neutral is required use a field installed neutral kit.

⑤ Suitable for use as service entrance equipment.

⑥ Also rated Type 3S/3R.

⑦ 304 grade stainless steel. For switches with enclosures constructed from 316 grade stainless steel, see page 18/19.

# Safety Switches

## Heavy Duty Safety Switches

### Selection



System	Ampere Rating	Indoor — Type 1		Outdoor — Type 3R		Horsepower Rating <sup>④</sup>									
		Catalog Number	Ship Wt. (lbs.) Std. Pkg	Catalog Number	Ship Wt. (lbs.) 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			
Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.		

### 600 Volt Fusible<sup>⑤</sup>

#### 2-Pole, 2-Fuse<sup>③</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

#### 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>⑥</sup>
	60	—	—	HF362RL <sup>②</sup>	25	5	20	15	30	10	25	15	50	10	30 <sup>⑥</sup>
	100	HF363	24	HF363R	25	5	20	25	60	15	40	30	75	20	50 <sup>⑥</sup>
	200	HF364	48	HF364R	49	25	50	50	125	30	50	60	150	40	50
	400	HF365A <sup>①</sup>	93	HF365RA <sup>①</sup>	157	—	—	100	250	—	—	125	350	50	—
	600	HF366A <sup>①</sup>	98	HF366RA <sup>①</sup>	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>⑥</sup>
	100	HF363N	25	HF363NR	26	10	30	25	60	15	40	30	75	20	50 <sup>⑥</sup>
	200	HF364N	49	HF364NR	50	25	50	50	125	30	50	60	150	40	50
	400	HF365NA	94.6	HF365NRA	94.6	—	—	100	250	—	—	125	350	50	—
	600	HF366NA	99.6	HF366NRA	99.6	—	—	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>③</sup>

						480 Volt AC/600 Volt AC/600 Volt DC									
	Ampere Rating	Type 4/4X Stainless <sup>⑤</sup>		Type 12 Industrial <sup>⑥</sup>											
		Catalog Number	Ship Wt. (lbs.) Std. Pkg	Catalog Number	Ship Wt. (lbs.) Std. Pkg	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.
	30	HF261S	15	HF261J■	15	3	7½	—	—	3	10	—	—	5	15
	60	HF262S	20	HF262J■	20	5	20	—	—	10	25	—	—	10	30
	100	HF263S■	27	HF263J■	27	10	30	—	—	15	40	—	—	20	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>⑥</sup>
	100	HF363S	25	HF363J	25	—	—	25	60	—	—	30	75	20	50 <sup>⑥</sup>
	200	HF364S	49	HF364J	49	—	—	50	125	—	—	60	150	40	50
	400	HF365SA <sup>①</sup>	93	HF365JA <sup>①</sup>	93	—	—	100	250	—	—	125	350	50	—
	400	HF365SSA	93	—	—	—	—	100	250	—	—	125	350	50	—
	600	HF366SA <sup>①</sup>	98	HF366JA <sup>①</sup>	98	—	—	150	400	—	—	200	500	50	—
	600	HF366SSA	98	—	—	—	—	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 3-5 weeks for delivery.

① 60-600A 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 on 1200 Amp solidly grounded wye systems per NEC 230.95.

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 18/19.

# Safety Switches

## Heavy Duty Safety Switches

### Selection



System	Ampere Rating	Indoor — Type 1		Outdoor — Type 3R		Horsepower Rating							
		Catalog Number	Ship Wt. (lbs.)	Catalog Number	Ship Wt. (lbs.)	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	—	—	7½	—	10	—	5	15
	60	HNF262	19	HNF262R	20	—	—	20	—	25	—	10	30
	100	HNF263	24	HNF263R	25	—	—	30	—	40	—	20	50

#### 3-Pole

						480 Volt AC / 600 Volt AC / 250 Volt DC							
	30	HNF361	12	HNF361R	13	5	10	7½	20	10	30	5	—
	30	—	—	HNF361RL <sup>⑥</sup>	19	5	10	7½	20	10	30	5	—
	60	HNF362H <sup>②</sup>	11	HNF362RH <sup>②</sup>	11	10	20	20	50	20	40	10	—
	60	HNF362 <sup>①</sup>	18	HNF362R <sup>①</sup>	19	10	20	20	50	25	60	10	30 <sup>⑦</sup>
	60	—	—	HNF362RL <sup>⑥</sup>	24	10	20	20	50	25	60	10	30 <sup>⑦</sup>
	100	HNF363 <sup>①</sup>	23	HNF363R <sup>①</sup>	24	15	40	30	75	40	100	20	50 <sup>⑦</sup>
	200	HNF364 <sup>①</sup>	46	HNF364R <sup>①</sup>	47	15	60	50	125	50	150	40	50
	400	HNF365A <sup>①</sup>	75	HNF365RA <sup>①</sup>	75	15	125	50	250	50	350	50	—
	600	HNF366A <sup>①</sup>	77	HNF366RA <sup>①</sup>	77	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							
		Type 4 / 4X Stainless <sup>⑥</sup>		Type 12 Industrial <sup>⑤</sup>									
		30	HNF261S	13	HNF261J	13	—	—	7½	—	10	—	5
60	HNF262S	20	HNF262J	20	—	—	20	—	25	—	10	30	
100	HNF263S■	25	HNF263J■	25	—	—	30	—	40	—	20	50	

#### 3-Pole

						480 Volt AC / 600 Volt AC / 250 Volt DC							
	30	HNF361S	13	HNF361J	13	5	10	7½	20	10	30	5	—
	60	HNF362SH <sup>②</sup>	15	HNF362JH <sup>②</sup>	14	10	20	20	50	20	40	10	—
	60	HNF362S <sup>①</sup>	19	HNF362J <sup>①</sup>	19	10	20	20	50	25	60	10	30 <sup>⑦</sup>
	100	HNF363S <sup>①</sup>	24	HNF363J <sup>①</sup>	24	15	40	30	75	40	100	20	50 <sup>⑦</sup>
	200	HNF364S <sup>①</sup>	47	HNF364J <sup>①</sup>	47	15	60	50	125	50	150	40	50
	400	HNF365SA <sup>①</sup>	75	HNF365JA <sup>①</sup>	75	15	125	50	250	50	350	50	—
	400	HNF365SSA	75	—	—	15	125	50	250	50	350	50	—
	600	HNF366SA <sup>①</sup>	77	HNF366JA <sup>①</sup>	77	15	200	50	400	50	500	50	—
	600	HNF366SSA	77	—	—	15	200	50	400	50	500	50	—
	800	HNF367S	295	HNF367J■	295	15	250	50	500	50	500	50	—
1200	HNF368S■	310	HNF368J■	310	15	250	50	500	50	500	50	—	

■ Built to order. Allow 3-5 weeks for delivery.

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

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

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

③ Use 3-Pole switch for 200A application.

④ Suitable for use as service entrance equipment except for 1200 when used on a 480 or 600V grounded wye system.

⑤ Also rated type 3S / 3R.

⑥ Indicates oversized enclosure (30A switch in a 60A enclosure or a 60A switch in a 100A enclosure).

⑦ 600V DC and 600V DC horsepower rating shown requires (2) poles to be connected in series.

⑧ 304 grade stainless steel. For switches with enclosures constructed from 316 grade stainless steel, see page 18/19.

# Heavy Duty Safety Switches

Type 3R, 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.




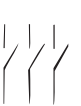

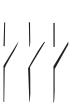
All allow viewing of visible blade position. 30–200A also allow viewing of indicating type fuses.

## 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	Ship Wt. (lbs.)	Maximum Horsepower Rating <sup>②</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	—	—
<b>3-Pole, 3-Wire Fusible, Type 3R<sup>④</sup></b>				<b>600 Volt AC / 250 Volt DC<sup>①</sup></b>					
	30 60	HF361RW HF362RW	17 22	3 10	7½ 15	15 30	20 50	5 10	— 30 <sup>⑤</sup>
<b>3-Pole, 3-Wire Non-Fusible, Type 3R<sup>④</sup></b>				<b>600 Volt AC / 250 Volt DC<sup>①</sup></b>					
	30 60	HNF361RW HNF362RW	14 21	3 10	10 20	20 50	30 60	5 10	— 30 <sup>⑤</sup>
<b>3-Pole, 3-Wire Fusible, Type 12<sup>③④</sup></b>				<b>600 Volt AC / 250 Volt DC<sup>①</sup></b>					
	30 60 100 200 400 600	HF361JW HF362JW HF363JW HF364JW HF365JWA HF366JWA	17 22 26 53 93 98	3 10 15 — — —	7½ 15 30 60 125 200	15 30 60 125 250 400	20 50 75 150 350 500	5 10 20 40 50 50	— 30 <sup>⑤</sup> 50 <sup>⑤</sup> 50 — —
<b>3-Pole, 3-Wire Non-Fusible, Type 12<sup>③④</sup></b>				<b>600 Volt AC / 250 Volt DC<sup>①</sup></b>					
	30 60 100 200 400	HNF361JW HNF362JW HNF363JW HNF364JW HNF365JWA	14 21 25 51 75	3 10 15 15 15	10 20 40 60 125	20 50 75 125 250	30 60 100 150 350	5 10 20 40 50	— 30 <sup>⑤</sup> 50 <sup>⑤</sup> 50 —
<b>3-Pole, 3-Wire Fusible, Type 4X Stainless Steel<sup>④⑥</sup></b>				<b>600 Volt AC / 250 Volt DC<sup>①</sup></b>					
	30 60 100 200 400 400	HF361SW HF362SW HF363SW HF364SW HF365SWA HF365SSWA	17 23 28 55 75 75	3 10 15 — 15 15	7½ 15 30 60 125 125	15 30 60 125 250 250	20 50 75 150 350 350	5 10 20 40 50 50	— 30 <sup>⑤</sup> 50 <sup>⑤</sup> 50 — —
<b>3-Pole, 3-Wire Non-Fusible, Type 4X Stainless Steel<sup>④⑥</sup></b>				<b>600 Volt AC / 250 Volt DC<sup>①</sup></b>					
	30 60 100 200 400 400	HNF361SW HNF362SW HNF363SW HNF364SW HNF365SWA HNF365SSWA	15 23 27 54 75 75	3 10 15 15 15 15	10 20 40 60 125 125	20 50 75 125 250 250	30 60 100 150 350 350	5 10 20 40 50 50	— 30 <sup>⑤</sup> 50 <sup>⑤</sup> 50 — —

① 200A switches are also rated 600V DC.

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

③ Also rated 3S/3R for outdoor use.

④ All switches are suitable for use as service entrance equipment. Use outside poles of 3-pole switch for 2-pole application.

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

⑥ 304 grade stainless steel. For switches with enclosures constructed from 316 grade stainless steel, see page 18/19.

## Elevator Control Switches

### Application

Siemens Type (ECS) Elevator Control disconnect switches are designed for single cable or hydraulic elevator application to interrupt the incoming AC power upon receiving a signal from the Fire Alarm Control Panel (FACP).

### Description

The Elevator Control switch units come completely assembled for quick installation, eliminating the labor and time needed to assemble individual components. Therefore, the numbering system assures that you get all of the correct components, assembled with the correct ratings, without having to individually order accessories.

It is easy to meet Code requirements for selective coordination in a fully fused system. Siemens Type (ECS) Elevator Control disconnect switches utilize Class J fuses that easily coordinate with any upstream fuse by simply using a 2:1 line-side to load-side fuse ratio.

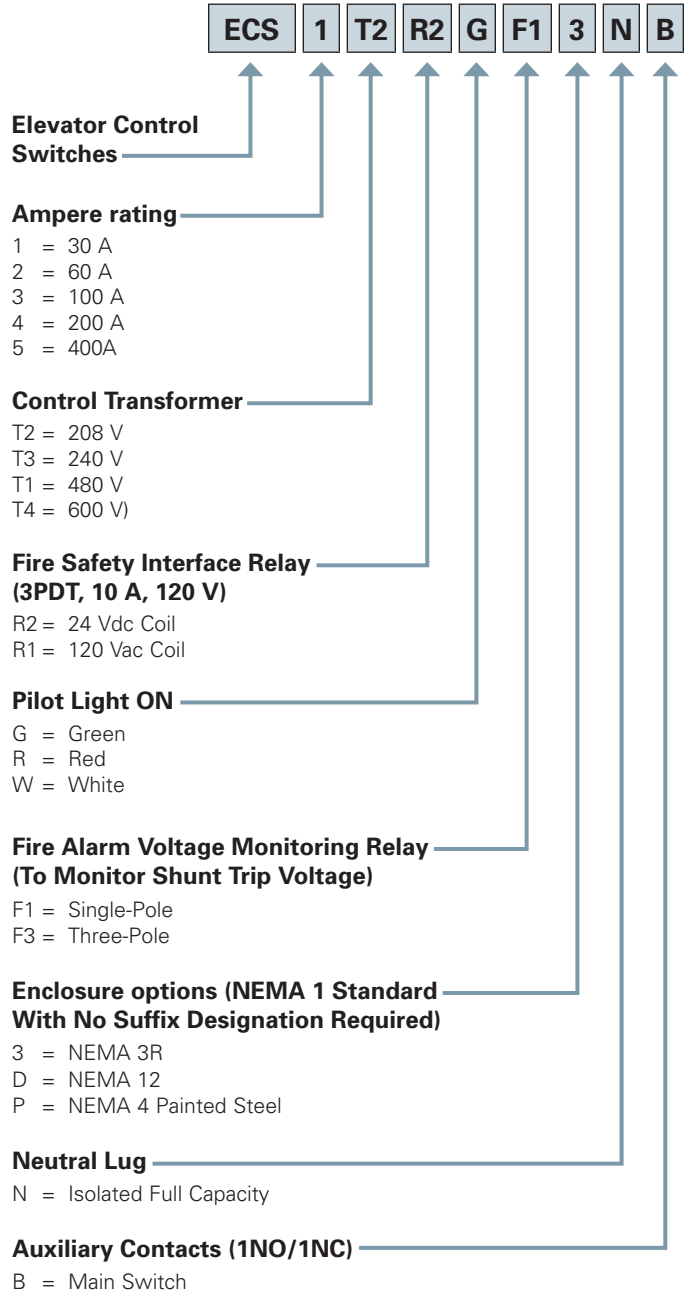
### Standards

- UL 98 Enclosed and Dead Front Switch – Guide 96NK3917, File E182262



### Catalog Number System

The following catalog numbering system defines an Elevator Control Switch construction.



© 100 VA with Primary and Secondary fusing (120 V Secondary)

## Elevator Control Switches

### Standard Features

- 30-400 A, 600 Vac, 3-phase fused power switch
- 200 kA RMS assembly short-circuit current rating
- Shunt trip 120 V
- Control power terminal block
- Ground lug compliant with the National Electric Code
- Class J fuse mounting only (Class J fuses not included)
- Key to test switch
- Pilot light – "ON"
- Mechanically interlocked auxiliary contact for hydraulic elevators with battery backup (5 A, 120 Vac rated)
- Handle designed for hook stick operation

### Optional Features

- Control power transformer with fuses and blocks
- Fire safety interface relay
- Isolated neutral lug (oversized 200% rated neutral option available where required by excessive non-linear loads)
- Fire Alarm Voltage Monitoring Relay (to monitor Shunt Trip Voltage)
- NEMA 3R, 4, and 12 enclosures available
- OSHPD Special Seismic Certification Preapproval (OSP)

### Other Options

Optional features include contact closure, i.e. battery lowering/door opening system. The B option offers support for the states of Arizona, Oregon, and Texas requirements to prevent "nuisance" fire alarms by over-riding the "Control Power not Available" signal when the Siemens Elevator control disconnect is manually (intentionally) turned off, and distinctive signaling for ON-OFF-TRIPPED conditions (Option B).

All Siemens Elevator Control elevator disconnect switches are UL-Listed and designed for safe access by qualified personnel. When maintenance or shutdown service is

required, no energized parts are exposed inside the enclosure when the disconnect switch is manually turned to the OFF position. For proper maintenance safety precautions, always turn off incoming power to the Siemens Elevator Control elevator switch when possible. When servicing any live electrical equipment, always wear appropriate personal protective equipment.

### Shunt-Trip Operation

The disconnect means is a shunt-trip operated switch. The control power source for the shunt-trip operator is a 120 Vac supply originating in the Siemens Elevator Control switch. Current to the shunt-trip device is switched by an isolation relay, which is in turn controlled by the FACP.

The control signal may be either 24 Vdc from the FACP (Option R2) or a "dry" contact closure in the FACP (Option R1). In the case of a "dry" contact closure, the sensing voltage is 120 Vac originating in the Siemens Elevator Control switch.

A key test switch (Option K) is included for testing the shunttrip circuit.

### Supervisory Indication

Additionally, an optional separate relay can be specified to monitor the 120 Vac control power source in the Siemens Elevator Control switch. This relay (Option F1 or F3) is used to provide supervisory indication of "Control Power Available" as required by NFPA 72 Section 6.15.4.4.

### Transformer Fuse Details

ECS Voltage/ Transformer Voltage	Primary Fuse (amps)	Secondary Fuse (amps)
208/120	FNQ-R-2	FNM-1 1/4
240/120	FNQ-R-2	FNM-1 1/4
480/120	FNQ-R-1	FNM-1 1/4
600/120	FNQ-R-1	FNM-1 1/4

### UL<sub>A</sub> / NEC<sub>B</sub> Listed Horsepower Ratings

Voltage / Poles	30A		60A		100A		200A		400A	
	Std <sup>②</sup>	Max <sup>①</sup>	Std <sup>②</sup>	Max <sup>①</sup>	Std <sup>②</sup>	Max <sup>①</sup>	Std <sup>②</sup>	Max <sup>①</sup>	Std <sup>②</sup>	Max <sup>①</sup>
208VAC / 3 Pole <sub>B</sub>	2	5	5	10	10	15	20	40	40	75
240VAC / 3 Pole <sub>A</sub>	2	7½	7½	15	15	30	25	60	50	75
480VAC / 3 Pole <sub>A</sub>	5	15	15	30	25	60	50	125	100	150
6008VAC / 3 Pole <sub>A</sub>	7½	20	15	50	30	75	60	150	125	200

Fuse and Short Circuit Information

This switch is suitable for use with Class J Fuses ONLY.

① Max HP with time delay Class J Fuses.  
 ② Max HP with non-time delay Class J Fuses.



## Safety Switches

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

### Selection

#### Application

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



HNF662J

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

System	Amp Rating	Indoor Type 1		Type 12/3R Industrial <sup>③</sup>		Horsepower Ratings <sup>③</sup>				480V, 3Ø		600V, 3Ø		250V DC	
		Catalog Number	Ship Wt. (lbs.)	Catalog Number	Ship Wt. (lbs.)	240V, 2Ø, 4W		240V 3Ø		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	
<b>Non-fusible 600 Volt AC, 250 Volt DC — 4-Pole</b>															
	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	4	

### 6-Pole Type VBII Switches<sup>①②⑤</sup>

System	Amp Rating	Type 12/3R Industrial		Type 4X Stainless Steel		Horsepower Ratings <sup>③</sup>				250V DC		
		Catalog Number	Ship Wt. (lbs.)	Catalog Number	Ship Wt. (lbs.)	240V 3Ø		480V, 3Ø			600V, 3Ø	
<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
<b>Non-fusible 600 Volt AC, 250 Volt DC — 6-Pole</b>												
	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 3-5 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.

⑤ Supplied with factory installed ground lugs.

# Special Application Safety Switches

## Interlocked Receptacle Switches

### Application

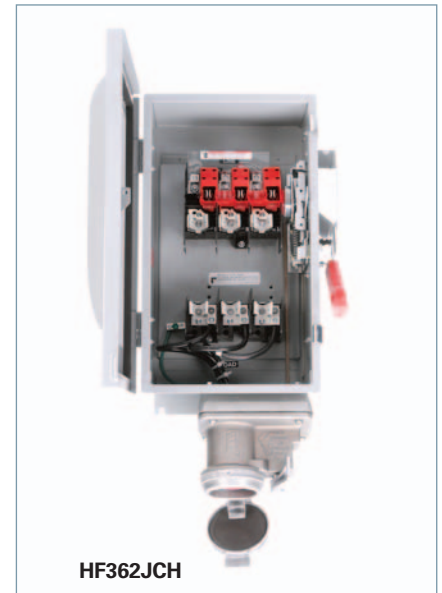
Receptacle Safety Switches provide cord connection protection of heavy-duty portable equipment (welders, infrared ovens, batch feeders, portable conveyors, assembly line fixtures and tools, refrigerator trucks, etc.) under load or fault conditions.

### 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.



HF362JCH

### Crouse-Hinds Interlocked Receptacle Switches

Ampere Rating <sup>④</sup>	Type 12 <sup>⑤</sup>	Type 4/4X <sup>⑥</sup>	Shipping Wt. (lbs.) Std. Pkg.	Accepts Crouse-Hinds Arkite <sup>®</sup> Plug Catalog Number
	Catalog Number	Catalog Number		

#### 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>⑤</sup>	Type 12 Stainless Steel Catalog Number <sup>⑥</sup>	Shipping Wt. (lbs.) Std. Pkg.	Accepts Pyle-National QuelArc™ <sup>②③</sup> Plugs Plug Catalog Number
Switch	Receptacle					
30	30	600 (F)	HF361JPN▲	HF361SPN▲	23	JPD-83046
		600 (N-F)	HNF361JPN	HNF361SPN	21	
60	60	240 (F)	HF322JPN▲	—	28	JPD-116046
		600 (F)	HF362JPN▲	HF362SPN▲	28	
		600 (N-F)	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 Ampere rating of both switch and receptacle.

⑤ Also rated Type 3R/3S.

⑥ Enclosure is constructed of Type 304 stainless steel.

# Special Application Safety Switches

Type VBII Non-Metallic & 316 Grade 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.)	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>③</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		Ship Weight (lbs.)	Horsepower Rating—3-Phase						250 Volts DC	600 Volts DC
	Catalog Number	With Viewing Window		240 Volt AC		480 Volt AC		600 Volt AC			
		Catalog Number		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.

# Enclosed Solar Photovoltaic (PV) Switches

## Application, Description, Selection

### Application

Solar disconnect switches are designed to be used in the DC portion of photovoltaic power generation circuits. They incorporate powerful magnets within the switch line base which work in combination with a double break switching action to quickly dissipate the very hot arc that is generated when a 600V DC circuit is opened under load. These circuits are defined by article 690 of the NEC which requires the grounded conductor to be at ground potential at all times and therefore cannot be switched.

### Description

30-200A switches are available in both Type 1 and 3R enclosures and in both fusible and non-fusible versions. They are provided with an additional door mounted warning label as required by the NEC and are supplied with a factory installed equipment ground bar. They are built to UL98 requirements but are UL listed in file number E335018 as UL1741 photovoltaic disconnect switches. They are 3 pole switches that are approved to switch 3 separate 600V DC circuits (one per pole). The design incorporates

many of the standard VBII switch features including a rolled out enclosure front flange, a large metal operating handle, oversized line and load lugs and large wire gutters. 1000VDC photovoltaic switches are UL98B listed for solar applications and comply with article 690 of the NEC. The new 400-600Amp switches are also UL98B listed at 600VDC and come in NEMA Type 3R.

### Solar Photovoltaic Enclosed Disconnect Switches

Ampere Rating	Indoor – Type 1		Outdoor – Type 3R		Rated Isc Per NEC Article 690
	Catalog Number	Ship Wt* Std. Pkg.	Catalog Number	Ship Wt* Std. Pkg.	
<b>Negative Ground 3 Pole 3 Wire Fusible 600Volt DC</b>					
30	HF361PV	14	HF361RPV	15	19.2 A
60	HF362PV	20	HF362RPV	21	38.4 A
100	HF363PV▲	25	HF363RPV	26	64.0 A
200	HF364PV▲	49	HF364RPV	50	128.0 A
<b>Negative Ground 3 Pole 3 Wire Non-Fusible 600Volt DC</b>					
30	HNF361PV	12	HNF361RPV	13	24.0 A
60	HNF362PV	19	HNF362RPV	20	48.0 A
100	HNF363PV▲	24	HNF363RPV	25	80.0 A
200	HNF364PV▲	47	HNF364RPV	48	160.0 A
<b>Positive and Negative Ground, 1 Pole, Fusible 1000 Volt DC</b>					
200	HF1104NPV▲	52	HF1104NRPV▲	53	128.0A
<b>Positive and Negative Ground, 1 Pole, Non-Fusible 1000 Volt DC</b>					
200	HNF1104NPV▲	50	HNF1104NRPV▲	51	160.0A
<b>Positive Ground 3 Pole 3 Wire Fusible 600Volt DC</b>					
30	HF361PVPG	14	HF361RPVPG	15	19.2 A
60	HF362PVPG▲	20	HF362RPVPG	21	38.4 A
100	HF363PVPG▲	25	HF363RPVPG▲	26	64.0 A
200	HF364PVPG▲	49	HF364RPVPG▲	50	128.0 A
<b>Positive Ground 3 Pole 3 Wire Non-Fusible 600Volt DC</b>					
30	HNF361PVPG	12	HNF361RPVPG	13	24.0 A
60	HNF362PVPG▲	19	HNF362RPVPG	20	48.0 A
100	HNF363PVPG▲	24	HNF363RPVPG▲	25	80.0 A
200	HNF364PVPG▲	47	HNF364RPVPG▲	48	160.0 A
<b>Positive and Negative Ground, 2 Wire, 600Volt DC, Type 3R</b>					
Amperage Rating	No. Poles	Fuse Type	Catalog Number	Ship Wt* Std. Pkg	Rated Isc Per NEC Article 690
400A	1	Fusible	HF165NRPV▲	165	256A
400A	1	Non-fusible	HNF165NRPV▲	127	256A
600A	1	Fusible	HF166NRPV▲	167	384A
600A	1	Non-fusible	HNF166NRPV▲	129	384A



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

\* In pounds (lbs)

Note: All disconnects are rated at 10,000 AIC per UL requirements when used with or protected by Class K, J or R fuses rated at 600VDC.

## Safety 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	Description
HR21A	30A, 240V Kit (GD only)
HR21	30A, 240V Kit (HD only)
HR612	30A, 600V Kit
HR22A	60A 240V Kit (GD only)
HR62	60A, 600V Kit
HR63	100A Kit
HR64	200A Kit
HR65A	400A Kit
HR66A	600A Kit

#### Class J Fusing

All 30-600A, 600V and 100-600A, 240V fusible Heavy Duty Switches are field convertible to accept Class J fuses by moving the load base to a pre-drilled J fuse position. All 100-600A, 240V fusible General Duty switches can also be field converted to accept Class J fuses.

#### Class J Fuse Kits

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

#### Internal Shield Kits (for fusible switches)

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

#### Internal Shield Kits<sup>®</sup>

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

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

® One kit per pole required.



HT63

#### Class T Fuse Adapter Kits

All 100-600A, General Duty and 100-200Amp and 1200Amp Heavy Duty Switches are field convertible to accept Class T fuses.

#### Class T Fuse Adapter Kits<sup>®</sup>

Catalog Number	Description
HT23	100A, 240V Kit
HT63	100A, 600V Kit
HT24	200A, 240V Kit
HT64▲	200A, 600V Kit
HT25A	400A, 240V Kit
HT65A	400A, 600V Kit
HT26A	600A, 240V Kit
HT66A	600A, 600V Kit
TFAK72	800A, 240V Kit
TFAK75	800A, 600V Kit
TFAK82	1200A, 240V Kit



HN612

#### Neutral Kits

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

#### Neutral Kits

Switch Ampere Rating	Kit Catalog Number
30 GD	n/a
30 HD	HN612
60 GD	HN22A
60, 100 HD, 100 GD	HN623
200	HN64
400 & 600	HN656A
800 & 1200	HN678

® Not designed for use in Non-metallic 4X safety switches. Not designed for use with Auxiliary Contacts.



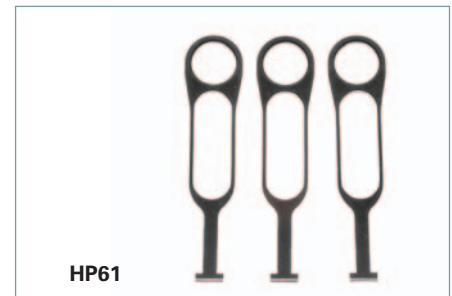
HN264

#### 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	Wire Range Line & Load Lugs (Cu/Al)
100	HN263	(2) #14-1/0 AWG
200	HN264	(2) #6 AWG-300 Kcmil
400	HN656A	(2) 1/0 AWG-600 Kcmil (2) #6 AWG-300 Kcmil
600	HN678A	(2) 1/0 AWG-600 Kcmil (2) #6 AWG-300 Kcmil



HP61

#### Fuse Puller Kits

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

#### Fuse Puller Kits

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



HA261234



HA265678



HLC612

HG261234

**Auxiliary Contacts**

Auxiliary Contacts are available only for Heavy Duty Switches. The auxiliary contacts are available in 1 normally open and 1 normally closed or 2 normally open and 2 normally closed configurations. Siemens offers a PLC Auxiliary Switch (30-600A) 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<sup>①</sup>

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

**With 1 NO & 1 NC Isolated Contacts**

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

**With 2 NO & 2 NC Isolated Contacts**

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

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

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

**Copper Lug Kits**

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

Copper Lug Kits

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

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

■ Purchase field replacement kit along with lugs.

① Series A 400A and 600A switches use HA161234, HA261234 or HA361234 auxiliary contacts. Earlier 400A and 600A switches use HA165678, HA265678 or HA365678 auxiliary contacts.

**Quick Connects**

They provide two point control power take-off capability and are normally used on two poles on the line side when it is required to have control power available when the switch is in the OFF position. They provide a mounting provision for standard ¼" quick connect terminal. Installed in the line or load side. 30A VBII switches have lugs UL listed to accept (2) wires per pole as standard so a 30A kit is not required.

Quick Connects

Catalog Number	Description
HQC62	60A 2 wire quick connect kit
HQC63	100A 2 wire quick connect kit
HQC64	200A 2 wire quick connect kit

**Isolated Ground Kits**

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

Isolated Ground Kits

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

**Equipment Ground Kits**

Equipment Ground Lug Kits are available for all 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	Number of Terminals	Wire Range Per Terminal (Cu/Al)
30-200 GD	HG61234	2	#14-4 AWG
30-200 HD	HG61234	2	#14-4 AWG
400 & 600	HG656A	4	2/0-6 AWG
800-1200	HG678	8	#6 AWG-250 Kcmil

## Safety Switches

# General and Heavy Duty Safety Switches

### Hub and Lug Selection

#### Interchangeable Hubs

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

Conduit Size (inches)	Catalog Number	Used On
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#### Type 3R<sup>①</sup>

Cover	Catalog Number	Used On
3/4	ECHA000	30-60A GD Only
1	ECHA075	
1 1/4	ECHA100	
1 1/4	ECHA125	
Cover	Catalog Number	Used On
3/4	ECHS000	100-200A GD 30-200A HD
1	ECHS075	
1 1/4	ECHS100	
1 1/2	ECHS125	
2	ECHS150	
2 1/2	ECHS200	
2 1/2	ECHS250	
Cover	Catalog Number	Used On
3	ECHV250	400-1200A
3 1/2	ECHV300	
3 1/2	ECHV350	
4	ECHV400	

#### Type 4/4X<sup>②</sup>

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

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

#### Field Replacement Kits and Neutral Barrier Kits

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

#### Field Replacement Kits and Neutral Barrier Kits

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

#### Lugs

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

#### Multiple Padlock Accessory

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

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

Switch Ampere Rating	Wire Range with Wire Bending Space Per NEC Requirements	Lug Wire Range
30GD	#14-8 AWG (Cu/Al)	#14-2 AWG (Cu/Al) <sup>⑥</sup>
60GD	#14-6 AWG (Cu)	#14-2 AWG (Cu) <sup>⑥</sup>
30HD	#14-6 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
60HD <sup>⑥⑦</sup>	#14-3 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
100 <sup>⑧</sup>	#14-1/0 AWG (Cu/Al)	#14-1/0 AWG (Cu/Al)
200 <sup>⑧</sup>	#6 AWG-250 Kcmil (Cu/Al)	#6 AWG-300 Kcmil (Cu/Al)
400 <sup>⑨</sup>	(1) 1/0 AWG-600 Kcmil (Cu/Al) (2) 1/0 AWG-500 Kcmil (Cu/Al)	(2) 1/0 AWG-600 Kcmil (Cu/Al)
600 <sup>⑨</sup>	(1) 1/0 AWG-600 Kcmil (Cu/Al) (2) 1/0 AWG-500 Kcmil (Cu/Al)	(2) 1/0 AWG-600 Kcmil (Cu/Al)
800	(3) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral	(3) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral
1200	(4) 3/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral	(4) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral



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

- ① Hubs suitable for 3R Switches.
- ② Also suitable for Type 12 applications.
- ③ Neutral Barrier kits are required on 30-100A switches only and only with 1-Phase / 3W or 3-Phase / 4W loads. Compression Lugs mounting kits are required on 400-1200A switches only.
- ④ Provides mounting for a single line or load lug.
- ⑤ Provides mounting for (2) compression lugs per phase on line or load.
- ⑥ Neutral lugs (only) are UL approved to accept #14-4 CU/Al cable.
- ⑦ Max. wire size for height reduced switches is 500 kcmil (Cu/Al).
- ⑧ 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.

## Safety Switches

# General and Heavy Duty Safety Switches

### Dimensions

#### Safety Switch Dimensions (Inches)\* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram <sup>①</sup>	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
GF221NA	8.4	8.56	—	5.08	5.44	2.93	3.96	S4	30(10)
GF221NRA	8.4	8.56	8.56	5.08	5.44	2.93	3.96	S5	30(10)
GF222NA	9.91	10.07	—	6.06	6.42	3.21	4.24	S21	20(5)
GF222NRA	9.91	10.07	10.07	6.06	6.42	3.21	4.24	S22	20(5)
GF223N	21.95	23.15	—	9.64	11.7	5.05	8.63	S10	23
GF223NR	21.95	—	23.46	9.64	11.67	5.05	8.7	S11	24
GF224N	29.9	31.07	—	14.62	16.68	6.36	10.92	S12	47
GF224NR	29.9	—	31.42	14.61	16.68	6.36	10.92	S13	48
GF225NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	91.1
GF225NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	91.1
GF226NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	95.6
GF226NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	95.6
GF321NA	8.4	8.56	—	5.08	5.44	2.93	3.96	S4	30(10)
GF321NRA	8.4	8.56	8.56	5.08	5.44	2.93	3.96	S5	30(10)
GF322NA	9.91	10.07	—	6.06	6.42	3.21	4.24	S21	20(5)
GF322NRA	9.91	10.07	10.07	6.06	6.42	3.21	4.24	S22	20(5)
GF323N	21.95	23.15	—	9.64	11.7	5.05	8.63	S10	25
GF323NR	21.95	—	23.46	9.64	11.67	5.05	8.7	S11	25
GF324N	29.9	31.07	—	14.62	16.68	6.36	10.92	S12	49
GF324NR	29.9	—	31.42	14.61	16.68	6.36	10.92	S13	50
GF325NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	94.6
GF325NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	94.6
GF326NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	99.6
GF326NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	99.6
GF326NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	99.6
GNF221A	6.18	6.35	—	4.2	4.56	2.88	3.93	S4	20(10)
GNF221RA	6.18	6.35	6.35	4.2	4.56	2.88	3.93	S5	20(10)
GNF321LA	8.4	8.56	—	5.08	5.43	2.93	3.95	S4	30(10)
GNF321RLA	8.4	8.56	8.56	5.08	5.43	2.93	3.95	S5	30(10)
GNF222A	8.4	8.56	—	5.08	5.43	2.93	3.95	S4	30(10)
LNF222RA	8.4	8.56	8.56	5.08	5.43	2.93	3.95	S20	30(10)
GNF222RA	8.4	8.56	8.56	5.08	5.43	2.93	3.95	S5	30(10)
GNF321A	6.18	6.35	—	4.2	4.56	2.88	3.93	S4	20(10)
GNF321RA	6.18	6.35	6.35	4.2	4.56	2.88	3.93	S5	20(10)
GNF322A	8.4	8.56	—	5.08	5.43	2.93	3.95	S4	30(10)
GNF322RA	8.4	8.56	8.56	5.08	5.43	2.93	3.95	S5	30(10)
GNF323	21.95	23.15	—	9.64	11.7	5.05	8.63	S10	23
GNF323R	21.95	—	23.46	9.64	11.67	5.05	8.7	S11	24
GNF324	29.9	31.07	—	14.62	16.68	6.36	10.92	S12	46
GNF324R	29.9	—	31.42	14.61	16.68	6.36	10.92	S13	47
GNF325A	33.47	33.96	—	22.4	23.404	6.94	9.93	S18	75
GNF326A	33.47	33.96	—	22.4	23.404	6.94	9.93	S18	77
HF221J also HF261J	14.27	17.33	—	6.65	9.02	5.32	10.46	—	13
HF221N also HF261	14.26	15.45	—	6.64	9.01	5.05	10.17	S6	12
HF221NR also HF261R	14.39	—	15.77	6.64	9.01	5.05	10.17	S8	13
HF221S also HF261S	14.27	17.33	—	6.65	9.02	5.32	10.46	—	13
HF222J also HF262J	16.22	19.31	—	9.17	11.47	5.33	10.46	—	19
HF222N also HF262	16.26	17.46	—	9.15	11.53	5.05	10.17	S16	18
HF222NR also HF262R	16.26	—	17.77	9.16	11.53	5.05	10.17	S17	19
HF222S also HF262S	16.22	19.31	—	9.17	11.47	5.33	10.46	—	19
HF223J also HF263J	21.96	23.16	—	9.65	12.02	5.34	10.46	—	24
HF223N also HF263	21.95	23.15	—	9.64	12.01	5.05	10.17	S10	23
HF223NR also HF263R	21.95	—	23.46	9.64	11.97	5.05	10.17	S11	24

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

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



## Safety Switches

# General and Heavy Duty Safety Switches

### Dimensions

#### Safety Switch Dimensions (Inches)\* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram <sup>①</sup>	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
HF223S also HF263S	21.96	23.16	—	9.65	12.02	5.34	10.46	—	24
HF224J	29.96	31.07	—	14.62	16.95	6.63	12.58	—	48
HF224N	29.9	31.07	—	14.62	16.98	6.36	12.33	S12	47
HF224NR	29.9	—	31.42	14.61	16.99	6.36	12.33	S13	48
HF224S	29.96	31.07	—	14.62	16.95	6.63	12.58	—	48
HF225NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	91.1
HF225NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	91.1
HF226NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	95.6
HF226NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	95.6
HF227N	66.67	67.16	—	38.4	39.96	9.24	14.68	—	360
HF227NR	66.67	—	67.74	38.4	39.96	9.24	14.68	—	362
HF228N	66.67	67.16	—	38.4	39.96	9.24	14.68	—	362
HF228NR	66.67	—	67.74	38.4	39.96	9.24	14.68	—	364
HF365A	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	93
HF365JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	93
HF365RA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	93
HF365SA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	93
HF365SSA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	93
HF366A	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	98
HF366JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	98
HF366RA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	98
HF366SA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	98
HF366SSA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	98
HF321J	14.27	17.33	—	6.65	9.02	5.32	10.46	—	14
HF321N	14.26	15.45	—	6.64	9.01	5.05	10.17	S6	14
HF321NR	14.39	—	15.77	6.64	9.01	5.05	10.17	S8	15
HF321S, SS	14.27	17.33	—	6.65	9.02	5.32	10.46	—	14
HF322J	16.27	19.31	—	9.17	11.47	5.33	10.46	—	20
HF322N	16.26	17.46	—	9.15	11.53	5.05	10.17	S16	19
HF322NR	16.26	—	17.77	9.16	11.53	5.05	10.17	S17	20
HF322S, SS	16.27	19.31	—	9.17	11.47	5.33	10.46	—	20
HF323J	21.96	23.16	—	9.65	12.02	5.34	10.46	—	25
HF323N	21.95	23.15	—	9.64	12.01	5.05	10.17	S10	25
HF323NR	21.95	—	23.46	9.64	11.97	5.05	10.17	S11	26
HF323S, SS	21.96	23.16	—	9.65	12.02	5.34	10.46	—	25
HF324J	29.96	31.07	—	14.62	16.95	6.63	12.58	—	49
HF324N	29.9	31.07	—	14.62	16.98	6.36	12.33	S12	49
HF324NR	29.9	—	31.42	14.61	16.99	6.36	12.33	S13	50
HF324S, SS	21.96	31.07	—	14.62	16.95	6.63	12.58	—	49
HF325JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	93
HF325NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	94.6
HF325NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	94.6
HF325SA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	93
HF325SSA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	93
HF326JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	98
HF326NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	99.6
HF326NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	99.6
HF326SA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	98
HF326SSA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	98
HF327J	66.67	67.16	—	38.4	39.96	9.24	14.68	—	367
HF327N	66.67	67.16	—	38.4	39.96	9.24	14.68	—	380
HF327NR	66.67	—	67.74	38.4	40.25	9.24	14.68	—	383
HF327S	66.67	67.16	—	38.4	39.96	9.24	14.68	—	367
HF328N	66.67	67.16	—	38.4	39.96	9.24	14.68	—	382
HF328NR	66.67	—	67.74	38.4	40.25	9.24	14.68	—	385
HF361, PV, PVPG	14.26	15.45	—	6.64	9.01	5.05	10.17	S6	14
HF361J, JW	14.27	17.33	—	6.65	9.02	5.32	10.46	—	14
HF361L	16.26	17.46	—	9.15	11.53	5.05	10.17	S16	19
HF361N	14.26	15.45	—	6.64	9.01	5.05	10.17	S6	14
HF361NR	14.39	—	15.77	6.64	9.01	5.05	10.17	S8	15
HF361R, RPV, RPVPG	14.39	—	15.77	6.64	9.01	5.05	10.17	S8	15
HF361RL, RW	16.26	—	17.77	9.16	11.53	5.05	10.17	S17	20
HF361S, SS, SSW, SW	14.27	17.33	—	6.65	9.02	5.32	10.46	—	15
HF362, PV, PVPG	16.26	17.46	—	9.15	11.53	5.05	10.17	S16	19

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

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

# Safety Switches

## General and Heavy Duty Safety Switches

### Dimensions

#### Safety Switch Dimensions (Inches)\* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram <sup>①</sup>	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
HF362J, JW	16.27	19.31	—	9.17	11.47	5.33	10.46	—	20
HF362N	16.26	17.46	—	9.15	11.53	5.05	10.17	S16	19
HF362NR	16.26	—	17.77	9.16	11.53	5.05	10.17	S17	20
HF362R, RPV, RPVPG, RW	16.26	—	17.77	9.16	11.53	5.05	10.17	S17	20
HF362RL	21.95	—	23.46	9.64	11.97	5.05	10.17	S11	25
HF362S, SS, SSW, SW	16.27	19.31	—	9.17	11.47	5.33	10.46	—	20
HF363, PV, PVPG	21.95	23.15	—	9.64	12.01	5.05	10.17	S10	24
HF363J, JW	21.96	23.16	—	9.65	12.02	5.34	10.46	—	25
HF363N	21.95	23.15	—	9.64	12.01	5.05	10.17	S10	25
HF363NR	21.95	—	23.46	9.64	11.97	5.05	10.17	S11	26
HF363R, RPV, RPVPG	21.95	—	23.46	9.64	11.97	5.05	10.17	S11	25
HF363S, SS, SSW, SW	21.96	23.16	—	9.65	12.02	5.34	10.46	—	25
HF364, PV, PVPG	29.9	31.07	—	14.62	16.98	6.36	12.33	S12	48
HF364J, JW	29.96	31.07	—	14.62	16.95	6.63	12.58	—	49
HF364N	29.9	31.07	—	14.62	16.98	6.36	12.33	S12	49
HF364NR	29.9	—	31.42	14.61	16.99	6.36	12.33	S13	48
HF364R, RPV, RPVPG	29.9	—	31.42	14.61	16.99	6.36	12.33	S13	49
HF364S, SS, SSW, SW	29.96	31.07	—	14.62	16.95	6.63	12.58	—	49
HF365A	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	93
HF365JA, HF365JWA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	93
HF365NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	94.6
HF365NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	94.6
HF365RA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	93
HF365SA, HF365SWA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	93
HF365SSA, HF365SSWA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	93
HF366A	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	98
HF366JA, HF366JWA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	98
HF366NA	45.32	45.81	—	22.4	23.404	6.94	9.93	S18	99.6
HF366NRA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	99.6
HF366RA	45.32	45.81	—	22.4	23.404	6.94	9.93	S19	98
HF366SA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	98
HF366SSA	45.32	45.81	—	22.4	23.404	7.34	10.347	—	98
HF367	66.67	67.16	—	38.4	39.96	9.24	14.68	—	380
HF367J	66.67	67.16	—	38.4	39.96	9.24	14.68	—	380
HF367N	66.67	67.16	—	38.4	39.96	9.24	14.68	—	382
HF367NR	66.67	—	67.74	38.4	40.25	9.24	14.68	—	386
HF367R	66.67	—	67.74	38.4	40.25	9.24	14.68	—	382
HF367S	66.67	67.16	—	38.4	39.96	9.24	14.68	—	380
HF368, J, S	66.67	67.16	—	38.4	39.96	9.24	14.68	—	383
HF368N	66.67	67.16	—	38.4	39.96	9.24	14.68	—	385
HF368NR	66.67	—	67.74	38.4	40.25	9.24	14.68	—	388
HF368R	66.67	—	67.74	38.4	40.25	9.24	14.68	—	385
HNF365JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	75
HNF365RA	33.47	33.96	—	22.4	23.404	6.94	9.93	S19	75
HNF365SA	33.47	33.96	—	22.4	23.404	7.34	10.347	—	75
HNF365SSA	33.47	33.96	—	22.4	23.404	7.34	10.347	—	75
HNF366SA	33.47	33.96	—	22.4	23.404	7.34	10.347	—	77
HNF366SSA	33.47	33.96	—	22.4	23.404	7.34	10.347	—	77
HNF366JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	77
HNF366RA	33.47	33.96	—	22.4	23.404	6.94	9.93	S19	77
HNF361, PV, PVPG also HNF261 & HNF362H	11.11	12.31	—	6.64	9.01	5.05	10.17	S7	12
HNF361J, JW also HNF261J & HNF362JH	11.12	14.14	—	6.65	9.02	5.56	10.46	—	13
HNF361R, RPV, RPVPG also HNF261R & HNF362RH	11.11	—	12.63	6.64	9.01	5.05	10.17	S9	13
HNF361RL	16.26	—	17.77	9.16	11.53	5.05	10.17	S17	20
HNF361S, SS, SSW, SW also HNF261S & HNF362SH	11.12	14.14	—	6.65	9.02	5.56	10.46	—	13
HNF362, PV, PVPG also HNF262	16.26	17.46	—	9.15	11.53	5.05	10.17	S16	18
HNF362J, JW also HNF262J	16.27	17.46	—	9.17	11.47	5.33	10.46	—	19
HNF362R, RPV, RPVPG also HNF262R	16.26	—	17.77	9.16	11.53	5.05	10.17	S17	19
HNF362RL	21.95	—	23.46	9.64	11.97	5.05	10.17	S11	24
HNF362S, SS, SSW, SW also HNF262S	16.27	17.46	—	9.17	11.47	5.33	10.46	—	19
HNF363, PV, PVPG also HNF263	21.95	23.15	—	9.64	12.01	5.05	10.17	S10	23
HNF363J, JW also HNF263J	21.96	23.16	—	9.65	12.02	5.34	10.46	—	24
HNF363R, RPV, RPVPG also HNF263R	21.95	—	23.46	9.64	11.97	5.05	10.17	S11	24
HNF363S, SS, SSW, SW also HNF263S	21.96	23.16	—	9.65	12.02	5.34	10.46	—	24

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

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

# Safety Switches

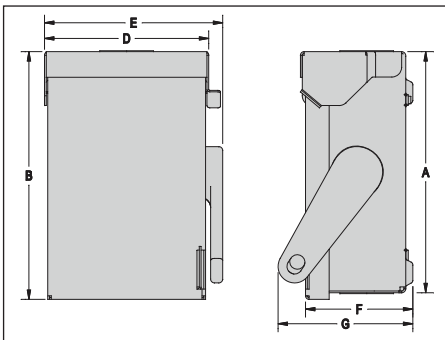
## General and Heavy Duty Safety Switches

### Dimensions

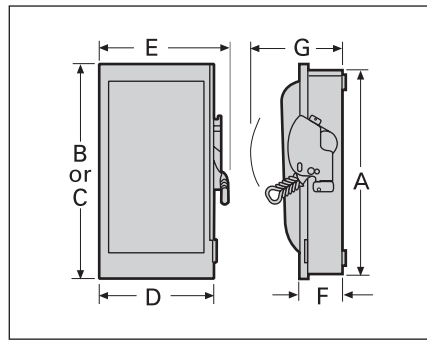
#### Safety Switch Dimensions (Inches)\* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram <sup>①</sup>	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
HNF364, PV, PVPG	29.9	31.07	—	14.62	16.98	6.36	12.33	S12	46
HNF364J, JW	29.96	31.07	—	14.62	16.95	6.63	12.58	—	47
HNF364R, RPV, RPVPG	29.9	—	31.42	14.61	16.99	6.36	12.33	S13	47
HNF364S, SS, SSW, SW	29.96	31.07	—	14.62	16.95	6.63	12.58	—	47
HNF365JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	75
HNF365JWA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	75
HNF365RA	33.47	33.96	—	22.4	23.404	6.94	9.93	S19	75
HNF365SA, HNF365SWA	33.47	33.96	—	22.4	23.404	7.34	10.347	—	75
HNF365SSA, HNF365SSWA	33.47	33.96	—	22.4	23.404	7.34	10.347	—	75
HNF366JA	45.32	45.81	—	22.4	23.404	6.97	10.05	—	77
HNF366RA	33.47	33.96	—	22.4	23.404	6.94	9.93	S19	77
HNF366SA	33.47	33.96	—	22.4	23.404	7.34	10.347	—	77
HNF367, J	54.67	55.16	—	38.4	39.96	9.24	14.68	—	302
HNF367R	54.67	—	55.7	38.4	40.25	9.24	14.68	—	304
HNF367S	54.67	55.16	—	38.4	39.96	9.24	14.68	—	302
HNF368, J, S	54.67	55.16	—	38.4	39.96	9.24	14.68	—	305
HNF368R	54.67	55.16	—	38.4	40.25	9.24	14.68	—	307
LF111N	7.97	8.13	—	5.5	5.94	3	5.38	S2	35 (10)
LF111NR	8.07	—	8.16	5.16	5.94	3.13	5.38	S3	35 (10)
LF211N	7.97	8.13	—	5.5	5.94	3	5.38	S1	35 (10)
LF211NR	8.07	—	8.16	5.16	5.94	3.13	5.38	S3	35 (10)

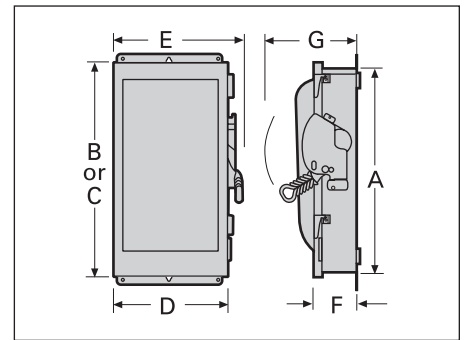
**Type 1 or 3R  
30-60A GD**



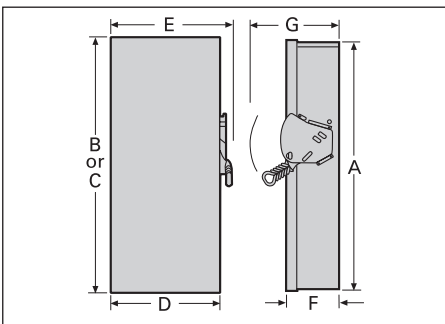
**Type 1 or 3R  
100-200A GD, 30-200A HD Type VBII**



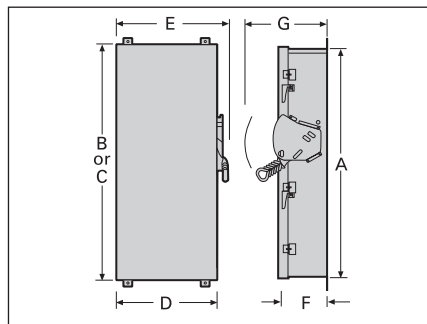
**Type 4/4X or 12  
30-200A HD Type VBII**



**Type 1 or 3R  
400-1200A Type VBII (GD & HD)**



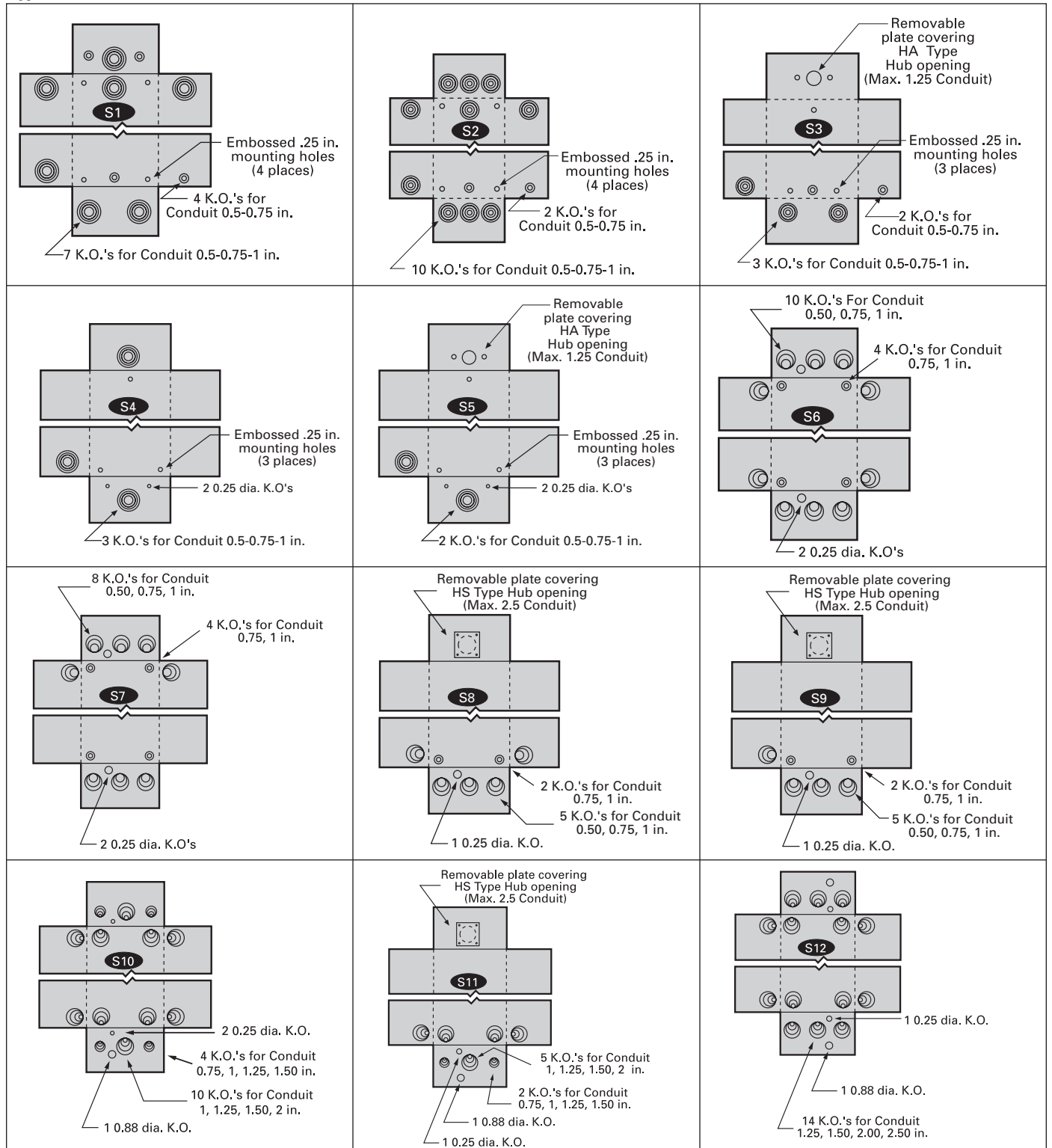
**Type 4/4X or 12  
400-1200A HD Type VBII**



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

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

Type 1 & 3R Enclosures



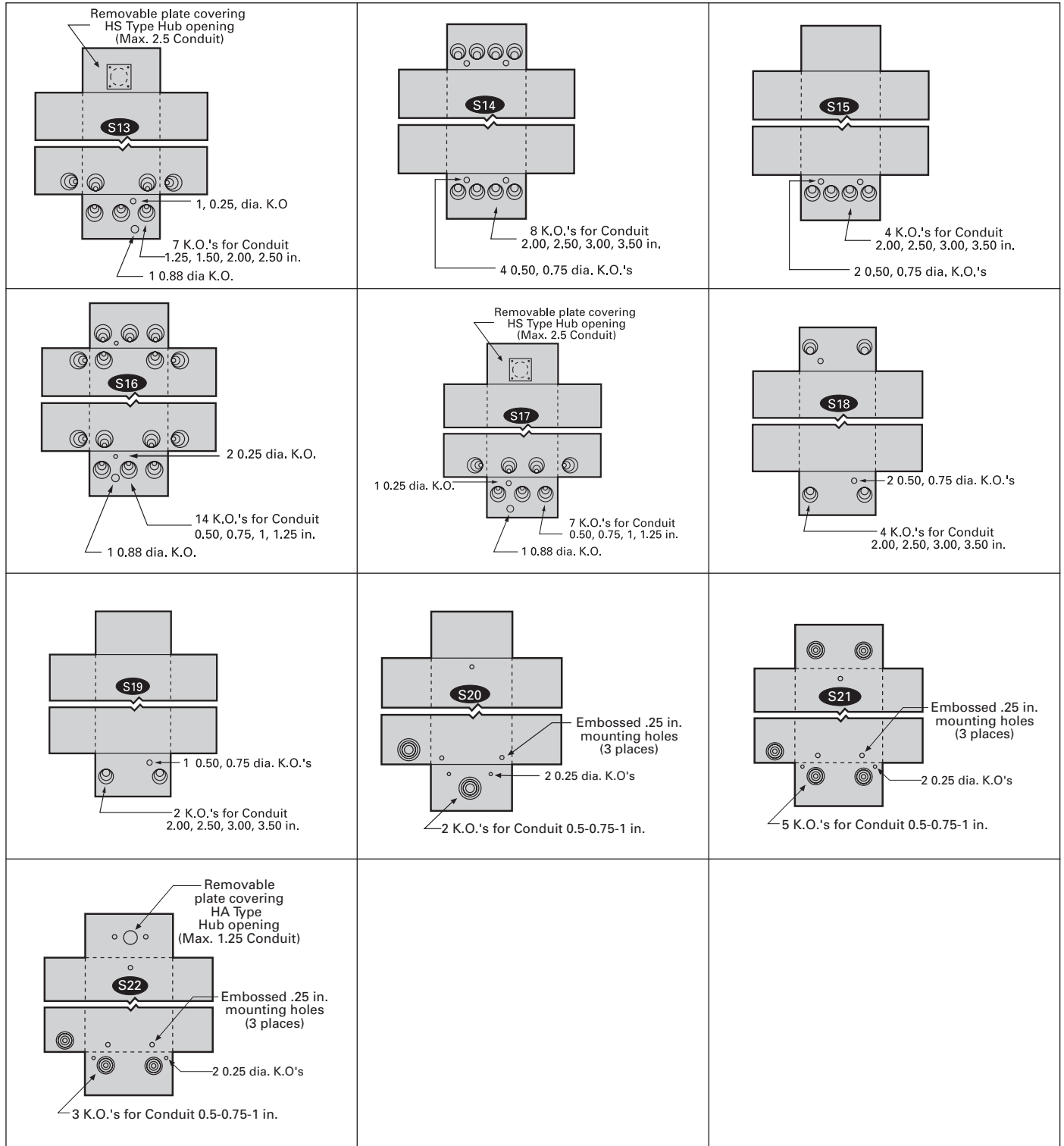
\*For inches / millimeters conversion, multiply inches by 25.4.

# Safety Switches

## General and Heavy Duty Safety Switches

### Knockout Diagrams

#### Type 1 & 3R Enclosures

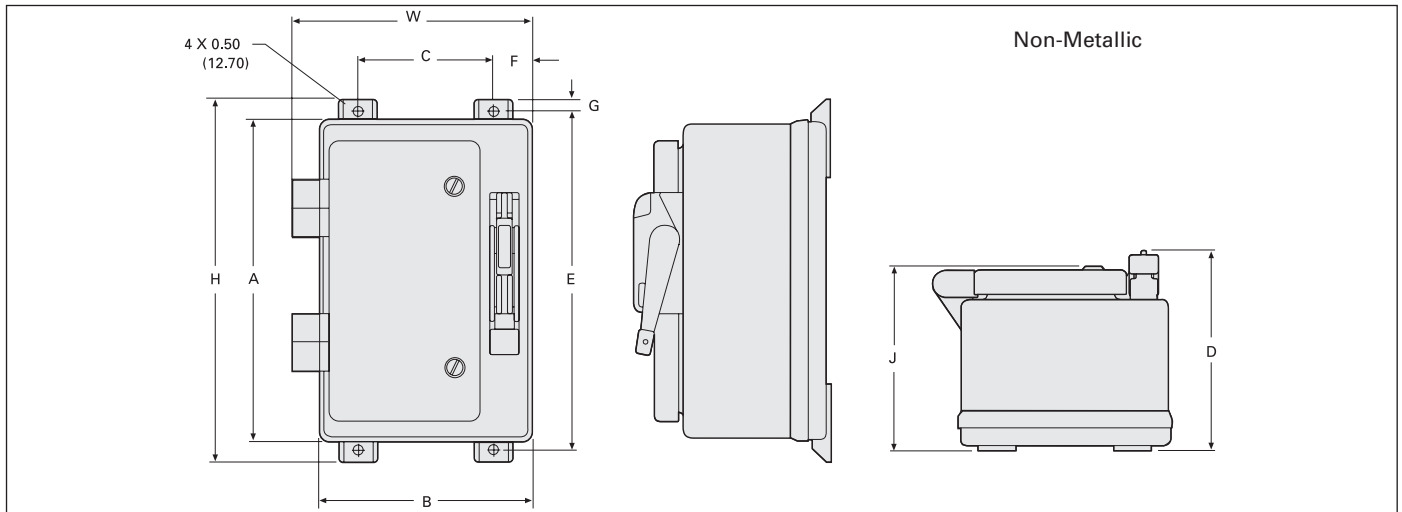


\*For inches / millimeters conversion, multiply inches by 25.4.

# Safety Switches

## Special Application: Non-Metallic

### Dimensions



Catalog Number	Dimensions (Inches) Non-Metallic									
	H	W	D	A	B	C	E	F	G	J
HF321NX	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HF322NX	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HF361NX <sup>Ⓞ</sup>	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HF362NX <sup>Ⓞ</sup>	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HF363NX <sup>Ⓞ</sup>	26.95	14.87	13.25	24.84	13.72	6.25	25.75	3.75	.46	12.15
HF364NX <sup>Ⓞ</sup>	33.41	27.47	13.19	31.31	26.31	18.50	32.25	3.91	.47	12.10
HNF361X <sup>Ⓞ</sup>	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HNF362X <sup>Ⓞ</sup>	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HNF363X <sup>Ⓞ</sup>	26.95	14.87	13.25	24.84	13.72	6.25	25.75	3.75	.46	12.15
HNF364X <sup>Ⓞ</sup>	33.41	27.47	13.19	31.31	26.31	18.50	32.25	3.91	.47	12.10

## VBI Interlocked Receptacle Switches

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

### Cr-H Type Fusible (240 & 600V)

30	14.27	7.42	9.02	6.22	1.52	6.1	6.0
60	16.27	9.17	11.47	6.34	1.52	6.4	7.4
100	21.96	9.65	12.02	6.80	1.52	6.5	7.6

### Cr-H Type Non-Fusible (600V max.)

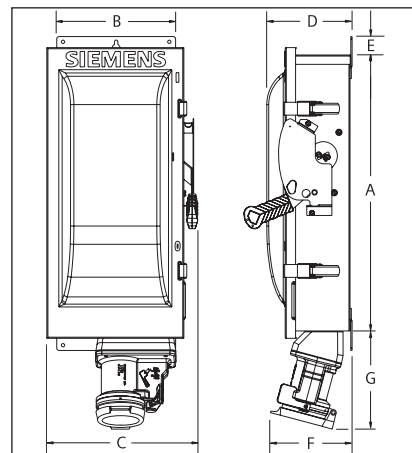
30	14.27	7.42	9.02	6.22	1.52	6.1	6.0
60	16.27	9.17	11.47	6.34	1.52	6.4	7.4
100	21.96	9.65	12.02	6.80	1.52	6.5	7.6

### Pyle-National Type Fusible (240 & 600V)

30	14.27	7.42	9.02	6.22	1.52	3.5	3.0
60	16.27	9.17	11.47	6.34	1.52	5.0	4.5

### Pyle-National Type Non-Fusible (600V max.)

30	14.27	7.42	9.02 <sup>Ⓞ</sup>	6.22	1.52	3.5	3.0
60	16.27	9.17	11.47 <sup>Ⓞ</sup>	6.34	1.52	5.0	4.5



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

Ⓞ Dimensions also apply to "L" suffix switches (less lugs).

4 & 6-Pole Safety Switch Dimensions – Inches (mm)

Catalog Number	Enclosure			Mounting		
	A	B	C	D	E	F

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

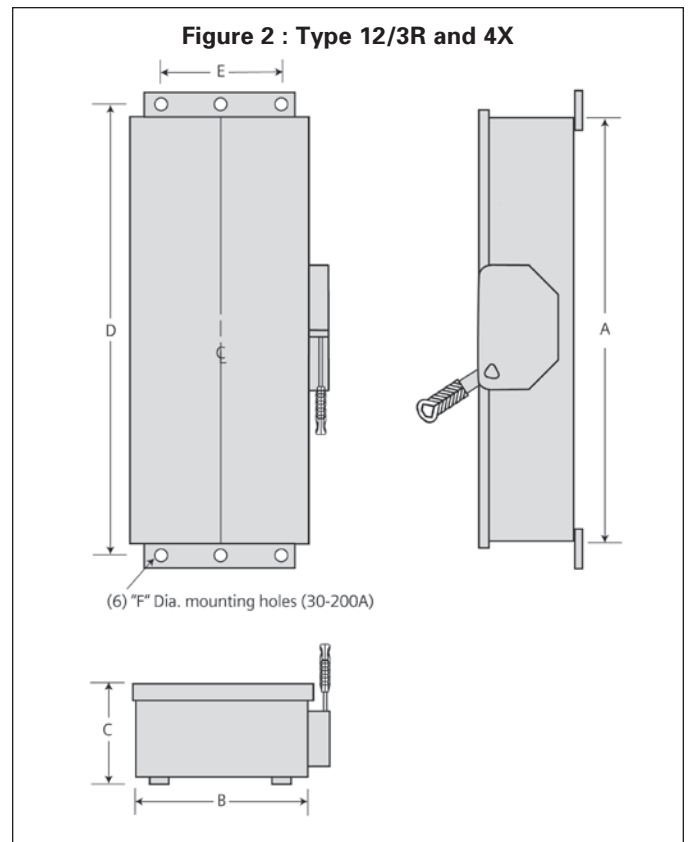
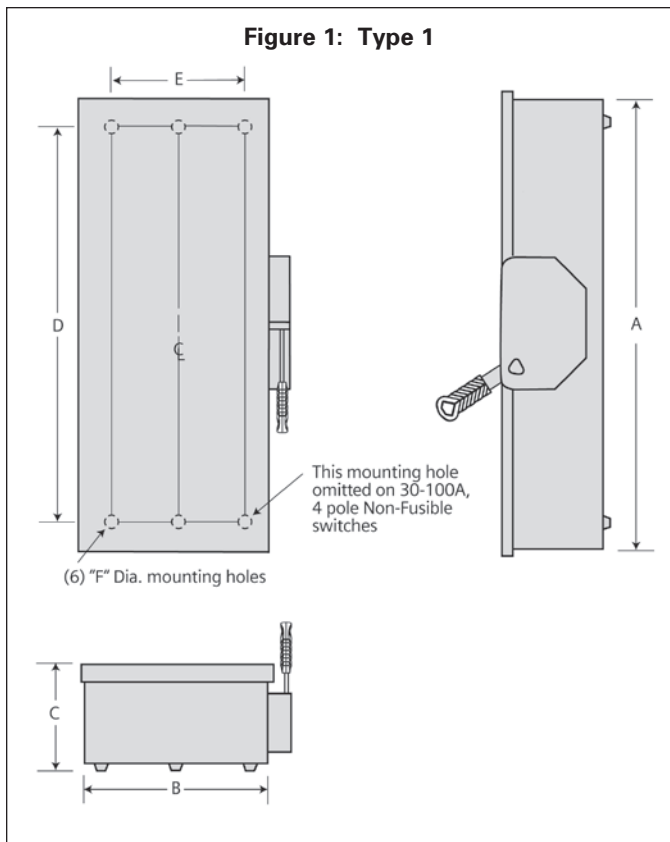
HNF461	24.50 (622)	9.53 (242)	6.09 (155)	19.00 (483)	6.75 (171)	0.268 (7)
HF461	29.12 (740)	9.53 (242)	6.09 (155)	23.50 (597)	6.75 (171)	0.268 (7)
HNF462	24.88 (632)	11.50 (292)	6.09 (155)	19.00 (483)	9.38 (238)	0.268 (7)
HF462	33.53 (852)	11.50 (292)	6.09 (155)	27.50 (699)	9.38 (238)	0.268 (7)
HNF463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

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

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

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

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



# Double Throw

## Description and Selection

### Description

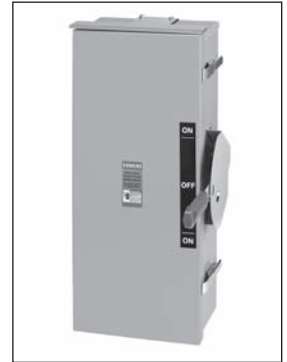
Double throw switches are intended to transfer loads from one power source to another. All 2 & 3-pole double throw switches are suitable for use as service equipment including non-fusible versions when used in combination with a UL listed circuit breaker or fusible switch. All are UL Listed and both horsepower and load break rated. Switches are rated for use on systems up to 10,000A when protected with Class H fuses or 100,000A when protected with Class R or Class T fuses<sup>②</sup>. They can also be used to connect a single source of power to either of two loads. In this application it is necessary to field modify fusible

switches so that the fuses are on the load side of the switching mechanism.

A cover interlock is provided on all ampere ratings. The operating handle may be padlocked in the off position.

#### Fuse Capabilities of Fusible DTF Switches

Amp Rating	Fuse Type			
	H	R	T	J
30 & 60A, 240V	Std	Yes (kit)	No	No
30 & 60A, 600V	Std	Yes (kit)	No	Yes <sup>③</sup>
100 & 200A	Std	Yes (kit)	Yes (kit)	Yes <sup>③</sup>
400 & 600A (DTF)	No	No	Yes <sup>③</sup>	Std



### Double Throw Switches

System	Voltage	Number of Poles	Amps	Type 1 — Indoor	Type 3R — Outdoor <sup>①</sup>	Type 12/3R — Industrial	Type 4X — Stainless Steel
				Catalog Number	Catalog Number	Catalog Number	Catalog Number

#### Heavy Duty Fusible (30-200A) with Class H fuse spacings —Less Neutral<sup>②</sup>

	240 Volt AC or 250 Volt DC	2	200	DTF224▲	DTF224R	—	—	
			3	30	DTF321	DTF321R▲	—	—
				60	DTF322	DTF322R▲	—	—
		100		DTF323▲	DTF323R	—	—	
		3	200	DTF324	DTF324R	—	—	
			400	DTF325	FR325DTK <sup>④</sup> ▲	—	—	
	600		DTF326▲	FR326DTK <sup>④</sup> ▲	—	—		
	600 Volt AC, 250 Volt DC	3	30	DTF361	—	—	—	
			60	DTF362▲	—	—	—	
			100	DTF363	DTF363R	—	F353SSDTK <sup>⑤</sup> ▲	
		200	DTF364	DTF364R	—	F354SSDTK <sup>⑤</sup> ▲		
		400	DTF365	FR355DTK <sup>④</sup> ▲	—	F355SSDTK <sup>④</sup> ▲		
400		DTF365	FR355DTK <sup>④</sup> ▲	—	F355SSDTK <sup>④</sup> ▲			

#### Heavy Duty Non-Fusible —Less Neutral<sup>②</sup>

	240 Volt AC or 250 Volt DC	2	30	DTNF221	—	—	—
			60	DTNF222	—	—	—
			100	DTNF223	—	—	—
			200	DTNF224	DTNF224R	—	—
			400	DTNF225	DTNF225R	—	—
			400	DTNF225	DTNF225R	—	—
		3	30	DTNF321	—	—	—
			60	DTNF322	—	—	—
			100	DTNF323	DTNF323R	—	—
			200	DTNF324	DTNF324R	—	—
			400	DTNF325	—	—	—
			600	DTNF326	—	—	—
	600 Volt AC, or 250 Volt DC	3	30	DTNF361	DTNF361R	DTNF361J	DTNF361S
			60	DTNF362	DTNF362R	DTNF362J	DTNF362S
			100	DTNF363	DTNF363R	DTNF363J	DTNF363S
			200	DTNF364	DTNF364R	DTNF364J▲	DTNF364S
			400	DTNF365	DTNF365R	NF355HDTK	NF355SSDTK
			600	DTNF366	DTNF366R	—	—
		4 <sup>⑤</sup>	30	—	NFR451DTK▲	—	—
			60	—	NFR452DTK▲	—	—
			100	—	NFR453DTK▲	—	—
			200	NF454DTK	NFR454DTK▲	—	NF454SSDTK▲
			400	NF455DTK▲	NFR455DTK▲	—	—
			800	NF456DTK▲	NFR456DTK▲	—	—

#### General Duty Non-Fusible

	Voltage	Number of Poles	Amps	Type 3R — Outdoor <sup>①</sup> Less Neutral	Type 3R — Outdoor <sup>①</sup> With Neutral	Type 3R — Outdoor General Duty With Neutral <sup>②</sup>
				Catalog Number	Catalog Number	Catalog Number
	240 Volt AC	2	100	DTGNF223R	DTGNF223NR	DTLNF213NR
			200	DTGNF224R	DTGNF224NR	—
	3	100	DTGNF323R	DTGNF323NR	—	
		200	DTGNF324R	DTGNF324NR	—	

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

- ① Use HS Type hubs for 30-200A switches. 400A and larger switches do not have hub provisions.
- ② All Heavy Duty double throw switches with a catalog number starting with "DT" are rated 200,000 AIC max.

- when protected by Class R, J or T fuses. Fuse ampere rating must not exceed switch ampere rating.
- ③ Move load base.
- ④ Will accept class T Fuses only.
- ⑤ 4-pole switches are not approved for service entrance.

- ⑥ Will accept class H fuses only.
- ⑦ General duty Stand-by Power Panel catalog number DTLNF213NR contains (2) 100A, 2P circuit breakers rated 120/240V AC & 10,000 AIC.



Accessories, Lug Data and Horsepower Ratings

Accessories – 2 and 3-Pole Switches Type “DT” Only<sup>Ⓞ</sup>

Description	Catalog Number
<b>Neutral Kits</b> 30A 60 & 100A 200A 400 & 600A 800 & 1200A	HNC612 HN263 HNC264 HN678 HND678
<b>Equipment Ground Kit</b> 30-200A (2) #14-4 AWG 400 & 600A (4) #14-2/0 800-1200A (8) #6-350 Kcmil	HG61234 HG656 HG678
<b>Auxiliary Contacts (HD only) (two required per switch)<sup>Ⓞ</sup></b> 30-200A with (1) NO & (1) NC contact 30-200A with (2) NO & (2) NC contacts 400-1200A with (1) NO & (1) NC contact 400-1200A with (2) NO & (2) NC contacts	HA161234 HA261234 HA165678 HA265678
<b>Class R Fuse Clip Kits (two required per switch)</b> 30A, 240V Kit 30A, 600V Kit/60A, 240V Kit 60A, 600V Kit 100A Kit 200A Kit	HR21 HR612 HR62 HR63 HR64
<b>Class T Fuse Adapter Kits (two required per pole)</b> 100A, 240V Kit 100A, 600V Kit 200A, 240V Kit 200A, 600V Kit	HT23 HT63 HT24 HT64
<b>Type 3R Hubs (30-200A)</b> For ¾" Conduit For 1" Conduit For 1 ½" Conduit For 2" Conduit For 2 ½" Conduit	ECHS075 ECHS100 ECHS125 ECHS150 ECHS200 ECHS250

Accessories – 4-Pole and Type “F” & “NF” 3-Pole Switches Only<sup>Ⓞ</sup>

Description	Catalog Number
<b>Auxiliary Switch (two required per switch)</b> 30-800A (1) NO, (1) NC <sup>Ⓞ</sup> (2) NO, (2) NC <sup>Ⓞ</sup>	DS200EK1 DS200EK2
<b>Ground Lug Kit<sup>Ⓞ</sup></b> 30-60-100A 200A 400-600-800A	DS100GK DS200GK DS468GK
<b>Hubs</b> 30-60-100A Use Type HR Hubs 200-400A Use Type SSH 4, 4X Hubs 600-800A Use Type SSH 4, 4X Hubs	
<b>Neutrals (3-pole only)</b> 30-60-100A 200A 400 & 600A Fusible 400A 3P Non-Fusible	DT100NK DT200NK DS800NK DT600NK

Maximum Horsepower Ratings

Fused

Ampere Rating	1-Phase AC		3-Phase AC			250V DC
	240V	240V	240V	480V	600V	
30	3	7½	15	20	5	
60	10	15	30	50	10	
100	15	30	60	75	20	
200	15	60	125	150	40	
400	—	125	125	125	50	
600	—	125	—	—	50	

Non-Fused

30	5	10	20	30	5
60	10	20	50	60	10
100	15	40	75	100	20
200	15	60	125	150	40
400-800	—	125	250	350	50

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

Ⓞ For “DT” VBII Type switches only.

Ⓞ Also for fusible stainless & 400A Type 12 & 4x switches.

Ⓞ The following ground lugs are provided as standard in 200A and larger switches 200-(1) #14-4 Cu/Al 400-800A-(3) #6-250MCM Cu/Al.

Ⓞ One aux. required for normal and one required for emergency switch line base.

Wire Ranges (Line, Load and Neutral) per NEC Requirements

30-200A – 2, 3 & 4-Pole Switches

Switch Ampere Rating	Wire Range (Cu/Al) New VBII Design Line, Load and Neutral
30	(1) #14-6
60	(1) #14-2
100	(1) #14-1/0 AWG
100	(1) #14-1/0 AWG
200	(1) #6-250 kcmil

400-1200A – 2 & 3-Pole Switches

Switch Ampere Rating	Wire Range (Cu/Al) New VBII Design Line, Load and Neutral
400	(1) 1/0 AWG-750 kcmil or (2) 1/0 AWG-250 kcmil
600	(2) 1/0 AWG-500 kcmil
800	(2) 1/0 AWG-750 kcmil or (3) 1/0 AWG-500 kcmil
1200	(3) 1/0 AWG-600 kcmil or (4) 1/0 AWG-500 kcmil

400-800A – 4-Pole switches

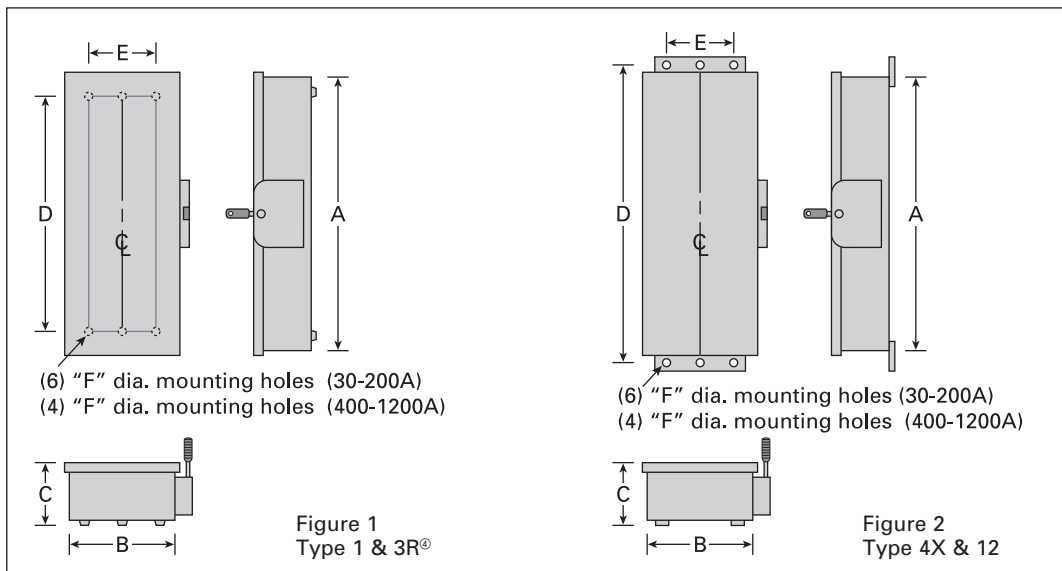
Switch Ampere Rating	Wire Range (Cu/Al) New VBII Design Line, Load and Neutral
400	(2) 1/0 AWG-300 kcmil or (1) 1/0 AWG-750 kcmil
600	(2) 250-500 Kcmil
800	(3) 250-500 Kcmil

Replacement Parts – 2 and 3-Pole Switches Only<sup>Ⓞ</sup>

Description	Catalog Number
Type 1, 3R & 12 Replacement Handle	30-200A HHD61234
Type 4X Replacement Handle	30-200A HHD61234S
Replacement Handle	400-1200A HHD656

VIII Design Double Throw Dimensions (Inches)

Catalog Number	Enclosure			Mounting		
	A	B	C	D	E	F
<b>Figure 1 (30-1200A Type 1 &amp; 3R)</b>						
DTNF221, DTNF321, DTNF361, DTNF361R	24.50	9.53	6.09	19.00	6.75	0.268
DTF321, DTF321R, DTF361	29.12	9.53	6.09	23.50	6.75	0.268
DTNF222, DTNF322, DTNF362, DTNF362R	24.88	11.50	6.09	19.00	9.38	0.268
DTF322, DTF322R, DTF362	33.45	11.50	6.09	27.50	9.38	0.268
DTNF223, DTNF323, DTNF323R, DTNF363, DTNF363R, DTGNF223R, DTGNF223NR, DTGNF323R, DTGNF323NR	27.62	12.18	6.09	19.36	8.00	0.268
DTF323, DTF323R, DTF363, DTF363R	36.44	12.18	6.09	28.11	8.00	0.268
DTNF224, DTNF224R, DTNF324, DTNF324R, DTNF364, DTNF364R, DTGNF224R, DTGNF224NR, DTGNF324R, DTGNF324NR	36.00	19.12	6.42	31.00	15.00	0.44
DTF224, DTF224R, DTF324, DTF324R, DTF364, DTF364R	49.44	19.12	6.42	44.50	15.00	0.44
DTF325, DTF326, DTF365	73.54	28.22	9.44	65.50	16.00	0.56
DTNF225, DTNF225R, DTNF325, DTNF365, DTNF365R	57.71	28.22	9.44	49.75	16.00	0.56
DTNF326, DTNF366, DTNF366R	57.71	28.22	9.44	49.75	16.00	0.56
DTNF327, DTNF367, DTNF367R	71.65	41.60	9.44	63.70	32.00	0.56
DTNF368, DTNF368R	71.65	41.60	9.44	63.70	32.00	0.56
FR325DTK <sup>Ⓢ</sup> , FR355DTK <sup>Ⓢ</sup>	74.31	24.90	8.88	69.50	20.25	0.56
FR326DTK <sup>Ⓢ</sup>	85.65	27.00	8.88	80.75	22.25	0.56
NFR451DTK <sup>Ⓢ</sup> , NFR452DTK <sup>Ⓢ</sup> , NFR453DTK <sup>Ⓢ</sup>	24.63	17.34	4.78	21.50	14.97 <sup>Ⓣ</sup>	0.27 <sup>Ⓣ</sup>
NF454DTK <sup>Ⓢ</sup> , NFR454DTK <sup>Ⓢ</sup>	37.25	19.19	6.32	33.50	16.00 <sup>Ⓢ</sup>	0.56 <sup>Ⓢ</sup>
NF455DTK <sup>Ⓢ</sup> , NF456DTK <sup>Ⓢ</sup> , NF457DTK <sup>Ⓢ</sup> , NFR455DTK <sup>Ⓢ</sup> , NFR456DTK <sup>Ⓢ</sup> , NFR457DTK <sup>Ⓢ</sup>	63.31	27.00	8.88	58.50	22.25 <sup>Ⓢ</sup>	0.56 <sup>Ⓢ</sup>
<b>Figure 2 (30-200A Type 12 &amp; 4X)</b>						
DTNF361J, DTNF361S	24.42	9.65	6.48	26.65	5.47	0.27
DTNF362J, DTNF362S	24.80	11.61	6.48	27.03	8.00	0.27
DTNF363J, DTNF363S	27.54	12.29	6.48	29.77	8.47	0.27
DTNF364J, DTNF364S	35.93	19.24	6.78	38.16	13.44	0.33
NF355HDTK <sup>Ⓢ</sup> , NF355SSDTK <sup>Ⓢ</sup>	53.82	22.66	7.25	56.20	18.00	0.56
NF454SSDTK <sup>Ⓢ</sup>	37.47	19.16	6.48	39.75	15.75	0.50 <sup>Ⓢ</sup>
F353SSDTK <sup>Ⓢ</sup>	37.00	11.62	5.50	38.50	9.00	0.26
F354SSDTK <sup>Ⓢ</sup>	50.90	19.16	6.46	53.27	16.12	0.50
F355SSDTK <sup>Ⓢ</sup>	74.50	25.00	8.92	76.69	20.25	0.56



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

Ⓢ (3) Mounting holes supplied (1 at top).  
 Ⓢ (4) Mounting holes provided.

Ⓢ These switches are not Type VIII design.  
 Ⓢ Drip hood not shown but provided on Type 3R enclosures.

## Safety Switches

# Enclosed Bolted Pressure Switches & Safety Switch

### Replacement Parts

For enclosed bolted pressure contact switches order as lug-in/lug-out single section BPS main switchboards using either the SPACE 2000 Switchboard EPM or COMPAS.

### VBII Safety Switch Replacement Parts

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

#### Fusible 2- and 3-Pole 60-600A General Duty & 30-1200A Heavy Duty<sup>⑤⑧</sup>

30 HD 240V	HFB21 <sup>②</sup>	HBB21 <sup>②</sup>	—	HH6123 <sup>②</sup>
60 GD	HFB612 <sup>②</sup>	HBB612 <sup>②</sup>	GH223	—
60 HD 240V	HFB22 <sup>②</sup>	HBB22 <sup>②</sup>	—	HH6123 <sup>②</sup>
30 600V	HFB612 <sup>②</sup>	HBB612 <sup>②</sup>	—	HH6123 <sup>②</sup>
60 600V	HFB62 <sup>②</sup>	HBB62 <sup>②</sup>	—	HH6123 <sup>②</sup>
100	HFB63 <sup>②</sup>	HBB63 <sup>②</sup>	GH223	HH6123 <sup>②</sup>
200	HFB64 <sup>②</sup>	HBB64 <sup>②</sup>	GH24	HH64 <sup>②</sup>
400	HFB65 <sup>③④</sup>	HBB656 <sup>③④</sup>	HH65678	HH65678 <sup>②</sup>
600	HFB66 <sup>③④</sup>	HBB656 <sup>③④</sup>	HH65678	HH65678 <sup>②</sup>
800	HFB67A <sup>②④</sup>	HBB67A <sup>②④</sup>	—	HH65678 <sup>②</sup>
1200	HFB68 <sup>②④</sup>	HBB68 <sup>②④</sup>	—	HH68 <sup>②</sup>

#### Non-Fusible 3-Pole 60-600A General Duty & 30-1200A Heavy Duty<sup>⑤⑧</sup>

30 HD	HNB612 <sup>②</sup>	—	—	HH6123 <sup>②</sup>
60 GD	HNB612 <sup>②</sup>	—	GH223	—
60 HD	HNB623 <sup>②</sup>	—	—	HH6123 <sup>②</sup>
100	HNB623 <sup>②</sup>	—	GH223	HH6123 <sup>②</sup>
200	HNB64 <sup>②</sup>	—	GH24	HH64 <sup>②</sup>
400	HNB65 <sup>③④</sup>	—	HH65678	HH65678 <sup>②</sup>
600	HNB66 <sup>③④</sup>	—	HH65678	HH65678 <sup>②</sup>
800	HNB67A <sup>②④</sup>	—	—	HH65678 <sup>②</sup>
1200	HNB678 <sup>②</sup>	—	—	HH68 <sup>②</sup>

Ampere Rating	Mechanism Assembly Catalog Number	Line & Load Lugs Catalog Number
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#### Fusible 2- and 3-Pole 60-600A General Duty & 30-1200A Heavy Duty<sup>⑤⑧</sup>

30 HD 240V	HM6123 <sup>②</sup>	HL612 <sup>①</sup>
60 GD	HM6123	HL612 <sup>①</sup>
60 HD 240V	HM6123 <sup>②</sup>	HL612 <sup>①</sup>
30 600V	HM6123 <sup>②</sup>	HL612 <sup>①</sup>
60 600V	HM6123 <sup>②</sup>	HL612 <sup>①</sup>
100	HM6123 <sup>②</sup>	HL63 <sup>①</sup>
200	HM64 <sup>②</sup>	HL64 <sup>①</sup>
400 (Legacy)	HM65	HL65678 <sup>④</sup>
400 (series-A)	HM656A	HL656A <sup>⑩</sup>
600 (Legacy)	HM66	HL65678 <sup>④</sup>
600 (series-A)	HM656A	HL66A <sup>⑩</sup>
800	HM67A	HL67A <sup>④⑨</sup>
1200	HM678	⑨

#### Non-Fusible 3-Pole 60-600A General Duty & 30-1200A Heavy Duty<sup>⑤⑧</sup>

30 HD	HM6123 <sup>②</sup>	HL612 <sup>①</sup>
60 GD	HM6123	HL612 <sup>①</sup>
60 HD	HM6123 <sup>②</sup>	HL612 <sup>①</sup>
100	HM6123 <sup>②</sup>	HL63 <sup>①</sup>
200	HM64 <sup>②</sup>	HL64 <sup>①</sup>
400 (Legacy)	HM65	HL65678 <sup>④</sup>
400 (series-A)	HM656A	HL656A <sup>⑩</sup>
600 (Legacy)	HM66	HL65678 <sup>④</sup>
600 (series-A)	HM656A	HL656A <sup>⑩</sup>
800	HM67A	HL67A <sup>④⑨</sup>
1200	HM678	⑨

- ① Three lugs included in kit.
- ② Includes lugs.
- ③ Lugs not included.
- ④ One lug per kit.
- ⑤ One per switch required unless otherwise noted.

- ⑥ One required per pole.
- ⑦ For type 4/4X stainless steel switches add "S" to end of catalog number.
- ⑧ For replacement door for heavy duty switches add "DOOR" to end of switch catalog number.

- ⑨ Lugs included with line and load bases.
- ⑩ Not for use with Non-metallic safety switches
- ⑪ Lug caps only—2 line side caps and 2 load side caps per kit

### Internal Shield Kits

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

Catalog Number	Switch Ampere Rating	UPC Code 040892_ _ _ _
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#### For use with Fusible Type 1, 3R, 12 and 4X Stainless Steel Enclosed Safety Switches<sup>⑩</sup>

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

#### For use with Fusible Type VBII Disconnect Switches

HSK61	30	79024
HSK623	60 & 100	79025
HSK64	200	79026



HF362 with HSK62SSW installed



VBFS361F with HSK61 Installed



3LD2254-0TK51

Features

- 16–250 Ampere, to 100 hp, 480V and 600V
- Rotary actuation models
- 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
- 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 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.

Short Circuit Withstand Ratings

Switch Rating and 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.

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 Catalog Number <sup>①</sup>	4 Hole Mounted Catalog Number <sup>①</sup>	Number of Poles	Ampere Rating	AC Horsepower Ratings				
				120V		240V		480V
				1Ø	1Ø	3Ø	3Ø	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

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.

## Disconnect Switches

# Compact Non-Fusible — Rotary

### Selection

#### 3LD Type Base Mounted Complete Assemblies

(Operator, Shaft, & Switch) 600V AC Max.②

Handle mounting②			Number of Poles	Ampere Rating	AC Horsepower Ratings				
Shaft (center hole)	4 Hole (no defeat)	4 Hole (with defeat)			120V	240V	480V	600V	
Catalog Number	Catalog Number	Catalog Number		10	10	30	30	30	
—	3LD2013-0TK5	3LD2017-0TK1 3LD2017-1TL1	3 3 + N	16	½	1½	3	7½	10
3LD2144-0TK5 3LD2144-1TL5	3LD2113-0TK5 3LD2113-1TL5	—	3 3 + N	25	2	3	7½	10	15
3LD2244-0TK5 3LD2244-1TL53	3LD2213-0TK5 3LD2213-1TL53	3LD2217-0TK1 3LD2217-1TL1	3 3 + N	32	2	3	10	20	20
3LD2545-0TK5	3LD2514-0TK5	3LD2517-0TK1 3LD2517-1TL1	3 3 + N	63	3	10	15	40	50
—	3LD2714-0TK5	—	3	100	—	—	30	60	75
—	3LD2814-0TK5	—	3	125	—	—	40	75	100
—	3LD2318-0TK1	—	3	160	—	—	40	75	75
—	3LD2418-0TK1	—	3	250	—	—	50	100	75



Base Mount

3LD2217-0TK13

#### Accessories for Front Mounted 3LD2 Switches

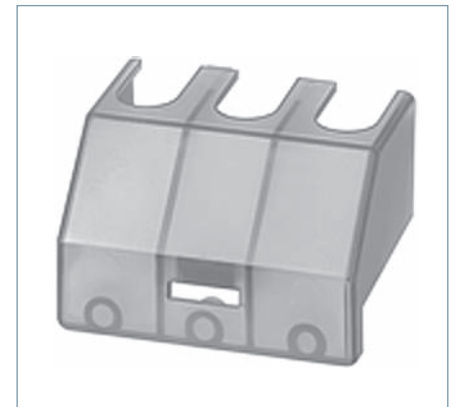
Catalog Number	Description	Switches Used With
3LD9200-5B③ 3LD9200-5BF③	1 NO, 1 NC Aux. Contact 1 NO, 1 NC Aux. with Gold Plated Contacts	25-125A 25-125A
3LD9220-2B 3LD9250-2BA 3LD9280-2B	Neutral/Ground Terminal Neutral/Ground Terminal Neutral/Ground Terminal	25 & 32A 63A 100 & 125A
3LD9220-0B 3LD9250-0BA 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
3LD9224-1B① 3LD9284-1B① 3LD9224-3B① 3LD9284-3B①	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
3LD9224-1D① 3LD9284-1D① 3LD9224-3D① 3LD9284-3D①	Black Handle (shaft mtg.)④ Black Handle (shaft mtg.)④ Red/Yellow Handle (shaft mtg.)④ Red/Yellow Handle (shaft mtg.)④	25 & 32A 63-125A 25 & 32A 63-125A
3LD9221-2A① 3LD9221-0A① 3LD9251-0A①	Terminal Cover 1P (Pack of 4) Terminal Cover 3P (Pack of 4) Terminal Cover 3P (Pack of 4)	25 & 32A 25 & 32A 63A



3LD9220-2C

#### Accessories for Base Mounted 3LD2 Switches

3LD9200-5C③ 3LD9200-5CF③	1 NO, 1 NC Aux. Contact 1 NO, 1 NC Aux. with Gold Plated Contacts	25-250A 25-250A
3LD9220-2C 3LD9250-2CA 3LD9280-2C 3LD9240-2C	Neutral/Ground Terminal Neutral/Ground Terminal Neutral/Ground Terminal Neutral/Ground Terminal	25 & 32A 63A 100 & 125A 160 & 250A
3LD9220-0C 3LD9250-0CA 3LD9280-0C 3LD9240-0C	4th Pole (leading ON, lagging OFF) 4th Pole (leading ON, lagging OFF) 4th Pole (leading ON, lagging OFF) 4th Pole (leading ON, lagging OFF)	25 & 32A 63A 100 & 125A 160 & 250A
3LD9224-1B① 3LD9284-1B① 3LD9224-3B① 3LD9284-3B①	Black Handle (4 hole mtg. no defeat) Black Handle (4 hole mtg. no defeat) Red/Yellow Handle (4 hole mtg. no defeat) Red/Yellow Handle (4 hole mtg. no defeat)	25 & 32A 63-125A 25 & 32A 63-125A
3LD9224-1D① 3LD9284-1D① 3LD9224-3D① 3LD9284-3D①	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
3LD9221-2A① 3LD9221-0A① 3LD9251-0A①	Terminal Cover 1P (Pack of 4) Terminal Cover 3P (Pack of 4) Terminal Cover 3P (Pack of 4)	25 & 32A 25 & 32A 63A



3LD9251-0A

**Note:** 3LD2 shaft lengths allow the following maximum enclosure depths from the switch mounting surface to the outside of the cover:

16-32A, 15.25"  
63-125A, 15.75"  
160 & 250A, 23.70"

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

② Add suffix 1 for a black or 3 for a red & yellow handle to the catalog number (except 3LD2244-1TL53 & 3LD2213-1TL53). Handles are IP65 rated and are also listed by UL for Type 1, 4X and 12 applications.

③ 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

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

⑤ Base mounted switches with direct mount handles are also available (3LD2330-0TK1\_② rated 160A and 3LD2430-0TK1\_② rated 250).

## Disconnect Switches

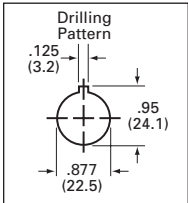
# Compact Non-Fusible — Rotary

### Dimensions

#### Dimension Drawings and Wire Ranges

##### Wire Ranges 60/75°C Cu only

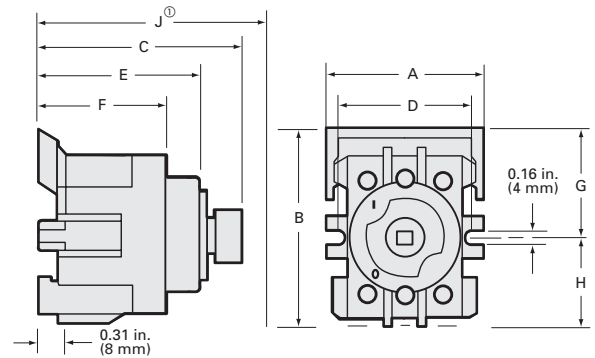
16A, 3LD20	(1) #18-10 AWG
25A, 3LD21	(1) #14-8 AWG
32A, 3LD22	(1) #14-8 AWG
63A, 3LD25	(1) #14-6 AWG
100, 125A, 3LD2	(1) #12-1 AWG
160, 250A, 3LD2	(1) #1-400 MCM



**Shaft Mounted  
3LD2 Handle Cutout  
(4-hole pattern)**

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

Switch	Dimension J
3LD2 25 & 32A Front Shaft Mounted	3.07 (78)
3LD2 63 Front Shaft Mounted	3.35 (85)
3LD2 16-32A 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 16-32A Base w/4-hole Mtg. Handle	5.59 (142)
3LD2 63A Base w/4-hole Mtg. Handle	5.99 (152)
3LD2 100-250A Base w/4-hole Mtg. Handle	6.07 (154)



Switch Type	Switch Catalog Number	Dimensions Inches (mm)							
		A	B	C	D	E	F	G	H
Rotary Front Mtg.	3LD20 <sup>②</sup>	1.89 (48)	1.97 (50)	1.97 (50)	—	—	—	—	—
Rotary Front Mtg.	3LD21 & 3LD22 <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 & 3LD28 <sup>②</sup>	2.40 (61)	3.27 (83)	2.40 (61)	—	—	—	—	—
Rotary Base Mtg.	3LD20 <sup>②</sup>	1.89 (48)	1.97 (50)	2.29 (58)	—	—	—	—	—
Rotary Base Mtg.	3LD21 & 3LD22 <sup>②</sup>	1.81 (46)	2.17 (55)	2.29 (58)	—	—	—	—	—
Rotary Base Mtg.	3LD25 <sup>②</sup>	2.36 (60)	2.52 (64)	2.68 (68)	—	—	—	—	—
Rotary Base Mtg.	3LD27 & 3LD28 <sup>②</sup>	2.80 (71)	3.27 (83)	2.76 (70)	—	—	—	—	—
Rotary Base Mtg.	3LD23 & 3LD24	4.41 (112)	5.83 (148)	4.10 (104)	—	—	—	—	—

<sup>①</sup>Depth from outside of cover to back of switch.

<sup>②</sup>Handle front plate dimensions:  
3LD 16-32A—2.64 inches square  
3LD 63-125—3.55 inches square

# Enclosed Rotary Disconnect Switches

Selection

## 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
- 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)
- HP 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
- 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	3 Pole, 3 Wire with (1) NO & (1) NC Aux. Contact <sup>③④</sup>		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	7½	15	20
30	—	3LD2264-1TS51-0US2 <sup>⑥</sup> ▲	1	3	7½	15	20
30	—	3LD2264-2TW51-0US2 <sup>⑦</sup> ▲	1	3	7½	15	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	7½	15	20
30	—	3LD2264-1TS53-0US2 <sup>⑥</sup> ▲	1	3	7½	15	20
30	—	3LD2264-2TW53-0US2 <sup>⑦</sup> ▲	1	3	7½	15	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

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

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

② Approved for indoor/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.

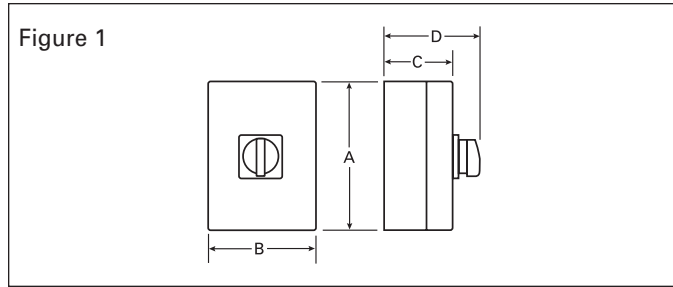
⑧ Aux. contacts break about 3 Ms before and make about 3 Ms after main switch contacts.

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

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

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

Wire ranges 60/75°C Cu Only

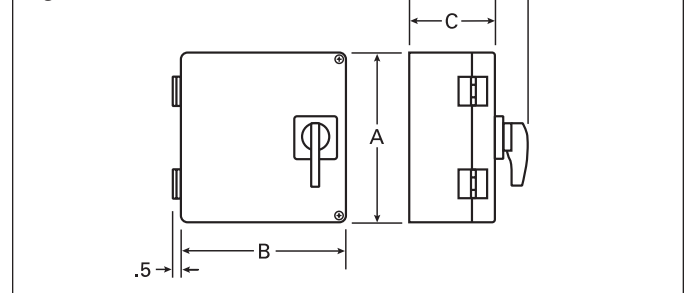
3LD2 Type Switches<sup>③</sup>

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

Figure 2



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	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>⑦</sup>
30A	LBRA1	Auxiliary Contact Kit (1 NO-1 NC)
60-100A	LBRA2	Auxiliary Contact Kit (1 NO-1 NC)
30-100A	HF63CX <sup>⑧</sup>	Neutral Kit

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.



## Disconnect Switches

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

### Features and Ordering Information

#### Features

- 30-600A, 600VAC and DC ratings
- 240 & 600V AC switches are UL Recognized under file number E121152, Vol. 3 and CSA certified under file number 154852
- 600V DC Photovoltaic switches are UL Recognized under file number E335018, Vol. 3 and are rated to switch 3 separate 600V DC circuits
- 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. PV switches are rated 10,000 AIC at 600V DC with 600V DC rated class K, J or R fuses.
- Flange mounted handles rated as Type 1, 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 the 2010 California Building Code (CBC) — and with the International Building Code (IBC) — Compliance Level SDS = 1.85 g



VBFS361, VBLK1 & VBH1



VBFS363F



VBNFS365, VBLK4 & VBH2

#### 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.

## Disconnect Switches

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

### Selection

#### Switches—for Standard 600V Max AC or DC Applications

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>
			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>⑨</sup>
600	600	VBFS366	—	—	150	400	200	500	— <sup>⑨</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>⑨</sup>
600	600	VBNS366	—	200	—	400	—	500	— <sup>⑨</sup>
<b>Fusible Flange Mounted Switches - 3-Pole<sup>⑥⑦</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>⑥⑦</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 on all 600V switches. If Class R Fuses are required, add a Class R Fuse Clip Kit.

#### Switches—for Photovoltaic Applications, 600VDC Max.<sup>⑦</sup>

(for use in negative ground systems only)

Switch Ampere Rating	Catalog Number	Rated Isc per NEC Article 690
<b>Fusible Panel Mounted Variable Depth Switches—3 Pole<sup>⑧⑨</sup></b>		
30	VBFS361PV	19.2A
60	VBFS362PV	38.4A
100	VBFS363PV	64.0A
<b>Non-Fusible Panel Mounted Variable Depth Switches—3 Pole<sup>⑧</sup></b>		
30	VBNS361PV	24.0A
60	VBNS362PV	48.0A
100	VBNS363PV	80.0A
<b>Fusible Flange Mounted Variable Depth Switches—3 Pole (Includes Type 1, 3R and 12 Rated Operating Handle)<sup>⑧⑨</sup></b>		
30	VBFS361FPV	19.2A
60	VBFS362FPV	38.4A
100	VBFS363FPV	64.0A
<b>Non-Fusible Flange Mounted Variable Depth Switches—3 Pole (Includes Type 1, 3R and 12 Rated Operating Handle)<sup>⑧</sup></b>		
30	VBNS361FPV	24.0A
60	VBNS362FPV	48.0A
100	VBNS363FPV	80.0A

- 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 pages 18/42 or 18/43.
- ⑥ Includes line base, load base, operating mechanism line and load lugs plastic operating handle and required linkage.
- ⑦ All photovoltaic switches are rated to be used with 3 separate 600V DC circuits.
- ⑧ Fusible switches accept Class K or R fuses as standard and Class J fuses by relocating the load base.
- ⑨ Rated 250V DC max and 50HP at 250V DC.
- ⑩ Please add letter "M" to the end of catalog number for metal handle.

#### Cable Kit

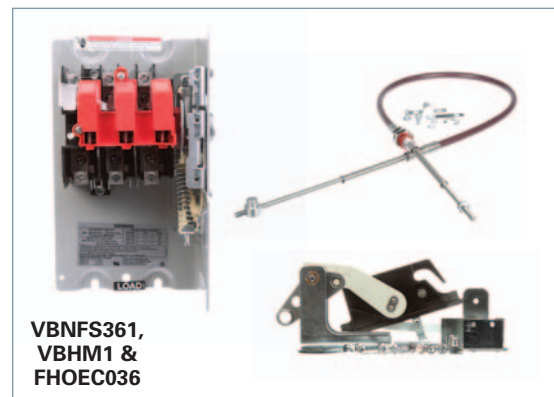
For use with 30-200A panel mounted switches and Max-Flex handle and adapter kit.

Catalog Number	Description
FHOEC036	36" long drive cable
FHOEC048	48" long drive cable

#### Max-Flex™ Handle and Adapter Kit

(Type 1, 12, 3R & 4X) Use with 30-200A panel mounted switches and cable kit.

Catalog Number	Operating Handle Description
<b>Plastic Handles</b>	
VBHM1	30-200A Type 1, 3R, 12 and 4X
<b>Metal Handles</b>	
VBHM2	30-200A Type 1, 3R and 12
VBHM2X	30-200A Type 4X



## Disconnect Switches

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

### Selection & Accessories

#### Flange Mounted Operating Handles

For use with Panel Mounted Switches. Plastic handle is included with Flange Mounted Switches as standard.

Catalog Number	Operating Handle Description
<b>Plastic Handles</b>	
VBH1	30-200A Type 1, 3R & 12
VBH14X	30-200A Type 4X
<b>Metal Handles</b>	
VBH112	30-200A Type 1, 3R & 12
VBH14	30-200A Type 4X
VBH2	400A Type 1 & 12
VBH2R	400 & 600A Type 1, 3R & 12
VBH24X	400 & 600A Type 4X



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	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

#### 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
DKR2	2 point (for use with enclosures less than 40" high)
DKR3	3 point (for use with enclosures 40" or larger in height)

#### Rigid Linkage Kits

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

Catalog Number	Switch Ampere Rating	Enclosure Depth <sup>①</sup>	
		Min	Max.
VBLK1	30-200	6.94 <sup>②</sup>	6.94 <sup>②</sup>
VBLK2	30-200	6.94 <sup>②</sup>	19.0
VBLK3	400 & 600	9.00	8.75
VBLK4	400 & 600	9.00	19.0



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>③</sup>

Catalog Number	Description
HT23	100A, 240V Kit
HT63	100A, 600V Kit
HT24	200A, 240V Kit
HT64▲	200A, 600V 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.

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

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

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

#### **NEW** Quick Connects

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

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



HN612

#### Neutral Kits<sup>④</sup>

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

#### Neutral Kits

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

#### 200% Neutral Kits<sup>④</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	Wire Range Line & Load Lugs (Cu/Al)
60 & 100A	HN263	(2) #14-1/0 AWG

▲ Built to order. Allow 6-8 weeks for delivery.  
 ① Dimensions (min. & max.) from enclosure mounting panel to outside surface of enclosure handle mounting flange.

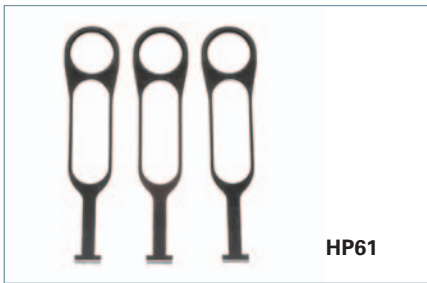
② 7.12 for 200A switches.  
 ③ One kit per pole required.

④ UL approved (not CSA certified).

## Disconnect Switches

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

### Accessories



### 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	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
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	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	Number of Terminals	Wire Range Per Terminal (Cu/Al)
30-200	HG61234	2	#14-4 AWG
400 & 600	HG656	4	#6 AWG-250 Kcmil

### **NEW** Internal Shield Kits (for fusible switches)

Kits provide a "skirt" that encloses the VBII switch and also a clear plastic inner door to prevent accidental contact with live parts. Test probe holes are provided and fuses can be replaced without removal of kit.

Switch Ampere Rating	Shield Kit Catalog Number
30A	HSK61
60-100A	HSK623
200A	HSK64

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

## Disconnect Switches

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

### 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.

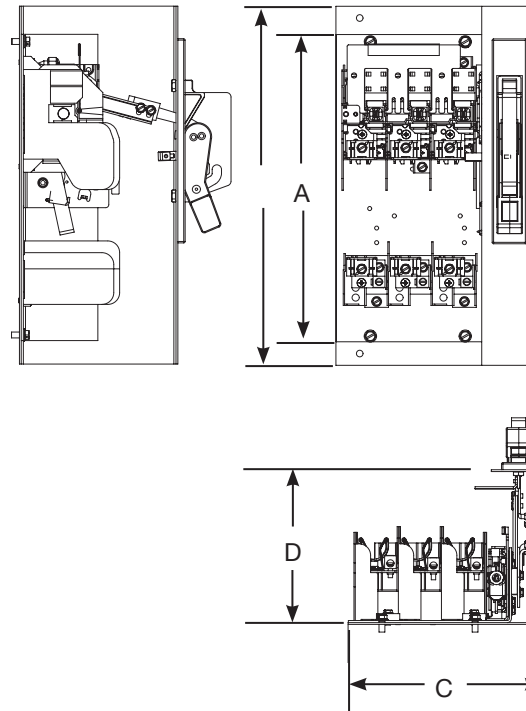
## Wire Ranges (Line, Load and Standard Neutral)

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>ⓐ</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, VBFS361PV	11.88	N/A	7.47	6.94	19
VBFS362, VBFS362PV	13.12	N/A	8.50	6.94	19
VBFS363, VBFS363PV	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 <td 16.50	8.63	19	
<b>Non-fusible, Panel Mounted</b>					
VBNFS361, VBNFS361PV	9.79	N/A	7.47	6.94	19
VBNFS362, VBNFS362PV	9.79	N/A	8.50	6.94	19
VBNFS363, VBNFS363PV	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, VBFS361FPV	11.88	14.08	7.47	7.27	N/A
VBFS362F, VBFS362FPV	13.12	15.83	8.85	7.27	N/A
VBFS363F, VBFS363FPV	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, VBNFS361FPV	9.79	11.78	7.47	7.27	N/A
VBNFS362F, VBNFS362FPV	9.79	11.78	8.85	7.27	N/A
VBNFS363F, VBNFS363FPV	9.79	11.78	8.85	7.27	N/A
VBNFS364F	10.77	11.97	12.68	7.57	N/A



<sup>ⓐ</sup> 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.

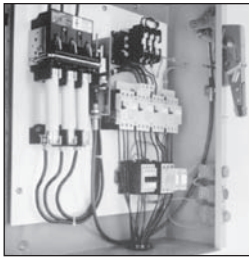
## Disconnect Switches

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

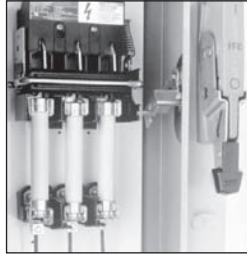
### Selection

### Features

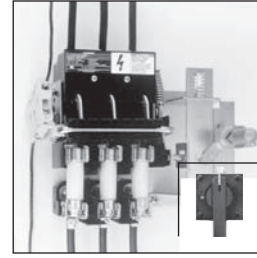
- 30, 60, 100 and 200 Ampere Switches
- UL Recognized (file # E121152 vol. 1 & 2) and CSA Certified
- Simple Mounting — with an integral switch and over center mechanism
- Horsepower & load break rated
- Compact Size
- Visible Blade Contacts
- Rugged Construction — with a short circuit current rating 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
- Flange mounted handles meet NFPA79 requirements



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 our 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 18/47 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>①</sup>						250 Volts DC (max) <sup>②</sup>
				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>①</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>②</sup>				
			Catalog Number	Catalog Number	Catalog Number <sup>①</sup>	Catalog Number <sup>①</sup>	Catalog Number <sup>①</sup>	
30	MCS603R or MCS603L	No Fuse	TMK606	—	—	—	—	#14 to #4 AWG Cu/Al
		30A, 250V	—	—	FCK203▲	—	FCRK203	
		30A, 600V	—	—	FCK206	FCJK603	FCRK206	
		60A, 250V	—	—	FCK206	—	FCRK206	
60	MCS606R or MCS606L	60A, 600V	—	—	FCK606	FCJK606	FCRK606	#14 to #4 AWG Cu/Al
		No Fuse	TMK606	—	—	—	—	
		60A, 250V	—	—	FCK206	—	FCRK206	
		60A, 600V	—	—	FCK606	FCJK606	FCRK606	
100	MCS610R or MCS610L	100A, 250V	—	—	OFCK661▲	OFCK661▲	③	#14 to #2/0 AWG Cu/Al
		100A, 600V	—	—	OFCK661▲	OFCK661▲	③	
		No Fuse	TMK610	TMK610C	—	—	—	
		100A, 250V	—	—	FCK610	FCK610	③	
200	MCS620R or MCS620L	100A, 600V	—	—	FCK610	FCK610	③	#6 to 300 kcmil Cu/Al
		200A, 250V	—	—	OFCK620	OFCK620	③	
		200A, 600V	—	—	OFCK620	OFCK620	③	
		No Fuse	TMK620	TMK620C▲	—	—	—	
200	MCS620R or MCS620L	200A, 250V	—	—	FCK620	FCK620	③	#6 to 300 kcmil Cu/Al
		200A, 600V	—	—	FCK620	FCK620	③	

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

① 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.

② Includes both line and load lugs.

③ For Class R fuses order Class H kit from this table and the Class R conversion kit from the next page.

④ HP ratings for time delay fuses and for 250V DC also apply to Non-fusible switches.

# Disconnect Switches

## Type MCS (30-200A)

### Accessories

#### Auxiliary Switch Kits

Switch Catalog Number	Contact Arrangement	
	1 NO/1 NC Catalog Number	2 NO/2 NC Catalog Number
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
100A, 600V	SSRK33
200A, 600V	SSRK34

#### Fuse Ejector Kits

Switch Catalog Number	Fuse Ejector Kit Catalog Number
MCS610	FE100▲
MCS620	FE200▲

#### Handle Operators

##### Fixed Depth, Flange Mounted, Types 1, 3, 3R, 12<sup>①④</sup>

Switch Catalog Number	Complete Handle Mechanism	Handle Only	Switch Operator Only
	Catalog Number	Catalog Number	Catalog Number
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>

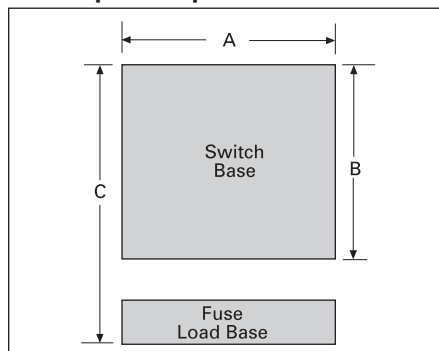
Switch Catalog Number	Complete Handle Mechanism	Handle Only	Switch Operator Only	Cable Only <sup>③</sup>
	Catalog Number	Catalog Number	Catalog Number	Catalog Number
MCS603R	FHOS06036R	FHOHS	FHOS06R	FHOEC036
MCS603L	FHOS06036L	FHOHS	FHOS06L	FHOEC036
MCS606R	FHOS06036R	FHOHS	FHOS06R	FHOEC036
MCS606L	FHOS06036L	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	RHOH	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.  
 ①For Type 4 and 4X applications, order handle only Catalog Number 100A - FDH104 200A - FDH204  
 ②For Type 4 and 4X applications, order handle only Catalog Number FHOHS4

③Standard cable length is 36 inches. Alternate lengths are available as follows:

Length	Amps	Cat. No.
48"	30-100	FHOEC048
60"	30-100	FHOEC060
48"	200	FHOJC048
60"	200	FHOJC060

④For Type 4 and 4X applications, order handle only Catalog Number RHOSH4  
 ⑤For Type 3 and 3R applications, order handle only Catalog Number RHOH  
 ⑥Min. 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.

## Type CFS Compact Fusible Switches

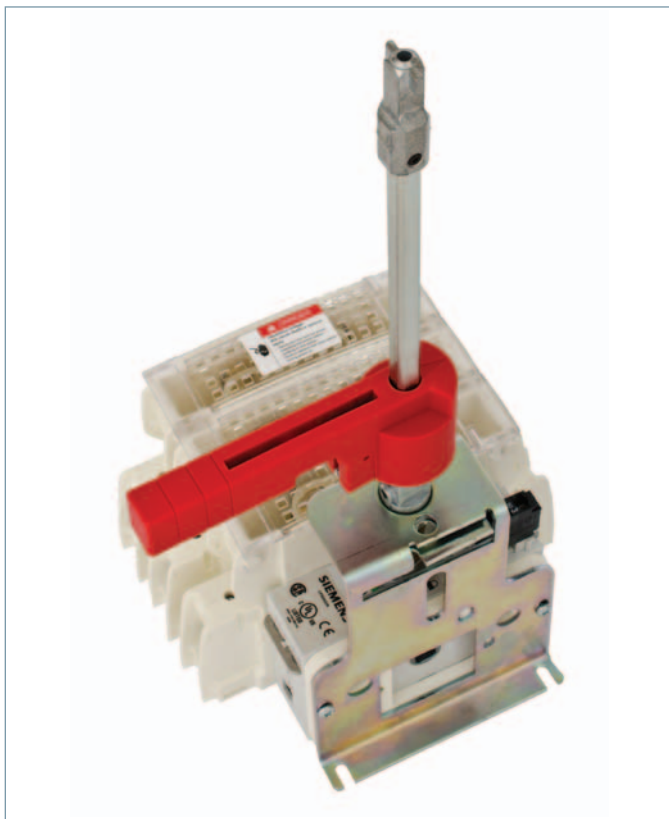
### Description

Siemens Type CFS compact fusible switches meet UL 98 requirements and can be used in either service entrance or branch circuit applications. 30-800A, 3 pole switches are offered and are all rated 600V AC maximum. 30A switches are available with provisions for either Class CC or J fuses. 60A and larger switches provided with Class J fuse provisions can be used in non-fusible applications with field installable no-fuse kits.

All are open style, designed to be panel mounted and are UL listed under file number #E121152 or #E68312 and CSA certified under file number #222227. A variety of door mounted rotary operators are available with Type 1, 3R, 12 or 4/4X ratings.

### NFPA79 Kits

CFSNFPA1 AND CFSNFPA2N kits provide an internal handle and padlocking means to comply with article 5.3.4.2 of the NFPA-2002 standard.



### Catalog Numbering System

#### CFS Switches

Compact Fusible Switch

**CFS 3 6 1 J 5 N**

- Number of poles 3 = 3
- Max. Voltage Rating 6 = 600V
- Ampere rating
  - 1 = 30A
  - 2 = 60A
  - 3 = 100A
  - 4 = 200A
  - 5 = 400A
  - 6 = 600A
  - 7 = 800A
- Fuse provisions type
  - C = Class CC
  - J = Class J with right hand mechanism
  - JL = Class J with left hand mechanism
  - L = Class L with right hand mechanism
- Max. AIC rating
  - 5 = 100kA
  - Omit = 200kA J fused
- Version
  - N = New size reduced version
  - N1 = New 100kA 60A switch

#### Operating Handles

CFS type handle

**CFSH 10 R 12 N**

- Shaft cross section
  - 5 = 5 mm
  - 10 = 10 mm
  - 12 = 12 mm
- Handle color and length
  - B = Black & blue, short
  - R = Red & yellow, short
  - BL = Black & blue, long
  - RL = Red & yellow, long
- NEMA type
  - 12 = 1, 3R and 12
  - 4 = 1, 3R, 12 and 4/4X
- Version
  - N = New version

#### CFS Operating Shafts

CFS type shaft

**CFSS 10 200 H N**

- Shaft cross section
  - 5 = 5 mm
  - 10 = 10 mm
  - 12 = 12 mm
- Shaft length
  - 200 = 200 mm
  - 400 = 400 mm
- Switch compatibility
  - Omit = 30A, 100kA
  - H = 100 or 200 kA
- Version
  - N = New version



## Disconnect Switches

# Type CFS Compact Fusible Switches

### Features and Ordering Information

#### Features

- 30 - 800A ratings
- UL Listed under file #E121152 & CSA Certified under file #222227
- Door mounted rotary handles with defeatable cover interlock
- Meets UL requirements for both main and branch circuit applications
- Compact size
- 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 numbers CFS361C5 & CFS361J5 can be DIN-rail mounted and can be either front or side operated with standard rotary handles..
- All CFS part numbers ending in N 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
- 30-400A, 200kA switches are provided with quick connect terminal provisions for voltage sensing or for 10A max. control circuits



#### 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 100kA 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 contact are available if needed as follows. 30A 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. 30-100A switches are designed to prevent inadvertent contact with live parts and shields are not required. 200 & 400A switches are not supplied with terminal shields. They are available as field installed kits for both line and load terminals. 400-800A 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 information provided in the selection tables.

## Disconnect Switches

# Type CFS Compact Fusible Switches

### Shaft and Handle Selection

Fusible switches, 3-pole 600V AC Max. 30-100A & 600-800A switches are also rated 250V DC Max when poles are field connected in series<sup>⑤</sup>

Switch Ampere Rating	Catalog Number	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>	100kA
30 <sup>①</sup>	CFS361J5	Class J	7.5	15	20	5 <sup>③</sup>	
30 <sup>①</sup>	CFS361JN	Class J	7.5	15	20	5 <sup>③</sup>	
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 <sup>④</sup>		60	125	150	—	
400 <sup>②</sup>	CFS365JN <sup>④</sup>		125	250	350	—	
600 <sup>②</sup>	CFS366J <sup>③⑤</sup>		200	400	500	—	
800 <sup>②</sup>	CFS367L <sup>③⑤</sup>	Class L	200	400	500	—	200kA

#### Optional – With Left Hand Mounted Mechanism<sup>④</sup>

30 <sup>②</sup>	CFS361JLN	Class J	7.5	15	20	5 <sup>③</sup>	200kA
60 <sup>②</sup>	CFS362JLN		15	30	50	10 <sup>③</sup>	
100 <sup>②</sup>	CFS363JLN		30	60	75	20 <sup>③</sup>	

#### Operating Shafts for 30-400A Switches<sup>⑤</sup>

Catalog number	Shaft length in. (mm)	Switch & handle compatibility
CFSS5200N CFSS5400N	7.9 (200) 15.7 (400)	5mm x 5mm for use with CFS361C5 & CFS361J5 switches & with "CFSH5" handles only
CFSS5200HN CFSS5400HN	7.9 (200) 15.7 (400)	5mm x 5mm for use with all "CFSH10" handles & with CFS361C5 & CFS361J5 switches only
CFSS10200HN CFSS10400HN	7.9 (200) 15.7 (400)	10mm x 10mm for use with all "CFSH10" handles & with all 30-400A switches except CFS361C5 & CFS361J5

#### Compact rotary operating handles — door mounted (for use with CFS361C5 & CFS361J5 switches only)<sup>⑥</sup>

Catalog number	Color	UL Type	Operating shaft compatibility
CFSH5B12N CFSH5R12N	Blue & Black Yellow & Red	1, 3R & 12	CFSS5200N or CFSS5400N
CFSH5B4N CFSH5R4N	Blue & Black Yellow & Red	1, 3R, 12 & 4/4X	

#### Rotary Operating Handles - Door Mounted

(for use with CFSS5200HN, CFSS5400HN, CFSS10200HN & CFSS10400HN)

Catalog number	Color	Description
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##### Type 1, 3R & 12<sup>⑦</sup>

CFSH10B12N	Blue & Black	Heavy duty pistol grip (2.75" long for use with 30A switches & CFS362JN1)
CFSH10R12N	Yellow & Red	
CFSH10BL12N	Blue & Black	Heavy duty pistol grip (4.92" long for 30-400A switches)
CFSH10RL12N	Yellow & Red	

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

CFSH10B4N	Blue & Black	Heavy duty pistol grip (2.75" long for use with 30A switches & CFS362JN1)
CFSH10R4N	Yellow & Red	
CFSH10BL4N	Blue & Black	Heavy duty pistol grip (4.92" long for 30-400A switches)
CFSH10RL4N	Yellow & Red	



① Line and load lugs included.

② Line and load lugs are not included.

Order from table on next page if required.

③ DC HP rating shown requires (3) poles to be connected in series.

④ CFS364JN & CFS365JN can be rotated 180° for left hand operation as standard.

⑤ Catalog numbers CFS361C5 & CFS361J5 accept 5mm x 5mm operating shafts. All other 30-400A switches accept 10mm x 10mm operating shafts.

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

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

⑧ 4 pole 600 & 800A switches, CFS466J & CFS467L are also available.

⑨ CFS366J and CFS367L are rated 250 & 600V DC when (2) poles are connected in series.

## Disconnect Switches

# Type CFS Compact Fusible Switches

### Selection and Accessories

#### 600 & 800A Rotary Operating Handles - Door Mounted (8.27" long)<sup>②</sup>

Catalog number	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 12mm x 12mm)

Catalog number	Shaft length in. (mm)	Enclosure depth (switch mounting surface to door OD)
CFSS12200H	12.59 (320)	10.43 – 16.68 in.
CFSS12400H	15.75 (400)	10.43 – 19.84 in.

#### Type CFS Fusible Switch Accessories

Catalog number	Description
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##### Terminals<sup>①</sup>

CFSL200	200A lug kit (6 lugs per kit) #6-3/0
CFSL400N	400A lug kit (6 lugs per kit) #2-600kcmil (for CFS365JN only)
CNFSL400D	400A lug kit (6 lugs per kit, 2 wires per lug) #6-350kcmil
CFSL400	600-800A lug kit (6 lugs per kit, 2 wires per lug) #2-600kcmil <sup>②</sup>

##### 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)

CFSAUXH1 <sup>②</sup>	Aux contact holder (CFS361C5 & CFS361J5)
CFSAUX1NO	Aux contact 1 NO (30-800A Sws)
CFSAUX1NC	Aux contact 1 NC (30-800A Sws)
CFS11AUX	1NO, 1NC aux contact kit (side mount for 200kA switches)
CFS22AUX	2NO, 2NC aux contact kit (side mount for 200kA switches)

##### Terminal shrouds (line or load)

CFSTS200N <sup>③</sup>	200A shroud kit (line or load 3-pole kit)
CFSTS400N <sup>③</sup>	400A shroud kit (line or load 3-pole kit for CFS365JN only)
CFSTS680 <sup>④</sup>	600/800A 3-pole shroud kit
CFSTS6804 <sup>④</sup>	600/800A 4-pole shroud kit

##### 30A compact switch kits

CFSPLK	Shaft padlocking kit for 30A compact switch when door is open
CFSH5CDM	Direct mount handle kit for CFS361C5
CFSH5JDM	Direct mount handle kit for CFS361J5

##### NFPA 79 kits (if auxiliary contacts are needed, see table above)

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 and an internal OFF padlocking provision.

CFSNFPA1 <sup>④</sup>	For use with CFS361C5 & CFS361J5
CFSNFPA2N <sup>⑤</sup>	For use with CFS361JN, CFS361CN, CFS362JN1, CFS362JN, CFS363JN & CFS364JN
CFSNFPA3N <sup>⑤</sup>	For use with CFS365JN only

① Supplied as standard on 30-100A switches  
 ② CFS361C5 will accept (4) aux contacts without an aux contact holder. CFS361J5 will accept (2) aux contacts without an aux contact holder.  
 ③ Supplied as standard on all but 30A, 100kA compact switches.

④ 12.6 in. (320 mm) long operating shaft included  
 ⑤ 12.7 in. (323 mm) long operating shaft included  
 ⑥ Line side terminal shrouds supplied with switch  
 ⑦ Defeatable cover interlock included.  
 Cover cannot be opened when the handle is padlocked in the OFF position.

⑧ Neither line or load terminal shrouds are supplied as standard with new style 200 & 400A switches.  
 ⑨ 2 kits needed for 800A, total 12 lugs to cover line and load sides



## Disconnect Switches

# Type CFS Compact Fusible Switches

### Technical Characteristics

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

Catalog Number	Amps	Fuse Class	Ac Short Circuit Rating	Electrical Endurance	Mechanical Endurance	Panel Space Requirements - in. (mm)		
						Height	Width	Depth <sup>①</sup>
CFS361C5	30	CC	100kA	6000	10000	4.56 (116)	3.78 (96)	6.00 (152)
CFS361J5	30	J	100kA	6000	10000	4.56 (116)	4.15 (105)	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)
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)
CFS362JLN	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)
CFS363JLN	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)	11.00 (280)
CFS466J	600	J	200kA	1000	5000	11.81 (300)	18.03 (458)	11.00 (280)
CFS367L	800	L	200kA	500	3500	11.81 (300)	14.33 (364)	11.00 (280)
CFS467L	800	L	200kA	500	3500	11.81 (300)	18.03 (458)	11.00 (280)

#### Wire Ranges Line & Load Lugs

Switch	Amperage Rating	UL Approved Wire Size (75° C)
CFS361J5	30	(1)#14-10
CFS361C5	30	(1)#14-10
CFS361JN	30	(1)#14-6
CFS362JN1	60	(1)#14-6
CFS362JN	60	(1)#12-1
CFS363JN	100	(1)#12-1
CFS364JN	200	(1)#3/0
CFS365JN	400	(1)600MCM
CFS366J	600	(2)350 MCM
CFS367L	800	(2)600 MCM

#### Auxiliary Contact Capability When An NFPA79 Kit Is Used

Switch	NFPA79 Kit	Aux Contacts That Can Be Installed
CFS361C5	CFSNFPA1	(2) Total, CFS AUX1NO or CFS AUX1NC
CFS361J5		(1) CFS AUX1NO or (1) CFS AUX1NC
CFS361JN	CFSNFPA2N	(2) Total, CFS AUX1NO or CFS AUX1NC <sup>②</sup>
CFS362JN1		
CFS362JN		
CFS363JN		
CFS364JN	CFSNFPA3N	(2) Total, CFS AUX1NO or CFS AUX1NC <sup>②</sup>
CFS365JN		

① Minimum dimensions from mounting surface to inside of cover. Dimensions shown can be decreased if aux contacts are not required.

② For additional auxiliary contacts use side mounted CFS11AUX or CFS22AUX.

## Type CNFS Compact Non-Fusible Switches

### Description

Siemens Type CNFS compact non-fusible switches meet UL 98 requirements and can be used in either service entrance or branch circuit applications. They are available in 30-800A, 3-pole switches and are all rated 600VAC maximum.

All are open style, designed to be panel mounted and are UL listed under file number #E121152 or #E68312 and CSA certified under file number #222227. A variety of door mounted rotary operators are available with Type 1, 3R, 12 or 4/4X ratings.

These non-fusible switches are UL listed under file #E201138 and CSA certified under file #112964. They also conform to IEC standard 60947-3.

### Catalog Numbering System

#### CNFS Switches

Compact Non-Fusible Switch

- Number of poles 3 = 3
- Max. Voltage Rating 6 = 600V
- Ampere rating
  - 1 = 30A
  - 2 = 60A
  - 3 = 100A
  - 4 = 200A
  - 5 = 400A
  - 6 = 600A
  - 7 = 800A
- Design type
  - N = Compact design

CNFS 3 6 1 N



#### Features

- 30 - 800A ratings
- UL Listed under file #E201138 & CSA Certified under file #112964 or #703166
- Options to have door mounted pistol handles with defeat-able cover interlock or direct mounted handles.
- Meets UL 98 requirements
- Compact size
- All short circuit protection ratings require the use of Class J fuses in the circuit.
- Load break and horsepower rated
- Quick make and break operation
- All external handles and direct handles for 600-800A switches are padlockable with up to (3) padlocks with 5/16" hasps in the OFF position. Direct handles for 30-100A switches are padlockable with (1) padlock with 3/16" hasps in the OFF position.
- All switches are able to be panel mounted. Catalog numbers CNFS361N, CNFS362N, & CNFS363N can also be DIN-rail mounted and can either be front or side operated with standard pistol handles.
- Handles are available in Type 1, 3R, 4/4X & 12 ratings



#### Ordering information

1. Select the panel mounted switch required based on Ampere, HP and AIC requirements. Switches with a right hand mechanism are standard.
  2. Select handle based on environmental rating required.
  3. For door mounted handles, select operating shaft based on enclosure depth. For enclosure depths of 9.00" or less from panel mounting surface to inside of door use up to 200 mm long shafts. From 9.00" to 13.00" use up to 320 mm long shafts. For deeper enclosures use up to 400 mm long shafts. For direct mount handles, no shaft is needed.
  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. Each switch will accept up to (2) aux contact modules, containing (2) contacts in each.
  6. 30-100A Series N switches are designed to prevent inadvertent contact with live parts and shields are not required but are offered as terminal shrouds. 100-400A switches are not supplied with terminal shields. They are available as separate field installed kits for both line and load terminals by amperage rating. Line side terminal screens are provided for 600-800A switches.
- Note: Be sure to check shaft and handle compatibility with the switch selected by using information provided in the selection tables.

## Disconnect Switches

# Type CNFS Compact Non-Fusible Switches

### Shaft and Handle Selection

#### Type CNFS compact non-fusible switches

Switch Ampere Rating	Catalog Number	Max Horsepower Ratings			Short Circuit Rating	
		240V 3Ø AC	480V 3Ø AC	600V 3Ø AC	@ 480VAC	@ 600VAC
30	CNFS361N <sup>①</sup>	10	20	25	100	100
60	CNFS362N <sup>①</sup>	20	40	50	100	100
100	CNFS363N <sup>①</sup>	20	50	50	100	25
200	CNFS364N <sup>②</sup>	75	150	200	200	200
400	CNFS365N <sup>②</sup>	125	250	350	200	200
600	CNFS366N <sup>②</sup>	200	400	350	200	200
800	CNFS367N <sup>②</sup>	200	500	500	100	100



#### Direct mount rotary handles for compact non-fusible switches

Catalog Number	Color	Use with compact non-fusible switches
CNFSHD1	Blue	CNFS361N, CNFS362N, CNFS363N
CNFSHD2	Black	CNFS364N, CNFS365N
CNFSHD3	Black	CNFS366N, CNFS367N



#### Operating shafts for compact non-fusible switches

Catalog Number	Shaft length in. (mm)	Switch and handle compatibility
CNFSS52001	7.9 (200)	5mm x 5mm for use with CNFS361N, CNFS362N and CNFS363N switches and with "CNFSH5" handles only
CNFSS53201	12.6 (320)	
CNFSS54001	15.7 (400)	
CFSS10200HN	7.9 (200)	10mm x 10mm for use with "CFSSH10" handles and with CNFS364N and CNFS365N switches only
CNFSS103202	12.6 (320)	
CFSS10400HN	15.7 (400)	
CNFSS152003	7.9 (200)	15mm x 15mm for use with "CFSSH12" handles and with CNFS366N and CNFS367N switches only
CNFSS153203	12.6 (320)	
CNFSS154003	15.7 (400)	



#### Compact rotary operating handles for non-fusible switches – door mounted

Catalog Number	Color	UL Type	Operating shaft compatibility	Use with non-fusible compact switches
CNFSSH5BP121	Black	NEMA 1, 3R, 12	CNFSS52001, CNFSS53201, CNFSS54001	CNFS361N, CNFS362N, CNFS363N
CNFSSH5RP121	Red/Yellow	NEMA 1, 3R, 12		
CNFSSH5BP41	Black	NEMA 4/4X		
CNFSSH5RP41	Red/Yellow	NEMA 4/4X		
CFSSH10BL12N	Black	NEMA 1, 3R, 12	CFSS10200HN, CNFSS103202, CFSS10400HN	CNFS364N, CNFS365N
CFSSH10RL12N	Red/Yellow	NEMA 1, 3R, 12		
CFSSH10BL4N	Black	NEMA 4/4X		
CFSSH10RL4N	Red/Yellow	NEMA 4/4X		
CFSSH12BL12	Black	NEMA 1, 3R, 12	CNFSS152003, CNFSS153203, CNFSS154003	CNFS366N, CNFS367N
CFSSH12RL12	Red/Yellow	NEMA 1, 3R, 12		
CFSSH12BL4	Black	NEMA 4/4X		
CFSSH12RL4	Red/Yellow	NEMA 4/4X		

① Line and load lugs are included.

② Line and load lugs are not included. Order from table on following pages if needed.

③ All switches can be rotated 180° for left hand operation as standard.

④ Compact pistol grip design (2.75" long) with defeatable cover interlock. Cover can be opened when handle is padlocked in the OFF position.

⑤ Defeatable cover interlock provided. Cover cannot be opened when handle is in the OFF position.

⑥ Flange mounting is not available for non-fusible switches.

## Disconnect Switches

# Type CNFS Compact Non-Fusible Switches

### Additional Accessories

#### Auxiliary contacts for use with non-fusible switches

Catalog Number	Number of Contacts	Use with Non-fusible Contact Switches
CNFS1AUX1	1 Normally Open + 1 Normally Closed	CNFS361N, CNFS362N, CNFS363N
CNFS2AUX1	2 Normally Closed	
CNFS1AUX2	1st Auxiliary Contact: 1 Normally Open + 1 Normally Closed	CNFS364N, CNFS365N, CNFS366N, CNFS367N
CNFS2AUX2	2nd Auxiliary Contact: 1 Normally Open + 1 Normally Closed	



#### Terminal shrouds for use with non-fusible switches

Catalog Number	Shroud Location	Use with Non-fusible Contact Switches
CNFSSTS100	Top and Bottom	CNFS361N, CNFS362N, CNFS363N
CNFTS200T	Top	CNFS364N
CNFTS200B	Bottom	
CNFTS400T	Top	CNFS365N
CNFTS400B	Bottom	
CNFTS600B	Bottom	CNFS366N
CNFTS800B	Bottom	CNFS367N



#### Terminal lug kits for use with non-fusible switches

Catalog Number	Wire Sizes	Use with Non-fusible Contact Switches
Included	#10-2/0	CNFS361N, CNFS362N, CNFS363N
CFSL200	#6-300MCM	CNFS364N
CFSL400N	#2-600MCM	CNFS365N
CNFSL400D	#6-350MCM, 2 wires per lug	CNFS366N
CFSL400	#6-350MCM, 2 wires per lug	CNFS366N, CNFS367N <sup>Ⓞ</sup>



<sup>Ⓞ</sup> 2 kits needed for 800A, total 12 lugs to cover line and load sides.