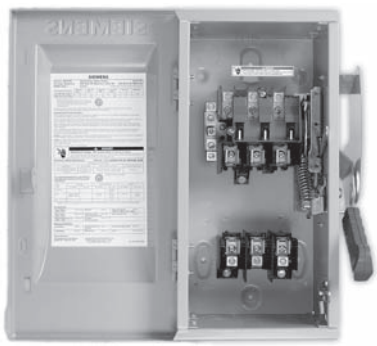
General Duty Switch



Heavy Duty Switch

Window Switch

Scan to connect online to the most up-to-date version of this Section of SPEEDFAX.

contents

	General Duty	Heavy Duty	Double Throw
Application	General Duty Switches are intended for applications where reliable performance and continuity of service are needed, but where duty requirements are not severe and usual service conditions prevail. (These switches are intended for use primarily with supply circuits rated 240V AC or less where the available fault current is less than 100,000A when used with Class R or T fuses or 10,000A max. when used with Class H fuses.)	Heavy Duty Switches are intended for use in applications where: 1. Rugged construction, reliable performance, continuity of service and ease of maintenance are emphasized, or 2. Available fault currents higher than 10,000A are likely to be encountered, such as in manufacturing plants, mass production industries, and commercial, institution-al and other large buildings served by network systems or transformers of higher capacities. 3. System voltage is 600V AC or DC Max. 4. A Type 12 or 4 / 4X enclosure is required.	Double throw switches are intended to transfer loads from one power source to another. All 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.
Short Circuit Withstand Ratings	Suitable for use on systems capable of delivering not more than 100,000 RMS symmetrical amperes of fault current as follows: Sw. Rating / AIC Rating / Protective Device① 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: Sw. Rating & Tpye / AIC Rating / Protective Device① 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 DT② / 200,000 / Class R, J or T Fuse 800 & 1200A HD & DT② / 200,000 / Class L or T Fuse	
Fuses	Fusible switches will accept the following UL class fuses: 30 "LF" - 30A max plug Fuses 30-600A "GF" Class H & K, Class R with kit 100-600A "GF" Class J-move base 100-200 "GF" Class T with kit 400-600A "GF" Class T-move bases	Fusible switches will accept the following UL class fuses: 30-600A "HF" Class H & K, Class R with kit 30-600A, 600V "HF" Class J-move base 100-600A, 240V "HF" Class J-move base 100-200A "HF" Class T with kit 400-600A "HF" Class T-move bases 800-1200A "HF" Class L, Class T with kit③	Fusible switches will accept the following UL class fuses: 30-200A "DT" & "F" Class H & K, Class R with kit 30 & 60A 600V "DT" Class J-move base 100-200A "DT" Class J-move base, Class T with kit 400-600A "DT" Class J-standard, Class T-move bases 400A 240v "F" Class H-standard 400A, 600V & 600A "F" Class T-Standard
Cover Interlocks	Voidable – cover interlocks on switches prevent the switch door from being opened when in the "ON" position. No cover interlock on 30A Type 3R 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.
Underwriters' Laboratories, Inc.	Listed by UL under file #E4776 as enclosed switches and also suitable for use as service equipment (where applicable). UL98 Enclosed and Deadfront Switches.		
NEMA Specifications	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.
Seismic Qualifications	All GD & HD switches and "DT" type double throw switches have been tested and comply with the 2010 California Building Code (CBC) and with the 2009 International Building Code (IBC) - Compliance Level SDS = 1.85 g		
Groundable Neutral (All neutrals are bondable for service entrance use.)	Fusible switches have groundable neutral blocks factory installed. 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.
Padlocks	Padlockable cover latch. OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.
HP & Load Break Ratings	All General Duty, Heavy Duty and Double Throw Switches are both load break and horsepower rated.		

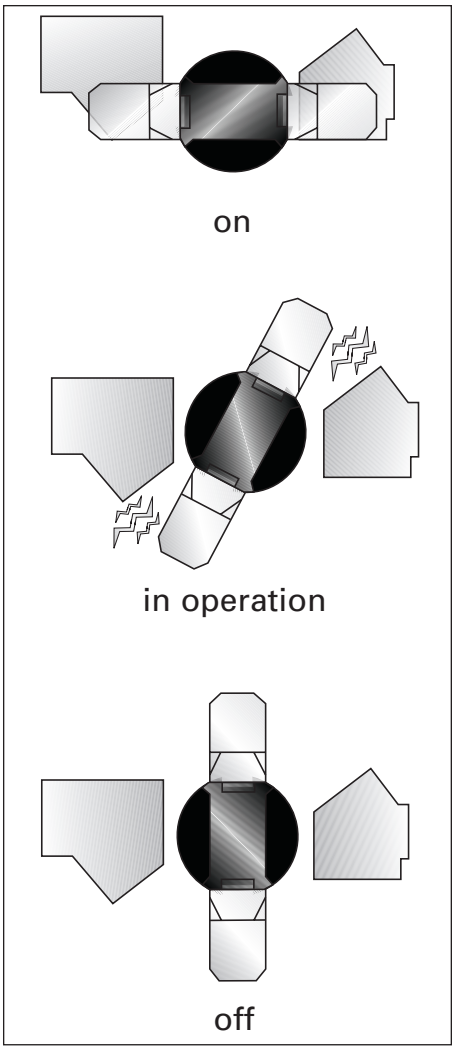
① The protective device can either be a fuse installed in a fusible switch or an upstream fuse or circuit breaker protecting a non-fusible switch. The ampere rating of the upstream protective device must not exceed the switch ampere rating.

② All 4 pole and fusible double switches with catalog numbers starting with "F" are rated 100,000 AIC max.

③ Class T kit available for 240V max. applications on 1200A switches.

Feature Comparison

General Duty	Heavy Duty	Double Throw	Features / Ratings
▪	▪	▪	30 thru 600 Amps
	▪	▪	800 and 1200 Amps
▪	▪	▪	240 Volt AC
	▪	▪	600 Volt AC
▪	▪	▪	250 Volt DC
	▪		600 Volt DC
▪	▪	▪	Double-break visible blade design (30-200A)
▪	▪	▪	Quick-make, quick-break switching action
▪	▪	▪	Highly visible ON/OFF handle indication
	▪		Handle design for hook stick operation
▪	▪	▪	Padlockable cover latch
▪	▪	▪	Padlockable handle
▪③		▪	Single voidable cover interlock
	▪	▪	Dual voidable cover interlock
▪	▪	▪	Type 1 enclosure
▪	▪	▪	Type 3R enclosure
	▪	▪	Type 12 enclosure
	▪	▪	Type 4 / 4X enclosures
▪	▪	▪	Generous wiring gutters that meet UL and NEC wire-bending space requirements
▪	▪	▪	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
▪⑥	▪	▪	All plated copper current carrying parts (except lugs)
▪	▪	▪	Spring reinforced Fuse Clips (except 30A general duty)②
	▪	▪	Clear pivoting line terminal shield
▪	▪	▪	Replacement parts
	▪		Field addable 200% neutral
▪⑦	▪①⑦	▪①⑦	Provisions for UL Class T, R and H Fuses
	▪	▪①	Provisions for UL Class J and L Fuses
	▪	▪	Metal nameplate
60-600A	▪	▪	Aux. switch kits
	▪④		Type 4X with stainless steel interior parts
▪⑤	▪		Rolled flange enclosure design (30-200A)
	▪	▪	Isolated ground kits



Double Break Switching Action

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

① 400, 600V & 600A fusible, double-throw switches accept only Class J or T fuses. Only 800 & 1200A HD switches will accept Class L fuses.
② 30A general duty switches have fuse clips constructed of spring type copper.
③ Not supplied on 30A outdoor & plug fuse switches.
④ 30-200A Type VBII in stainless steel enclosures.
⑤ 60-200A.
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**① 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.


A


B


C D


E

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 Breaker②③

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	60-100A GD & DT (240V)	18 kA Thru 240 VAC
NEB, NEG, NGG, NGB, ED4	30-100A HD & DT (600V)	18 kA Thru 480 VAC
ED6	30-100A HD & DT (600V)	18 kA Thru 600 VAC
FD6-A, JD6-A	200A HD & DT (600V)	18 KA Thru 600 VAC
JD6-A, LD6-A	400A 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

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

Catalog Numbering System

Type VBII Safety Switch Catalog Numbering System

H	F	3	6	4	N	R	CU	A

Switch Type

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

Fused or Non-Fused

F =	Fused
NF =	Non-Fused

Number of Poles

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

Voltage

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

Amperes

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

Series Type

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

Special Applications With:

CH =	Crouse-Hinds Receptacle
CJ =	Factory J Fuse Spacings
CR =	Class R Clips Installed
CU =	Factory-Installed Copper Lugs
G =	Factory-Installed Ground Bar
H =	Height or Size Reduced
L =	Oversized Enclosure
PN =	Pyle-National Receptacle
PV =	Photovoltaic rated
PVPG =	Photovoltaic rated, Positive Ground
W =	Viewing Window

Enclosure Type

Omit =	Type 1, Indoor
R =	Type 3R, Outdoor
S =	Type 4 / 4X, Stainless Steel
SS =	Type 4 / 4X, 316 Grade Stainless Steel
X =	Type 4 / 4X, Non-Metallic
J =	Type 12, Industrial
XL =	Type 4/4X Non-Metallic Less Line & Load Lugs

With or Without Neutral

Omit =	Less Neutral
N =	With Neutral

Type VBII Accessories Catalog Numbering System

H	R	6	4	A

Switch Type

H =	Heavy Duty
G =	General Duty③

Accessory Type

A1 =	Auxiliary Switch 1/NO and 1/NC
A2 =	Auxiliary Switch 2/NO and 2/NC
A3 =	Auxiliary Switch Low Current
CL =	Compression Lug Barrier / Mounting Kit
CU =	Copper Lug③
G =	Ground Lug Kit
G2 =	Insulated Ground Lug Kit
J =	Class J Fuse Kit②
LC =	Copper Lug Kit③
N =	Neutral
N2 =	200% Neutral③
NCM =	Field Replacement Lug Kit②
P =	Fuse Puller Kit
R =	Class R - Fuse Clip Kit
T =	Class T - Fuse Kit

Series Type

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

Amperes

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

Maximum Voltage

2 =	240V Max①
6 =	600V Max

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.

Features[5]

- 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 4-20
- Lugs — see page 4-20

Dimensions (inches)

Type	Height	Width	Depth
1	8¼	5½	3
3R	8¼	5⅜	3⅛

Wire Range Table

Switch Type	Wire Range
120/240 Volt Fusible 30 Amp	Cu/Al #14 to #8 AWG[4]
120/240 Volt Non-Fusible 60 Amp	Cu/Al #14 to #3 AWG

Ampere Rating	Indoor — Type 1 Catalog Number	Indoor — Type 1 Ship. Wt. (lbs.) Pkg. of 10	Outdoor — Type 3R Catalog Number	Outdoor — Type 3R Ship Wt. (lbs.) Pkg. of 10	Horsepower Ratings[1] 1-Phase, 2-Wire Standard	Horsepower Ratings[1] 1-Phase, 2-Wire Maximum
120/240 Volt Fusible						
1-Pole and Solid Neutral[2]					**120 Volt — 1-Phase, 2-Wire**	
30	**LF111N**	35	**LF111NR**	35	½	2
2-Pole and No Neutral					**120/240 Volt — 1-Phase, 2-Wire**	
30	Use 2-Pole and Solid Neutral					
2-Pole and Solid Neutral[2]					**120/240 Volt — 1-Phase, 3-Wire**	
30	**LF211N**	35	**LF211NR**	35	1½	3
240 Volt Non-Fusible						
2-Pole Special Application Switch			**1 or 2-Pole — No Fuse**		**240 Volt — 1-Phase, 2-Wire**	
60	—	—	**LNF222R[3]**	35	—	10

For inches / millimeters conversion, multiply inches by 25.4.

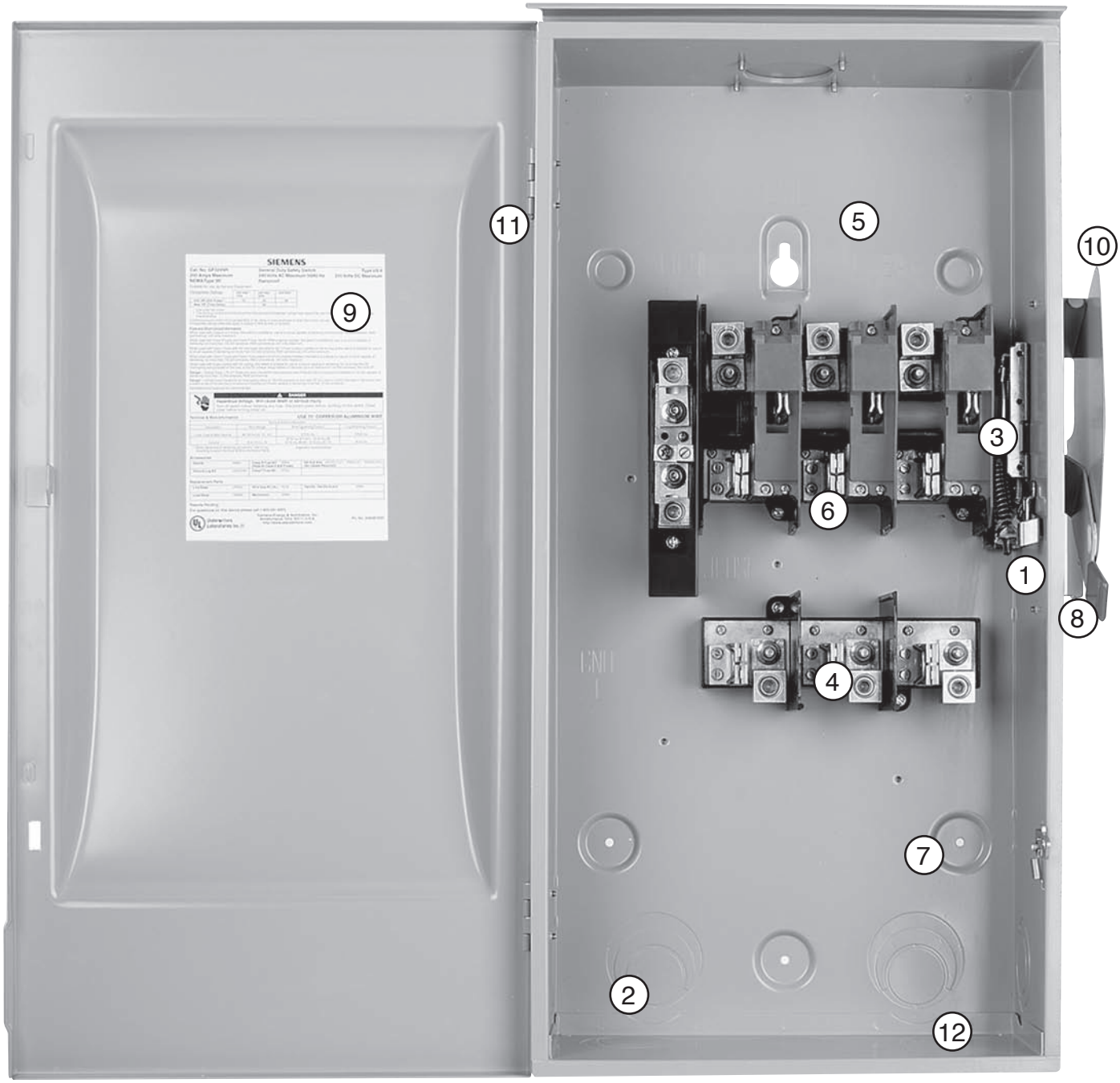
[1] Dual horsepower ratings:
Std. — applies when non-time delay plug fuses are installed.
Max — applies when time-delay plug fuses are installed.

[2] 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

[3] Bottom cable entry and exit only. No hub provision supplied. **GSGK60** is included and factory installed.

[4] Line lugs will accept and are UL approved for #14 to #6 Cu/Al cable.

[5] Features also apply to 2- and 3-pole, 30A general duty switches on page 4-8.

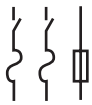


1. Cover interlock
2. Tangential knockouts through 600A for easy conduit lineup
3. Quick-make, quick-break operating mechanism that ensures positive operation
4. Provisions for T, R, J, H, and K class fuses (T & J 100-600A)
5. Generous wiring gutters that meet or exceed NEC wire-bending space requirements
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. Side-hinged door that opens 180 degrees for easier wiring
12. A unique enclosure design that adds rigidity and strength. Its rolled edge prevents cuts and scrapes to conductors and to installer's hands

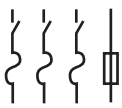
System	Ampere Rating	Indoor — Type 1 Catalog Number	Indoor — Type 1 Ship Wt. (lbs.) Std. Pkg	Outdoor — Type 3R Catalog Number	Outdoor — Type 3R Ship Wt. (lbs.) Std. Pkg	Horsepower Rating① 240V AC 1-Phase, 2-Wire Std.	1-Phase, 2-Wire Max.	2-Phase, 4-Wire Std.	2-Phase, 4-Wire Max.	3-Phase, 3-Wire Std.	3-Phase, 3-Wire Max.	250 Volt DC Std.

240 Volt Fusible

2-Pole, 2-Fuse, and Solid Neutral②③④ — 240 Volt AC/250 Volt DC

	30	**GF221N**	35⑦	**GF221NR**⑤	35⑦	1½	3	—	—	3	7½	5
	60	**GF222N**	14	**GF222NR**	14	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 Neutral④ — 240 Volt AC/250 Volt DC

	30	**GF321N**	24⑥	**GF321NR**⑤	24⑥	1½	3	—	—	3	7½	5
	60	**GF322N**	15	**GF322NR**	15	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-Fusible③④

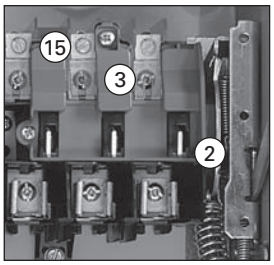
2-Pole or 3-Pole — 240 Volt AC/250 Volt DC

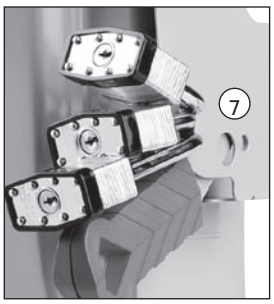
	30	**GNF321**	24⑥	**GNF321R**⑤	24⑥	—	3	—	—	7½	—	5
	60	**GNF322**	12	**GNF322R**	13	—	10	—	—	15	—	10
	100	**GNF323**	23	**GNF323R**	24	—	15	—	—	30	—	20
	200	**GNF324**	46	**GNF324R**	47	—	15	—	—	60	—	40
	400	**GNF325A**	114	Use 600V Switch — **HNF365RA**		—	15	—	—	125	—	50
	600	**GNF326A**	116	Use 600V Switch — **HNF366RA**		—	15	—	—	200	—	—

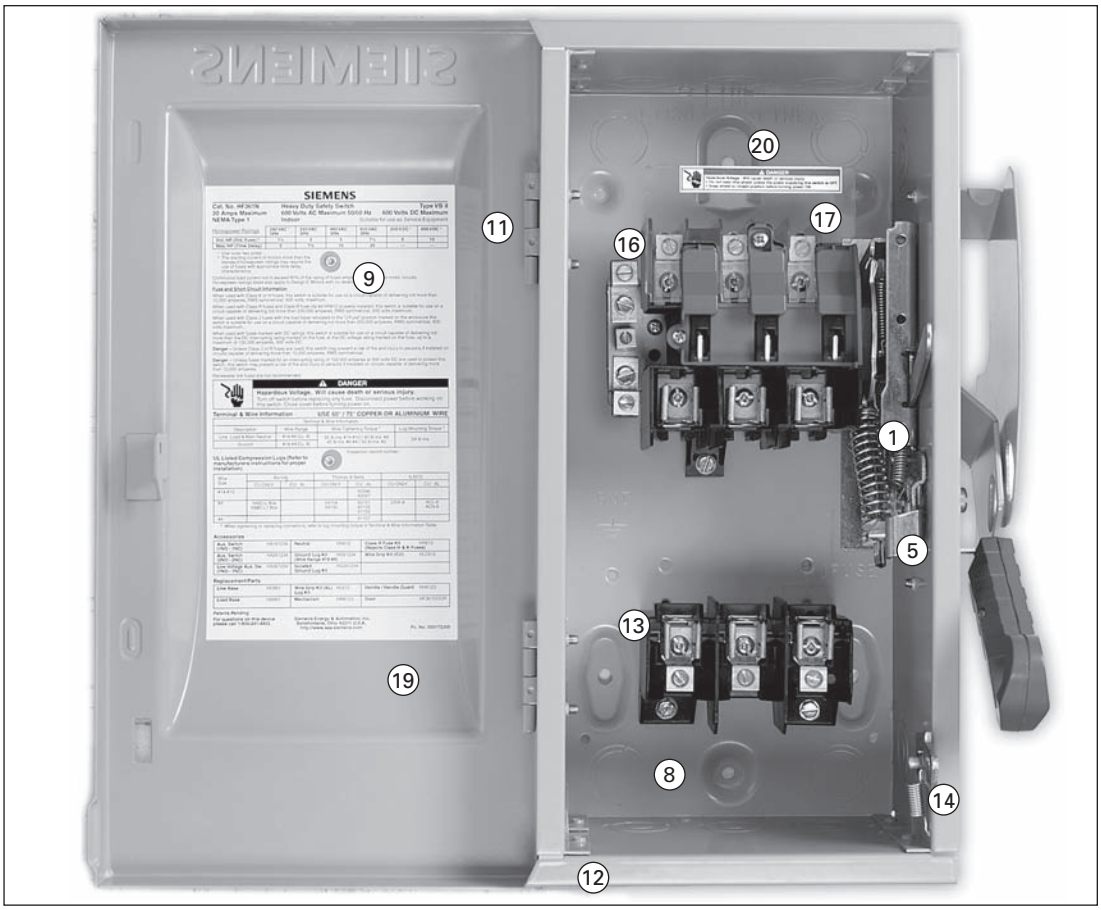
① Dual horsepower ratings: Std.- applies when non-time delay fuses are installed. Max.- applies when time-delay fuses are installed.

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.





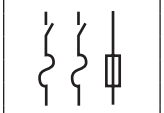


1. Quick-make, quick-break operating mechanism that ensures positive operation.
2. Visible blade, double-break switching action.
3. Arc chutes dissipate heat and prolong switch life.
4. Highly visible red handle grip. Designed for hook stick operation.
5. Defeatable dual cover interlock.
6. Center punch 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.

System	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	Horsepower Rating① 240V AC 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.

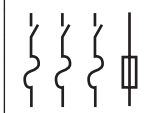
240 Volt Fusible⑤

2-Pole, 2-Fuse, and Solid Neutral③ (Also used for 2-Pole, 2-Wire Applications) 240 Volt AC/250 Volt DC



30	HF221N	12	HF221NR	13	1½	3	—	—	3	7½	5
60	HF222N	18	HF222NR	19	3	10	—	—	7½	15	10
100	HF223N	23	HF223NR	24	7½	15	—	—	15	30	20
200	HF224N	47	HF224NR	48	15	—	—	—	25	60	40
400	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

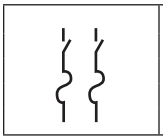
3-Pole, 3-Fuse, and Solid Neutral (Also used for 3-Pole, 3-Wire Applications) 240 Volt AC/250 Volt DC



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

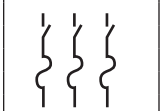
240 Volt Fusible⑤

2-Pole, 2-Fuse④ 240 Volt AC/250 Volt DC



	Type 4/4X Stainless⑦		Type 12 Industrial⑥								
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-Fuse④ (Also used for 2-Pole, 2-Wire Applications in 400–800A Ratings) 240 Volt AC/250 Volt DC



30	HF321S	14	HF321J	14	1½	3	—	—	3	7½	—
60	HF322S	20	HF322J	20	3	10	—	—	7½	15	10
100	HF323S	25	HF323J	25	7½	15	—	—	15	30	20
200	HF324S	49	HF324J	49	15	—	—	—	25	60	40
400	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 4-16.

System	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	Horsepower Rating④ 480V AC 1-Phase, 2-Wire Std.	480V AC 1-Phase, 2-Wire Max.	480V AC 3-Phase, 3-Wire Std.	480V AC 3-Phase, 3-Wire Max.	600V AC 1-Phase, 2-Wire Std.	600V AC 1-Phase, 2-Wire Max.	600V AC 3-Phase, 3-Wire Std.	600V AC 3-Phase, 3-Wire Max.	250 Volt DC	600 Volt DC
600 Volt Fusible⑤															
2-Pole, 2-Fuse③														**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 DC①**	
	30	HF361	14	HF361R	15	3	7½	5	15	3	10	7½	20	5	—
	30	HF361L⑦	19	HF361RL⑦	20	3	7½	5	15	3	10	7½	20	5	—
	60	HF362	19	HF362R	20	5	20	15	30	10	25	15	50	10	30⑧
	60	—	—	HF362RL⑦	25	5	20	15	30	10	25	15	50	10	30⑧
	100	HF363	24	HF363R	25	5	20	25	60	15	40	30	75	20	50⑧
	200	HF364	48	HF364R	49	25	50	50	125	30	50	60	150	40	50
	400	HF365A①	93	HF365RA①	157	—	—	100	250	—	—	125	350	50	—
	600	HF366A①	98	HF366RA①	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 DC①**	
	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	30⑧
	100	HF363N	25	HF363NR	26	10	30	25	60	15	40	30	75	20	50⑧
	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 Fusible⑤ (For 2-Pole Applications use outside poles of 3-Pole Switches)															
2-Pole, 2-Fuse③														**480 Volt AC/600 Volt AC/600 Volt DC**	
		Type 4/4X Stainless⑨		Type 12 Industrial⑥											
	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 DC①**	
	30	HF361S	13	HF361J	14	—	—	5	15	—	—	7½	20	5	—
	60	HF362S	20	HF362J	20	—	—	15	30	—	—	15	50	10	30⑧
	100	HF363S	25	HF363J	25	—	—	25	60	—	—	30	75	20	50⑧
	200	HF364S	49	HF364J	49	—	—	50	125	—	—	60	150	40	50
	400	HF365SA①	93	HF365JA①	93	—	—	100	250	—	—	125	350	50	—
	400	HF365SSA	93	—	—	—	—	100	250	—	—	125	350	50	—
	600	HF366SA①	98	HF366JA①	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 4-16.

System	Ampere Rating	Indoor — Type 1 Catalog Number	Indoor — Type 1 Ship Wt. (lbs.)	Outdoor — Type 3R Catalog Number	Outdoor — Type 3R Ship Wt. (lbs.)	Horsepower Rating 240 Volt 1-Phase	240 Volt 3-Phase	480 Volt 1-Phase	480 Volt 3-Phase	600 Volt 1-Phase	600 Volt 3-Phase	250V DC	600V DC
600 Volt Non-Fusible④													
2-Pole③												**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	—	—	HNF361RL⑥	19	5	10	7½	20	10	30	5	—
	60	HNF362H②	11	HNF362RH②	11	10	20	20	50	20	40	10	—
	60	HNF362①	18	HNF362R①	19	10	20	20	50	25	60	10	30⑦
	60	—	—	HNF362RL⑥	24	10	20	20	50	25	60	10	30⑦
	100	HNF363①	23	HNF363R①	24	15	40	30	75	40	100	20	50⑦
	200	HNF364①	46	HNF364R①	47	15	60	50	125	50	150	40	50
	400	HNF365A①	75	HNF365RA①	75	15	125	50	250	50	350	50	—
	600	HNF366A①	77	HNF366RA①	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-Fusible④													
2-Pole③												**480 Volt AC / 600 Volt AC / 600 Volt DC**	
		Type 4 / 4X Stainless⑧		Type 12 Industrial⑤									
	30	HNF261S	13	HNF261J	13	—	—	7½	—	10	—	5	15
	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	HNF362SH②	15	HNF362JH②	14	10	20	20	50	20	40	10	—
	60	HNF362S①	19	HNF362J①	19	10	20	20	50	25	60	10	30⑦
	100	HNF363S①	24	HNF363J①	24	15	40	30	75	40	100	20	50⑦
	200	HNF364S①	47	HNF364J①	47	15	60	50	125	50	150	40	50
	400	HNF365SA①	75	HNF365JA①	75	15	125	50	250	50	350	50	—
	400	HNF365SSA	75	—	—	15	125	50	250	50	350	50	—
	600	HNF366SA①	77	HNF366JA①	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 4-16.

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 Rating② 240V AC 1-Phase, 2-Wire	240V AC 3-Phase, 3-Wire	480V AC 3-Phase, 3-Wire	600V AC 3-Phase, 3-Wire	250V DC	600V DC
3-Pole, 3-Wire Fusible, Type 3R④									**600 Volt AC / 250 Volt DC①**
	30	HF361RW	17	3	7½	15	20	5	—
	60	HF362RW	22	10	15	30	50	10	30⑤
3-Pole, 3-Wire Non-Fusible, Type 3R④									**600 Volt AC / 250 Volt DC①**
	30	HNF361RW	14	3	10	20	30	5	—
	60	HNF362RW	21	10	20	50	60	10	30⑤
3-Pole, 3-Wire Fusible, Type 12③④									**600 Volt AC / 250 Volt DC①**
	30	HF361JW	17	3	7½	15	20	5	—
	60	HF362JW	22	10	15	30	50	10	30⑤
	100	HF363JW	26	15	30	60	75	20	50⑤
	200	HF364JW	53	—	60	125	150	40	50
	400	HF365JWA	93	—	125	250	350	50	—
	600	HF366JWA	98	—	200	400	500	50	—
3-Pole, 3-Wire Non-Fusible, Type 12③④									**600 Volt AC / 250 Volt DC**
	30	HNF361JW	14	3	10	20	30	5	—
	60	HNF362JW	21	10	20	50	60	10	30⑤
	100	HNF363JW	25	15	40	75	100	20	50⑤
	200	HNF364JW	51	15	60	125	150	40	50
	400	HNF365JWA	75	15	125	250	350	50	—
3-Pole, 3-Wire Fusible, Type 4X Stainless Steel④⑥									**600 Volt AC / 250 Volt DC①**
	30	HF361SW	17	3	7½	15	20	5	—
	60	HF362SW	23	10	15	30	50	10	30⑤
	100	HF363SW	28	15	30	60	75	20	50⑤
	200	HF364SW	55	—	60	125	150	40	50
	400	HF365SWA	75	15	125	250	350	50	—
	400	HF365SSWA	75	15	125	250	350	50	—
3-Pole, 3-Wire Non-Fusible, Type 4X Stainless Steel④⑥									**600 Volt AC / 250 Volt DC①**
	30	HNF361SW	15	3	10	20	30	5	—
	60	HNF362SW	23	10	20	50	60	10	30⑤
	100	HNF363SW	27	15	40	75	100	20	50⑤
	200	HNF364SW	54	15	60	125	150	40	50
	400	HNF365SWA	75	15	125	250	350	50	—
	400	HNF365SSWA	75	15	125	250	350	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 4-16.

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 Type12/3R enclosures.
6-pole switches are available with either Type 12/3R or Type 4X stainless steel enclosures.

Standards

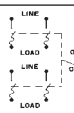
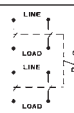
- UL & CUL listed under file #E4776
- Meets UL98 for enclosed switches
- 4 & 6-Pole switches are suitable for use as service entrance
- Meets NEMA Standard KS-1 for enclosed switches
- Meets NEC wire bending space requirements

Features

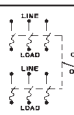
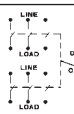
- Visible blade, double break switching action
- Highly visible ON/OFF indication
- Defeatable dual cover interlock
- Padlock option in OFF position
- All copper current carrying parts①
- Tangenital knockouts (Type 1, 4-pole switches)

HNF662J

4-Pole Type VBII Switches①②

System	Amp Rating	Indoor Type 1 Catalog Number	Indoor Type 1 Ship Wt. (lbs.)	Type 12/3R Industrial⑤ Catalog Number	Type 12/3R Industrial⑤ Ship Wt. (lbs.)	Horsepower Ratings③ 240V, 2Ø, 4W Std.	240V, 2Ø, 4W Max.	240V 3Ø Std.	240V 3Ø Max.	480V, 3Ø Std.	480V, 3Ø Max.	600V, 3Ø Std.	600V, 3Ø Max.	250V DC
Fusible 600 Volt AC, 250 Volt DC — 4-Pole, 4 Fuse④														
	30	HF461	36	HF461J	36	3	10	3	7½	5	15	7½	20	5
	60	HF462	40	HF462J	40	7½	20	7½	15	15	30	15	50	10
	100	HF463	43	HF463J	43	15	30	15	30	25	60	30	75	20
	200	HF464■	88	HF464J■	88	25	50	25	60	50	125	60	150	40
Non-fusible 600 Volt AC, 250 Volt DC — 4-Pole														
	30	HNF461	32	HNF461J	32	—	10	—	10	—	20	—	30	5
	60	HNF462	34	HNF462J	34	—	20	—	20	—	50	—	60	10
	100	HNF463■	36	HNF463J■	36	—	30	—	40	—	75	—	100	20
	200	HNF464■	78	HNF464J■	78	—	50	—	60	—	125	—	150	4

6-Pole Type VBII Switches①②⑤

System	Amp Rating	Type 12/3R Industrial Catalog Number	Type 12/3R Industrial Ship Wt. (lbs.)	Type 4X Stainless Steel Catalog Number	Type 4X Stainless Steel Ship Wt. (lbs.)	Horsepower Ratings③ 240V 3Ø Std.	240V 3Ø Max.	480V, 3Ø Std.	480V, 3Ø Max.	600V, 3Ø Std.	600V, 3Ø Max.	250V DC
Fusible 600 Volt AC, 250 Volt DC — 6-Pole, 6 Fuse④												
	30	HF661J	37	HF661S■	37	3	7½	5	15	7½	20	5
	60	HF662J	41	HF662S■	41	7½	15	15	30	15	50	10
	100	HF663J■	44	HF663S■	44	15	30	25	60	30	75	20
	200	HF664J■	90	HF664S■	90	25	60	50	125	60	150	40
Non-fusible 600 Volt AC, 250 Volt DC — 6-Pole												
	30	HNF661J	33	HNF661S	33	—	10	—	20	—	30	5
	60	HNF662J	35	HNF662S	35	—	20	—	50	—	60	10
	100	HNF663J	37	HNF663S	37	—	40	—	75	—	100	20
	200	HNF664J	80	HNF664S■	80	—	60	—	125	—	150	40

■ Built to order. Allow 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.

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.

Description①②

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 Rating④	Type 12⑤ Catalog Number	Type 4/4X⑥ Catalog Number	Shipping Wt. (lbs.) Std. Pkg.	Accepts Crouse-Hinds Arktite① Plug 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 Number⑤	Type 12 Stainless Steel Catalog Number⑥	Shipping Wt. (lbs.) Std. Pkg.	Accepts Pyle-National QuelArc™②③ Plugs Plug Catalog Number
Switch	Receptacle					
30	30	600 (F) 600 (N-F)	**HF361JPN▲** **HNF361JPN**	**HF361SPN▲** **HNF361SPN**	23 21	**JPD-83046**
60	60	240 (F) 600 (F) 600 (N-F)	**HF322JPN▲** **HF362JPN▲** **HNF362JPN**	— **HF362SPN▲** **HNF362SPN**	28 28 27	**JPD-116046**

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

① Arktite™ 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.

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.		
3-Pole, 4-Wire, 240 Volt Fusible, Type 4X⑤										
30	**HF321NX**	21	3	7½	—	—	—	—	5	—
60	**HF322NX▲**	22	7½	15	—	—	—	—	10	—
3-Pole, 4-Wire, 600 Volt AC Fusible, Type 4X②③⑤										
30	**HF361NX**	21	3	7½	5	15	7½	20	5	15④
60	**HF362NX**	22	7½	15	15	30	15	50	10	30④
100	**HF363NX▲①**	39	15	30	25	60	30	75	20	50④
200	**HF364NX▲①**	83	25	60	50	125	60	150	40	50
3-Pole, 3-Wire, 600 AC Volt Non-Fusible,① Type 4X②③										
30	**HNF361X**	20	—	7½	—	20	—	30	5	15④
60	**HNF362X**	20	—	15	—	50	—	60	10	30④
100	**HNF363X▲**	38	—	30	—	75	—	100	20	50④
200	**HNF364X▲**	81	—	60	—	125	—	150	40	50

Type 4/4X 316 Grade Stainless Steel

Ampere Rating	Standard Catalog Number	With Viewing Window Catalog Number	Ship Weight (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.		
240V AC, 250V DC Fusible 3-Pole, 3-Wire											
30	**HF321SS▲**	—	15	3	7½	—	—	—	—	5	—
60	**HF322SS▲**	—	19	7½	15	—	—	—	—	10	—
100	**HF323SS▲**	—	27	15	30	—	—	—	—	20	—
200	**HF324SS▲**	—	48	25	60	—	—	—	—	40	—
600V AC, 250V DC Fusible 3-Pole, 3-Wire③											
30	**HF361SS**	**HF361SSW**	17	3	7½	5	15	7½	20	5	—
60	**HF362SS**	**HF362SSW▲**	21	7½	15	10	30	15	50	10	30④
100	**HF363SS**	**HF363SSW▲**	28	15	30	25	60	30	75	20	50④
200	**HF364SS**	**HF364SSW▲**	54	25	60	50	125	60	150	40	50
600V AC, 250 V DC Non-Fusible 3-Pole, 3-Wire①③											
30	**HNF361SS**	**HNF361SSW**	15	—	10	—	20	—	30	5	—
60	**HNF362SS**	**HNF362SSW▲**	21	—	20	—	50	—	60	10	30④
100	**HNF363SS**	**HNF363SSW▲**	26	—	40	—	75	—	100	20	50④
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.

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 Catalog Number	Indoor – Type 1 Ship Wt* Std. Pkg.	Outdoor – Type 3R Catalog Number	Outdoor – Type 3R Ship Wt* Std. Pkg.	Rated Isc Per NEC Article 690
Negative Ground 3 Pole 3 Wire Fusible 600Volt DC					
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
Negative Ground 3 Pole 3 Wire Non-Fusible 600Volt DC					
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
NEW Positive and Negative Ground, 1 Pole, Fusible 1000 Volt DC					
200	HF1104NPV▲	52	HF1104NRPV▲	53	128.0A
NEW Positive and Negative Ground, 1 Pole, Non-Fusible 1000 Volt DC					
200	HNF1104NPV▲	50	HNF1104NRPV▲	51	160.0A
Positive Ground 3 Pole 3 Wire Fusible 600Volt DC					
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
Positive Ground 3 Pole 3 Wire Non-Fusible 600Volt DC					
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

NEW Positive and Negative Ground, 2 Wire, 600Volt DC, Type 3R

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
400A	2	Fusible	HF265NRPV▲	325	256A
400A	2	Non-fusible	HNF265NRPV▲	315	256A
600A	1	Fusible	HF166NRPV▲	167	384A
600A	1	Non-fusible	HNF166NRPV▲	129	384A
600A	2	Fusible	HF266NRPV▲	327	384A
600A	2	Non-fusible	HNF266NRPV▲	315	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.

HF361PV

HNF361RPV

HF362RPV

HR612

HT63

HN264

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
GSRK321	30A, 240V Kit (GD only)
HR21	30A, 240V Kit (HD only)
HR612	30A, 600V Kit/60A, 240V Kit
HR62	60A, 600V Kit
HR63	100A Kit
HR64	200A Kit
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.

NEW Internal Shield Kits ②

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.

① One kit per pole required.

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.800A switches are field convertible to accept Class T fuses by moving the load base to a pre-drilled T fuse position.

Class T Fuse Adapter Kits①

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
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	**W410190**
30 HD, 60 GD	**HN612**
60, 100 HD, 100 GD	**HN623**
200	**HN64**
400 & 600	**HN656A**
800 & 1200	**HN678**

② Not designed for use in Non-metallic 4X safety switches. Not designed for use with Auxiliary Contacts.

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

HA261234

HLC612

HG261234

Auxiliary Contacts

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

Auxiliary Contacts

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

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

Isolated Ground Kits

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

Isolated Ground Kits

Switch Ampere Rating	Catalog Number	Number of Terminals Isolated	Number of Terminals Grounded	Wire Range Per Terminal (Cu/Al)
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)
30A GD	**GSGK60**	2	#14-8 AWG
60–200 GD	**HG61234**	2	#14-4 AWG
30–200 HD	**HG61234**	2	#14-4 AWG
400 & 600	**HG656A**	4	2/0-6 AWG
800–1200	**HG678**	8	#6 AWG-250 Kcmil

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
Type 3R①		
Cover	**ECHA000**	30A GD Only
3/4	**ECHA075**	
1	**ECHA100**	
1 1/4	**ECHA125**	
Cover	**ECHS000**	60–200A GD 30–200A HD
3/4	**ECHS075**	
1	**ECHS100**	
1 1/4	**ECHS125**	
1 1/2	**ECHS150**	
2	**ECHS200**	
2 1/2	**ECHS250**	
2 1/2	**ECHV250**	400–1200A
3	**ECHV300**	
3 1/2	**ECHV350**	
4	**ECHV400**	
Type 4/4X②		
3/4	**SSH075**	30–200A
1	**SSH100**	
1 1/4	**SSH125**	
1 1/2	**SSH150**	
2	**SSH200**	
2 1/2	**SSH250**	400–600A
3	**SSH300**	
3 1/2	**SSH350**	
4	**SSH400**	

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

Field Replacement Kits and Neutral Barrier Kits

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

Field Replacement Kits and Neutral Barrier Kits

Switch Ampere Rating	Catalog Number	Kit Description
30	**HCL612**	Neutral Barrier Kit
60 & 100	**HCL623**	Neutral Barrier Kit
400	**HCM65A**	240V/600V Fusible Kit
400	**HNCM65A**	240/600V Non-Fusible Kit
600	**HCM66A**	240V/600V Fusible Kit
600	**HNCM66A**	240V/600V Non-Fusible Kit
800 & 1200⑤	**HCL65678■**	1 Pole, Compression Lug Mounting Kit

Lugs

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

Multiple Padlock Accessory

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

SSH125

ECHV300

ECHS200

SL0420

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)⑥	#14-6 AWG (Cu/Al)
30HD	#14-6 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
60⑧⑩	#14-3 AWG (Cu/Al)	#14-2 AWG (Cu/Al)
100⑪	#14-1/0 AWG (Cu/Al)	#14-1/0 AWG (Cu/Al)
200⑨	#6 AWG-250 Kcmil (Cu/Al)	#6 AWG-300 Kcmil (Cu/Al)
400⑦	(1) 1/0 AWG-600 Kcmil (Cu/Al) (2) 1/0 AWG-500 Kcmil (Cu/Al)	(2) 1/0 AWG-600 Kcmil (Cu/Al)
600⑦	(1) 1/0 AWG-600 Kcmil (Cu/Al) (2) 1/0 AWG-500 Kcmil (Cu/Al)	(2) 1/0 AWG-600 Kcmil (Cu/Al)
800	(3) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral	(3) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral
1200	(4) 3/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral	(4) 1/0 AWG-750 Kcmil (Cu/Al) Line Load (4) 1/0 AWG-750 Kcmil (Cu/Al) neutral

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

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

Safety Switch Dimensions (Inches)* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram①	Shipping Weight (lbs.)
	Box A	With Door B	With Rain Shed C	Box D	With Handle E	Box F	With Handle G		
GF221N	7.97	8.13	—	5.5	5.94	3	5.88	S1	35 (10)
GF221NR	8.07	—	8.16	5.16	5.94	3.13	5.88	S3	35 (10)
GF222N	14.26	15.45	—	6.64	8.7	5.05	8.63	S6	14
GF222NR	14.39	—	15.76	6.64	8.7	5.05	8.63	S8	14
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
GF321N	7.97	8.19	—	7.19	7.69	3	5.88	S2	24 (5)
GF321NR	8.07	—	8.16	7.19	8.16	3.13	5.88	S4	24 (5)
GF322N	14.26	15.45	—	6.64	8.7	5.05	8.63	S6	15
GF322NR	14.39	—	15.76	6.64	8.7	5.05	8.63	S8	15
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
GNF321	7.97	8.19	—	7.19	7.69	3	5.88	S2	24 (5)
GNF321R	8.07	—	8.16	7.19	7.69	3.13	5.88	S4	24 (5)
GNF322	11.11	12.31	—	6.64	8.71	5.05	8.61	S7	12
GNF322R	11.11	—	12.62	6.64	8.71	5.05	8.61	S9	13
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 Switch Dimensions (Inches)* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram①	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 Switch Dimensions (Inches)* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram①	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

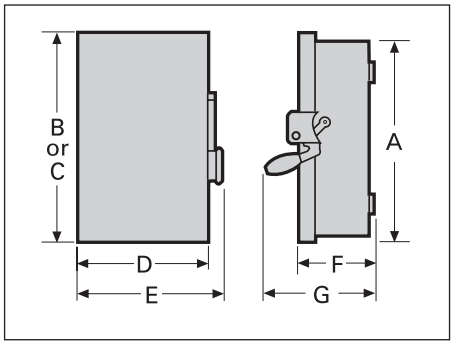
***For inches / millimeters conversion, multiply inches by 25.4.**

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

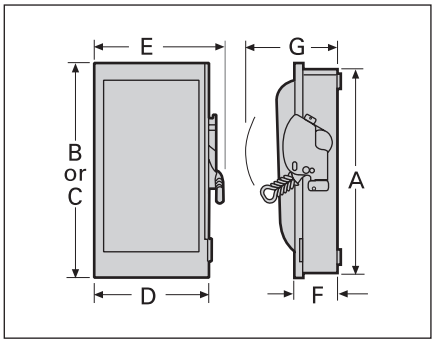
Safety Switch Dimensions (Inches)* & Shipping Weights

Catalog Number	Height			Width		Depth		Knockout Diagram①	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)
LNF222R	8.07	—	8.16	5.16	5.94	3.13	5.38	S5	35 (10)

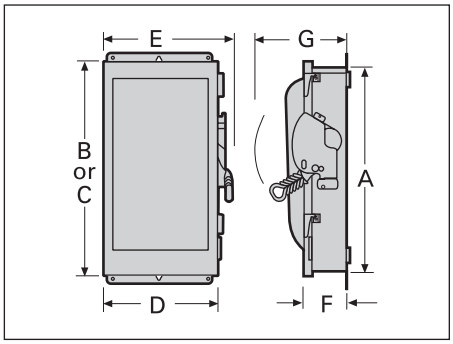
Type 1 or 3R
30A GD



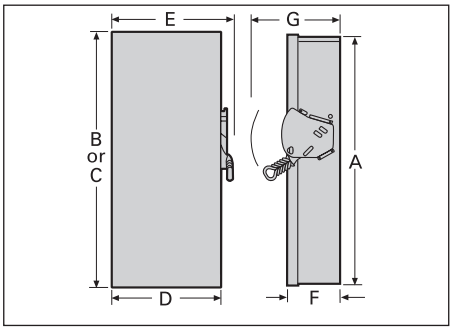
Type 1 or 3R
60-200A GD, 30-200A HD Type VBII



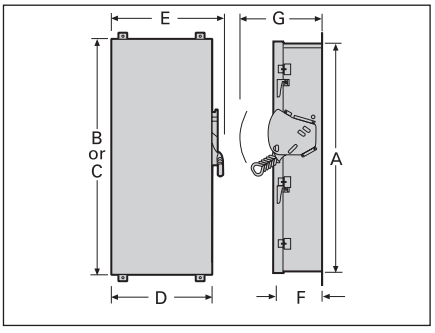
Type 4/4X or 12
30-200A HD Type VBII



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



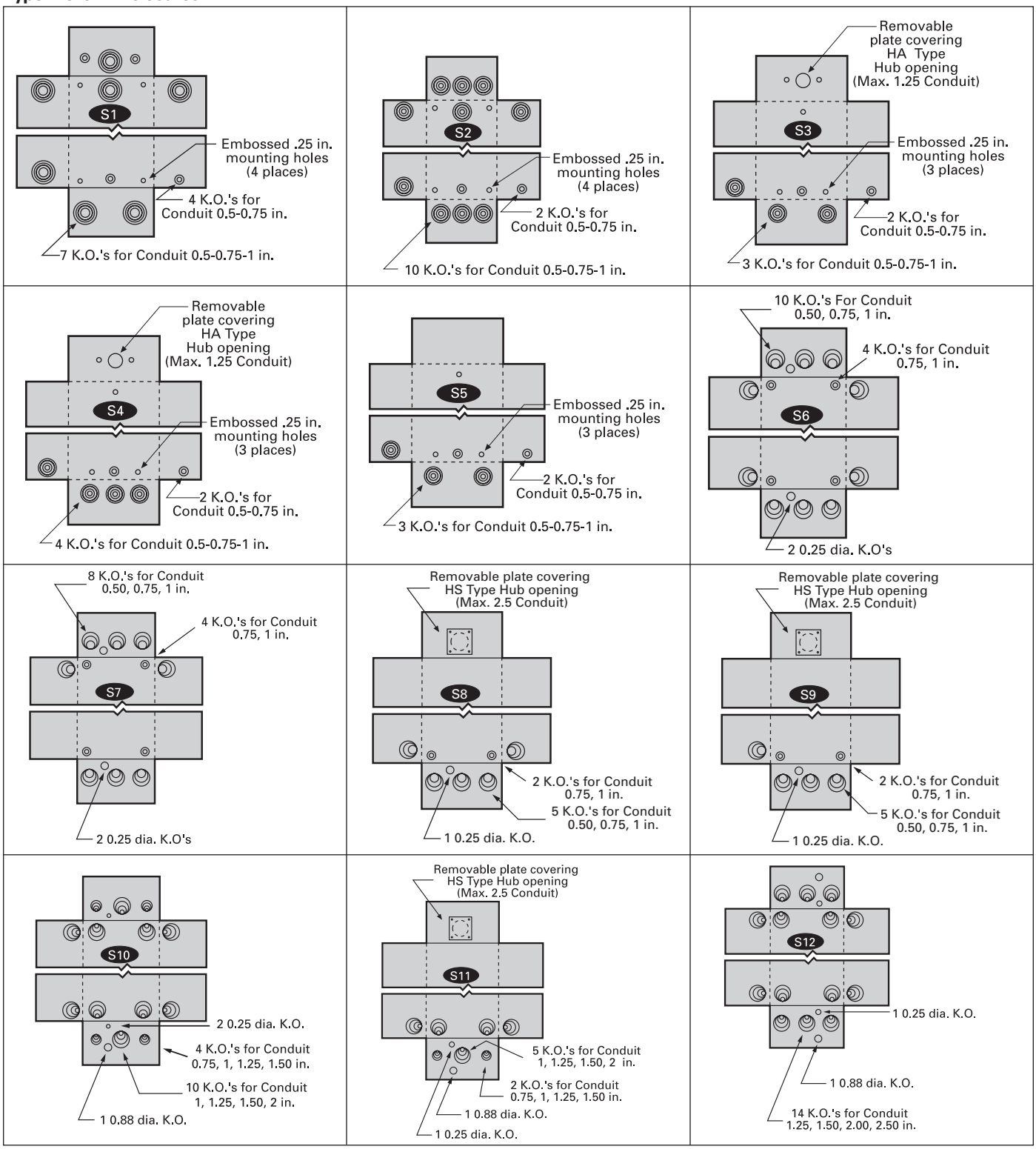
Type 4/4X or 12
400-1200A HD Type VBII



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

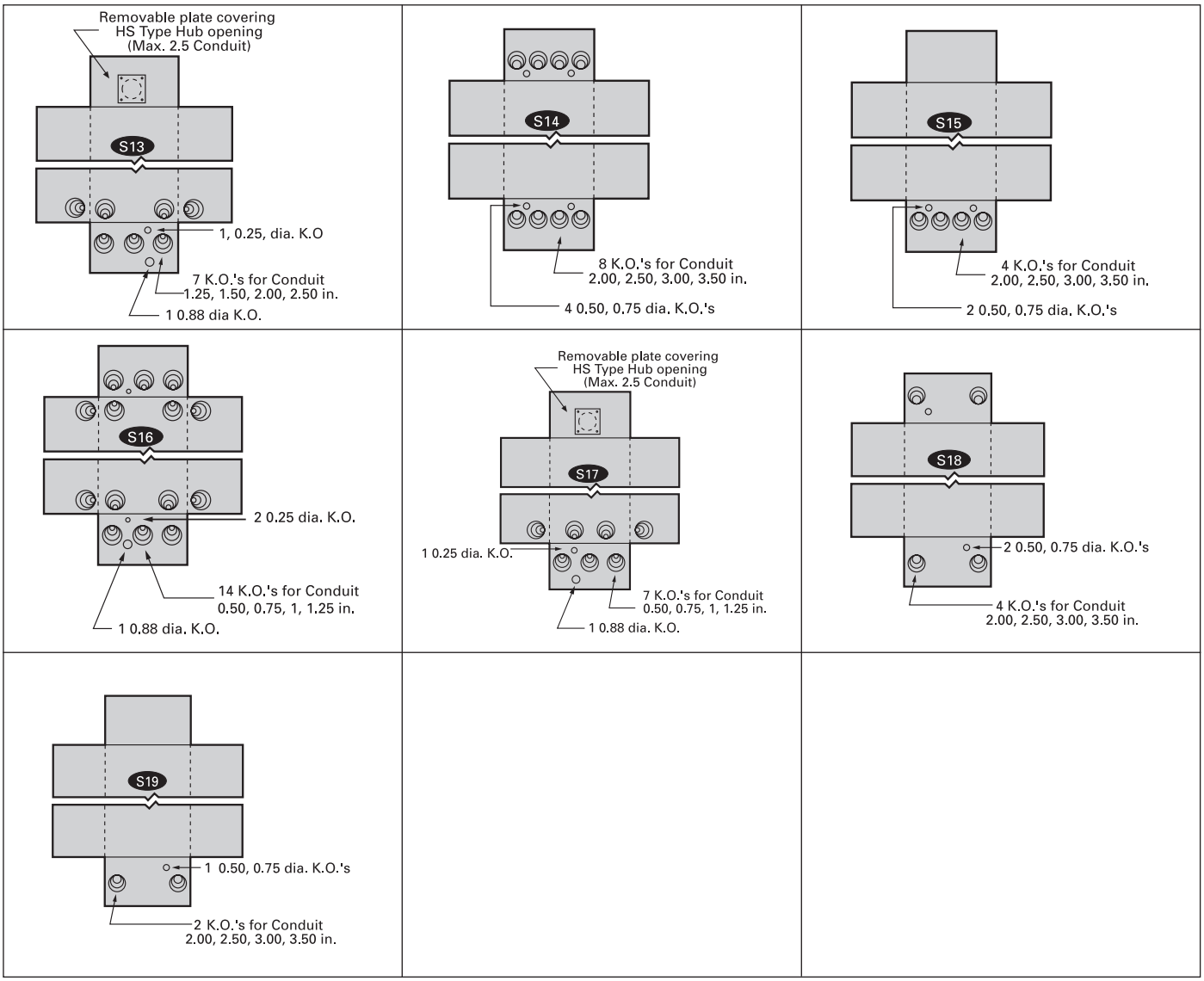
① Knocks not provided on Type 4 / 4X and 12 or in 800 & 1200A switches.

Type 1 & 3R Enclosures



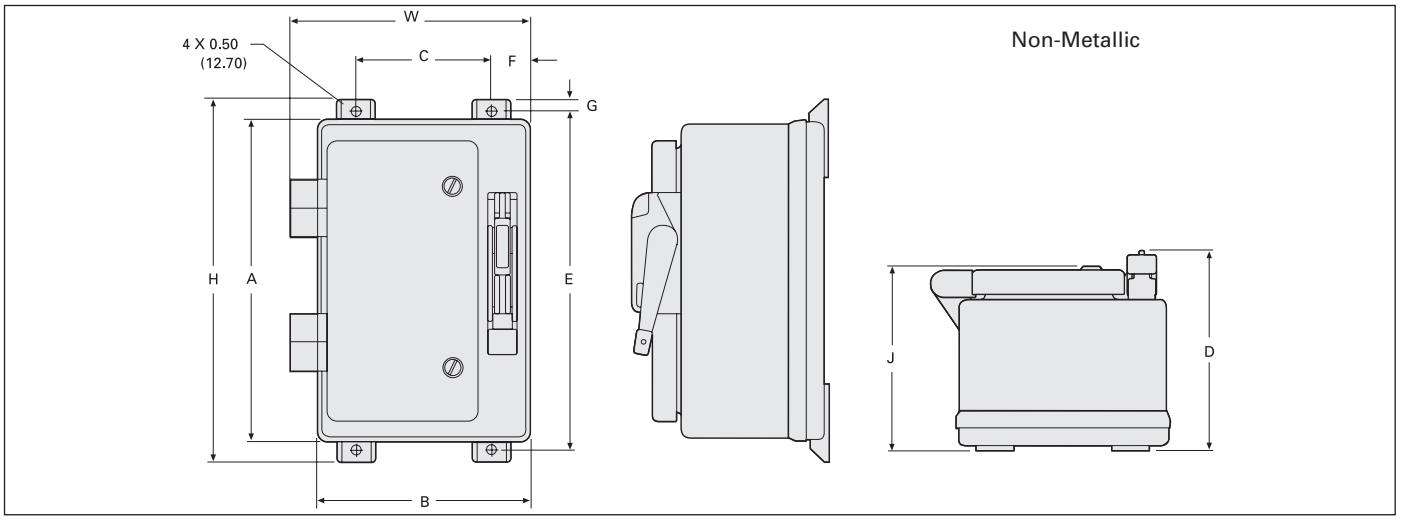
***For inches / millimeters conversion, multiply inches by 25.4.**

Type 1 & 3R Enclosures



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

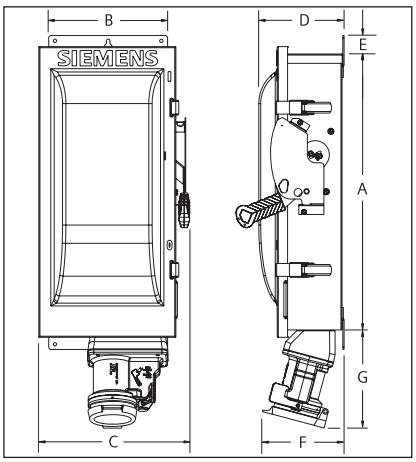
Special Application Safety Switches Dimension Drawings



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
HF361NX①	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HF362NX①	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HF363NX①	26.95	14.87	13.25	24.84	13.72	6.25	25.75	3.75	.46	12.15
HF364NX①	33.41	27.47	13.19	31.31	26.31	18.50	32.25	3.91	.47	12.10
HNF361X①	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HNF362X①	18.75	12.11	10.25	16.59	10.97	7.00	17.50	1.98	.46	9.20
HNF363X①	26.95	14.87	13.25	24.84	13.72	6.25	25.75	3.75	.46	12.15
HNF364X①	33.41	27.47	13.19	31.31	26.31	18.50	32.25	3.91	.47	12.10

VBII 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	9.02①	6.22	1.52	3.5	3.0
60	16.27	9.17	11.47①	6.34	1.52	5.0	4.5



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

① 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)

Figure 1: Type 1

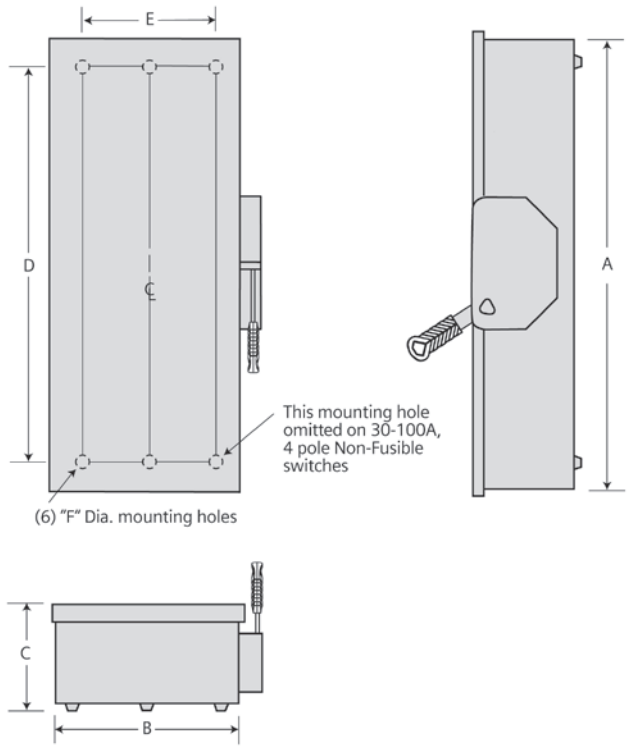
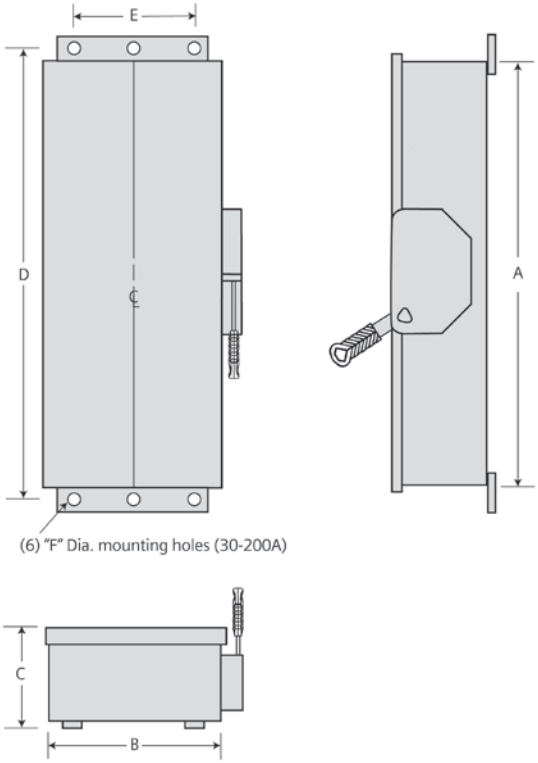


Figure 2 : Type 12/3R and 4X



Description

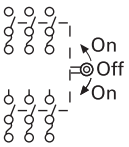
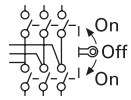
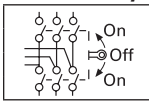
Double throw switches are intended to transfer loads from one power source to another. All 2 & 3-pole double throw switches are suitable for use as service equipment including non-fusible versions when used in combination with a UL listed circuit breaker or fusible switch. All are UL Listed and both 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 fuses②. 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	Yes③
100 & 200A	Std	Yes (kit)	Yes (kit)	Yes③
400 & 600A (DTF)	No	No	Yes③	Std

Double Throw Switches

System	Voltage	Number of Poles	Amps	Type 1 — Indoor Catalog Number	Type 3R — Outdoor① Catalog Number	Type 12/3R — Industrial Catalog Number	Type 4X — Stainless Steel Catalog Number
Heavy Duty Fusible (30-200A) with Class H fuse spacings —Less Neutral ②							
	240 Volt AC or 250 Volt DC	2	200	DTF224▲	DTF224R	—	—
		3	30	DTF321	DTF321R▲	—	—
			60	DTF322	DTF322R▲	—	—
			100	DTF323▲	DTF323R	—	—
			200	DTF324	DTF324R	—	—
			400	DTF325	FR325DTK⑥▲	—	—
			600	DTF326▲	FR326DTK④▲	—	—
	600 Volt AC, 250 Volt DC	3	30	DTF361	—	—	—
			60	DTF362▲	—	—	—
			100	DTF363	DTF363R	—	F353SSDTK⑥▲
			200	DTF364	DTF364R	—	F354SSDTK⑥▲
			400	DTF365	FR355DTK④▲	—	F355SSDTK④▲
Heavy Duty Non-Fusible —Less Neutral ②							
	240 Volt AC or 250 Volt DC	2	30	DTNF221	—	—	—
			60	DTNF222	—	—	—
			100	DTNF223	—	—	—
			200	DTNF224	DTNF224R	—	—
			400	DTNF225	DTNF225R	—	—
		3	30	DTNF321	—	—	—
			60	DTNF322	—	—	—
			100	DTNF323	DTNF323R	—	—
			200	DTNF324	DTNF324R	—	—
			400	DTNF325	—	—	—
			600	DTNF326	—	—	—
			800	DTNF327▲	—	—	—
	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	—	—
			800	DTNF367	DTNF367R	—	—
			1200	DTNF368▲	DTNF368R	—	—
		4⑤	30	—	NFR451DTK▲	—	—
			60	—	NFR452DTK▲	—	—
			100	—	NFR453DTK▲	—	—
			200	NF454DTK	NFR454DTK▲	—	NF454SSDTK▲
			400	NF455DTK▲	NFR455DTK▲	—	—
			600	NF456DTK▲	NFR456DTK▲	—	—
			800	NF457DTK▲	NFR457DTK▲	—	—
General Duty Non-Fusible				Type 3R — Outdoor① Less Neutral	Type 3R — Outdoor① With Neutral	Type 3R — Outdoor General Duty With Neutral ⑦	
	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" Only①

Description		Catalog Number
Neutral Kits	30A 60 & 100A 200A 400 & 600A 800 & 1200A	**HNC612** **HN263** **HNC264** **HN678** **HND678**
Equipment Ground Kit	30-200A (2) #14-4 AWG 400 & 600A (4) #14-2/0 800-1200A (8) #6-350 Kcmil	**HG61234** **HG656** **HG678**
Auxiliary Contacts (HD only) (two required per switch)④	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**
Class R Fuse Clip Kits (two required per switch)	30A, 240V Kit 30A, 600V Kit/60A, 240V Kit 60A, 600V Kit 100A Kit 200A Kit	**HR21** **HR612** **HR62** **HR63** **HR64**
Class T Fuse Adapter Kits (two required per pole)	100A, 240V Kit 100A, 600V Kit 200A, 240V Kit 200A, 600V Kit	**HT23** **HT63** **HT24** **HT64**
Type 3R Hubs (30-200A)	For ¾" Conduit For 1" Conduit For 1 ¼" 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 Only②

Description		Catalog Number
Auxiliary Switch (two required per switch)	30-800A (1) NO, (1) NC④ (2) NO, (2) NC④	**DS200EK1** **DS200EK2**
Ground Lug Kit③	30-60-100A 200A 400-600-800A	**DS100GK** **DS200GK** **DS468GK**
Hubs	30-60-100A Use Type HR Hubs 200-400A Use Type SSH 4, 4X Hubs 600-800A Use Type SSH 4, 4X Hubs	
Neutrals (3-pole only)	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	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

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 Only①

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

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

① For "DT" VBII Type switches only.

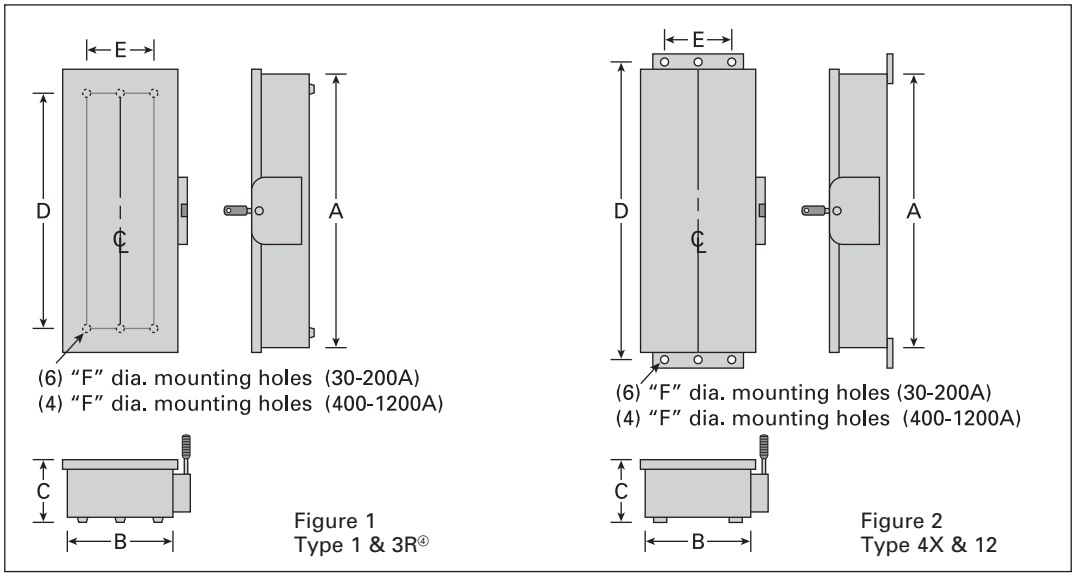
② Also for fusible stainless & 400A Type 12 & 4x switches.

③ 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.

④ One aux. required for normal and one required for emergency switch line base.

VBII Design Double Throw Dimensions (Inches)

Catalog Number	Enclosure			Mounting		
	A	B	C	D	E	F
Figure 1 (30-1200A Type 1 & 3R)						
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
FR325DTK③, FR355DTK③	74.31	24.90	8.88	69.50	20.25	0.56
FR326DTK③	85.65	27.00	8.88	80.75	22.25	0.56
NFR451DTK③, NFR452DTK③, NFR453DTK③	24.63	17.34	4.78	21.50	14.97①	0.27①
NF454DTK②③, NFR454DTK②③	37.25	19.19	6.32	33.50	16.00②	0.56②
NF455DTK③, NF456DTK③, NF457DTK③, NFR455DTK③, NFR456DTK③, NFR457DTK③	63.31	27.00	8.88	58.50	22.25②	0.56②
Figure 2 (30-200A Type 12 & 4X)						
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
NF355HDTK①③, NF355SSDTK①③	53.82	22.66	7.25	56.20	18.00	0.56
NF454SSDTK③	37.47	19.16	6.48	39.75	15.75	0.50②
F353SSDTK②③	37.00	11.62	5.50	38.50	9.00	0.26
F354SSDTK②③	50.90	19.16	6.46	53.27	16.12	0.50
F355SSDTK②③	74.50	25.00	8.92	76.69	20.25	0.56



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

① (3) Mounting holes supplied (1 at top).
② (4) Mounting holes provided.
③ These switches are not Type VBII design.
④ Drip hood not shown but provided on Type 3R enclosures.

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: 3 Pole, 3 Wire	Catalog Number: 3 Pole, 3 Wire with (1) NO & (1) NC Aux. Contact⑧⑨	Shipping Weight①	Horsepower Ratings: 240V AC 1 Phase	240V AC 3 Phase	480V AC 3 Phase	600V AC 3 Phase
Non-Fusible, Type 1, 4X & 12K② with Screw Cover and Black Rotary Handle 600V AC Max.⑤							
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	—	**3LD2264-1TS51-0US2⑥▲**	1	3	7½	15	20
30	—	**3LD2264-2TW51-0US2⑦▲**	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 & 12K② with Screw Cover and Red and Yellow Rotary Handle 600V AC Max.⑤							
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	—	**3LD2264-1TS53-0US2⑥▲**	1	3	7½	15	20
30	—	**3LD2264-2TW53-0US2⑦▲**	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

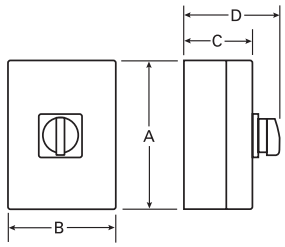
▲ Built to order. Allow 6–8 weeks for delivery.
① Carton quantity of (1). Shipping weight in pounds (lbs.).
② Approved for indoor/outdoor use. No cover interlock provided.
③ 30 and 60A switches are also rated 600V AC.
④ Also rated as Type 12 and UL approved for both indoor and outdoor use. Defeatable 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	5.52④	3.94	3.19	4.57
3LD2164-	25		5.52④	3.94	3.19	4.57
3LD2264-	30		5.52④	3.94	3.19	4.57
3LD2565-	63		6.93⑤	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"

Figure 1



UL and CUL Short Circuit Withstand Ratings

Ampere Rating	Short Circuit Withstand Rating and Fuse Class: With Line Side Fusing — 5 kA at 600V Max	10 kA at 600V Max	18 kA at 480V Max	With Load Side Fusing① — 5 kA at 480V Max	18 kA at 480V Max
3LD2 Type Switches⑧					
16	RK5 (50A Max)	—	—	—	—
25 & 30	RK5 (80A Max)	—	—	—	—
63	RK5 (175A Max)	—	—	—	—
100 & 125	—	RK5 (200A Max)	—	—	—
HNF Type Switches					
30	—	H, K & RK5 (100A Max)	J, T & CC (100A Max)	H, K & RK5 (30A Max)	Ferraz Shawmut A50P or lower let-through semiconductor fuses (60A Max)
60	⑥	H, K & RK5 (150A Max)		H, K & RK5 (60A Max)	Ferraz Shawmut A50P or lower let-through semiconductor fuses (100A Max)
100		⑥			

Wire ranges 60/75°C Cu Only

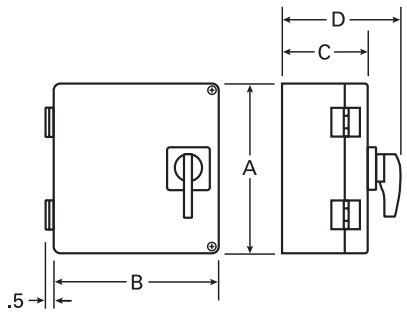
3LD2 Type Switches③

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 Switches③		
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 Kit②
30A	**LBRA1**	Auxiliary Contact Kit (1 NO-1 NC)
60–100A	**LBRA2**	Auxiliary Contact Kit (1 NO-1 NC)
30–100A	**HF63CX⑦**	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.**

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	Load Base	Handle / Handle Guard	
			General Duty	Heavy Duty
	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Fusible 2- and 3-Pole 60-600A General Duty & 30-1200A Heavy Duty⑤⑧				
30 HD 240V	**HFB21②**	**HBB21②**	—	**HH6123⑦**
60 GD	**HFB612②**	**HBB612②**	**GH223**	—
60 HD 240V	**HFB22②**	**HBB22②**	—	**HH6123⑦**
30 600V	**HFB612②**	**HBB612②**	—	**HH6123⑦**
60 600V	**HFB62②**	**HBB62②**	—	**HH6123⑦**
100	**HFB63②**	**HBB63②**	**GH223**	**HH6123⑦**
200	**HFB64②**	**HBB64②**	**GH24**	**HH64⑦**
400	**HFB65③⑥**	**HBB656③⑥**	**HH65678**	**HH65678⑦**
600	**HFB66③⑥**	**HBB656③⑥**	**HH65678**	**HH65678⑦**
800	**HFB67A②⑥**	**HBB67A②⑥**	—	**HH65678⑦**
1200	**HFB68②⑥**	**HBB68②⑥**	—	**HH68⑦**
Non-Fusible 3-Pole 60-600A General Duty & 30-1200A Heavy Duty⑤⑧				
30 HD	**HNB612②**	—	—	**HH6123⑦**
60 GD	**HNB612②**	—	**GH223**	—
60 HD	**HNB623②**	—	—	**HH6123⑦**
100	**HNB623②**	—	**GH223**	**HH6123⑦**
200	**HNB64②**	—	**GH24**	**HH64⑦**
400	**HNB65③⑥**	—	**HH65678**	**HH65678⑦**
600	**HNB66③⑥**	—	**HH65678**	**HH65678⑦**
800	**HNB67A②⑥**	—	—	**HH65678⑦**
1200	**HNB678⑥**	—	—	**HH68⑦**

Ampere Rating	Mechanism Assembly	Line & Load Lugs
	Catalog Number	Catalog Number
Fusible 2- and 3-Pole 60-600A General Duty & 30-1200A Heavy Duty⑤⑧		
30 HD 240V	**HM6123⑦**	**HL612①**
60 GD	**HM6123**	**HL612①**
60 HD 240V	**HM6123⑦**	**HL612①**
30 600V	**HM6123⑦**	**HL612①**
60 600V	**HM6123⑦**	**HL612①**
100	**HM6123⑦**	**HL63①**
200	**HM64⑦**	**HL64①**
400	**HM65**	**HL65678④**
600	**HM66**	**HL65678④**
800	**HM67A**	**HL67A⑥⑨**
1200	**HM678**	⑨
Non-Fusible 3-Pole 60-600A General Duty & 30-1200A Heavy Duty⑤⑧		
30 HD	**HM6123⑦**	**HL612①**
60 GD	**HM6123**	**HL612①**
60 HD	**HM6123⑦**	**HL612①**
100	**HM6123⑦**	**HL63①**
200	**HM64⑦**	**HL64①**
400	**HM65**	**HL65678④**
600	**HM66**	**HL65678④**
800	**HM67A**	**HL67A⑥⑨**
1200	**HM678**	⑨

Internal Shield Kits

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

Catalog Number	Switch Ampere Rating	UPC Code 040892_ _ _ _ _
For use with Fusible Type 1, 3R, 12 and 4X Stainless Steel Enclosed Safety Switches⑩		
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

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