Type VBII Safety Switches

Guide Form Specifications

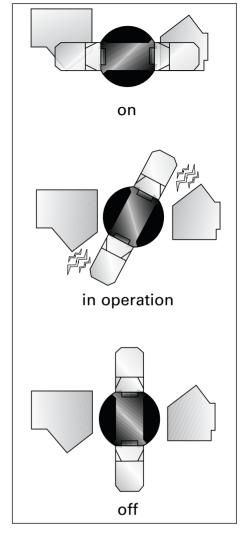
Product Overview

	General Duty	Heavy Duty	Double Throw	
Application	General Duty Switches are intended for applications where reliable performance and continuity of service are needed, but where duty requirements are not severe and usual service conditions prevail. (These switches are intended for use primarily with supply circuits rated 240V AC or less where the available fault current is less than 100,000A when used with Class R or T fuses or 10,000A max. when used with Class H fuses.)	Heavy Duty Switches are intended for use in applications where: 1. Rugged construction, reliable performance, continuity of service and ease of maintenance are emphasized, or 2. Available fault currents higher than 10,000A are likely to be encountered, such as in manufacturing plants, mass production industries, and commercial, institutional and other large buildings served by network systems or transformers of higher capacities. 3. System voltage is 600V AC or DC Max. 4. A Type 12 or 4/4X enclosure is required.	Double throw switches are intended to transfer loads from one power source to another. All double throw switches are CSA certified. Switches are rated for use on systems with an available fault current of up to 10,000 AIC when protected with Class H fuses or 200,000 AIC when protected with Class R, J or Class T fuses. They can also be used to connect a single source of power to either of two loads. In this application it is necessary to field modify fusible switches so that the fuses are on the load side of the switching mechanism.	
Short Circuit Withstand Ratings	Suitable for use on systems capable of delivering not more than 100,000 RMS symmetrical amperes of fault current as follows: Sw. Rating AIC Rating Protective Device® 30-200A 10,000 Circuit Breaker 30-200A 10,000 Class H Fuse 30-200A 100,000 Class R Fuse 100-200A 100,000 Class J or T Fuse	Suitable for use on systems capable of delivering not more than 200,000 RMS symme fault current as follows: Sw. Rating & Tpye All Heavy Duty & DT 10,000 Circuit Breaker		
Fuses	Fusible switches will accept the following CSA class fuses: 30 "LF" - 30A max plug Fuses 30-200A "GD" Class H & K, Class R with kit 100-200A "GD" Class J-move base 100-200A "GD" Class T with kit	Fusible switches will accept the following CSA class fuses: 30-600A "HD" Class H & K, Class R with kit 30-600A, 600V "HD" Class J-move base 100-600A, 240V "HD" Class J-move base 100-200A "HD" Class T with kit 400-600A "HD" Class T-move bases 800-1200A "HD" Class L, Class T with kit ²	Fusible switches will accept the following CSA class fuses: 30-200A "DT" - Class H & K, Class R with kit 30 & 60A 600V "DT" - Class J-move base 100-200A "DT" - Class J-move base, Class T with kit 400-600A "DT" - Class J-standard, Class T-move bases	
Cover Interlocks	Voidable – cover interlocks on switches prevent the switch door from being opened when in the "ON" position. No cover interlock on plug fuse type switches.	Voidable dual cover interlocks standard on all heavy duty switches. Prevents cover from being opened when switch is in the "ON" position and prevents switch from being turned "ON" when door is opened.	Dual cover interlocks standard on all double throw switches. Prevents cover from being opened when switch is in the "ON" position and prevents switch from being turned "ON" when door is opened.	
Specifications	CSA certified under file #24563 as enclosed switch entrance when neutral bonded to the enclosure is i Switches. Meet NEMA standard KS-1-2001 for type GD		CSA certified under file #24563 as enclosed switches. Meets CSA C22.2 No.4 Enclosed switches. Meet NEMA standard KS-1-2001 type HD for	
Seismic Qualifications	switches. All GD & HD switches and "DT" type double throw so and with the 2009 International Building Code (IBC) -	switches. witches have been tested and comply with the 2010 Ca Compliance Level SDS = 1.85 g	"DT" switches. alifornia Building Code (CBC)	
Groundable Neutral (All neutrals are bondable for service entrance use.)	Fusible switches have groundable neutral blocks factory installed.	All switches (both Fusible and Non-Fusible) are either supplied with factory installed neutrals or accept field addable neutrals.	All 2-3 pole DT will accept field addable neutrals.	
Padlocks	Padlockable cover latch. OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.	Padlockable cover latch and multiple OFF padlock provisions on handle.	
HP & Load Break Ratings	All General Duty, Heavy Duty and Double Throw	Switches are both load break and horsepower rat	<u> </u>	

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

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

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



Double Break Switching Action

Like the time-proven Vacu-Break Design, the Siemens 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.

 ^{0 400, 600}V & 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.

[®] Not supplied on 30A outdoor & plug fuse switches.
@ 30-200A Type VBII in stainless steel enclosures.
® 60-200A.

^{© 200}A general duty switches have aluminum neutral assemblies.

© 100-200A GD, 100-600A DT and 100-1200A HD switches

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

Safety Switches

General Duty and Heavy Duty

Enclosure Types

- 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.
- 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.
- © **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.
- Type 4 enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust, rain, splashing water and hose-directed water. They are not intended to provide protection against conditions such as internal condensation or internal icing.
- E Type 12[®] enclosures are intended for indoor use primarily to provide a degree of protection against dust, falling dirt and dripping water. They are not intended to provide protection against conditions such as internal condensation.

Load Break Ratings

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

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

Horsepower Ratings

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

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

Product Overview







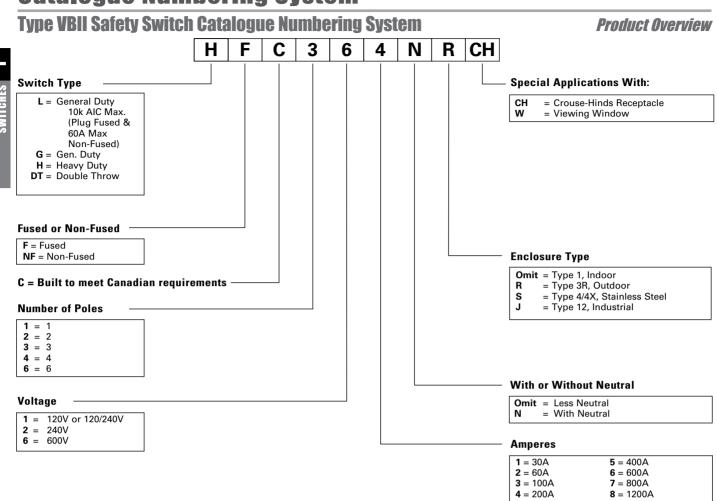


Non-Fusible Safety Switch AIC Ratings When Protected by a Circuit Breaker²³

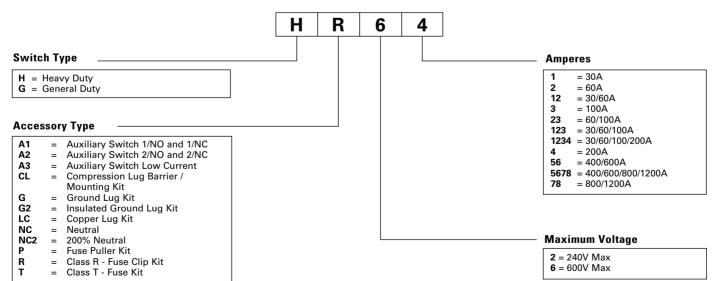
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Breaker Frame	Non-Fused Switch	Short Circuit Current Rating						
NEG, NGB, ED4	30 DT (240V)	18 kA Thru 240 VAC						
NEB, NEG, NGG, NGB, ED4	60-100A GD & DT (240V)	18 kA Thru 240 VAC						
NEB, NEG, NGG, NGB, ED4	30-100A HD & DT (600V)	18 kA Thru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

② All switches above are rated at 10 KA when protected by any CSA certified or cUL Listed CB

³ Circuit breaker trip rating must not exceed switch ampere rating



Type VBII Accessories Catalogue Numbering System



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 304 grade stainless steel and 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



					Maximum Horse	oower Ratings ^②				
	Ampere		Hub	Ship.	240V AC		480V AC	600V AC	250V	600V
System	Rating	Catalogue Number	Туре	Wt. (lbs.)	1-Phase, 2-Wire	3-Phase, 3-Wire	3-Phase, 3-Wire	3-Phase, 3-Wire	DC	DC
3-Pole, 3	3-Wire Fu	sible, Type 12 ³⁴)	(For 2-Pole Ap	plications use outsi	de poles of 3-Pole S	Switches)	600 Volt AC / 2	50 Vo	It DC ^①
	30	HFC361JW		17	3	7 ^{1/2}	15	20	5	_
را را را	60	HFC362JW		22	10	15	30	50	10	30⑤
	100	HFC363JW	SSH	26	15	30	60	75	20	30⑤
ح ح ح	200	HFC364JW		53	_	60	125	150	40	50
ווו	400	HFC365JW		166	_	125	250	350	50	_
	600	HFC366JW	*	168	_	200	400	500	50	_
3-Pole,	3-Wire N	on-Fusible, Type	12 ^③				(00 Volt AC / 2	50 Vol	t DC
	30	HNFC361JW		14	3	10	20	30	5	_
	60	HNFC362JW	0011	21	10	20	50	60	10	30 ^⑤
777	100	HNFC363JW	SSH	25	15	40	75	100	20	50®
	200	HNFC364JW		51	15	60	125	150	40	50
' ' '	400	HNFC365JW	*	133	15	125	250	350	50	_
3-Pole,	3-Wire Fu	sible, Type 4X St	ainless	S ⁴⁶ (For 2-F	ole Applications us	e outside poles of 3	3-Pole Switches)	600 Volt AC / 2	50 Vo	It DC ^①
	30	HFC361SW		17	3	7½	15	20	5	_
	60	HFC362SW	SSH	23	10	15	30	50	10	30 ^⑤
555	100	HFC363SW	3311	28	15	30	60	75	20	50 ^⑤
	200	HFC364SW		55	_	60	125	150	40	50
	400	HFC365SW	*	168	15	125	250	350	50	_
3-Pole,	3-Wire N	on-Fusible, Type	4X Sta	ainless [©]			(600 Volt AC / 2	50 Vol	t DC
	30	HNFC361SW		15	3	10	20	30	5	_
	60	HNFC362SW	SSH	23	10	20	50	60	10	30 ^⑤
777	100	HNFC363SW	3311	27	15	40	75	100	20	50 ^⑤
	200	HNFC364SW		54	15	60	125	150	40	50
	400	HNFC365SW	*	134	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.

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

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

^{© 600}V DC horsepower rating shown requires (2) poles to be connected in series.

^{© 304} grade stainless steel.

^{*} Consult Siemens representative.

Safety Switches

Cross References for SE and ID switches

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	Ampere	Indoor — Type 1		
System Rating		Catalogue Number	VBII Cross Reference	
General Duty			240 Volt Fusible	

General Duty

2-Pole 2-Fuse Service Entrance and Solid Neutral

_	TOIC,	L-i u3c, c	ocivice Entrance and oon	a Neutrai
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	30 60 100	SE221 SE222 SE223	GFC221N GFC222N GFC223N
	1 1 1	200	SE224	GFC224N



-	, .		or
777	30	SE321	GFC321N
[[[[]]	60	SE322	GFC322N
2	100	SE323	GFC323N
' ' ' '	200	SE324	GFC324N





		Indoor — Type 1		Type 12 Industrial		Type 4/4X Stainless	
System	Ampere Rating	Catalogue Number	VBII Cross Reference	Catalogue Number	VBII Cross Reference	Catalogue Number	VBII Cross Reference

Fusible Heavy Duty

2-Pole, 2-Fuse and Solid Neutral

240 Volt / 250 Volt DC

I	30	_	_	12ID221	HFC221J + HNC612	4ID221	HFC221S + HNC612
	60	-	_	12ID222	HFC222J + HNC623	4ID222	HFC222S + HNC623
	100	_	_	12ID223	HFC223J + HNC623	4ID223	HFC223S + HNC623
	200	_	_	12ID224	HFC224J + HNC64	4ID224	HFC224S + HNC64
	400	ID225	HFC225N	12ID225	HFC325J + HNC656	_	_
	600	ID226	HFC226N	12ID226	HFC326J + HNC656	_	_

3-Pole, 3-Fuse 240 Volt / 250 Volt DC

•	را را را	30	ID321	HFC321N ^①	12ID321	HFC321J [©]	4ID321	HFC321S + HNC612 [©]
		60	ID322	HFC322N ^①	12ID322	HFC322J [©]	4ID322	HFC322S + HNC623 ²
		100	ID323	HFC323N ^①	12ID323	HFC323J [©]	4ID323	HFC323S + HNC623 ²
	7 7 7	200	ID324	HFC324N ^①	12ID324	HFC324J [©]	4ID324	HFC324S + HNC64 ²
		400	ID425	HFC325N ^①	12ID425	HFC325J [©]	_	-
		600	ID426	HFC326N ^①	12ID426	HFC326J [©]	_	_

		Indoor — Type 1		Type 12 Industrial		Type 4/4X Stainless		Type 12 with Receptacle		Type 4/4X with Receptacle	
Syste	Ampere	Catalogue	VBII Cross	Catalogue	VBII Cross	Catalogue	VBII Cross	Catalogue	VBII Cross	Catalogue	VBII Cross
	Rating	Number	Reference	Number	Reference	Number	Reference	Number	Reference	Number	Reference

Fusible Heavy Duty

3-Pole, 3-Fuse 480 Volt AC / 600 Volt AC / 250 Volt DC

	,		•									
		30	ID361	HFC361	12ID361	HFC361JW	4ID361	HFC361SW	12ID361W	HF361JCHW	4ID361W	HF361SCHW
	ا را را را	60	ID362	HFC362	12ID362	HFC362JW	4ID362	HFC362SW	12ID362W	HF362JCHW	4ID362W	HF362SCHW
	(((100	ID363	HFC363	12ID363	HFC363JW	4ID363	HFC363SW	12ID363W	HF363JCHW	_	_
	ا کے کے کا	200	ID364	HFC364	12ID364	HFC364JW	4ID364	HFC364SW	_	-	_	_
		400	ID365	HFC365	12ID365	HFC365JW	_	_	_	_	-	_
		600	ID366	HFC366	12ID366	HFC366JW	_	_	_	_	-	_

Non-Fusible Heavy Duty

3-Pole, 3-Fuse 480 Volt AC / 600 Volt AC / 250 Volt DC

	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	30	ID361NF	HNFC361	12ID361NF	HNFC361JW	4ID361NF	HNFC361SW	12ID361NFW	HNF361JCHW	4ID361NFW	HNF361SCHW	
		60	ID362NF	HNFC362	12ID362NF	HNFC362JW	4ID362NF	HNFC362SW	12ID362NFW	HNF362JCHW	4ID362NFW	HNF362SCHW	
		100	ID363NF	HNFC363	12ID363NF	HNFC363JW	4ID363NF	HNFC363SW	12ID363NFW	HNF363JCHW	_	_	
		200	ID364NF	HNFC364	12ID364NF	HNFC364JW	4ID364NF	HNFC364SW	_	_	_	_	
	1 1 1 1	400	ID365NF	HNFC365		HNFC365JW	_	_	_	_	_	_	
		600	ID366NF	HNFC366	12ID366NF	HNFC366J [©]	_	_	_	_	_	_	