

Double Throw Switches



Description & Application

Double throw safety switches are intended to transfer loads from one power source to another. All two- and three pole double throw switches are suitable for use as service equipment. All are UL listed. 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 neces-

sary 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 Switches

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

Double Throw Switches

System	Voltage	Number of Poles	Amps	Type 1 – Indoor	Type 3R – Outdoor ¹	Type 12/3R Industrial	Type 4X – Stainless Steel
				Catalog Number	Catalog Number	Catalog Number	Catalog Number
Heavy Duty Fusible (30-200A with Class H fuse provisions)²							
	240 Volt AC or 250 Volt DC	2	200	DTF224	DTF224R	—	—
			30	DTF321	DTF321R	—	—
			60	DTF322	DTF322R	—	—
			100	DTF323	DTF323R	—	—
			200	DTF324	DTF324R	—	—
			400	DTF325	—	—	—
	600 Volt AC, 250 Volt DC	3	30	DTF361	—	—	—
			60	DTF362	—	—	
			100	DTF363	DTF363R	F353SSDTK	
			200	DTF364	DTF364R	F354SSDTK	
			400	DTF365	—	F355SSDTK ⁴	
			—	—	—	—	

Heavy Duty Non-Fusible²

	240 Volt AC or 250 Volt DC	2	30	DTNF221	—	—	—	
			60	DTNF222	—	—		
			100	DTNF223	—	—		
			200	DTNF224	DTNF224R	—		
			400	DTNF225	DTNF225R	—		
			—	—	—	—		
		600 Volt AC or 250 Volt DC	3	30	DTNF321	—	—	—
				60	DTNF322	—	—	
				100	DTNF323	DTNF323R	—	
				200	DTNF324	DTNF324R	—	
				400	DTNF325	—	—	
				600	DTNF326	—	—	
	600 Volt AC or 250 Volt DC	3	30	DTNF361	DTNF361R	DTNF361J	DTNF361S	
			60	DTNF362	DTNF362R	DTNF362J	DTNF362S	
			100	DTNF363	DTNF363R	DTNF363J	DTNF363S	
			200	DTNF364	DTNF364R	DTNF364J	DTNF364S	
			400	DTNF365	DTNF365R	NF355HDTK	NF355SSDTK	
			600	DTNF366	DTNF366R	—	—	
		4 ⁵	30	—	NFR451DTK	—	—	
			60	—	NFR452DTK	—	—	
			100	—	NFR453DTK	—	—	
			200	NF454DTK	NFR454DTK	—	NF454SSDTK	
			400	NF455DTK	NFR455DTK	—	—	
			600	NF456DTK	NFR456DTK	—	—	
800	NF457DTK	NFR457DTK	—	—				

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 catalog numbers 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 Catalog No. F355SSDTK will accept Class T Fuse only
⁵ Four pole switches are not approved for service entrance.

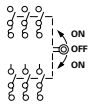
Double Throw Switches

General Duty, Accessories, Lug Data and Horsepower Ratings

Double Throw Switches

System	Voltage	Number of Poles	Amps	Type 3R – Outdoor ^① Less Neutral	Type 3R – Outdoor ^① With Neutral
				Catalog Number	Catalog Number

General Duty Non-Fusible

	240 Volt AC	2	100	DTGNF223R	DTGNF223NR
			200	DTGNF224R	DTGNF224NR
	3	100	DTGNF323R	DTGNF323NR	
		200	DTGNF324R	DTGNF324NR	

Accessories – 2 and 3 Pole Switches Only^②

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 (1) #14-2/0 400& 600A (8) #6-350 Kcmil	HG61234 HG656 HG678
Auxiliary Contacts (HD only) (two required per switch)^⑤	30-200A with (1) NO & (1) NC Contacts 30-200A with (2) NO & (2) NC Contacts 400-1200A with (1) NO & (1) NC Contacts 400-1200A with (2) NO & (2) NC Contacts	HA161234 HA261234 HA165678 HA265678
Class R Fuse Clip Kits (two required per switch)	30-, 240V Kit 30-, 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 3/4" Conduit For 1" Conduit For 1 1/4" Conduit For 1 1/2" Conduit For 2" Conduit For 2 1/2" Conduit	HS075 HS100 HS125 HS150 HS200 HS250

Accessories – 4 Pole Switches Only^③

Description	Catalog Number	
Auxiliary Switch (two required per switch)	30-800A (1) NO, (1) NC ^⑤ (2) NO, (2) NC ^⑤	DS200EK1 DS200EK2
Ground Lug Kit^④	30-60-100A 200A 400-600-800A	DSG100GK DSG200GK DSG468GK
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 (for fusible stainless and 400A Type 12 & 4X only)	30-60-100A 200A 400A Fusible	DT100NK DT200NK DS800NK

Replacement Parts – 2 and 3 Pole Switches Only^②

Description	Catalog Number	
Type 1, 3R & 12 Replacement Handle	30-200A	HHD61234
Type 4X Replacement Handle	30-200A	HHD61234S
Type 4X Replacement Handle	400-1200A	HHD678

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

30-200A – 2, 3 & 4 Pole Switches

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

400-1200A – 2, 3 Pole Switches

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

Maximum Horsepower Ratings Fused

Ampere Rating	1-Phase AC		3-Phase AC			250V DC
	240V	240V	480V	600V	250V	
30	3	7 1/2	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	

Maximum Horsepower Ratings 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

^① Use HS Type hubs for 30-200A switches.

^② Not for fusible stainless or 400A Type 12 & 4X switches.

^③ Also for fusible stainless & 400A Type 12 & 4X switches.

^④ 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.

^⑤ One aux. required for normal and one required for emergency switch line base.

Figure 1: Type 1 & 3R

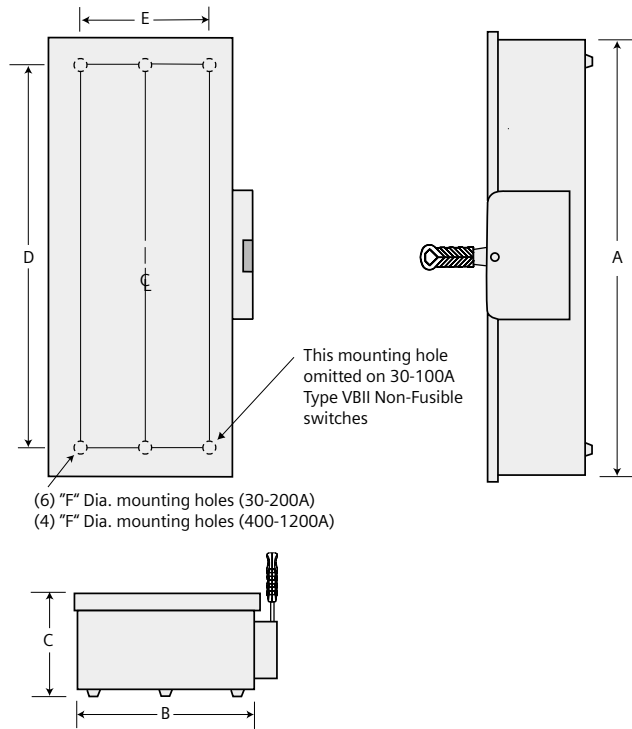
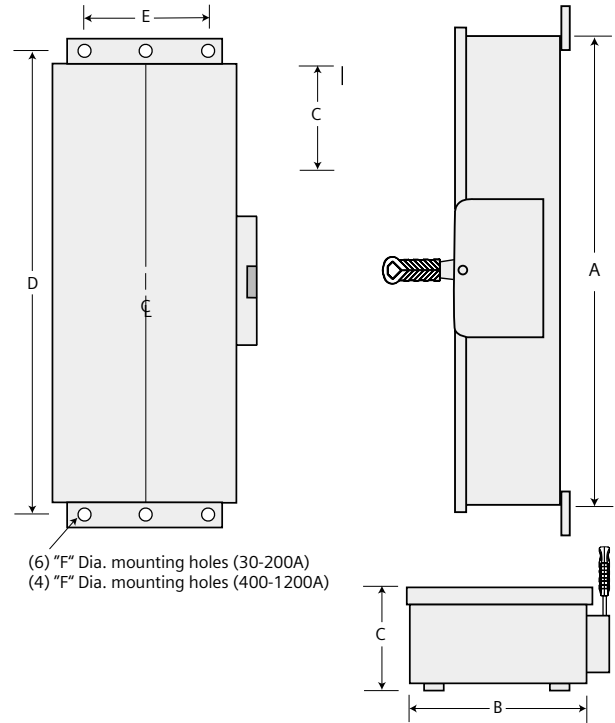


Figure 2: Type 4X & 12



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, DTGNF323R	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, DTNF324R, DTNF324, DTNF364R, DTNF364, DTNF364R, DTGNF224R, DTGNF324R	36.00	19.12	6.42	31.00	15.00	0.44
DTF324, DTF324R, 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	57.7	28.22	9.44	49.75	16.00	0.56
DTNF326, DTNF366, DTNF366R	58.50	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
NFR451DTK ^① , NFR452DTK ^① , NFR453DTK ^①	24.63	11.63	4.78	21.50	9.25 ^①	0.25 ^①
NFR454DTK ^②	37.25	19.19	6.32	33.50	16.00 ^②	0.56 ^②
NF455DTK ^③ , NF456DTK ^③ , NF457DTK ^③ NFR455DTK ^③ , NFR456DTK ^③ , NFR457DTK ^③	63.31	27.00	8.88	58.50	22.25 ^②	0.56 ^②

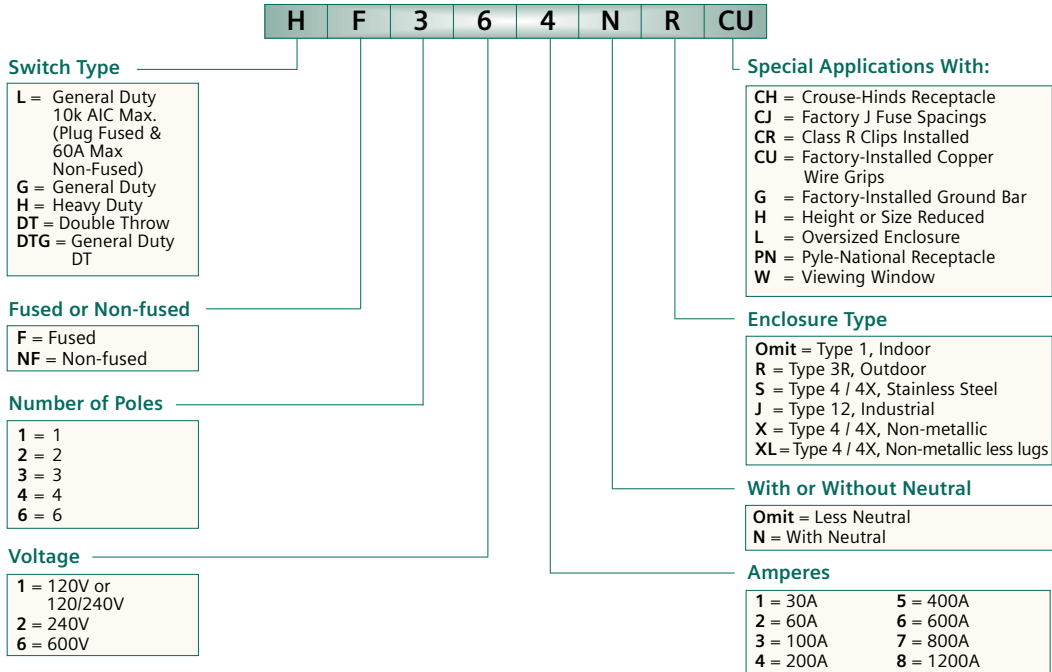
Figure 2 (30-200A Type 12 & 4X)

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, DTNF363R	27.54	12.29	6.48	29.77	8.47	0.27
DTNF364J, DTNF364S	35.93	19.24	6.78	38.16	13.44	0.33
NF355HDTK ^④ , NF355SSDTK ^④	53.82	22.66	7.25	56.20	18.00	0.56

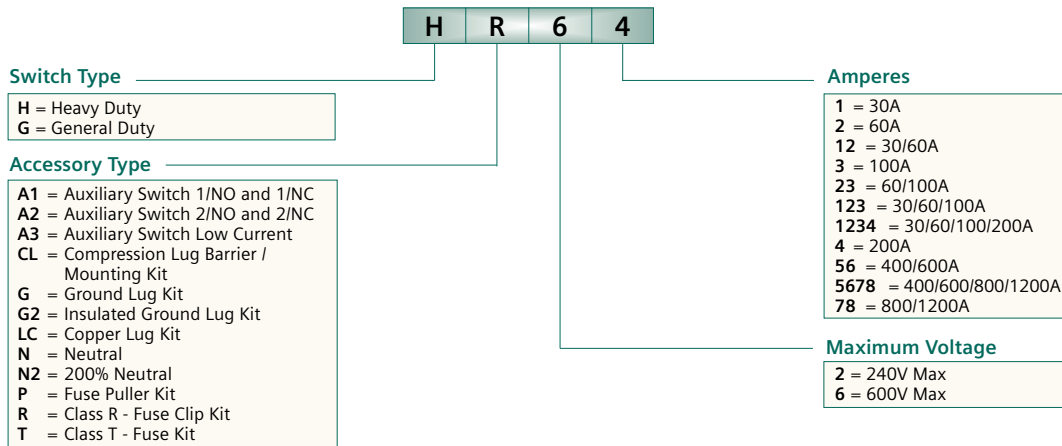
- ① (3) Mounting holes supplied (1 at top).
- ② (4) Mounting holes supplied.
- ③ These switches are not Type VBII design.
- ④ Drip hood not shown but provided on Type 3R enclosures.

Siemens Catalog Numbering System

Type VBII Safety Switch Catalog Numbering System



Siemens Accessories Catalog Numbering System



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