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Heavy Duty Safety Switch Standards and Ratings

Standards

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

Ratings

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

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

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

Non-fusible switches when protected by a circuit breaker

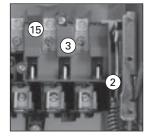
Switch Ampere Rating	Breaker Frame	UL Listed Short Circuit Rating					
30-1200A	All UL listed circuit breakers	10,000 AIC thru 600 VAC					
30-100A	NEB, NEG, NGG, NBG & ED4	18,000 AIC thru 480 VAC					
30-100A	ED6	18,000 AIC thru 600 VAC					
200A	FD6-A & JD6-A	18,000 AIC thru 600 VAC					
400A	JD6-A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

Fuse Provisions supplied in fusible switches

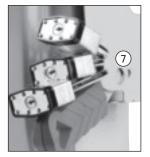
- 30 & 60A 240V Class H standard, Class R with kit
- 100-600A 240V Class H standard, Class J by moving load base, Class R with kit
- 30-600A 600V Class H standard, Class J by moving load base, Class R with kit
- 100 & 200A Class T with kit
- 400 & 600A Class H standard, Class J & T by moving load base,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

Switches Heavy Duty Safety Switches

Features











- 1. Quick-make, quick-break operating mechanism that ensures positive operation.
- 2. Visible blade, double-break switching action.
- 3. Arc chutes dissipate heat and prolong switch life.
- 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/AI 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.
- Embossed aluminum nameplate on Heavy Duty Switches provides highly visible ON/OFF indication.
- **19.** Drawn cover for increased rigidity and resistance to abuse.
- **20.** Top key hole and bottom mounting holes provide easy 2 or 3 point mounting.

Switches Heavy Duty Safety Switches

Type VBII 4 & 6 Pole Heavy Duty Safety Switches

Application

4 & 6 pole Switches are commonly used as a disconnecting means for two-speed, two-winding motors. Fused switches provide both over current and short circuit protection. Non-fusible switches normally provide a local disconnection means for twospeed 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)



4 Pole Type VBII Switches¹

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

6 Pole Type VBII Switches¹²

	Type 12/3R	Industria	I	Type 4X Sta	Horsepov								
Amp	Catalog	List	Ship Wt.	Catalog	List	Ship Wt.	240V 3Ø		480V, 3Ø		600V, 3Ø		250V
Rating	Number	Price \$	(lbs.)	Number	Price \$	(lbs.)	Std.	Max.	Std.	Max.	Std.	Max.	DC
Fusible 600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse [®]													
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			_	20	_		_	60	10
100	HNF663J		37	HNF663S		37	_	40	_	75	_	100	20
200	HNF664J		80	HNF664S∎		80	-	60	-	125	-	150	40
	Rating 600 V 30 60 100 200 sible 6 30 60 100	Amp Rating Catalog Number 600 Volt AC, 25 30 HF661J 60 HF663J= 100 HF663J= 200 HF664J= sible 600 Volt 30 HNF661J 60 HNF661J 100 HNF661J	Amp Rating Catalog Number List Price \$ 600 Volt AC, 250 Volt 30 HF661J Image: State of the	Amp Rating Catalog Number List Price \$ Ship Wt. (lbs.) 600 Volt AC, 250 Volt DC — 6 30 HF661J HF662J 41 37 41 100 HF663J HF664J 44 90 sible 600 Volt AC, 250 Volt DC 30 HNF661J HNF662J 100 33 HNF661J HNF663J	Amp RatingCatalog NumberList Price \$Ship Wt. (lbs.)Catalog Number600 Volt AC, 250 Volt DC — 6 Pole, 6 Fu30 60 100 100 100 100 100 100 100 100 1663J 100 100 1664J 100 	Amp RatingCatalog NumberList Price \$Ship Wt. (lbs.)Catalog NumberList Price \$600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse30HF661J HF662J37HF661Sm HF663SmHF661Sm HF664Sm30HF663Jm37HF661Sm HF663SmHF663Sm HF664SmHF662Sm HF664Sm30HF664Jm90HF663Sm HF664Sm30HNF661J HF664Sm33 S5HNF661S HNF662S30HNF661J HNF663J33 S7HNF661S HNF663S	Amp RatingCatalog NumberList Price \$Ship Wt. (lbs.)Catalog NumberList Price \$Ship Wt. (lbs.)600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse30HF661J HF662J3737HF661Sm HF663Sm3730HF661J HF663Jm3741 44HF662Sm HF664Sm4144200HF664Jm909090sible 600 Volt AC, 250 Volt DC HNF661J6 Pole33 3510033 HNF661S33 3530HNF661J HNF663J33 3733 37HNF661S HNF663S33 37	Amp RatingCatalog NumberList Price \$Ship Wt. (lbs.)Catalog NumberList Price \$Ship Wt. (lbs.)240V 30 Std.600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse3737373730HF661J HF662J 2004137HF661S HF663S 9037373100HF663J HF664J 2004144HF663S HF664S 904415200HF661J HF664J HF664J33HNF661S 90334430HNF661J HF664J 903333HNF661S HF664S 333330HNF661J HNF662J 1003333HNF661S 373330HNF661J HNF663J3337	Amp Rating Catalog Number List Price \$ Ship Wt. (lbs.) Catalog Number List Price \$ Ship Wt. (lbs.) 240V 30' 600 Volt AC, 250 Volt DC - 6 Pole, 6 Fuse ⁽⁴⁾ Std. Max. 30 HF661J 37 HF661Sm 41 37 15 100 HF663Jm 41 HF663Sm 44 15 30 200 HF664Jm 90 HF664Sm 90 25 60 sible 600 Volt AC, 250 Volt DC - 6 Pole 5 33 - 10 30 HNF661J 33 HNF661S 33 - 10 30 HNF661J 35 HNF662S 35 - 20 100 HNF663J 37 HNF663S 37 - 40	Amp Rating Catalog Number List Price \$ Ship Wt. (lbs.) List Number Ship Wt. Price \$ 240V 3Ø 480V, 3Ø 600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse ⁽⁴⁾ Std. Max. Std. Max. Std. 30 HF661J 37 HF661Sm 41 7½ 15 15 100 HF663Jm 44 HF663Sm 44 15 30 25 200 HF664Jm 90 HF664Sm 90 25 60 50 sible 600 Volt AC, 250 Volt DC — 6 Pole 6 Pole 6 Pole 90 25 60 50 30 HNF661J 33 HNF661S 33 - 10 - 30 HNF661J 35 HNF662S 35 - 20 -	Amp Rating Catalog Number List Price \$ Ship Wt. (lbs.) Catalog Price \$ List (lbs.) Ship Wt. (lbs.) 240V 30 480V, 30 600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse ⁽¹⁾ Std. Max. Std. Max. 30 HF661J 60 HF663J HF663J 200 37 HF661S HF663J HF664J HF663S 41 7½ 5 15 30 HF664J HF664J 44 HF663S 90 44 15 30 25 60 200 HF664J 43 HF664S 90 25 60 50 125 sible 60 HNF661J 33 HNF661S 33 - 10 - 20 30 HNF661J 35 HNF662S 35 - 20 - 50 30 HNF663J 37 HNF662S 35 - 20 - 50 30 HNF663J 37 HNF663S 37 - 40 - 75 <	Amp Rating Catalog Number List Price \$ Ship Wt. (lbs.) List Price \$ Ship Wt. (lbs.) 240V 3Ø 480V, 3Ø 600V, 3Ø 600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse [®] Std. Max. Std. Max. Std. Max. Std. Max. Std. Max. Std. Max. Std. Std. Max. Std. Max. Std. Std. Std. Max. Std. Std. Std. Max. Std. Std. Std. Std. Max. Std. Std.<	Amp Rating Catalog Number List Price \$ Ship Wt. (lbs.) List Price \$ Ship Wt. (lbs.) 240V 3Ø 480V, 3Ø 600V, 3Ø 600 Volt AC, 250 Volt DC — 6 Pole, 6 Fuse [®] 37 37 3 7½ 5 15 7½ 20 30 HF661J 37 41 HF661S 41 7½ 15 15 7½ 20 100 HF663J 44 HF663S 44 15 30 25 60 30 75 200 HF664J 90 25 60 50 125 60 150 30 HF664J 33 HF664S 90 25 60 50 125 60 150 30 HF664J 33 HNF661S 33 - 10 - 20 - 30 60 HNF661J 33 35 HNF662S 35 - 20 - 50 - 60 100 HNF663J

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

① Lugs are aluminum alloy as standard. Optional copper body lugs are available.
② All 4 & 6 pole VBII switches are suitable for use as

All 4 & 6 pole VBII switches are suitable for use a 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.

Is 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.