

Heavy Duty/Window Switch



### Heavy Duty Window Switches

#### Application Description

Typically used but not limited to industrial applications such as mining, forestry, saw mills, steel mills. Recommended for any application where verification of the blade contact status is required without opening the door of the switch.

#### Product Description

- Available on type 12 and 4 painted steel and 4X stainless steel heavy duty switches
- 30–1200Ampere
- 30-60A full window design provides visible blade and blown fuse verification
- 100A-1200A window design provides visible blade verification
- Fusible and non-fusible
- Also available on double throw, receptacle switches, 6 pole, and enviroline switches
- Windows are constructed from tempered safety glass.
- 30-100A field replaceable window kit available (effective August 2003)
- Fusible switches with neutral installed suitable for service entrance

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#### Features & Benefits

- Full range offering 30A–1200A
- Tempered safety glass, resists scratching, fading and blistering
- Large full window at 30 & 60A, provides unrestricted view without opening the door of the switch
  - Visible blade indication
  - Fuse presence, condition and type
  - Better visibility in low light or restricted areas
- Benefits operator safety
- Labour savings
- Field replaceable window kit for 30-100Ampere
- Type 12 enclosure can be field converted to 3R

#### Standards and Certifications

- CSA certified File No. 69743
- Meets C22.2 No.4 standard for enclosed switches
- ISO 9001:2008



### Product Selection

12HD361W



#### 240 Vac Heavy-Duty, Fusible Single-Throw with Viewing Window

System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses				DC 250V	Type 12 <sup>②</sup> Enclosure Dust-Tight Catalogue Number	Type 4 Enclosure Watertight, Painted Steel Catalogue Number	Type 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
			AC Standard Fuse		Time Delay					
			Single-Phase	Three-Phase	Single-Phase	Three-Phase				
<b>Four-Wire (Three Blades, Three Fuses, S/N), 240 Vac—250 Vdc<sup>①</sup></b>										
	30	H	—	3	—	7-1/2	—	12HD321NW <sup>②</sup>	—	4HD321NW
	60	H	—	7-1/2	—	15	—	12HD322NW <sup>②</sup>	—	4HD322NW
	100	H	—	15	—	30	20	12HD323NW <sup>②</sup>	—	4HD323NW
	200	H	—	25	—	60	40	12HD324NW <sup>②</sup>	—	4HD324NW
	400	H	—	50	—	125	50	12HD325NW <sup>②</sup>	4HD325NW	4HD325NWSS
	600	H	—	75	—	200	—	12HD326NW <sup>②</sup>	4HD326NW	4HD326NWSS
	800	L	—	100	—	250	—	12HD327NW <sup>②</sup>	4HD327NW	4HD327NWSS
	1200	L	—	—	—	—	—	③	③	③

#### 600 Vac Heavy-Duty, Fusible Single-Throw with Viewing Window

System	Ampere Rating	Fuse Class Provision	Maximum Horsepower Ratings with Time Delay Fuses				DC 250V 600V	Type 12 <sup>②</sup> Enclosure Industrial, Dust-Tight Catalogue Number	Type 4 Enclosure Watertight, Painted Steel Catalogue Number	Type 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
			Single-Phase AC		Three-Phase AC					
			480V	600V	480V	600V				
<b>Four-wire (Three Blades, Three Fuses), 600 Vac—250 Vdc<sup>①</sup></b>										
	30	H	7-1/2	10	15	20	—	12HD361W <sup>②</sup>	—	4HD361W
	60	H	20	25	30	50	—	12HD362W <sup>②</sup>	—	4HD362W
	100	H	30	40	60	75	—	12HD363W <sup>②</sup>	—	4HD363W
	200	H	50	50	125	150	—	12HD364W <sup>②</sup>	—	4HD364W
	400	H	—	—	250	350	—	12HD365W <sup>②</sup>	4HD365W	4HD365WSS
	600	H	—	—	400	500	—	12HD366W <sup>②</sup>	4HD366W	4HD366WSS
	800	L	—	—	500	500	—	12HD367W <sup>②</sup>	4HD367W	4HD367WSS
	1200	L	—	—	—	—	—	③	③	③

4HD361NFW



#### 600 Vac Heavy-Duty, Non-Fusible Single-Throw with Viewing Window

System	Ampere Rating	Maximum Horsepower Ratings						Type 12 Enclosure <sup>②</sup> Dust-Tight Catalogue Number	Type 4 Enclosure Watertight, Painted Steel Catalogue Number	Type 4X Enclosure Corrosion-Resistant, Stainless Steel Catalogue Number
		Single-Phase AC		Three-Phase AC		DC				
		480V	600V	480V	600V	250V	600V			
<b>Three-Pole—600 Vac, 250 Vdc<sup>①</sup> (Not Suitable for Service Entrance)</b>										
	30	7-1/2	10	20	30	5	—	12HD361NFW <sup>②</sup>	—	4HD361NFW
	60	20	25	50	60	10	—	12HD362NFW <sup>②</sup>	—	4HD362NFW
	100	40	50	75	100	20	—	12HD363NFW <sup>②</sup>	—	4HD363NFW
	200	50	50	125	150	40	—	12HD364NFW <sup>②</sup>	—	4HD364NFW
	400	—	—	250	350	50	—	12HD365NFW <sup>②</sup>	4HD365NFW	4HD365NFWSS
	600	—	—	400	500	—	—	12HD366NFW <sup>②</sup>	4HD366NFW	4HD366NFWSS
	800	—	—	500	500	—	—	12HD367NFW <sup>②</sup>	4HD367NFW	4HD367NFWSS
	1200	—	—	—	—	—	—	③	③	③

#### Notes

- ① For two-pole applications, use outside poles of three-pole switch.
- ② Type 12 enclosures (30–800A) can be field modified to meet Type 3R rainproof requirements when a factory provided drain hole is opened.
- ③ Contact Customer Support (1-800-268-3578) for availability of this product.

Effective August 2003, 30–100A window switches offer visible blade verification and blown fuse indication in a single design as shown in the photos. The window is replaceable 30–100A. Higher ampere ratings will continue to be manufactured with a non-replaceable epoxy affixed design with visible blade verification only.

### Technical Data and Specifications for Heavy Duty Window Switch

#### Short-Circuit Ratings Using Class "R", "J" or "T" Fusing Where Applicable

Ampere Rating	Voltage Ratings			
	Type 1	Type 3R	Type 12	Type 4 and 4X
30	200k at 600	200k at 600	200k at 600	200k at 600
60	200k at 600	200k at 600	200k at 600	200k at 600
100	200k at 480 100k at 600	200k at 480 100k at 600	200k at 600	200k at 600
200	200k at 600	200k at 600	200k at 600	200k at 600
400	200k at 480 100k at 600	200k at 480 100k at 600	200k at 480 100k at 600	200k at 480 100k at 600
600	200k at 480 100k at 600	200k at 480 100k at 600	200k at 480 100k at 600	200k at 480 100k at 600
800	200k at 480 100k at 600	200k at 480 100k at 600	200k at 480 100k at 600	200k at 480 100k at 600
1200	200k at 600	200k at 600	200k at 600	200k at 600

#### Note

Class "H" fuse clips supplied as standard for 30–600A. Class "L" fuse clips supplied as standard for 800–1200A. Rated at 10,000 rms symmetrical when using Class "H" fuses.

#### Fuse Class Adaptation

Safety Switch Type	Standard Fuse Class Clips Supplied with Switch	Adaptable to Accept the Following Fuse Class		
		R	J	T
		Heavy Duty	H 30-600A L 800-1200A	30A-600A

**Note:** For 'J' Fusing on 240V Heavy Duty Switches Field Modification Required. 30-60 amperes not available.

100-400 amperes, reposition loadside fuse block to accept 'J' fuse.  
600 amperes adapter kit included with switch.

For 'R' fuse rejector adapter kit and 'T' fuse adapter kit see accessory options on page 5.

**Note:** For 'J' fusing on 600V Heavy Duty Switches Field Modification Required.

30-60 amperes, reposition fuse clips on loadside of fuse base.  
100-400 amperes, reposition loadside fuse block to accept 'J' fuse.

600 amperes adapter kit included with switch.  
For 'R' fuse rejector adapter kit and 'T' fusing see page 5 accessory application options.

#### Window Replacement Kit (for 30-100A switches built after August 2003)

30-60A	Type 12, 4X	<b>70-85643-3</b>
100A	Type 12, 4X	<b>70-8564</b>
30-60A	EnviroLine	<b>70-8564-2</b>
100A	EnviroLine	<b>70-8564-4</b>

#### UL/CSA Recognized Non-Fusible Safety Switch/Circuit Breaker Series-Connected Ratings

Eaton 30-200A non fusible safety switch withstand ratings when protected with circuit breakers

Non-Fusible Safety Switch Ampere Rating	Max System Voltage AC	Number of Poles Switched	Maximum fault level available at upstream circuit breaker (kA RMS symmetrical)	Circuit Breaker Frame(s)		
30A & 60A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH		
			18,000	FD, EGE		
		2, 3, 4, 6	14,000	FDB		
			10,000	Any manufacturer or Eaton breaker type		
		100A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, EGH
					18,000	FD, EGE
	2, 3, 4, 6		14,000	FDB		
			10,000	Any manufacturer or Eaton breaker type		
	480		600	2, 3, 4, 6	35,000	EGH, EGS
					10,000	Any manufacturer or Eaton breaker type
		200A	600	2, 3, 4, 6	25,000	FDC, HFD, HFDE, HJD, JGH
					18,000	FD, JD, JGE
480	600	2, 3, 4, 6	14,000	FDB		
			10,000	Any manufacturer or Eaton breaker type		
	2, 3, 4, 6	65,000	HFD, HFDE, HJD, JGH			
		10,000	Any manufacturer or Eaton breaker type			

### Dimensions

Approximate Dimensions in Inches (mm)

**Note:** Dimensions are for estimating purposes only.

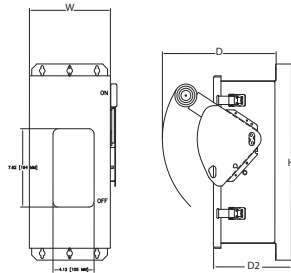
#### Heavy-Duty, Non-Fusible, 600V, Three-Pole, Single-Throw with Window

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
30	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
60	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
100	11.84 (301)	24.95 (634)	11.44 (291)	6.30 (160)	30 (13.64)
200	16.95 (430)	35.38 (899)	11.63 (295)	6.44 (164)	55 (24.97)
400	24.12 (612)	57.47(1460)	12.43 (316)	7.19 (183)	125 (56.75)
600	25.12 (638)	63.00 (1600)	13.92 (353)	8.91 (226)	167 (75.82)
800	25.34 (644)	71.75 (1823)	13.92 (353)	8.91 (226)	175 (79.45)
1200	41.47 (1053)	70.31 (1786)	19.94 (507)	13.50 (343)	519 (231.54)

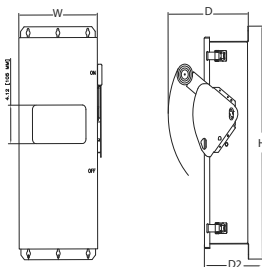
**Note:**

For 6 pole switches with windows, refer to page 40 for dimensions - NOTE 30, 60A same as 100A dimensions  
 For DT (Double Throw) switches with windows refer to page 40 for dimensions.  
 Type 12 enclosures (30-1200A) can be field modified to meet Type 3R rainproof requirements when factory provided drain hole is opened.

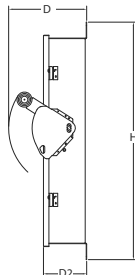
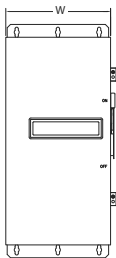
#### Type 12, 4X 30-60A



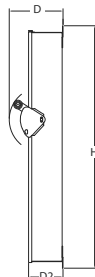
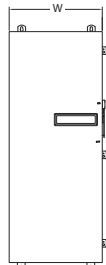
#### Type 12, 4X 100A



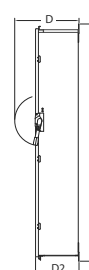
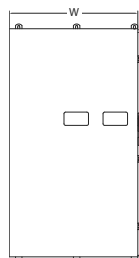
#### Type 12, 4/4X 200A



#### Type 12, 4/4X 400A - 800A



#### Type 12, 4/4X 1200A



#### Heavy-Duty, Fusible, 240V and 600V, Three-Pole Single-Throw, with Window

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
30	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
60	8.8 (224)	19.08 (485)	11.44 (291)	6.30 (160)	18 (8.18)
100	11.84 (301)	24.95 (634)	11.44 (291)	6.30 (160)	30 (13.64)
200	16.95 (430)	35.38 (899)	11.63 (295)	6.44 (164)	55 (24.97)
400	24.12 (612)	57.47(1460)	12.43 (316)	7.19 (183)	125 (56.75)
600	25.12 (638)	63.00 (1600)	13.92 (353)	8.91 (226)	167 (75.82)
800	25.34 (644)	71.75 (1823)	13.92 (353)	8.91 (226)	175 (79.45)
1200	41.47 (1053)	70.31 (1786)	19.94 (507)	13.50 (343)	519 (231.54)

#### Terminal Capacity for Heavy Duty Safety Switch 600V Max

Ampere	Line/Load Terminal Capacity (per phase)	Ground Terminal Capacity	Neutral Catalogue #	Neutral Terminal Capacity
30	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
60	#14 - #2	#14 - 4	DH030NK	4x #14 - #2
100	#14 - 1/0	#14 - 4	DH100NK	2x #14-#2 AND 2x #14 - 1/0
200 (Type 12 & 4X)	#6 - 300mcm	#14 - #4	DH200NK	2x #6 - 300mcm AND 2x #14 - #2
400	(2) 1/0 - (2)300mcm OR (1) 1/0 - 750mcm	#6 - 250mcm	DS400NK	2X 1/0 - 750mcm OR (2)1/0 - (2)300mcm AND 3x#6 - 250mcm
600	(1)#2 - 600mcm AND (1) 1/0 - 750mcm	#6 - 250mcm	DS600NK	2 x 1/0 - (1)750mcm OR 1/0 - (2) 300mcm AND 1 x #2 - 600mcm AND 3 x #6 - 250mcm
800	(4) 3/0 - (4)750mcm	#6 - 250mcm	DS800NK	2 X (4)3/0 - (4)750mcm AND 3 x #6 - 250mcm
1200	(4) 1/0 - (4)750mcm	#6 - 250mcm	DS800NK	2 X (4)3/0 - (4)750mcm AND 3 x #6 - 250mcm

**Note**

\* Order neutral catalogue number when neutral required and not included with switch.

All terminals are rating al/cu unless otherwise noted.

Ground terminal is standard on all switches. For optional ground lug kits or copper lug kits see page 5 and 6