

# EATON

# Cutler-Hammer

## AT3 Automatic Transfer Switch

Product Focus

Electrical Ratings  
Industrial Design  
Standard and Optional Features

### Product Description

The Cutler-Hammer® AT3 Automatic Transfer Switch from Eaton's electrical business is designed to provide unmatched performance, reliability and versatility for critical standby power applications. AT3 switches are equipped with the high-performance ATC-300 digital transfer controller for rock-solid monitoring, status reporting and transfer control operation. Superior design and robust construction make the AT3 the industry benchmark for critical and distributed power systems.

### Electrical Ratings

- Ratings 30 – 1000 amperes.
- 2, 3 or 4-poles.
- Up to 600 Vac, 50/60 Hz.
- NEMA® 1, 3R, 12, open.
- Suitable for emergency and standby systems (all loads).
- UL® 1008 listed.
- CSA® C22.2 No. 178 certified.

### Industrial Design Highlights

- Double-throw, mechanically interlocked transfer mechanism.
- High withstand and closing ratings.
- Seismic Zone 4 qualified (BOCA®, CBC, IBC, UBC®).

### Standard Features

- Auxiliary relay contacts:
  - Source 1 Present 2NO & 2NC
  - Source 2 Present 2NO & 2NC
- Switch position indication contacts:
  - Source 1 Position 1NO & 1NC
  - Source 2 Position 1NO & 1NC

- Source 1 & Source 2 sensing:
  - Undervoltage/under frequency
  - Overvoltage/over frequency
  - 3-phase rotation protection
  - 3-phase voltage unbalance/loss
- Pre-transfer signal contacts 1NO/1NC.
- Go to Emergency (Source 2).
- Seven field programmable time delays.
- LCD-based display for programming, system diagnostic and Help message display.
- Mimic diagram with source available and connected LED indication.
- Time-stamped history log.
- System test pushbutton.
- Programmable plant exerciser — OFF, daily, 7, 14, 28-day interval selectable run time 0 – 600 minutes no load/load with failsafe.
- Safe manual operation under full load with permanently affixed operating handle.

### Optional Features

- Suitable for Use as Service Equipment in the standard enclosure size.
- Available TVSS surge suppression for power/controller, engine start circuit, phone and cable connections.
- Integrated distribution panels.
- Field-selectable multi-tap transformer panel permits operation on a wide range of system voltages.
- Integral overcurrent protection.
- Space heater with thermostat.
- Ammeter — load side.
- Stainless steel cover for controller.

### Service Entrance Equipment

The AT3 transfer switch is available as rated as Suitable for Use as Service Equipment in the standard enclosure size. Cutler-Hammer Service Equipment rated transfer switches with integral overcurrent protection may be installed at the point of Service Entrance without the need for separate upstream disconnect devices and additional power connections.



**Table 1. UL 1008 Withstand and Close-On Ratings (kA)**

Switch Rating Amperes	UL 1008 3-Cycle "Any Breaker" Rating			Rating When Used With Upstream Fuse		
	240 Vac	480 Vac	600 Vac	Maximum Fuse Rating	Fuse Type	600 Vac
30 – 100	100	65	25	200	J, T	200
150	100	65	25	400	J, T	200
150 – 225	100	65 <sup>①</sup>	25	400	J, T	200
225	100	65	25	400	J, T	200
300	100	65	25	400	J, T	200
400	100	65	25	600	J, T	200
600	100	65	25	1200	J, T	200
800	65	50	25	1600	L	200
1000	65	50	25	1600	L	200

① 240 Vac.

**Table 2. Wall Mount Transfer Switch Standard Terminal Data for Power Cable Connections**

Switch Rating Amperes	Breaker Frame	Line Side (Normal and Standby Source)	Load Connection	Neutral Connection
30 – 100	HFD	(1) #14 – 1/0	(1) #14 – 1/0	(3) #14 – 1/0
150 – 225	HFD	(1) #6 – 300	(1) #6 – 300	(3) #4 – 300
150 – 225	HKD	(1) #3 – 350	(1) #6 – 360	(3) #4 – 350
225 – 300	HKD	(1) #3 – 350	(1) #6 – 350	(3) #4 – 350
400	HLD	(1) 4/0 – 600	(2) #1 – 500	(6) 250 – 350
600	HLD	(2) 3/0 – 350	(2) #1 – 500	(6) 250 – 350
600	HMDL	(2) #1 – 500	(2) #1 – 500	(12) 4/0 – 500
600 (4-pole)	NB	(3) 3/0 – 400	(3) 3/0 – 400	(3) 3/0 – 400
800	HMDL	(3) 3/0 – 400	(3) 3/0 – 400	(12) 4/0 – 500
800	HNB	(4) 4/0 – 500	(4) 4/0 – 500	(12) 4/0 – 500
1000	HNB	(4) 4/0 – 500	(4) 4/0 – 500	(12) 4/0 – 500

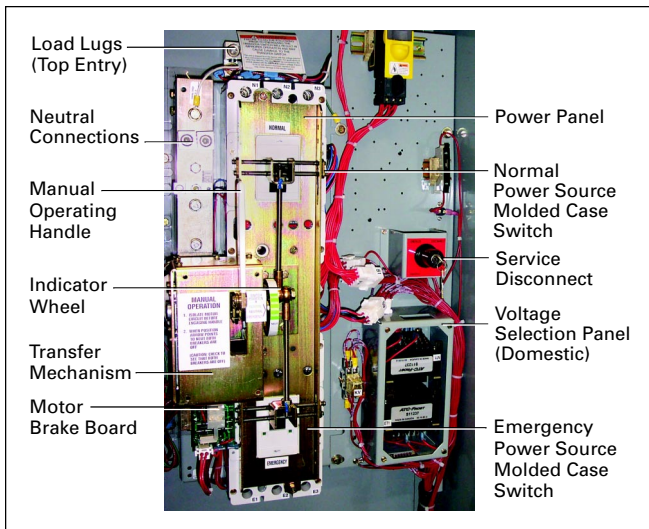
**Note:** All terminals suitable for copper or aluminum conductors.  
**Note:** For alternate terminal sizes, contact Eaton.

**Table 3. Dimensions in Inches (mm) and Approximate Shipping in Lbs. (kg)**

Switch Type	Amperes	Enclosure			Gutter Space		Bolt Pattern		Weight Lbs. (kg)
		A (Height)	B (Width)	C (Depth)	D (Width)	E (Depth)	G (Horizontal)	H (Vertical)	
HFD <sup>②</sup>	30 – 100	47.74 (1213.0)	20.81 (528.6)	17.22 (437.0)	8.00 (203.2)	4.00 (101.6)	10.75 (273.0)	46.44 (1180.0)	232 (105)
HFD <sup>②</sup>	150 – 225	47.74 (1213.0)	20.81 (528.6)	17.22 (437.0)	8.00 (203.2)	4.00 (101.6)	10.75 (273.0)	46.44 (1180.0)	232 (105)
HFD <sup>③</sup>	30 – 100	47.74 (1213.0)	20.81 (528.6)	17.22 (437.0)	8.00 (203.2)	4.00 (101.6)	10.75 (273.0)	46.44 (1180.0)	240 (190)
HFD <sup>③</sup>	150	47.74 (1213.0)	20.81 (528.6)	17.22 (437.0)	8.00 (203.2)	4.00 (101.6)	10.75 (273.0)	46.44 (1180.0)	240 (190)
HFD <sup>③</sup>	150 – 225	35.61 (904.0)	20.06 (509.5)	13.34 (339.0)	8.00 (203.2)	4.00 (101.6)	10.75 (273.0)	34.31 (904.0)	150 (68)
HKD	150 – 225	48.00 (1219.2)	20.81 (528.6)	18.40 (467.4)	8.00 (203.2)	4.00 (101.6)	11.00 (279.4)	45.50 (1155.7)	305 (138)
HKD	300	56.00 (1422.4)	20.81 (528.6)	18.40 (467.4)	8.00 (203.2)	4.00 (101.6)	11.00 (279.4)	53.50 (1358.9)	295 (134)
HLD	400	53.00 (1346.0)	25.81 (655.6)	18.40 (467.4)	8.00 (203.2)	4.00 (101.6)	16.00 (406.4)	51.50 (1308.0)	425 (193)
HLD <sup>②</sup>	600	64.00 (1625.6)	25.81 (655.6)	18.40 (467.4)	8.00 (203.2)	4.00 (101.6)	16.00 (406.4)	62.50 (1588.0)	475 (214)
HMDL	600	76.74 (1949.2)	25.81 (655.6)	19.50 (495.3)	8.00 (203.2)	4.00 (101.6)	16.00 (406.4)	75.15 (1908.8)	480 (218)
HMDL <sup>②</sup>	800	76.74 (1949.2)	25.81 (655.6)	19.50 (495.3)	8.00 (203.2)	4.00 (101.6)	16.00 (406.4)	75.15 (1908.8)	510 (232)
HNB	800 – 1000	76.74 (1949.2)	25.81 (655.6)	19.50 (495.3)	8.00 (203.2)	4.00 (101.6)	16.00 (406.4)	75.15 (1908.8)	540 (245)

② 240/120 volt, single-phase, 3-wire or 208 volt, 3-phase, 4-wire systems only.

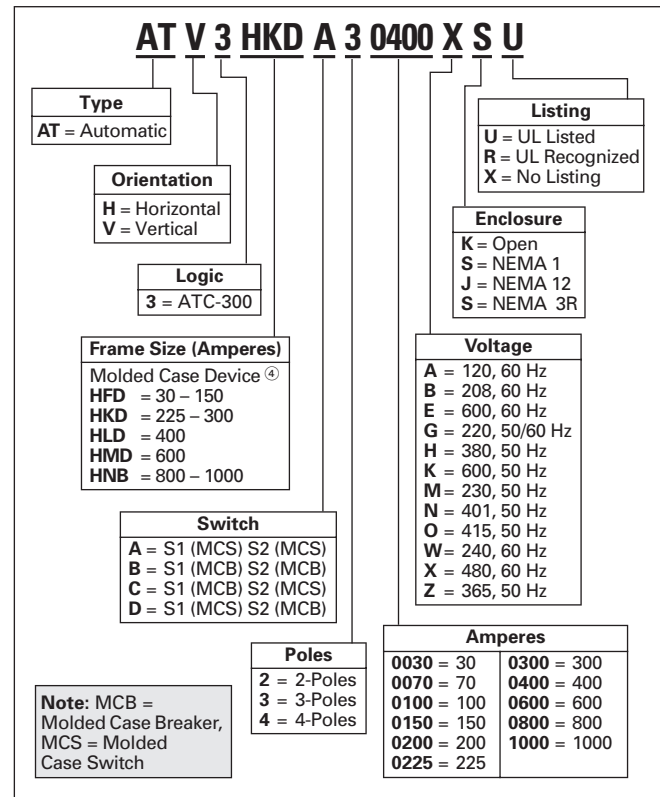
③ With multi-tap voltage selection panel.



**Typical (225 – 1000 A) Vertical Design Transfer Switch Equipment (Door Open and Deadfront Cover Removed)**

CSA is a registered trademark of the Canadian Standards Association. Cutler-Hammer is a federally registered trademark of Eaton Corporation. NEMA is the registered trademark and service mark of the National Electrical Manufacturers Association. UL is a federally registered trademark of Underwriters Laboratories Inc. BOCA is a registered trademark of Building Officials and Code Administrators International, Inc. Uniform Building Code (UBC) is a trademark of the International Conference of Building Officials (ICBO).

**Table 4. AT3 Transfer Switch Catalog Numbering System**



④ HFD = 200 and 225 amperes, HLD = 600 amperes, HMD = 800 amperes for 240/120 Vac single-phase, 3-wire and 208Y/120 Vac 3-phase, 4-wire systems only.

Eaton Electrical Inc.  
 1000 Cherrington Parkway  
 Moon Township, PA 15108  
 United States  
 tel: 1-800-525-2000  
 www.EatonElectrical.com

©2004 Eaton Corporation  
 All Rights Reserved  
 Printed in USA  
 Pub. No. PA01602002E / Z2897  
 November 2004