

EATON Starters and Contactors Overview



Cutler-Hammer's Freedom series of IEC contactors feature a compact space-saving design.

Components that meet IEC 60947 are more reliable, of higher quality, and are better matched to their intended application.

Contactor overview

The Cutler-Hammer CE15 Freedom Series IEC contactors offer big contactor ratings in a compact frame. The 45 mm frame contactors can handle up to 20 hp at 460V. They are easily DIN-rail mountable in either the vertical or horizontal upright position. Note: There is not enough space to assemble two contactors into a reversing contactor.

Starter overview

The Cutler-Hammer AE16 Series IEC starters are full voltage magnetic starters used for starting polyphase induction motors. These starters also provide protection to the motor against running or stalled overcurrents.

The 45 mm frame starters can handle up to 20 hp at 460V. They are easily DIN-rail mountable in either the vertical or horizontal upright position.

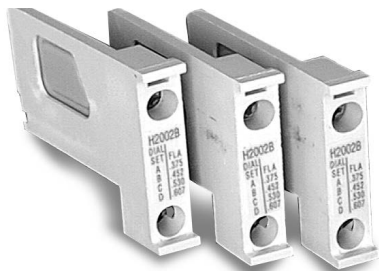
Starters are comprised of a contactor, overload relay and heater packs (sold separately). The overload relays have FLA adjustable dials.

Starter/contactor features and specifications

- EN60947-4-1 IEC 947-4-1 compliance (international standard for low voltage switchgear and control devices)
- UL-listed and CSA-certified
- 45mm frame rated maximum 20 hp at 460V; highest horsepower rating in a compact, space-saving design
- Long-life twin break, silver cadmium oxide contacts for excellent conductivity and superior resistance to welding and arc erosion
- 45mm open contactors, sizes A-F, with DIN-rail or universal base mounting
- DIN rail release mechanism: conveniently located on line side of contactor
- Designed to 2,000,000 electrical and 20,000,000 mechanical operations at maximum hp ratings through 20 hp at 460V. Adequate for most general duty control applications.
- Contactor and terminal markings conform to CENELEC EN50011.
- Holding circuit contact(s) supplied standard
- Lugs supplied standard on sizes A-F
- Tape wound coil
- Straight-through wiring

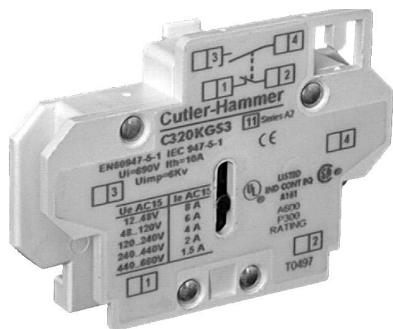


Motor Control Accessories



Heater packs

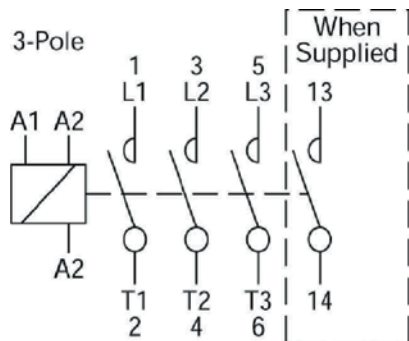
Heater packs are used with the C306DN3B overload relay. The load lugs are built into the overload base to allow load wiring prior to heater pack installation. Heater packs come in packs of three.



Auxiliary contacts

Auxiliary contacts are designed for installation on the Cutler-Hammer Freedom series contactors and starters. The snap-on design makes them quick and easy to install.

The bifurcated (i.e. contact is split into two fingers for redundant contact) design of the contact blocks features silver cadmium alloy contacts.



Auxiliary Contacts

Standard Trip-Class 20 Heater Packs

Part Number (Three heater packs)	Price	Max. Amps	Motor Full Load Ampere Rating Dial Position			
			A	B	C	D
H2001B-3	\$140.00	32	.254	.306	.359	.411
H2002B-3	\$140.00	32	.375	.452	.530	.607
H2003B-3	\$140.00	32	.560	.676	.791	.907
H2004B-3	\$140.00	32	.814	.983	1.15	1.32
H2005B-3	\$140.00	32	1.20	1.45	1.71	1.96
H2006B-3	\$140.00	32	1.79	2.16	2.53	2.90
H2007B-3	\$140.00	32	2.15	2.60	3.04	3.49
H2008B-3	\$140.00	32	3.23	3.90	4.56	5.23
H2009B-3	\$140.00	32	4.55	5.50	6.45	7.40
H2010B-3	\$140.00	32	6.75	8.17	9.58	11.0
H2011B-3	\$140.00	32	9.14	10.8	12.4	14.0
H2012B-3	\$140.00	32	14.0	16.9	19.9	22.8
H2013B-3	\$140.00	32	18.7	22.7	26.7	30.7
H2014B-3	\$140.00	32	23.5	28.5	33.5	38.5

Contactors terminal markings

Contactors terminals are identified by a two-digit number in accordance with international standards approved by CENELEC (European Committee for Electrotechnical Standardization). This distinctive number is marked on the top nameplate and designates the type and quantity of built-in auxiliary contacts. The first digit indicates the quantity of N.O. contacts and the second digit indicates the quantity of N.C. contacts. Example: 10E indicates a contactor with one N.O. and no N.C. auxiliary contacts (factory supplied). In addition, all terminals conform to both CENELEC and NEMA requirements. Auxiliary contact terminals use the first digit to indicate location and the second digit to indicate status (1-2 means N.C. and 3-4 means N.O.) Example: 13-14 indicates the first auxiliary contact and it is a N.O. See the diagram to the left for the contact label.



Mounting adapters

DIN-rail and panel mounting adapters are required when overload relays need to be separately mounted due to space requirements. The terminal base adapter includes line terminals and connects with the overload relays.

Mounting Adapters

Part Number	Price	Description
C306TB1	\$44.50	Mounting Adapter for 32A Overload Relay

Auxiliary Contacts

Part Number	Price	Description
C320KGS3	\$100.00	1 N.O. and 1 N.C.
C320KGS1	\$72.00	1 N.O.