

# AEB Series Bolted Motor Starters and Contactors

## Explosionproof, Dust-Ignitionproof, Watertight

Full Voltage. Combination and Non-Combination.

### NEC/CEC:

Class I, Division 1 and 2, Groups B, C, D  
Class I, Zone 1 and 2, Groups IIB + H<sub>2</sub>  
Class II, Division 1 and 2, Groups E, F, G  
Class III

### NEC/CEC:

NEMA 4, 4X, 7BCD, 9EFG  
CSA Type 4, 4X

### Application

- Combination and non-combination motor starters are used in areas where hazardous materials are handled or stored.
- These units provide disconnecting means, undervoltage protection, circuit protection, and motor running protection.

### Features

- Copperfree cast aluminum.
- Precision machined flame path between box and cover.
- Bolt on slotted mounting feet.
- Stainless steel, captive Quad-Lead® cover bolts (disengage in 1-1/2 turns).
- External stainless steel breaker operating handle.
- Ground lug package and installation instructions for termination of ground wire enclosed.
- Four point control terminal block, NEMA 1B with wire markers.
- Breaker operators can be locked in the ON or OFF position (combination starters only).
- Four plugged 3/4" NPSM outlets drilled and tapped for control devices.
- Standard outlets top and bottom.
- Plugged 1/2" outlets top and bottom for optional breather/drain.
- Components are mounted on a galvanized steel removable pan.
- Enclosures are designed to accept Cutler-Hammer +, or Square D ■ motor starters/circuit breakers. For other manufacturers, contact your local representative.
- O-ring gasket insures watertight integrity.

### Standard Materials

- Bodies and covers: copperfree (4/10 of 1%) aluminum
- Block hinges, cover bolts, handle, breaker and operator shafts: stainless steel
- O-ring: neoprene

### Standard Finish

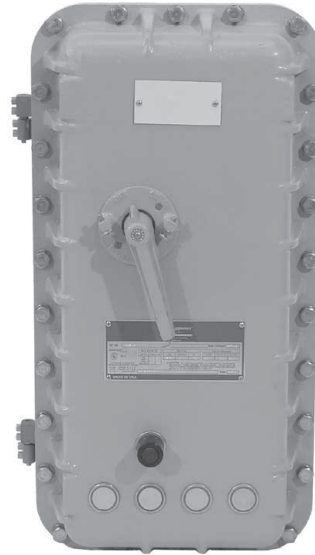
- Corrosion resistant gray powder coat epoxy inside and out

### Options

- See modifications page.

### NEC Certifications and Compliances

- ANSI/UL Standards: UL 508, UL 50, UL 1203
- CSA Standards: C22.2 No. 0-10, C22.2 No. 14-10, C22.2 No. 25-1996, C22.2 No. 30-M1986 and C22.2 No. 94-M91
- cCSAus Certified: 2561837



CONTROLS: NEC/CEC EXPLOSIONPROOF MOTOR STARTERS

Appleton®

+ Cutler-Hammer is a registered trademark of Eaton Corporation.

■ Square D is a registered trademark of Schneider Electric.

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### Catalog Numbering Guide

Example: The part number below depicts an Appleton, Class I, Division I, Groups B, C and D, NEMA Size 1, Bolted type, Combination Full Voltage Nonreversing Motor Starter operating at 480 Vac, Cutler-Hammer + starter w/120 Vac control voltage, and a Cutler-Hammer 7A MCP.

If a breaker is not required, omit last two characters.

|                                   |                                          |                                                                                                                                                                                                                                                                                                                                                                                         |          |                                                                                                                                                                                                                        |          |                                                                                                                                                                                       |                                                              |                                                                                                                                                                                                                                                                                                                                                                        |                                                            |
|-----------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| <b>AE</b>                         | <b>1</b>                                 | <b>B</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>B</b> | <b>4</b>                                                                                                                                                                                                               | <b>W</b> | <b>1</b>                                                                                                                                                                              | <b>C</b>                                                     | <b>2</b>                                                                                                                                                                                                                                                                                                                                                               | <b>▲</b>                                                   |
| NEC/CEC<br>Certified<br>AE Series |                                          | Starter Function:<br>A - FVNR (ATL)<br>B - Combination FVNR<br>M - Lighting Contactor<br>(3- thru 12-pole) ①<br>N - Combination<br>Lighting Contactor<br>(3- thru 12-pole) ①<br><br>Optional Starter Function ②:<br>C - FVR<br>D - Combination FVR<br>E - 2S1W<br>F - Comb. 2S1W<br>G - 2S2W<br>H - Combination 2S2W<br>J - Contactor (3 pole)<br>K - Combination<br>Contactor (3-pole) |          |                                                                                                                                                                                                                        |          | Control Voltage<br>(120 V coil standard):<br>1 - 120 Vac<br>2 - 240 Vac<br>3 - 380 Vac<br>4 - 480 Vac<br>6 - 600 Vac<br>8 - 480 V Coil/120 V<br>Control<br>9 - 208 Vac<br>0 - 277 Vac |                                                              |                                                                                                                                                                                                                                                                                                                                                                        | Suffix for Other<br>Options/Features:<br>See Modifications |
|                                   | NEMA Size:<br>0<br>1<br>2<br>3<br>4<br>5 |                                                                                                                                                                                                                                                                                                                                                                                         |          | Operating Voltage:<br>1 - 120 Vac<br>2 - 240 Vac<br>3 - 380 Vac<br>4 - 480 Vac<br>6 - 600 Vac<br>9 - 208 Vac                                                                                                           |          |                                                                                                                                                                                       | Breaker Manufacturer: ③<br>C - Cutler-Hammer<br>S - Square D |                                                                                                                                                                                                                                                                                                                                                                        |                                                            |
|                                   |                                          | Enclosure Type:<br>B Series                                                                                                                                                                                                                                                                                                                                                             |          | Starter Manufacturer: ③<br>W - Standard; Eaton/<br>Cutler-Hammer<br>(A200)<br>C - Freedom (AN16) Bi<br>Metal; Eaton/Cutler-<br>Hammer and<br>A - Freedom (AN19)<br>Electronic; Eaton/<br>Cutler-Hammer<br>S - Square D |          | MCP<br>1 - 3 Amp<br>2 - 7 Amp<br>3 - 15 Amp<br>4 - 30 Amp<br>5 - 50 Amp<br>6 - 70 Amp<br>7 - 100 Amp<br>8 - 150 Amp<br>9 - 250 Amp<br>0 - 400 Amp                                     |                                                              | MCP or Breaker Trip:<br>Breaker Trip<br>(Thermal Mag):<br>A - 15 Amp<br>B - 20 Amp<br>C - 25 Amp<br>D - 30 Amp<br>E - 35 Amp<br>F - 40 Amp<br>G - 50 Amp<br>H - 60 Amp<br>J - 70 Amp<br>K - 80 Amp<br>M - 90 Amp<br>N - 100 Amp<br>P - 125 Amp<br>Q - 150 Amp<br>R - 175 Amp<br>S - 200 Amp<br>T - 225 Amp<br>U - 250 Amp<br>V - 300 Amp<br>W - 350 Amp<br>X - 400 Amp |                                                            |

① Standard starter is manufactured by Square D; electrically operated, electrically held. Optional starter manufacture is ASCO; electrically operated, mechanically held. Contact your local sales representative for details.

② Contact your local sales representative for details.

③ Contact your local sales representative for additional UL Classified starters (Allen Bradley 509 and Vacuum, Sprecher and Schuh, Siemens, GE, and Cutler Hammer ITT Softstart and V200 Vacuum).

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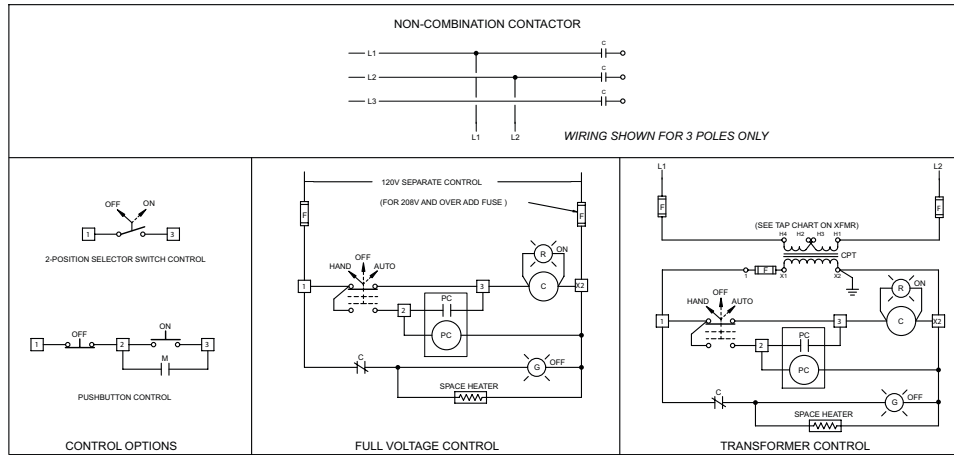
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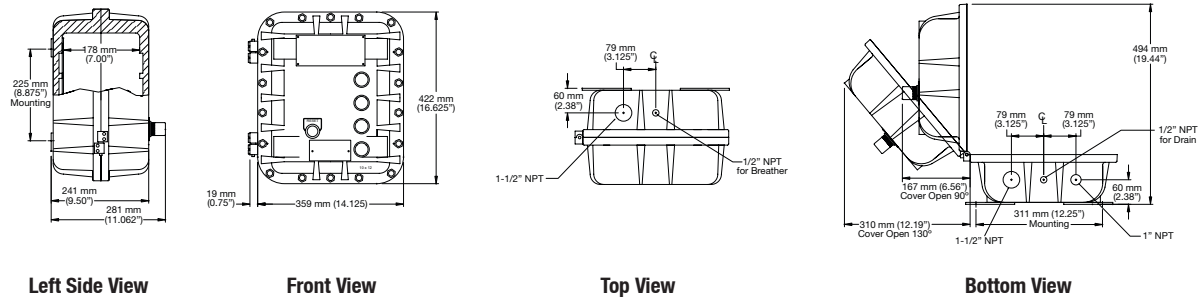
## Lighting Contactor — 3-Pole — 60 Hertz, 120 V Coil

| Line Voltage | Enclosure Size | Contactor Amps | Number of Poles | Catalog Number ▲ | Approximate Weight kg (lb) | Conduit Size (Inches) | Mounting Hardware Set Catalog Number |
|--------------|----------------|----------------|-----------------|------------------|----------------------------|-----------------------|--------------------------------------|
| 120          | 1              | 30             | 3               | AE1BM1S13        | 57 (125)                   | 1-1/2                 | AMH7                                 |
|              |                |                | 6               | AE1BM1S16        |                            |                       |                                      |
|              |                |                | 9               | AE1BM1S19        |                            |                       |                                      |
|              |                |                | 12              | AE1BM1S112       |                            |                       |                                      |

## Wiring Diagram



## Dimensions in Millimeters (Inches) — Lighting Contactor



▲ To complete the catalog number please add the appropriate suffix for other options/features. Suffixes, see AEB Series Motor Starters Modifications.