

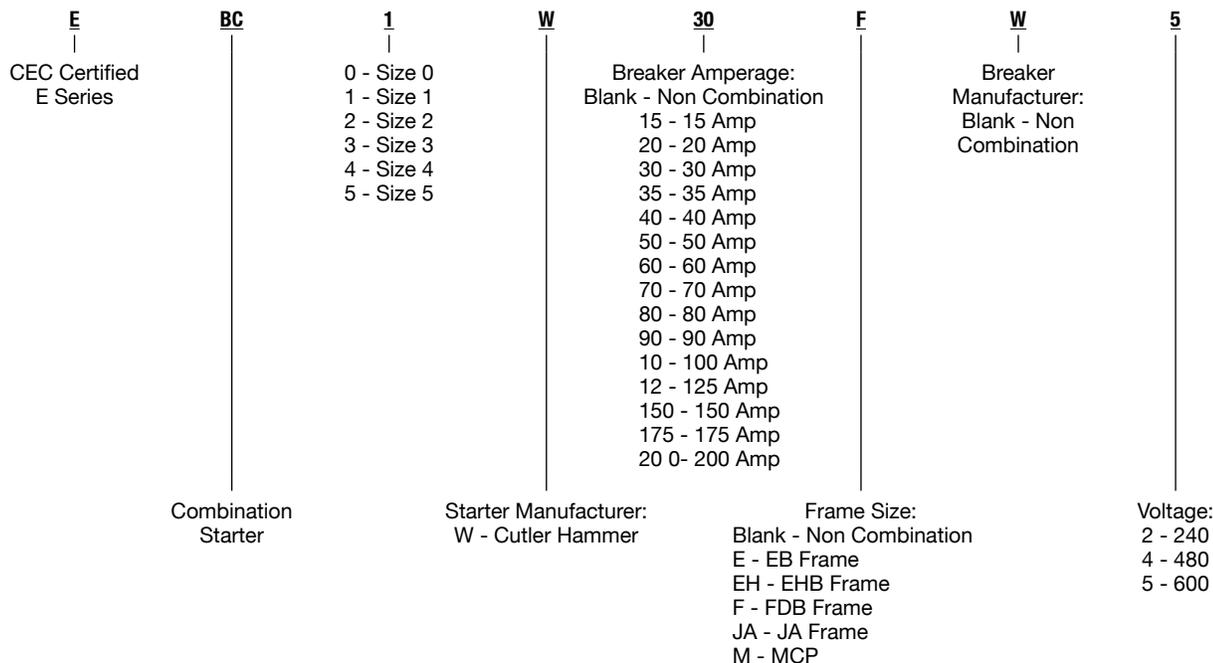
EBC Bolt-On Series Combination Line Starters with Breakers

Explosionproof, Dust-Ignitionproof

EBC, ERC, and ESC Series.

CEC:
 Class I, Groups C, D
 Class II, Groups E, F, G
 Class III
 NEMA 3R ①, 7CD, 9EFG, 12 ①

Catalog Number Logic



CONTROLS: NEC/CEC EXPLOSIONPROOF MOTOR STARTERS

Appleton®

Coil Voltage: If separate control or control transformer is required, add suffix **-120** immediately following the basic catalog number, preceding any accessory suffixes to be added.

Heater Selection: Select heater number from Heater Selection Table, based on motor full-load amperes. Add heater suffix to enclosure catalog number.

Starters and Breakers: Catalog listings for EBC enclosure have Cutler-Hammer + starters and breakers as standard.

Factory Installed Accessories: Add suffix to catalog number for accessories, if any.

Factory Installed Accessories

Description	Bolt-On Suffix	Description	Bolt-On Suffix
START-STOP push button	-GR	Additional NO or NC interlock — one (add prefix 2, 3 or 4 as needed)	-XLK
START-STOP push button (one barrel)	-DGR	Time delay low-voltage release for 3-wire control with 2 or 4-second adjustment.	
Universal push button (one)	—	For single-speed, nonreversing starters only.	
Dust-cap push button, Universal (one)	-DKU	Control circuit voltage:	
HAND-OFF-AUTO selector switch	-HOA	120 Vac, 60 Hz	-LVR1
ON-OFF selector switch	-BOF	240 Vac, 60 Hz	-LVR2
Pilot light — Red	-RPL	480 Vac, 60 Hz	-LVR4
Pilot light — Green	-GPL	Forward—Off— Reverse (Reversing Starters)	-FOR
Pilot light transformer, 240/120 Vac	-PLT2	High—Off—Low (2-speed starter)	-HOL
Pilot light transformer, 480/120 Vac	-PLT4	Drain and breather set	-DV
Pilot light transformer, 600/120 Vac	-PLT5		
Control transformer ③			
50 Vac non-fused, for size 0 and 1 starter	-CT50		
100 Vac non-fused, for size 2 starter	-CT100		
200 Vac non-fused, for size 3 and 4 starter	-CT200		
300 Vac non-fused, for size 5 starter	-CT300		

① Available upon request.

† Not available on ES1 and ES2 enclosures.

③ Control transformers have 480/240 Vac primary; 120 Vac secondary. Fused control transformers available on special order.

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

EBR 30, 60, 100 and 150 Amp Series Receptacles

Explosionproof, Dust-Ignitionproof

With Disconnect Switch or Circuit Breaker. Weatherproof Spring Cover. 600 Vac Max. 250 Vdc Max.

NEC:

Class I, Division 1 and 2, Groups B*, C, D

Class II, Division 1 and 2, Groups F, G

Class III

NEMA 3*, 3R*, 4*, 4X*, 7CD, 9FG

Applications

- Locations where receptacles are used with stationary or portable electrically operated devices such as:
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor-generator sets
 - Air conditioners
 - Compressors
 - Pumps
- Locations where damp or corrosive conditions exist
- Class I: classified locations such as:
 - Petrochemical plants
 - Petroleum refineries
 - Paint and chemical plants
 - Any location where ignitable vapors or gases are present
- Class II: classified locations such as:
 - Process industries where there are dust hazards from handling such products as flour, grain and starch or any location where ignitable amounts of dust are present or amounts which would adversely affect performance

Features

- Energized receptacle contacts deeply recessed to reduce danger of accidental touching.
- Style 2 (shell and extra pole) grounding.
- Spring door keeps dust out of receptacle when plug is not in use. Screw cap also supplied.
- Brass contacts exert constant pressure along entire contact surface and provide superior electrical contact.
- Contacts have beryllium copper wire springs.
- Plug mechanical cable clamps prevent strain on cables—they meet or exceed UL strain relief pull-out requirements.
- Neoprene bushing compressed by cable collar prevents entrance of water.
- Insulators provide superior dielectric and mechanical strength and lowest arc tracking.
- 1-1/2 NPT tapped conduit openings; one top two bottom.
- EBRH: interlocked disconnect switch provides safe connect and disconnect operation at 30, 60 or 100 Amp, 600 Vac maximum. Two or three pole, non-fused motor circuit switch. EBRH permits safe operation in Class I, Group B as well as Class I, Groups C and D, Class II, Groups F, G, and Class III.
- EBR: interlocked circuit breaker provides interlocked connect and disconnect operation as well as short circuit and thermal time delay overload protection.
- To operate, insert plug (which automatically locks into receptacle) and turn Breaker Handle to "ON" position. To remove plug, turn Handle to "OFF" position, lift Plug Release Knob and pull plug out.
- ACP and CPH plug fits Powertite™ Series hazardous location EBR and EBRH receptacles.



Standard Materials

- EBR and EBRH receptacles: copperfree (4/10 of 1% max.) aluminum receptacle and mounting box
- CPH and ACP plugs: copperfree (4/10 of 1% max.) aluminum housings
- Insulating blocks: fiber glass reinforced polyester

Standard Finishes

- Receptacles, mounting boxes, cord connector housings and caps: epoxy powder coat

Options

- For Group B version add suffix **-GB** to receptacle (Group B version not suitable for NEMA 4, 4X).
- For GE ⤴ breaker, add **-GE** to receptacle. Contact your local representative for availability and price.
- Molded case switch available on the 150 Amp versions, add suffix **-K** to receptacle.
- Special Polarization: Prevents plug insertion in a receptacle or connector wired for a different voltage. In installations where there are different line voltages, the special polarization option is desirable. This allows only plugs and receptacles wired for the same line voltage to be mated together. The receptacle or connector interior is positioned 22-1/2°, relative to the polarization rivet, to the right (as specified) of standard, and plug is polarized to correspond. This option can be added to receptacles using the Powertite™ Plug. Add suffix **-P4** to receptacle or plug.
- For 2" feed-thru openings (one top, one bottom) add suffix **-22** to receptacle.
- 1 N/O and 1 N/C Auxiliary Contacts. Add suffix **-AUX**.

NEC Certifications and Compliances

- UL Standard: UL 1010 (UL 1203), UL 894, UL 1682, UL 1686
- UL Listed: E79132, E10784, E313360(EBR)

• Flip cover suitable for NEMA 3, 3R only.

▼ NEMA 4 rating maintained with Appleton NEMA 4 plug installed. Install screw cover for 4, 4X. Both covers are included with product.

◆ Add suffix **-GB** to Cat. No. for Group B. (Group B version not suitable for NEMA 4, 4X).

▶ GE is a registered trademark of General Electric Company.

EBR 30, 60, 100 and 150 Amp Series Receptacles

Explosionproof, Dust-Ignitionproof

With Disconnect Switch or Circuit Breaker. Weatherproof Spring Cover. 600 Vac Max. Pressure Wire Terminals.

NEC:

Class I, Division 1 and 2, Groups B*, C, D

Class II, Division 1 and 2, Groups F, G

Class III

NEMA 3*, 3R*, 4*, 4X*, 7CD, 9FG

EBRH Receptacles with Disconnect Switch

Receptacle	Wires/Poles	Catalog Number
30 Amp	2W, 3P	EBRH3023DS
	3W, 4P	EBRH3034DS
60 Amp	2W, 3P	EBRH6023DS
	3W, 4P	EBRH6034DS
100 Amp	2W, 3P	EBRH1023DS
	3W, 4P	EBRH1034DS



EBRH with Switch

EBR Receptacles with Circuit Breaker ◀

Receptacle	Circuit Breaker Amp	Pole	Catalog Number		
			with 480 Vac EHD Breaker	with 600 Vac FDB Breaker	with 600 Vac FD Breaker
30 Amp 2W, 3P	20	2	EBR3023EH20	EBR3023FB20	EBR3023HFB20
	30	2	EBR3023EH30	EBR3023FB30	EBR3023HFB30
	40	2	EBR3023EH40	EBR3023FB40	EBR3023HFB40
	50	2	EBR3023EH50	EBR3023FB50	EBR3023HFB50
30 Amp 3W, 4P	20	3	EBR3034EH20	EBR3034FB20	EBR3034HFB20
	30	3	EBR3034EH30	EBR3034FB30	EBR3034HFB30
	40	3	EBR3034EH40	EBR3034FB40	EBR3034HFB40
	50	3	EBR3034EH50	EBR3034FB50	EBR3034HFB50
60 Amp 2W, 3P	50	2	EBR6023EH50	EBR6023FB50	EBR6023HFB50
	60	2	EBR6023EH60	EBR6023FB60	EBR6023HFB60
	70	2	EBR6023EH70	EBR6023FB70	EBR6023HFB70
	90	2	EBR6023EH90	EBR6023FB90	EBR6023HFB90
60 Amp 3W, 4P	100	2	EBR6023EH100	EBR6023FB100	EBR6023HFB100
	50	3	EBR6034EH50	EBR6034FB50	EBR6034HFB50
	60	3	EBR6034EH60	EBR6034FB60	EBR6034HFB60
	70	3	EBR6034EH70	EBR6034FB70	EBR6034HFB70
100 Amp 2W, 3P	90	3	EBR6034EH90	EBR6034FB90	EBR6034HFB90
	100	3	EBR6034EH100	EBR6034FB100	EBR6034HFB100
	50	2	EBR1023EH50	EBR1023FB50	EBR1023HFB50
	70	2	EBR1023EH70	EBR1023FB70	EBR1023HFB70
100 Amp 3W, 4P	90	2	EBR1023EH90	EBR1023FB90	EBR1023HFB90
	100	2	EBR1023EH100	EBR1023FB100	EBR1023HFB100
	50	3	EBR1034EH50	EBR1034FB50	EBR1034HFB50
	70	3	EBR1034EH70	EBR1034FB70	EBR1034HFB70
150 Amp 3W, 4P	90	3	EBR1034EH90	EBR1034FB90	EBR1034HFB90
	100	3	EBR1034EH100	EBR1034FB100	EBR1034HFB100
	100	3	N/A	N/A	EBR15034FD100 ①
	125	3	N/A	N/A	EBR15034FD125 ①
	150	3	N/A	N/A	EBR15034FD150 ①



EBR with Breaker

1-1/2" threaded conduit openings – one in top and two in bottom

◀ Circuit Breakers are Cutler-Hammer. Cutler-Hammer F-Frame breakers available up to 175 Amps. Add **GE** after EH, FB, or HFB for GE Circuit Breakers. Contact your local representative for availability and price. Cutler-Hammer is a registered trademark of Eaton Corporation. GE is a registered trademark of General Electric Company.

• Flip cover suitable for NEMA 3, 3R only.

▼ NEMA 4 rating maintained with Appleton NEMA 4 plug installed. Install screw cover for 4, 4X. Both covers are included with product.

◆ Add suffix **-GB** to Cat. No. for Group B. (Group B version not suitable for NEMA 4, 4X)

① Molded Case Switch available. Add suffix **-K**.

EBR Receptacles 30, 60, 100 and 150 Amp

Circuit Breaker and Disconnect Switch Data

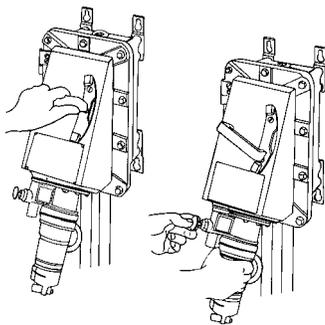
600 Vac Max.

NEC:
 Class I, Division 1 and 2, Groups B*, C, D
 Class II, Division 1 and 2, Groups F, G
 Class III
 NEMA 3*, 3R*, 4*, 4X*, 7CD, 9FG



EBR Shown

Solderless lugs are provided for line connections, and receptacle is prewired to the load side of breaker. Cover-mounted components leave entire enclosure space free for pulling of line conductors and wiring.



EBR Shown

Plug is mechanically locked in receptacle when circuit breaker is ON. Design provides interlocked connect and disconnect operation as well as short circuit and thermal time delay overload protection.

Breaker operating handle can be padlocked in either ON or OFF position and is trip-free.

Enclosure has additional 3/4" threaded openings top and bottom for installation of optional drain and breather; reducers furnished.

- Flip cover suitable for NEMA 3, 3R only.
- ▼ NEMA 4 rating maintained with Appleton NEMA 4 plug installed. Install screw cover for 4, 4X. Both covers are included with product.
- ◀ Cutler-Hammer is a registered trademark of Eaton Corporation.

EBR Horsepower Tables

These Cutler-Hammer * circuit breaker recommendations are for induction motors running with usual speed and torque characteristics. Ambient temperature, and frequency of starting could require different protective characteristics.

	HP	120 Vac	240 Vac	480 Vac	600 Vac
EBR3023 (2W, 3P, 1-Phase, 30 Amp 2-Pole)	1	40EHD	20EHD	15EHD	15FDB
	1-1/2	40EHD	30EHD	15EHD	15FDB
	2	50EHD	30EHD	20EHD	15FDB
	3	—	40EHD	30EHD	20FDB
	5	—	—	40EHD	30FDB
EBR6023 (2W, 3P, 1-Phase, 60 Amp 2-Pole)	7-1/2	—	—	40EHD	40FDB
	3	50EHD	—	—	—
	5	100EHD	50EHD	—	—
	7-1/2	—	70EHD	—	—
EBR3034 (3W, 4P, 3-Phase, 30 Amp 3-Pole)	10	—	—	50EHD	40FDB
	1	—	15EHD	15EHD	15FDB
	1-1/2	—	15EHD	15EHD	15FDB
	2	—	20EHD	15EHD	15FDB
	3	—	30EHD	15EHD	15FDB
	5	—	40EHD	20EHD	20FDB
	7-1/2	—	50EHD	30EHD	30FDB
	10	—	—	40EHD	30FDB
	15	—	—	40EHD	40FDB
	20	—	—	—	50FDB
EBR6034 (3W, 4P, 3-Phase, 60 Amp 3-Pole)	10	—	50EHD	—	—
	15	—	70EHD	—	—
	20	—	—	50EHD	—
	25	—	—	50EHD	50FDB
	30	—	—	70EHD	50FDB
	40	—	—	—	70FDB
EBR1034 (3W, 4P, 3-Phase, 100A and 150 Amp 3-Pole)	20	—	100EHD	—	—
	25	—	100EHD	—	—
	30	—	150FD	—	—
	40	—	—	100EHD	—
	50	—	—	100EHD	100FDB
	60	—	—	125FD	125FDB
	75	—	—	—	125FDB

EBR Circuit Breaker Data — Cutler-Hammer *

Frame	Continuous		Interrupting Ratings (RMS SYM Amp)		
	Amp	Max Volts	240 Vac	480 Vac	600 Vac
EHD	20-100	480	18,000	14,000	—
FDB	20-125	600	18,000	14,000	14,000
FD	20-150	600	65,000	25,000	18,000

EBR Horsepower Rating Table — Disconnect Switch

Max. Amp	Max. Horsepower Rating				
	120 Vac	240 Vac	480 Vac	600 Vac	250 Vdc
30	5	10	20	25	7-1/2
60	10	20	40	60	15
100	15	30	75	75	25
150	—	50	100	150	—

Plugs for EBR and EBRH Receptacles

NEC:

Class I, Division 1 and 2, Groups B*, C, D
 Class II, Division 1 and 2, Groups F, G
 Class III
 NEMA 3*, 3R*, 4*, 4X*, 7CD, 9FG

ACP Plugs for EBR and EBRH Receptacles

Cable Dia. (Inches)	30 Amp		60 Amp		100 Amp		150 Amp
	2W, 3P	3W, 4P	2W, 3P	3W, 4P	2W, 3P	3W, 4P	3W, 4P
.500 to 1.250	ACP3023BC	ACP3034BC	—	—	—	—	—
.500 to 1.375	—	—	ACP6023BC	ACP6034BC	—	—	—
.875 to 1.906	—	—	—	—	ACP1023CD	ACP1034CD	ACP15034CD
1.09 to 2.187	—	—	—	—	—	—	ACP15034DE

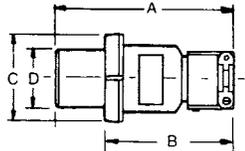


CPH Plugs for EBR and EBRH Receptacles

Cable Dia. (Inches)	30 Amp		60 Amp		100 Amp		150 Amp
	2W, 3P	3W, 4P	2W, 3P	3W, 4P	2W, 3P	3W, 4P	3W, 4P
.390 to 1.375	CPH3023BC	CPH3034BC	CPH6023BC	CPH6034BC	—	—	—

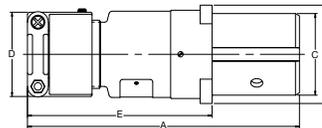


Dimensions of ACP Plugs



Max. Amp	No. Poles	Dimensions in Millimeters (Inches)			
		A	B	C	D
30	2,3,4	152.4 (6.00)	120.6 (4.75)	79.5 (3.13)	47.2 (1.86)
60	2,3	198.3 (7.81)	125.4 (4.94)	88.9 (3.50)	56.6 (2.23)
60	4	198.3 (7.81)	125.4 (4.94)	96.7 (3.81)	64.7 (2.55)
100	2,3	266.7 (10.50)	168.4 (6.63)	101.6 (4.00)	62.7 (2.47)
100	4	266.7 (10.50)	168.4 (6.63)	107.9 (4.25)	69.0 (2.72)
150 (CD & DE)	4	266.7 (10.50)	168.4 (6.63)	107.9 (4.25)	69.0 (2.72)

Dimensions of CPH Plugs



Max. Amp	Wire/Pole	Dimensions in Millimeters (Inches)				
		A	B	C	D	E
30	2W, 3P; 3W, 4P	155.7 (6.13)	60.4 (2.38)	47.2 (1.86)	6.68 (2.63)	112.7 (4.44)
60	2W, 3P	214.3 (8.44)	77.7 (3.06)	77.7 (3.06)	6.68 (2.63)	144.5 (5.69)
60	3W, 4P	214.3 (8.44)	77.7 (3.06)	64.7 (2.55)	6.68 (2.63)	144.5 (5.69)

• Flip cover suitable for NEMA 3, 3R only.

▼ NEMA 4 rating maintained with Appleton NEMA 4 plug installed. Install screw cover for 4, 4X. Both covers are included with product.

EBR 30, 60, 100 and 150 Amp Series Receptacles

Explosionproof, Dust-Ignitionproof

With Disconnect Switch or Circuit Breaker. Weatherproof Spring Cover. 600 Vac Max. 250 Vdc Max.

NEC:

Class I, Division 1 and 2, Groups B*, C, D

Class II, Division 1 and 2, Groups F, G

Class III

NEMA 3*, 3R*, 4*, 4X*, 7CD, 9FG

Replacement Parts

Description	Catalog Number
30 Amp, 2W, 3P Receptacle Interior	EBRI3023
30 Amp, 3W, 4P Receptacle Interior	EBRI3034
60 Amp, 2W, 3P Receptacle Interior	EBRI6023
60 Amp, 3W, 4P Receptacle Interior	EBRI6034
100 Amp, 2W, 3P Receptacle Interior	EBRI1023
100 Amp, 3W, 4P Receptacle Interior	EBRI1034
150 Amp, 3W, 4P Receptacle Interior	EBRI15034
30 Amp, 2W, 3P Disconnect Interlock Rod Assembly	DEJS30
30 Amp, 3W, 4P Disconnect Interlock Rod Assembly	DEJS30
60 Amp, 2W, 3P Disconnect Interlock Rod Assembly	DEJS60A
60 Amp, 3W, 4P Disconnect Interlock Rod Assembly	DEJS60B
100 Amp, 2W, 3P Disconnect Interlock Rod Assembly	DEJS100A
100 Amp, 3W, 4P Disconnect Interlock Rod Assembly	DEJS100B
30 Amp, 2W, 3P Breaker Interlock Rod Assembly	DEJS30
30 Amp, 3W, 4P Breaker Interlock Rod Assembly	DEJS30
60 Amp, 2W, 3P Breaker Interlock Rod Assembly	DEJS60A
60 Amp, 3W, 4P Breaker Interlock Rod Assembly	DEJS60B
100 Amp, 2W, 3P Breaker Interlock Rod Assembly	DEJS100A
100 Amp, 3W, 4P Breaker Interlock Rod Assembly	DEJS100B
150 Amp, 3W, 4P Breaker Interlock Rod Assembly	DEJS100B

Appleton®

PLUGS AND RECEPTACLES: NEC/CEC HAZARDOUS LOCATION

• Flip cover suitable for NEMA 3, 3R only.

▼ NEMA 4 rating maintained with Appleton NEMA 4 plug installed. Install screw cover for 4, 4X. Both covers are included with product.

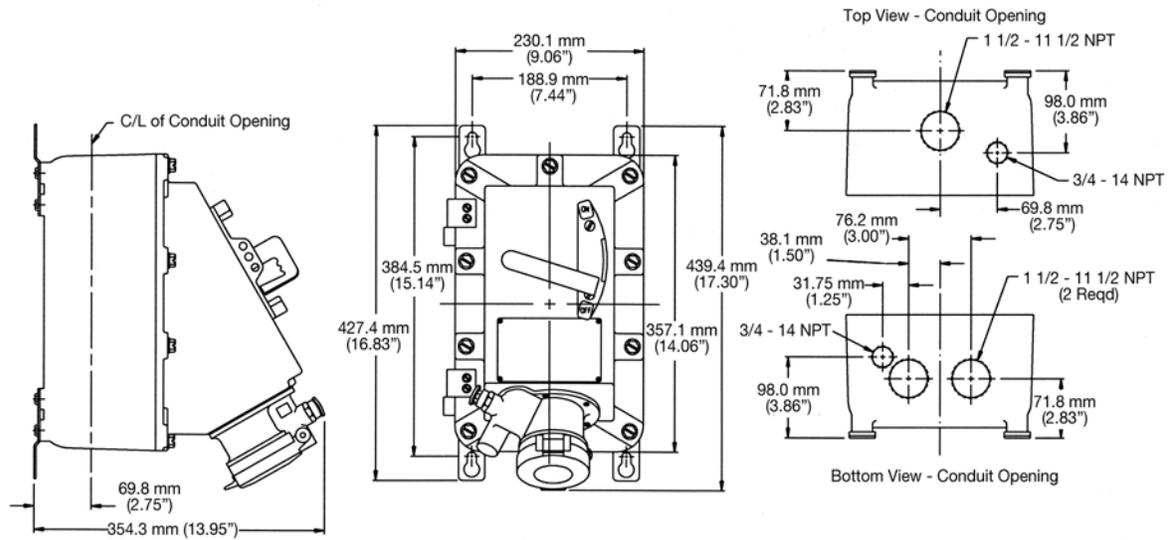
EBR 30, 60, 100 and 150 Amp Series Receptacles

NEC:

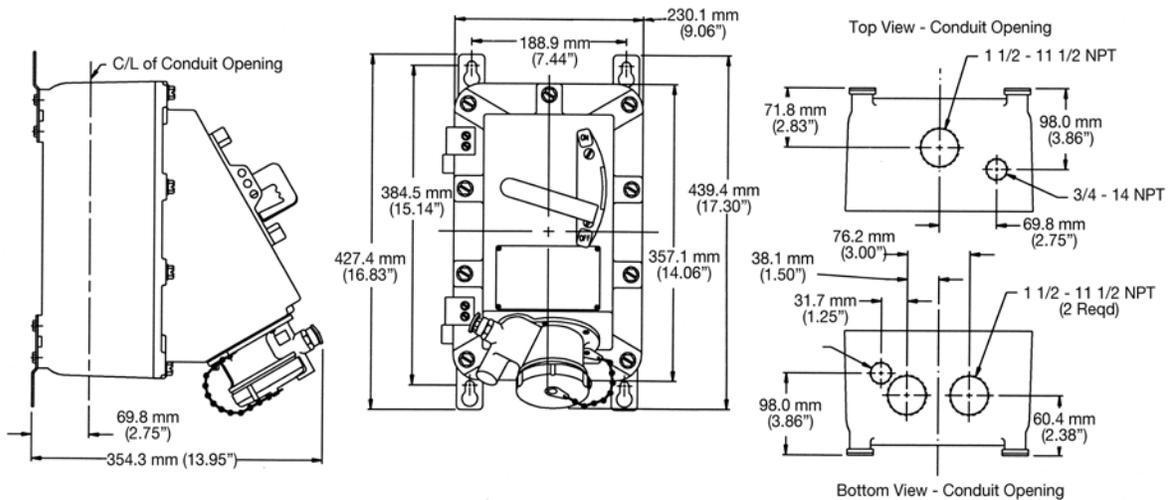
Class I, Division 1 and 2, Groups B*, C, D
 Class II, Division 1 and 2, Groups F, G
 Class III
 NEMA 3*, 3R*, 4*, 4X*, 7CD, 9FG

Dimensions in Millimeters (Inches)

Shown with Flip Cover



Shown with Screw Cover



- Flip cover suitable for NEMA 3, 3R only.
- ▼ NEMA 4 rating maintained with Appleton NEMA 4 plug installed. Install screw cover for 4, 4X. Both covers are included with product.