

# EBMB circuit breakers and enclosures

Cl. I, Div. 1 & 2, Groups B, C, D  
 Cl. II, Div. 1, Groups E, F, G  
 Cl. II, Div. 2, Groups F, G  
 Cl. III  
 NEMA 3, 3R, 4<sup>A</sup>, 4X<sup>B</sup>, 7BCD, 9EFG, 12

Explosionproof  
 Dust-ignitionproof  
 Raintight  
 Wet Locations  
 Watertight

3C

3C

## Applications:

EBM hinged cover motor control enclosures are used:

- For general motor control and circuit protection – indoors and outdoors – in damp, wet, dirty, dusty hazardous locations without the need for a protective shelter
- In areas where frequent wash downs are necessary or where heavy rain or water spray is prevalent
- To provide line disconnect means and short circuit protection
- For service entrance, feeder or branch circuit protection for lighting, heating, appliance and motor circuits
- On switchracks or other assemblies where it's desired that motor control be centrally located

## Features:

- Rugged, corrosion-resistant, cast copper-free aluminum construction (less than 0.4 of 1%)
- Circuit breaker operating handle located through the right side wall of the body permits visual confirmation of correct component assembly and operation
- Total compliance to the wiring end room requirements of the National Electrical Code
- Semi-clamshell enclosure design, with an external flanged ground joint between body and cover, makes interior components more accessible
- Minimum enclosure-to-enclosure spacing with little interference between the opened cover and an adjacent enclosure
- Copper-free aluminum hinges allow the cover to swing well out of the way
- Stainless steel, quick release, captive, hex head cover bolts; stainless steel springs provide clear indication cover bolts are fully retracted from body
- Versatile, internal operating mechanisms allow for field adjustment to accommodate popular manufacturers' breakers
- Simple, straightforward installation of breaker on pre-drilled mounting plate within enclosure; mounting plate also field removable
- Circuit breaker external operating handle can be padlocked in either ON or OFF positions
- Neoprene cover gasket permanently attached to the cover seals out moisture
- Bodies have top and bottom drilled and tapped entrances for power conduits and control conduits; removable reducers are supplied, as standard, to accommodate smaller size conduits; all conduit entrances are plugged
- Tap-on mounting feet
- Optional EMPS control devices may be added to enclosure cover
- Steel bracket for lifting larger enclosures during installation supplied as standard

## Standard materials:

- Body and cover – copper-free aluminum
- Operating handle – copper-free aluminum
- Operating shaft and bushing – stainless steel
- Interior parts – sheet steel, electrogalvanized
- Cover bolts, washers and retractile springs – stainless steel

<sup>A</sup>Enclosure not suitable for NEMA 4 or 4X with cover mounted operators.

<sup>B</sup>With S752 or S753 suffix.

<sup>C</sup>1000A frame (max. 800A trip).



EBM motor control enclosures accommodate popular makes of circuit breakers

## Certifications and compliances:

### NEC/CEC:

- Class I, Divisions 1 & 2, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class II, Division 2, Groups F, G
- Class III

### UL standards:

- UL1203 – Hazardous (Classified) Locations
- UL2062 – High AIC Rating (Interrupting Capacity) for Groups C, D

Voltage (AC)	RMS symmetrical amps
240	65,000
480	50,000
600	25,000

### CSA standard:

- C22.2 No. 30

### Environmental ratings:

- NEMA 3, 3R, 4<sup>A</sup>, 4X<sup>B</sup>, 7BCD, 9EFG, 12

## Electrical ratings:

- Circuit breakers – 100, 150, 225, 250, 400, 600, 800, 1000<sup>C</sup> ampere frame sizes

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## Options:

The following options are available from the factory by adding suffix to catalog number – suffixes are added alphanumerically.

### Part number example:

EBMBB-①-WT30FDB36-②

① Options in this position are additions to the enclosure itself and should be listed alphanumerically.

② Options in this position are modifications to the circuit breaker and should be listed alphanumerically.



EBMB circuit breaker enclosures are available with breakers from 100 to 1000<sup>ⓐ</sup> amp frame sizes

Description	Position in Cat. #	Suffix
• Ambient compensated circuit breaker trip setting.....②		<b>AC</b>
• Pilot light, 120 VAC, red jewel, with blank indicating plate.....①		<b>J1<sup>ⓕ</sup></b>
• Pilot light, 120 VAC, green jewel, with blank indicating plate.....①		<b>J3<sup>ⓕ</sup></b>
• LED pilot lights (in place of standard incandescent lamps).....①		<b>LED</b>
• START-STOP pushbuttons (requires two spaces).....①		<b>PB23<sup>ⓔ</sup>ⓐ</b>
• Space heater, 120V, 25 watts.....①		<b>R11</b>
• Space heater, 240V, 25 watts.....①		<b>R22</b>
• Space heater, 480V, 25 watts.....①		<b>R44</b>
• Insulated neutral with two connectors.....①		<b>S146</b>
• Standard drain (Class I, Groups B, C, D; Class II, Groups E, F, G; Class III).....①		<b>S756<sup>ⓐ</sup></b>
• Standard breather and drain (Class I, Groups B, C, D; Class II, Groups E, F, G; Class III).....①		<b>S756V<sup>ⓐ</sup></b>
• External epoxy finish.....①		<b>S752</b>
• Internal and external epoxy finish.....①		<b>S753</b>
• 12-point terminal block – 30 amp, 300V.....①		<b>S786</b>
• General purpose control relay, 4-pole N.O., contacts rated 10A at 600V, coil 120 VAC, 50/60 Hz.....①		<b>S787</b>
<b>Auxiliary switch on circuit breaker:</b>		
• 1A and 1B contacts.....②		<b>S784</b>
• 2A and 2B contacts.....②		<b>S785</b>

<sup>ⓓ</sup> Enclosure not suitable for NEMA 4 or 4X with cover mounted operators.

<sup>ⓔ</sup> With S752 or S753 suffix.

<sup>ⓕ</sup> If desired, markings on indicating plates may be added to catalog number. Select from the list of standard markings and DSL legend plate listings in Section 1C.

<sup>ⓐ</sup> 1000A frame (max. 800A trip).

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## Ordering information:

To order an enclosure complete with circuit breaker, insert the manufacturer's symbols in the designated positions of the catalog number. Symbols are shown in the footnotes below.

Enclosures only can be ordered. Select from listings below.

Circuit breaker		Enclosure			
No. of poles <sup>I</sup>	Voltage	Circuit breaker frame size	Cat. # Without circuit breaker	Circuit breaker amperage	Cat. # With circuit breaker
3	240 VAC or 125-250 VDC	100A	EBMBA <sup>K</sup>	15-70A	EBMBA TT <sup>Q</sup> TEB32
3	240 VAC or 125-250 VDC	150A	EBMBA <sup>L M</sup>	10-70A	EBMBA TT <sup>Q</sup> TEB32
3	480 VAC or 250 VDC	100A	EBMBA <sup>K</sup>	15-70A	EBMBA <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 34
3	480 VAC or 250 VDC	150A	EBMBA <sup>L M</sup>	10-70A	EBMBA TT <sup>Q</sup> TEB34
3	600 VAC	150A	EBMBA <sup>L M N</sup>	10-70A	EBMBA <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 36
3	240 VAC or 125-250 VDC	100A	EBMBB <sup>K</sup>	15-100A	EBMBB TT <sup>Q</sup> TEB32
3	240 VAC or 125-250 VDC	150A	EBMBB <sup>L M</sup>	10-150A	EBMBB TT <sup>Q</sup> TEB32
3	480 VAC or 250 VDC	100A	EBMBB <sup>K</sup>	15-100A	EBMBB <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 34
3	480 VAC or 250 VDC	150A	EBMBB <sup>L M</sup>	10-150A	EBMBB TT <sup>Q</sup> TEB34
3	600 VAC	150A	EBMBB <sup>L M N</sup>	15-150A	EBMBB <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 36
3	600 VAC	250A	EBMBG <sup>Q</sup>	70-250A	EBMBG <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 36
3	600 VAC or 250 VDC	400A	EBMBK <sup>P</sup>	100-400A	EBMBK <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 36
3	600 VAC or 250 VDC	600A	EBMBL <sup>Q</sup>	250-600A	EBMBL WT <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 36
3	600 VAC or 250 VDC	800A	EBMBL <sup>R</sup>	300-800A	EBMBL WT <sup>Q</sup> <sup>Q</sup> <sup>Q</sup> 36

### Ⓚ Circuit breakers

Manufacturer	Symbol
Cutler-Hammer	WT
General Electric	TT

### Ⓚ Select trip setting

Frame size	Trip setting
100A frame (EHD) <sup>K</sup>	15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100
150A frame (TEB, TED, HFD) <sup>L M N</sup>	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110, 125, 150
225/250A frame (JD, JDB, HJD) <sup>Q</sup>	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250
400A frame (KD, KDB, HKD) <sup>P</sup>	100, 125, 150, 175, 200, 225, 250, 300, 350, 400
600A frame (LD, HLD) <sup>Q</sup>	250, 300, 350, 400, 450, 500, 600
800A frame (MD) <sup>R</sup>	300, 350, 400, 450, 500, 600, 700, 800

### Ⓚ Select circuit breaker frame type based on frame size, voltage and manufacturer desired

Manufacturer	100A and 150A frame			250A frame <sup>Q</sup>	400A frame	600A frame	800A frame
	240 VAC	480 VAC	600 VAC	600 VAC	600 VAC	600 VAC	600 VAC
Cutler-Hammer	–	EHD	FDB HFD <sup>S</sup>	JD <sup>T</sup> JDB <sup>U</sup> HJD <sup>S</sup>	KD <sup>T</sup> KDB <sup>U</sup> HKD <sup>V</sup>	LD HLD <sup>V</sup>	MD
General Electric	TEB	TED	TEB				

<sup>H</sup> Enclosure not suitable for NEMA 4 or 4X with cover mounted operators.

<sup>I</sup> With S752 or S753 suffix.

<sup>J</sup> Depending on availability from the circuit breaker manufacturer, 1- and 2-pole can be furnished. Information available upon request. Example of an adjusted part number: EBMBB WT100EDH34 becomes EBMBB WT100EDH24.

<sup>K</sup> EBMBA will accept 15 through 70A trip; EBMBB will accept 15 through 100A trip.

<sup>L</sup> EBMBA will accept 10 through 70A trip; EBMBB will accept 10 through 150A trip.

<sup>M</sup> General Electric TEB frame available from 10 through 100A trip. TED frame available from 10 through 150A trip.

<sup>N</sup> Cutler-Hammer FDB and HFD frame available from 15 through 150A trip.

<sup>Q</sup> Cutler-Hammer JD and JDB types are 250A frame, available 70, 90, 100 and 125 through 250A trip.

<sup>P</sup> Cutler-Hammer KD and KDB frames available from 100 through 400A trip.

<sup>Q</sup> Cutler-Hammer LD and HLD frame available from 300 through 400 and 500, 600A trip.

<sup>R</sup> Cutler-Hammer MD frame available from 400 and 500 through 800A trip.

<sup>S</sup> Cutler-Hammer HFD and HJD are rated at 65kAIC at 480V and 25kAIC at 600V.

<sup>T</sup> Interchangeable trip unit.

<sup>U</sup> Non-interchangeable trip unit.

<sup>V</sup> Cutler-Hammer HKD and HLD are rated at 65kAIC at 480V and 35kAIC at 600V.

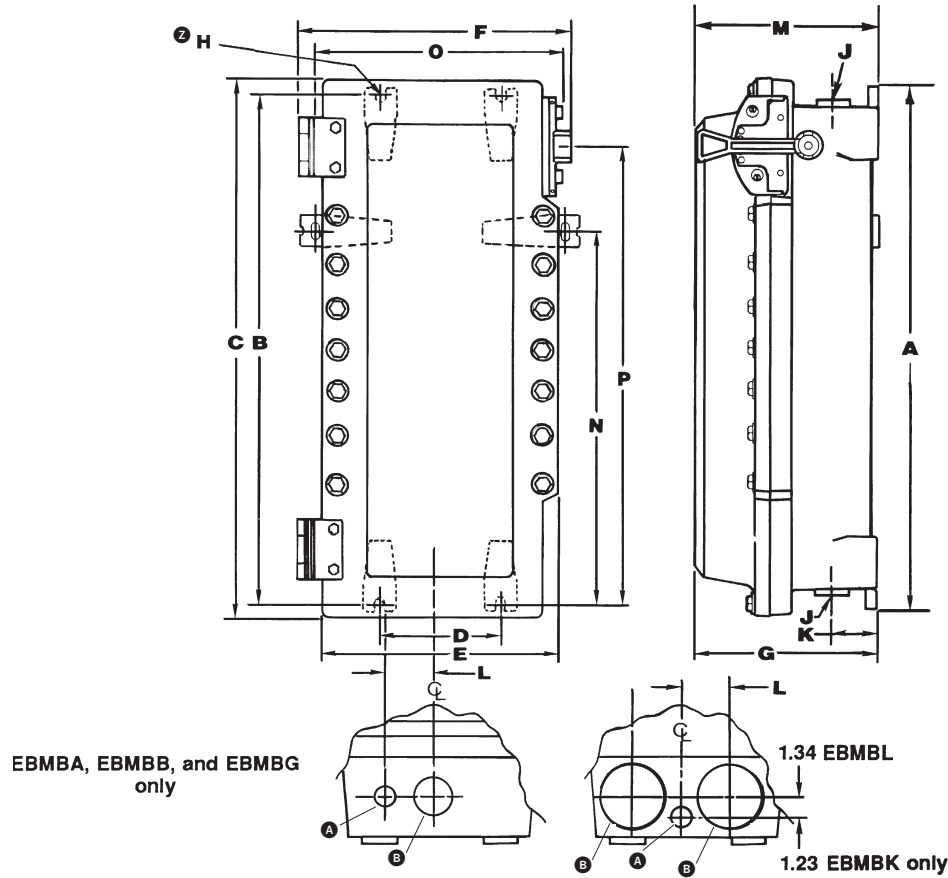
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## Dimensions<sup>Ⓞ</sup> (in inches):



EBMBA, EBMBB, and EBMGB only

J<sup>Ⓟ</sup>  
 (conduit entry  
 trade size)

Cat. # Enclosure only	Enclosure size symbol	A	B	C	D	E	F	G	J <sup>Ⓟ</sup> (conduit entry trade size)		K	L	M	N	O	P
									Drilled and tapped	With RE						
<b>100A frame</b>																
EBMBA	A	18.25	17.25	19.40	6.00	13.03	14.78	10.25	2"	1.5"	3.25	3.13	10.25	-	-	14.50
<b>100 and 150A frame</b>																
EBMBB	B	25.75	24.75	26.90	6.00	13.03	14.78	10.25	2"	1.5"	3.25	3.13	10.25	-	-	22.00
<b>225 and 250A frame</b>																
EBMBG	G	37.50	36.50	39.28	6.00	13.03	14.78	10.25	3"	2.5"	3.25	3.13	10.25	-	-	34.06
<b>400A frame</b>																
EBMBK	K	43.12	41.50	42.65	12.00	17.65	20.28	10.92	(2) 3"	(2) 2.5"	3.25	3.00	10.92	-	-	29.23
<b>600, 800 and 1000A frame<sup>Ⓞ</sup></b>																
EBMBL	L	53.25	51.50	53.28	12.00	17.90	20.58	13.03	(2) 4"	(2) 3.5"	4.00	3.50	13.13	41.50	18.40	29.88

<sup>W</sup>Enclosure not suitable for NEMA 4 or 4X with cover mounted operators. Breather and drain entries must be plugged for NEMA 4 rating.

<sup>X</sup>With S752 or S753 suffix.

<sup>V</sup>Dimensions are approximate, not for construction purposes.

<sup>Z</sup>Use 1/2" diameter bolts for mounting all enclosures (see 'H'). **Note:** Lifting bracket will accommodate a maximum 2 ton hook.

<sup>A</sup>1" drilled and tapped conduit entry for control conductors supplied with PLG plug (top and bottom).

<sup>B</sup>Conduit entrance(s) for power conductors (top and bottom). All conduit entrance(s) supplied with RE reducer and PLG plug.

<sup>C</sup>1000A frame (max. 800A trip).