

MOEM MCCB product selection guide



This guide will help you:

- Say “yes” more often
- Have more successful sales calls
- Partner with the product line and do business more easily
- Increase sales volume
- Scroll and replicate momentum
- Lead channel

Mission

You are preparing to visit a machinery OEM customer regarding a molded-case circuit breaker (MCCB) opportunity.

You would like to engage the customer in exploratory conversations to gather requirements specific to their application to help select the correct breaker line.

Issue

You are not sure what questions to ask because you’re not familiar with all the options and features available.

Solution

This MCCB product selection guide is designed to be your high level guide to asking the right questions for selecting the correct breaker from our broad offering.

The guide gives you a list of questions, criteria and features to identify which product line satisfies the majority of the requirements.

What Eaton brings

- Top market share in North America
- Complete line of circuit protection products
- Comprehensive product offering in molded-case circuit breakers
- MOEM specific Technical Resource Center support
- Certified to latest standards
- Innovators backed by more than 60 years of market experience

TIPS ON BREAKER SELECTION

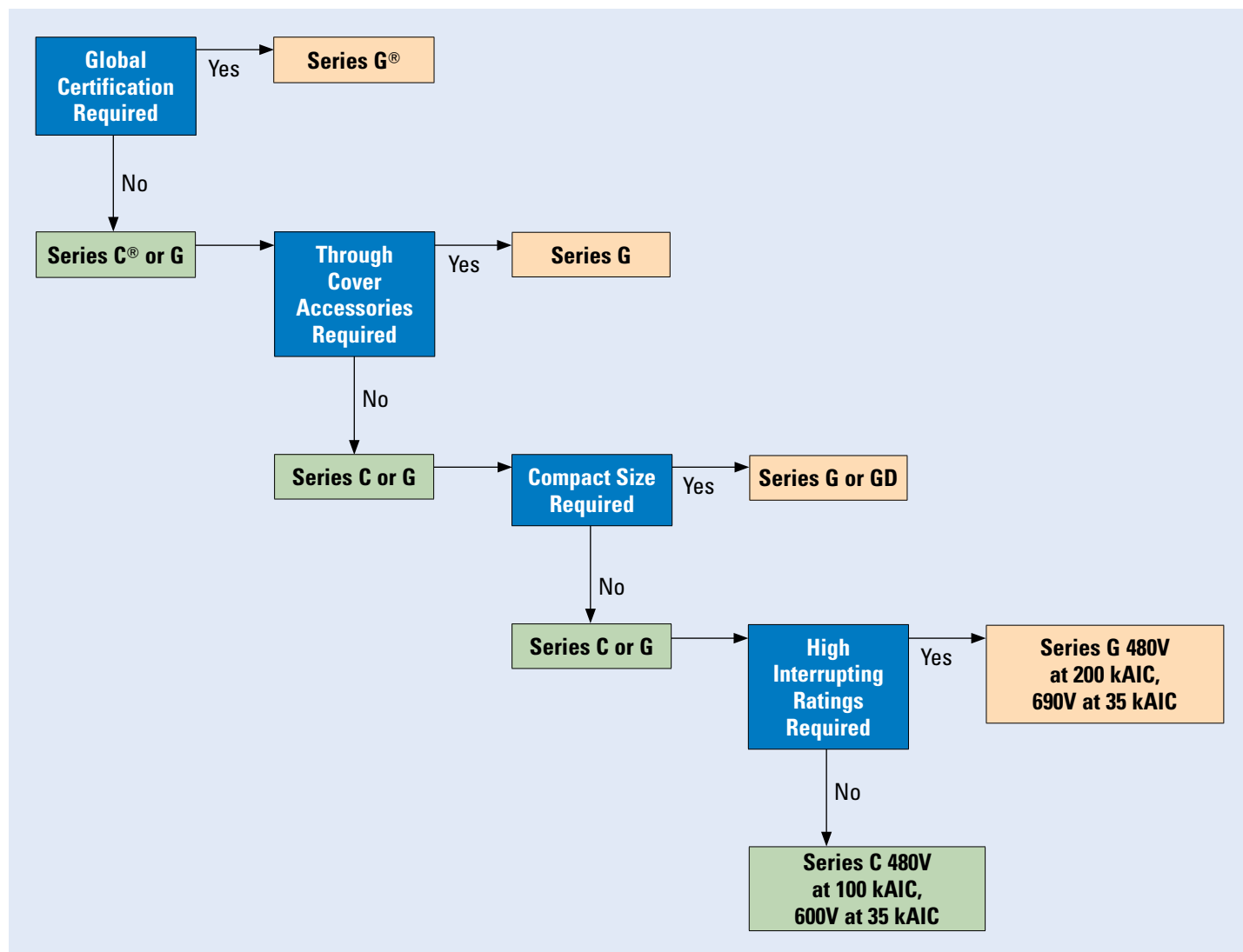
If the breaker you order is not available, consider the following:

1. Breaker with different or no lug options
Example
LGE3250FAG
Consider: LGE3250FAW and (2) TA250FJ
2. Higher interrupting ratings
Example
JGS3100FAG
Consider: JGH3100FAG
3. Components vs. kits
Example
Kit: EGHMVD06BO
Consider components:
68C6048G41 Handle
66A6010G95 Shaft
1498D66G17 Mechanism



Powering Business Worldwide

Decision chart



Features comparison for Series G and Series C MCCBs

Top 5 Considerations		
Features	Series G (International, Numerous Options)	Series C (Domestic, Fewer Options)
Certifications	Global (UL®, IEC, CE, CCC, CSA®)	UL, CSA only; limited IEC versions not dual rated in all cases
Available frame sizes	Five frames: EG (15–125A), JG (63–250A), LG (250–630A), NG (320–1200A), RG (800–2500A)	Eight frames: GD (15–100A), FD (10–225A), JD (70–250A), KD (70–400A), LD (125–600A), MDL (300–800A), ND and RD OPTIM only (400–2500A)
Size	Compact	Standard
Voltage/interrupting capacity	Maximum 480V at 200 kAIC; 415V at 200 kAIC	480V at 100 kAIC; 600V at 35 kAIC
Accessories (through cover)	Field installable ST, AUX, UVR, bell alarm, common accessories (<600A)	Primarily factory installed

Additional Considerations		
Features	Series G (International, Numerous Options)	Series C (Domestic, Fewer Options)
Combination ratings	Power distribution blocks available; tested with ICD products	Power distribution blocks available; tested with ICD products
Flexibility of stock, inventory usage variations	Higher with field installable, common internal accessories between EG, JG, LG	Fewer
Direct current options	Yes—up to 600 Vdc; LG up to 1000 Vdc	Yes—most frames up to MDL 800A up to 600 Vdc; FD, KD, MDL up to 1000 Vdc
Ambient temperatures	40°C standard, –20 to +70°C special calibration available	40°C standard, –20 to +70°C special calibration available
Electronic trip units	Yes—310+ JG through RG; field installable	Yes—FDE has 310+, KD has 310+, LD has 310 field installable
Rating plug	Not required—JG, LG, NG and RG have selectable long time delay and pickup setting switches on trip unit	LD and MDL only (not needed if 310+)
100% rated (at 40°C) available	Yes	Yes

Series C

Circuit Breaker Type	Continuous Ampere Rating at 40°C	No. of Poles	Volts AC	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA)					
				120	120/240	240	277	480	600
G-Frame									
GHB	15–100	1	120	65	—	—	—	—	—
GHB	15–100	2, 3	240	—	—	65	—	—	—
GHB	15–100	1	277	—	—	—	14	—	—
GHB	15–100	2, 3	480Y/277	—	—	—	14	14	—
HGHB	15–30	1	277	65	—	—	25	—	—
GHQ	15–20	1	277	65	—	—	14	—	—
GHBS	15–30	1, 2	480Y/277	65	65	—	14	—	—
GBHS	15–20	1, 2	600Y/347	—	—	—	—	—	10
GDB	15–50	2	480	—	—	—	—	14	—
GDB	15–100	3	480	—	—	—	—	14	—
GD	15–50	2	480	—	—	65	—	14	—
GD	15–100	3	480	—	—	65	—	22	—
GHC	15–100	1	120	65	—	—	—	—	—
GHC	15–100	2, 3	240	—	—	65	—	—	—
GHC	15–100	—	277	—	—	—	14	—	—
GHC	15–100	2, 3	480Y/277	—	—	—	14	14	—
HGHC	15–30	1	277	65	—	—	25	—	—
F-Frame									
EDB	100–225	2, 3	240	—	—	22	—	—	—
EDS	100–225	2, 3	240	—	—	42	—	—	—
ED	15–225	2, 3	240	—	—	65	—	—	—
EDH	100–225	2, 3	240	—	—	100	—	—	—
EDC	100–225	2, 3	240	—	—	200	—	—	—
EHD	15–100	1	277	—	—	—	14	—	—
EHD	15–100	2, 3	480	—	—	18	—	14	—
FDB	15–150	2, 3	600	—	—	18	—	14	14
FDB	15–150	4	600	—	—	18	—	14	14
FD	15–150	1	277	—	—	—	35	—	—
FD	15–225	2, 3	600	—	—	65	—	35	18
FD	15–225	4	600	—	—	65	—	35	18
FDE	15–225	3	600	—	—	65	—	35	18
HFD	15–150	1	277	—	—	—	65	—	—
HFD	15–225	2,3	600	—	—	100	—	65	25
HFD	15–225	4	600	—	—	100	—	65	25
HFDE	15–225	3	600	—	—	100	—	65	25
FDC	15–225	2, 3	600	—	—	200	—	100	35
FDC	15–225	4	600	—	—	200	—	100	35
FDCE	15–225	3	600	—	—	200	—	100	25
J-Frame									
JDB	70–250	2, 3	600	—	—	65	—	35	18
JD	70–250	2, 3, 4	600	—	—	65	—	35	18
HJD	70–250	2, 3, 4	600	—	—	100	—	65	25
JDC	70–250	2, 3, 4	600	—	—	200	—	100	35
K-Frame									
DK	250–400	2, 3	240	—	—	65	—	—	—
KDB	100–400	2, 3	600	—	—	65	—	35	25
KD	100–400	2, 3, 4	600	—	—	65	—	35	25
CKD	100–400	2, 3, 4	600	—	—	65	—	35	25
HKD	100–400	2, 3, 4	600	—	—	100	—	65	35
CHKD	100–400	2, 3, 4	600	—	—	100	—	65	35
KDC	100–400	2, 3, 4	600	—	—	200	—	100	65
L-Frame									
LDB	300–600	2, 3	600	—	—	65	—	35	25
LD	300–600	2, 3, 4	600	—	—	65	—	35	25
CLD	300–600	2, 3, 4	600	—	—	65	—	35	25
HLD	300–600	2, 3, 4	600	—	—	100	—	65	35
CHLD	300–600	2, 3, 4	600	—	—	100	—	65	35
LDC	300–600	2, 3, 4	600	—	—	200	—	100	50
CLDC	300–600	2, 3, 4	600	—	—	200	—	100	50

Series C (Continued)

Circuit Breaker Type	Continuous Ampere Rating at 40°C	No. of Poles	Volts AC	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA)					
				120	120/240	240	277	480	600
M-Frame									
MDL	300–800	2, 3	600	—	—	65	—	50	25
CMDL	300–800	2, 3	600	—	—	65	—	50	25
HMDL	300–800	2, 3	600	—	—	100	—	65	35
CHMDL	300–800	2, 3	600	—	—	100	—	65	35

Series G

Circuit Breaker Type	Maximum Rated Current (Amperes)	Ampere Range	No. of Poles	Breaker Capacity (kA rms) Vac 50–60 Hz—NEMA® UL, CSA			
				240 Vac	480 Vac	600 Vac ①	125/250 Vdc ②
EG-Frame							
B	125, 160 ③	15–160 ③	1	25	—	—	10 ④
B	125, 160 ③	15–160 ③	2, 3, 4	25	18	—	10
E	125, 160 ③	15–160 ③	2, 3, 4	35	25	18	10
S	125, 160 ③	15–160 ③	1	85	—	—	35 ④
S	125, 160 ③	15–160 ③	2, 3, 4	85	35	22	35
H	125, 160 ③	15–160 ③	1	100	—	—	42 ④
H	125, 160 ③	15–160 ③	2, 3, 4	100	65	25	42
C	125, 160 ③	15–160 ③	3, 4	200	100	35	42
JG-Frame							
E	250	20–250	2, 3, 4	65	25	18	10
S	250	20–250	2, 3, 4	85	35	18	22
H	250	20–250	2, 3, 4	100	65	25	22
C	250	20–250	3, 4	200	100	35	42
U	250	20–250	3, 4	200	150	50	50
X	250	20–250	3, 4	200	200	50	50
LG-Frame							
E	400, 630 ⑤	100–630 ⑤	3, 4	65	35	18	22
S	400, 630 ⑤	100–630 ⑤	3, 4	85	50	25	22
H	400, 630 ⑤	100–630 ⑤	3, 4	100	65	35	42
C	400, 630 ⑤	100–630 ⑤	3, 4	200	100	50	42
U	400, 630 ⑤	100–630 ⑤	3, 4	200	150	65	50
X	400, 630 ⑤	100–630 ⑤	3, 4	200	200	65	50
NG-Frame							
S	800, 1200	400–1200	2, 3, 4	85	50	25	—
H	800, 1200	400–1200	2, 3, 4	100	65	35	—
C	800, 1200	400–1200	2, 3, 4	200	100	65	—
S	1600 ⑥	1600	3	—	—	—	—
U	800	800	3	200	150	65	—
RG-Frame							
H	1600, 2000, 2500	800–2500	3, 4	125	65	50	—
C	1600, 2000, 2500	800–2500	3, 4	200	100	65	—

① EG breaker rated 600/347 Vac.

② Two poles in series.

③ 125A is the maximum UL and CSA rating for the EG.

④ 125 Vdc only for single-pole breakers.

⑤ 630A is not a UL or CSA listed rating. 600A is the maximum UL and CSA listed rating for the LG.

⑥ NG 1600A frame is not UL or CSA listed.

