

Technical Data and Specifications

Ratings

Frames EG, JG and LG

EG



JG



LG



Maximum rated current (amperes)	125, 160 ^①								250						400, 630 ^②							
Breaker type ^③	B	B	E	S	S	H	H	C	E	S	H	C	U	X	E	S	H	C	U	X		
Number of poles	1	2, 3, 4	2, 3, 4	1	2, 3, 4	1	2, 3, 4	3, 4	2, 3, 4	2, 3, 4	2, 3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4		
Breaker Capacity (kA rms) Vac 50–60 Hz																						
NEMA [®] , UL, CSA	240 Vac	25	25	35	85	85	100	100	200	65	85	100	200	200	200	65	85	100	200	200	200	
	480 Vac	—	18	25	—	35	—	65	100	25	35	65	100	150	200	35	50	65	100	150	200	
	600 Vac ^④	—	—	18	—	22	—	25	35	18	18	25	35	50	50	18	25	35	50	65	65	
	125/250 Vdc ^⑤	10 ^⑥	10	10	35 ^⑥	35	42 ^⑥	42	42	10	22	22	42	50	50	22	22	42	42	50	50	
IEC 60947-2	220–240 Vac	<i>I_{CU}</i>	25	25	35	85	85	100	100	200	65	85	100	200	200	65	85	100	200	200	200	
		<i>I_{CS}</i>	25	25	35	43	43	50	50	200	65	85	100	200	200	65	85	100	200	200	200	
	380–415 Vac	<i>I_{CU}</i>	—	18	25	—	40	—	70	100	25	40	70	100	150	200	35	50	70	100	150	200
		<i>I_{CS}</i>	—	18	25	—	30	—	35	100	25	40	70	100	150	200	35	50	53	100	150	200
	660–690 Vac	<i>I_{CU}</i>	—	—	—	—	—	—	—	—	12	12	14	16	18	18	12	20	25	30	35	35
		<i>I_{CS}</i>	—	—	—	—	—	—	—	—	6	6	7	12	14	14	6	10	13	15	18	18
	125/250 Vdc ^⑤	<i>I_{CU}</i>	10 ^⑥	10	10	35 ^⑥	35	42 ^⑥	42	42	10	22	22	42	50	50	22	22	42	42	50	50
		<i>I_{CS}</i>	10 ^⑥	10	10	35 ^⑥	35	42 ^⑥	42	42	10	22	22	42	50	50	22	22	42	42	50	50
Ampere range	15–160A ^①								20–250A						100–630A ^②							
Trip Units	FT-FM								FT-AM AT-AM Electronic (Digitrip RMS 310)						FT-AM AT-AM Electronic (Digitrip RMS 310)							
F = Fixed A = Adjustable T = Thermal M = Magnetic																						
Interchangeable	—								■						■							
	■								■						■							
Thermal magnetic	Fixed thermal								■						■							
	Adjustable thermal								■						■							
Magnetic	Fixed								Adjustable						Adjustable							
Electronic RMS ^⑦	LS	—								■						■ ^⑤						
	LSI	—								■						■ ^⑤						
	LSG	—								■						■ ^⑤						
	LSIG	—								■						■ ^⑤						
Utilization category	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		

Notes

- ① 125 amperes is the maximum UL and CSA rating for the EG.
- ② 630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA listed rating for the LG.
- ③ Breaker type C, U and X are current limiting per UL 489.
- ④ EG breaker rated 600/347 Vac.
- ⑤ Two poles in series.
- ⑥ 125 Vdc only for single-pole breakers.
- ⑦ Not suitable for DC application. Four-pole ground fault not available.

2.2

Molded Case Circuit Breakers

Series G

Frames NG and RG

2

NG



RG



Maximum rated current (amperes)		800, 1200	800, 1200	800, 1200	1600 ^①	800	1600, 2000, 2500	1600, 2000, 2500	
Breaker type		S	H	C ^②	S	U	H	C ^②	
Number of poles		2, 3, 4	2, 3, 4	2, 3, 4	3	3	3, 4	3, 4	
Breaker Capacity (kA rms) AC 50–60 Hz									
NEMA, UL, CSA	240 Vac	85	100	200	—	200	125	200	
	480 Vac	50	65	100	—	150	65	100	
	600 Vac	25	35	65	—	65	50	65	
IEC 60947-2	220–240 Vac	I_{cu}	85	100	200	85	—	135	200
		I_{cs}	85	100	100	85	—	100	100
	380–415 Vac	I_{cu}	50	70	100	50	—	70	100
		I_{cs}	50	50	50	50	—	50	50
	660–690 Vac	I_{cu}	20 ^③	25 ^③	35	20 ^③	—	25 ^③	35 ^③
		I_{cs}	10	13	18	10	—	13	18
250 Vdc	I_{cu}	—	—	—	—	—	—	—	
	I_{cs}	—	—	—	—	—	—	—	
Ampere range		400–1200A	400–1200A	400–1200A	1600A	800A	800–2500A	800–2500A	
Trip units		Electronic (Digitrip RMS 310+)				Electronic (Digitrip RMS 310+, 610 and 910)			
	Interchangeable	—	—	—	—	—	—	—	
	Built-in	■	■	■	■	■	■	■	
Electronic ^④	LI	—	—	—	—	—	■ ^⑤	■ ^⑤	
	LS	■	■	■	■	■	■	■	
	LSI	■	■	■	■	■	■	■	
	LIG	—	—	—	—	—	■ ^⑤	■ ^⑤	
	LSG	■	■	■	■	■	■	■	
	LSIG	■	■	■	■	■	■	■	
	ALSI	■	■	■	■	—	■	■	
	ALSIG	■	■	■	■	—	■	■	
Utilization category		A	A	A	A	A	A	A	

Notes

- ① NG 1600 ampere frame is not UL or CSA listed.
- ② Not KEMA-KEUR listed.
- ③ IEC 60947-2 H.5 Annex H is not KEMA-KEUR tested.
- ④ Not suitable for DC application. Four-pole ground fault not available.
- ⑤ Available only on Digitrip 610 and 910 trip units.

General Specifications

All Series G Frames

	EG		JG		LG		NG		RG	
Maximum rated current I_n depending on the version	160A ^①		250A		400, 630A ^②		800, 1200, 1600A ^③		1600, 2000, 2500A	
Rated insulation voltage U, according to IEC 60947-2										
Main conducting paths	500 Vac		750 Vac		750 Vac		750 Vac		750 Vac	
Auxiliary circuits	500 Vac		690 Vac		690 Vac		690 Vac		690 Vac	
Rated impulse withstand voltage U_{imp}										
Main conducting paths	6 kV		8 kV		8 kV		8 kV		8 kV	
Auxiliary circuits	4 kV		4 kV		4 kV		4 kV		4 kV	
Rated operational voltage U_e										
IEC	415 Vac		690 Vac		690 Vac		690 Vac		690 Vac	
NEMA	600Y/347 Vac		600 Vac		600 Vac		600 Vac		600 Vac	
UL and CSA listed	Yes ^①		Yes		Yes ^②		Yes ^③		Yes	
Permissible ambient temperature	-20° to 70°C		-20° to 70°C		-20° to 70°C		-5° to 60°C		-5° to 60°C	
Permissible load for various ambient temperatures close to the circuit breaker, related to the rated current of the circuit breaker	^④ ^⑤		^④ ^⑤		^④ ^⑤		—		—	
Circuit breakers for plant protection										
At 40°C	100%		100%		100%		100%		100%	
At 50°C	96%		92%		96%		91%		91%	
At 55°C	93%		87%		94%		86%		85%	
At 60°C	91%		83%		92%		82%		81%	
At 70°C	86%		73%		88%		70%		—	
Circuit breakers for motor protection										
At 40°C	—		100%		100%		—		—	
At 50°C	—		100%		100%		—		—	
At 55°C	—		100%		100%		—		—	
At 60°C	—		100%		100%		—		—	
At 70°C	—		90%		90%		—		—	
Circuit breakers for starter combinations and isolating circuit breakers										
At 40°C	100%		100%		100%		100%		100%	
At 50°C	100%		100%		100%		91%		91%	
At 55°C	96%		96%		95%		85%		85%	
At 60°C	91%		82%		90%		81%		81%	
At 70°C	86%		88%		84%		—		—	
Rated short-circuit breaking capacity (DC) Not for circuit breakers for motor protection (Time constant $t = 10$ rms)										
Two conducting paths in series For EG to LG up to 250 Vdc	42 kA max.		42 kA max.		42 kA max.		Ⓣ		Ⓣ	
NEMA (time constant $t = 8$ rms) Two conducting paths in series 250 Vdc	42 kA max.		42 kA max.		42 kA max.		Ⓣ		Ⓣ	

Notes

- ① 125 amperes is the maximum UL and CSA rating for the EG.
- ② 630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA rating for the LG.
- ③ 1200 amperes is the maximum UL and CSA rating for the NG.
- ④ Thermal overload release set to the lower value.
- ⑤ Thermal overload release set to the upper value.
- Ⓣ Not suitable for DC switching.

2.2

Molded Case Circuit Breakers

Series G

All Series G Frames, continued

2

	EG	JG	LG	NG	RG	
Main switch characteristics according to IEC 60947-2 in combination with lockable rotary drives	Yes	Yes	Yes	Yes	Yes	
Rated short circuit breaking capacity according to IEC 60947-2 (at AC 50/60 Hz)	For rated short circuit breaking capacity, see Page V4-T2-9 .					
Endurance (operating cycles)	10,000	10,000	8,000	3,000	3,000	
Maximum switching frequency	300 1/h	240 1/h	240 1/h	60 1/h	60 1/h	
Conductor cross sections and terminal types for main conductors	Box terminals	Box terminals	Box terminals	Flat bar terminals	Flat bar terminals	Flat bar terminals
Solid or stranded	2.5 to 95 mm ²	50 to 150 mm ²	95 to 240 mm ²	—	—	—
Finely stranded with end sleeve	2.5 to 50/70 mm ²	35 to 120 mm ²	70 to 150 mm ²	—	—	—
Busbar	—	—	—	600A	Optional	Optional
Tightening torque for box terminals	5.6 Nm	20 Nm	42 Nm	31 Nm	31 Nm	—
Tightening torque for busbar connection pieces	5.6 Nm	15 Nm	30 Nm	6 Nm	50 Nm	20 Nm
Conductor cross sections for auxiliary circuits with terminal connection or terminal strip						
Solid	0.75 to 2.5 mm ²	0.75 to 2.5 mm ²	0.75 to 2.5 mm ²	Up to 2x4 mm ²	Up to 2x4 mm ²	
Finely stranded with end sleeve	0.75 to 2.5 mm ²	0.75 to 2.5 mm ²	0.75 to 2.5 mm ²	Up to 2x2.5 mm ²	Up to 2x2.5 mm ²	
With brought-out cable ends	—	0.82 (AWG 18) mm ²	0.82 (AWG 18) mm ²	0.82 (AWG 18) mm ²	0.82 (AWG 18) mm ²	
Tightening torque for fitting screws	—	0.8 to 1.4 Nm	0.8 to 1.4 Nm	0.8 to 1.4 Nm	0.8 to 1.4 Nm	
Power loss per circuit breaker at maximum rated current I _n (the power losses of the undervoltage releases ("r" releases) must be observed if necessary) at three-phase symmetrical load)						
			400A:	600A:		
For plant protection	40W	45W	65W	120W	87/210W	220/270/400W
As isolating circuit breaker	40W	45W	65W	120W	87/210W	220/270/400W
For starter combinations	40W	45W	65W	120W	—	—
For motor protection	—	45W	65W	120W	—	—
Permissible mounting position						
Arc spacing— suitable for reverse-feed applications	Yes (except HMCPE)	Yes	Yes	Yes	Yes	
Auxiliary Switches						
Rated thermal current I _{th}	6A	6A	6A	6A	6A	
Rated making capacity	20A	20A	20A	20A	20A	
	AC-14	AC-14	AC-14	AC-15	AC-15	
Rated operational voltage	230/400/600V	230/400/600V	230/400/600V	600V	600V	
Rated operational current	6/3/0.25A	6/3/0.25A	6/3/0.25A	6A	6A	
				DC-13	DC-13	
Rated operational voltage	125/250V	125/250V	125/250V	125/250V	125/250V	
Rated operational current	0.5/0.15A	0.5/0.15A	0.5/0.15A	0.5/0.25A	0.5/0.25A	
Backup fuse	6/4/4A	(4) 6/4/4A	(4) 6/4/4A	(4) 6/4/4A	(4) 6/4/4A	
Miniature circuit breaker	6/4A	6/4A	6/4A	6/4A	6/4A	

All Series G Frames, continued

	EG	JG	LG	NG	RG
Releases					
Undervoltage releases ("r" releases)					
Response voltage:					
Drop (breaker tripped) U_s	35–70%	35–70%	35–70%	35–70%	35–70%
Pickup (breaker may be switched on) U_s	85–110%	85–110%	85–110%	85–110%	85–110%
Power consumption in continuous operation at:					
50/60 Hz 12 Vac	—	—	—	1.9 VA	2.9 VA
50/60 Hz 24 Vac	0.72 VA	3.9 VA	3.9 VA	2.4 VA	3.1 VA
50/60 Hz 48–60 Vac	1.15–1.78 VA	2.5–3.8 VA	2.5–3.8 VA	2.3–4.1 VA	3.4–6.0 VA
50/60 Hz 110–127 Vac	0.96–1.25 VA	1.8–2.4 VA	1.8–2.4 VA	3.4–4.2 VA	3.3–3.8 VA
50/60 Hz 208–240 Vac	1.28–1.68 VA	2.7–3.8 VA	2.7–3.8 VA	4.8–6.5 VA	4.2–7.2 VA
50/60 Hz 380–500 Vac	2.2–3.9 VA	3.4–5.8 VA	3.4–5.8 VA	6.8–12.0 VA	3.8–10.0 VA
50/60 Hz 525–600 Vac	3.4–4.3 VA	3.4–4.3 VA	3.4–4.3 VA	—	—
12 Vdc	—	—	—	2.6W	3.4W
24 Vdc	0.70W	3.1W	3.1W	3.6W	4.3W
48–60 Vdc	1.12–1.76W	2.0–3.1W	2.0–3.1W	3.5–5.5W	4.8–7.2W
110–125 Vdc	0.94–1.21W	1.6–2.2W	1.6–2.2W	2.9–3.6W	3.3–3.8W
220–250 Vdc	1.45–1.86W	3.1–4W	3.1–4W	4.8–6.3W	6.6–7.5W
Maximum opening time	50 ms	50 ms	50 ms	62 ms	62 ms
Shunt Trips					
Shunt trips ("f" releases)					
Response voltage:					
Pickup (breaker tripped) U_s	70–110%	70–110%	70–110%	70–110%	70–110%
Power consumption in (short time) at:					
50/60 Hz 24 Vac	10–41 VA	87–405 VA	87–405 VA	98–475 VA	612 VA
50/60 Hz 48–60 Vac	139–210 VA	710–1105 VA	710–1105 VA	24–50 VA	403–666 VA
50/60 Hz 48–127 Vac	—	—	—	—	—
50/60 Hz 110–240 Vac	83–360 VA	66–432 VA	66–432 VA	67–432 VA	396–1896 VA
50/60 Hz 380–440 Vac	—	127–188 VA	127–188 VA	76–110 VA	1596–2156 VA
50/60 Hz 380–600 Vac	418–1080 VA	—	—	—	—
50/60 Hz 480–600 Vac	—	34–60 VA	34–60 VA	19–42 VA	230–384 VA
12–24 Vdc	29–120W	164–631W	164–631W	145–610W	396W
48–60 Vdc	475–720W	830–1580W	830–1580W	67–102W	341–528W
110–125 Vdc	99–121W	112–150W	112–150W	121–150W	264–350W
220–250 Vdc	—	40–58W	40–58W	46–55W	374–475W
Maximum load duration	Interrupts automatically	Interrupts automatically	Interrupts automatically	Interrupts automatically	Interrupts automatically
Maximum opening time	50 ms	50 ms	50 ms	62 ms	62 ms
Molded Case Switch (with High Magnetic Trip)					
Unfused kAIC at 480 Vac (415 Vac)	65 (70)	65 (70)	65 (70)	65 (70)	65 (70)
Self-protected, will trip above	1250 for EG125; 1600 for EG160	2500	4000/6300	12,500	20,000



2.2

Molded Case Circuit Breakers

Series G

Dimensions and Weights

Approximate Dimensions in Inches (mm)

2

Series G—Frame EG, JG and LG

	EG			JG			LG		
	H	W	D	H	W	D	H	W	D
Single-pole	5.50 (139.7)	1.00 (25.4)	2.99 (76.0)	—	—	—	—	—	—
Two-pole	5.50 (139.7)	2.00 (50.8)	2.99 (76.0)	7.00 (177.8)	4.13 (105.0)	3.57 (87.4)	—	—	—
Three-pole	5.50 (139.7)	3.00 (76.2)	2.99 (76.0)	7.00 (177.8)	4.13 (105.0)	3.57 (87.4)	10.13 (258.0)	5.48 (140.0)	4.09 (104.0)
Four-pole	5.50 (139.7)	4.00 (101.6)	2.99 (76.0)	7.00 (177.8)	5.34 (135.6)	3.57 (87.4)	10.13 (258.0)	7.22 (183.0)	4.09 (104.0)

Series G—Frame NG and RG

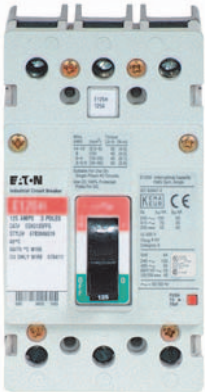
	NG			RG		
	H	W	D	H	W	D
Single-pole	—	—	—	—	—	—
Two-pole	—	—	—	—	—	—
Three-pole	16.00 (406.0)	8.25 (210.0)	5.50 (140.0)	16.00 (406.0)	15.50 (394.0)	9.75 (229.0)
Four-pole	16.00 (406.0)	11.13 (280.0)	5.50 (140.0)	16.00 (406.0)	20.00 (508.0)	9.75 (229.0)

Approximate Shipping Weight in Lbs (kg)

Series G—Frame EG, JG and LG

	EG	JG	LG	NG	RG
Single-pole	0.85 (0.39)	—	—	—	—
Two-pole	1.57 (0.71)	11.3 (5.13)	—	—	—
Three-pole	2.28 (1.04)	5.06 (2.30) T/M 5.31 (2.41) ETU	12.36 (5.61) T/M 13.04 (5.92) ETU	46.8 (21.3)	103.0 (47.0)
Four-pole	2.85 (1.29)	6.76 (3.07) T/M 7.12 (3.23) ETU	16.27 (7.39) T/M 16.92 (7.68) ETU	62.0 (28.3)	118.4 (54.0)

EG-Frame (15–125 Amperes)



Contents

<i>Description</i>	<i>Page</i>
EG-Frame (15–125 Amperes)	
Catalog Number Selection	V4-T2-16
Product Selection	V4-T2-17
Accessories	V4-T2-26
Technical Data and Specifications	V4-T2-27
Dimensions and Weights	V4-T2-27
JG-Frame (63–250 Amperes)	V4-T2-29
LG-Frame (250–630 Amperes)	V4-T2-45
NG-Frame (320–1200 Amperes)	V4-T2-61
RG-Frame (800–2500 Amperes)	V4-T2-70
Motor Circuit Protectors (MCP)	V4-T2-80
Motor Protector Circuit Breakers (MPCB)	V4-T2-84
30 mA Ground Fault (Earth Leakage) Module	V4-T2-87
Current Limiting Circuit Breaker Module	V4-T2-91
High Instantaneous Circuit Breaker for Selective Coordination.	V4-T2-96
Special Features and Accessories	V4-T2-99
Motor Operators	V4-T2-106
Plug-In Blocks	V4-T2-108
Drawout Cassette	V4-T2-109
Handle Mechanisms	V4-T2-110

EG-Frame (15–125 Amperes)

Product Description

EG breaker is HACR rated.

2.2

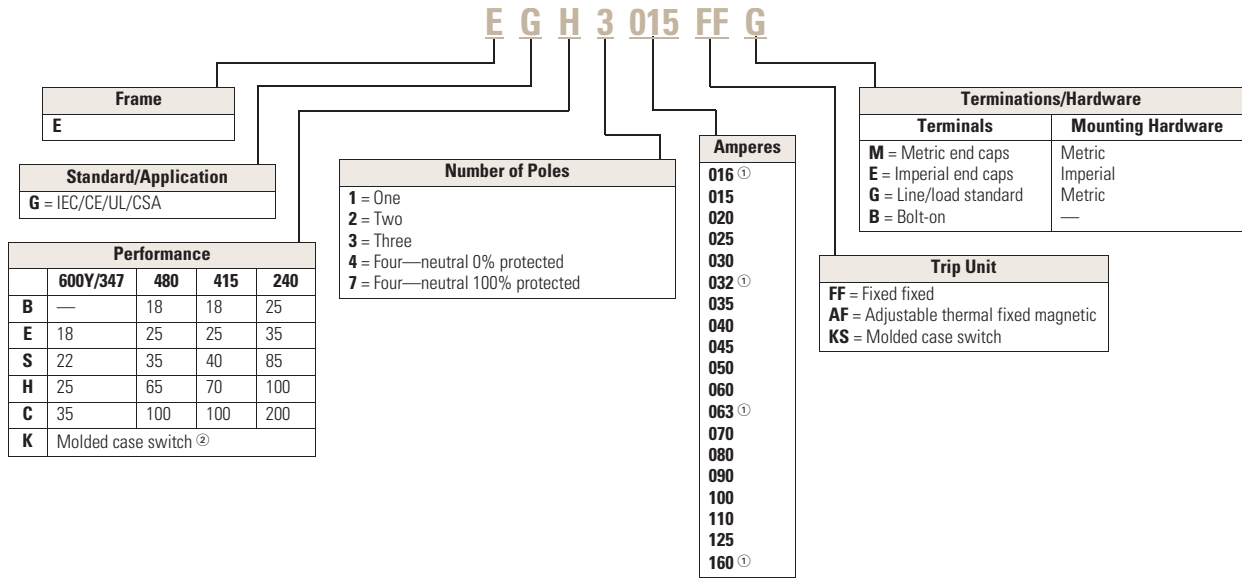
Molded Case Circuit Breakers

Series G

Catalog Number Selection

Series G—EG-Frame (15–125 Amperes)

2



Notes

- ① Cannot be UL rated.
- ② Available only as 125 and 160A sizes.

Product Selection

Complete Breaker (Includes Frame, Trip Unit, Standard Terminals and Mounting Hardware) IC Rating at 415/480 Volts

EG-Frame



EG-Frame—18/18

Maximum Continuous Amps at 40°C ^①	Single-Pole	Two-Pole	Three-Pole	Adjustable ^② Thermal, Fixed Magnetic Catalog Number	Four-Pole ^③	Adjustable ^② Thermal, Fixed Magnetic Catalog Number
	Fixed Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number		Fixed Thermal, Fixed Magnetic Catalog Number	
15	EGB1015FFG	EGB2015FFG	EGB3015FFG	—	EGB4015FFG	—
16	EGB1016FFG	EGB2016FFG	EGB3016FFG	—	EGB4016FFG	—
20	EGB1020FFG	EGB2020FFG	EGB3020FFG	—	EGB4020FFG	EGB4020AFG
25	EGB1025FFG	EGB2025FFG	EGB3025FFG	EGB3025AFG	EGB4025FFG	EGB4025AFG
30	EGB1030FFG	EGB2030FFG	EGB3030FFG	—	EGB4030FFG	—
32	EGB1032FFG	EGB2032FFG	EGB3032FFG	EGB3032AFG	EGB4032FFG	EGB4032AFG
35	EGB1035FFG	EGB2035FFG	EGB3035FFG	—	EGB4035FFG	—
40	EGB1040FFG	EGB2040FFG	EGB3040FFG	EGB3040AFG	EGB4040FFG	EGB4040AFG
45	EGB1045FFG	EGB2045FFG	EGB3045FFG	—	EGB4045FFG	—
50	EGB1050FFG	EGB2050FFG	EGB3050FFG	EGB3050AFG	EGB4050FFG	EGB4050AFG
60	EGB1060FFG	EGB2060FFG	EGB3060FFG	—	EGB4060FFG	—
63	EGB1063FFG	EGB2063FFG	EGB3063FFG	EGB3063AFG	EGB4063FFG	EGB4063AFG
70	EGB1070FFG	EGB2070FFG	EGB3070FFG	—	EGB4070FFG	—
80	EGB1080FFG	EGB2080FFG	EGB3080FFG	EGB3080AFG	EGB4080FFG	EGB4080AFG
90	EGB1090FFG	EGB2090FFG	EGB3090FFG	—	EGB4090FFG	—
100	EGB1100FFG	EGB2100FFG	EGB3100FFG	EGB3100AFG	EGB4100FFG	EGB4100AFG
125	EGB1125FFG	EGB2125FFG	EGB3125FFG	EGB3125AFG	EGB4125FFG	EGB4125AFG
160	—	—	EGB3160FFG	EGB3160AFG	EGB4160FFG	EGB4160AFG

Notes

- ① 16, 32, 63 and 160A are not UL listed ratings.
 ② Adjustable thermal are not UL listed.
 ③ Change the fourth digit to 7 for 100% neutral protection. Neutral is on the LH side.