

General Specifications

All Series G Frames

	EG		JG		LG		NG		RG	
Maximum rated current I_n depending on the version	160 A ^①		250 A		400, 630 A ^②		800, 1200, 1600 A ^③		1600, 2000, 2500 A	
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		-20 ° to 70 °C		-20 ° to 70 °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%	100%	100%	100%	100%	100%
At 50 °C	96%	92%	96%	94%	96%	91%	91%	91%	91%	91%
At 55 °C	93%	87%	94%	90%	93%	86%	85%	85%	85%	85%
At 60 °C	91%	83%	92%	87%	90%	82%	81%	81%	81%	81%
At 70 °C	86%	73%	88%	80%	84%	70%	70%	70%	70%	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.		⑥		⑥	
NEMA (time constant $t = 8$ rms) Two conducting paths in series 250 Vdc	42 kA max.		42 kA max.		42 kA max.		⑥		⑥	

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.
- ⑥ Not suitable for DC switching.

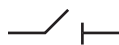
All Series G Frames, continued

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	—	—	—	600 A	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)						
			400 A:	600 A:		
For plant protection	40 W	45 W	65 W	120 W	87/210 W	220/270/400 W
As isolating circuit breaker	40 W	45 W	65 W	120 W	87/210 W	220/270/400 W
For starter combinations	40 W	45 W	65 W	120 W	—	—
For motor protection	—	45 W	65 W	120 W	—	—
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	20 A	20 A	20 A	20 A	20 A	
	AC-14	AC-14	AC-14	AC-15	AC-15	
Rated operational voltage	230/400/600 V	230/400/600 V	230/400/600 V	600 V	600 V	
Rated operational current	6/3/0.25 A	6/3/0.25 A	6/3/0.25 A	6A	6A	
				DC-13	DC-13	
Rated operational voltage	125/250V	125/250V	125/250V	125/250V	125/250V	
Rated operational current	0.5/0.15 A	0.5/0.15 A	0.5/0.15 A	0.5/0.25 A	0.5/0.25 A	
Backup fuse	6/4/4 A	(4) 6/4/4 A	(4) 6/4/4 A	(4) 6/4/4 A	(4) 6/4/4 A	
Miniature circuit breaker	6/4 A	6/4 A	6/4 A	6/4 A	6/4 A	

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	0.70 W	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	29–120 W	164–631 W	164–631 W	145–610 W	396 W
48–60 Vdc	475–720 W	830–1580 W	830–1580 W	67–102 W	341–528 W
110–125 Vdc	99–121 W	112–150 W	112–150 W	121–150 W	264–350 W
220–250 Vdc	—	40–58W	40–58 W	46–55 W	374–475 W
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



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)**EG-Frame (15–125 Amperes)****Product Description**

EG breaker is HACR rated.

Contents**Description****Page**

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-T2-47
NG-Frame (320–1200 Amperes)	V4-T2-65
RG-Frame (800–2500 Amperes)	V4-T2-74
Motor Circuit Protectors (MCP)	V4-T2-85
Motor Protector Circuit Breakers (MPCB).	V4-T2-89
30 mA Ground Fault (Earth Leakage) Module.	V4-T2-92
Current Limiting Circuit Breaker Module	V4-T2-96
High Instantaneous Circuit Breaker for	
Selective Coordination	V4-T2-101
Special Features and Accessories.	V4-T2-104
Motor Operators	V4-T2-112
Plug-In Blocks	V4-T2-114
Drawout Cassette	V4-T2-115

2.2

Molded Case Circuit Breakers

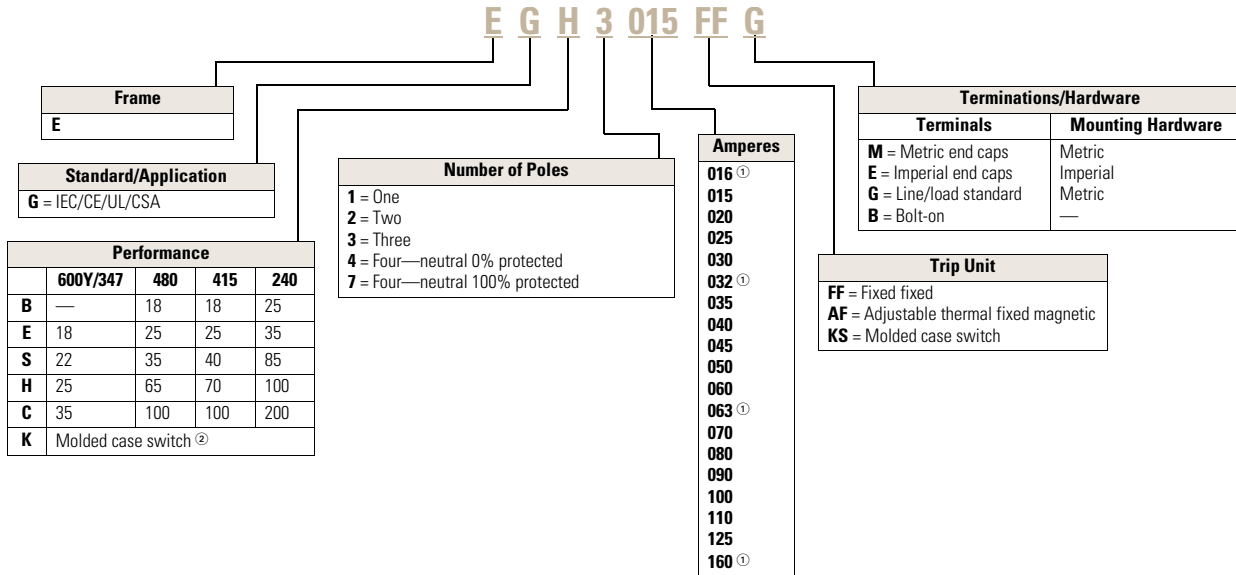
Series G

2

Catalog Number Selection

This information is presented only as an aid to understanding catalog numbers. It is not to be used to build catalog numbers for circuit breakers or trip units.

Series G—EG-Frame (15–125 Amperes)



Notes

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

2.2

Molded Case Circuit Breakers

Series G

EG-Frame—25/25 Single-Pole Unavailable

2

EG-Frame



EG-Frame—25/25

Maximum Continuous Amps at 40 °C ①	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	
15	EGE2015FFG	EGE3015FFG	—	EGE4015FFG	—
16	EGE2016FFG	EGE3016FFG	—	EGE4016FFG	—
20	EGE2020FFG	EGE3020FFG	—	EGE4020FFG	EGE4020AFG
25	EGE2025FFG	EGE3025FFG	EGE3025AFG	EGE4025FFG	EGE4025AFG
30	EGE2030FFG	EGE3030FFG	—	EGE4030FFG	—
32	EGE2032FFG	EGE3032FFG	EGE3032AFG	EGE4032FFG	EGE4032AFG
35	EGE2035FFG	EGE3035FFG	—	EGE4035FFG	—
40	EGE2040FFG	EGE3040FFG	EGE3040AFG	EGE4040FFG	EGE4040AFG
45	EGE2045FFG	EGE3045FFG	EGE3050AFG	EGE4045FFG	—
50	EGE2050FFG	EGE3050FFG	—	EGE4050FFG	EGE4050AFG
60	EGE2060FFG	EGE3060FFG	—	EGE4060FFG	—
63	EGE2063FFG	EGE3063FFG	EGE3063AFG	EGE4063FFG	EGE4063AFG
70	EGE2070FFG	EGE3070FFG	—	EGE4070FFG	—
80	EGE2080FFG	EGE3080FFG	EGE3080AFG	EGE4080FFG	EGE4080AFG
90	EGE2090FFG	EGE3090FFG	—	EGE4090FFG	—
100	EGE2100FFG	EGE3100FFG	EGE3100AFG	EGE4100FFG	EGE4100AFG
125	EGE2125FFG	EGE3125FFG	EGE3125AFG	EGE4125FFG	EGE4125AFG
160	—	EGE3160FFG	EGE3160AFG	EGE4160FFG	EGE4160AFG

Notes

- ① 16, 32, 63 and 160 A 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.