

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 _{cu}	25	25	35	85	85	100	100	200	65	85	100	200	200	200	65	85	100	200	200	200				
		I _{cs}	25	25	35	43	43	50	50	200	65	85	100	200	200	200	65	85	100	200	200	200				
	380–415 Vac	I _{cu}	—	18	25	—	40	—	70	100	25	40	70	100	150	200	35	50	70	100	150	200				
		I _{cs}	—	18	25	—	30	—	35	100	25	40	70	100	150	200	35	50	53	100	150	200				
	660–690 Vac	I _{cu}	—	—	—	—	—	—	—	—	12	12	14	16	18	18	12	20	25	30	35	35				
		I _{cs}	—	—	—	—	—	—	—	—	6	6	7	12	14	14	6	10	13	15	18	18				
	125/250 Vdc ^⑤	I _{cu}	10 ^⑥	10	10	35 ^⑥	35	42 ^⑥	42	42	10	22	22	42	50	50	22	22	42	42	50	50				
		I _{cs}	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 F = Fixed A = Adjustable T = Thermal M = Magnetic		FT-FM AT-FM								FT-AM AT-AM Electronic (Digitrip RMS 310)								FT-AM AT-AM Electronic (Digitrip RMS 310)							
Thermal magnetic	Interchangeable	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■	■	■	■	■	■					
	Built-in	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
	Fixed thermal	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
Thermal magnetic	Adjustable thermal	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
	Magnetic	Fixed								Adjustable								Adjustable								
	Electronic RMS ^⑦	LS	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤				
Electronic RMS ^⑦	LSI	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤					
	LSG	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤					
	LSIG	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^⑤	■ ^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.

Frames NG and RG

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
		I_{cs}	85	100	100	85	—	100
	380–415 Vac	I_{cu}	50	70	100	50	—	70
		I_{cs}	50	50	50	50	—	50
	660–690 Vac	I_{cu}	20 ^③	25 ^③	35	20 ^③	—	25 ^③
		I_{cs}	10	13	18	10	—	13
	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%	100%	100%	100%		
At 50°C	96%	92%	96%	94%	96%	91%	91%	91%		
At 55°C	93%	87%	94%	90%	93%	86%	85%	85%		
At 60°C	91%	83%	92%	87%	90%	82%	81%	81%		
At 70°C	86%	73%	88%	80%	84%	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

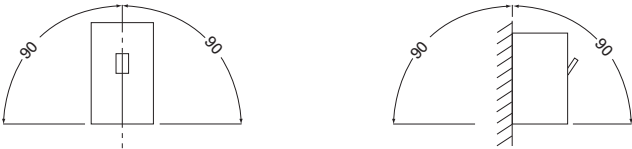
- ① 125 amperes is the maximum UL and CSA rating for the EG.
- ② 630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA rating for the LG.
- ③ 1200 amperes is the maximum UL and CSA rating for the NG.
- ④ Thermal overload release set to the lower value.
- ⑤ Thermal overload release set to the upper value.
- ⑥ Not suitable for DC switching.

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
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
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
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
As isolating circuit breaker	40W	45W	65W	120W	87/210W
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



Dimensions and Weights

Approximate Dimensions in Inches (mm)

2

Series G—Frame EG, JG and LG

	EG H	W	D	JG H	W	D	LG 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 H	W	D	RG 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-T2-45
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

2.2

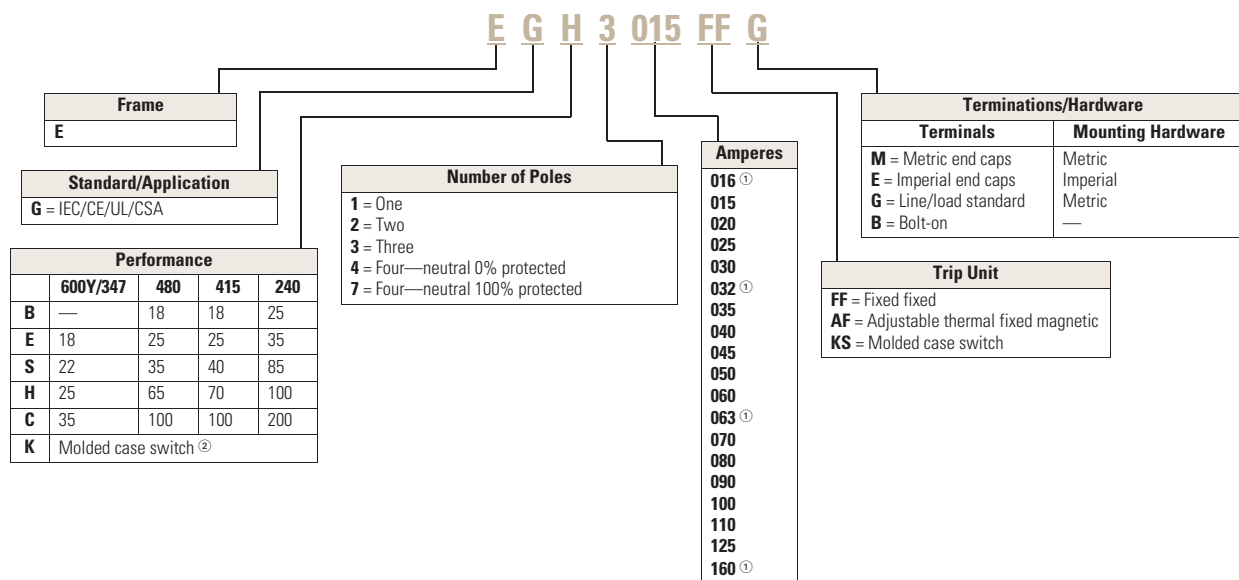
Molded Case Circuit Breakers

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.

EG-Frame



EG-Frame—70/65

Maximum Continuous Amps at 40°C ①	Single-Pole	Two-Pole	Three-Pole	Adjustable ② Thermal, Fixed Magnetic	Four-Pole ③	Adjustable ② Thermal, Fixed Magnetic
	Fixed Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Catalog Number
15	EGH1015FFG	EGH2015FFG	EGH3015FFG	—	EGH4015FFG	—
16	EGH1016FFG	EGH2016FFG	EGH3016FFG	—	EGH4016FFG	—
20	EGH1020FFG	EGH2020FFG	EGH3020FFG	EGH3020AFG	EGH4020FFG	EGH4020AFG
25	EGH1025FFG	EGH2025FFG	EGH3025FFG	EGH3025AFG	EGH4025FFG	EGH4025AFG
30	EGH1030FFG	EGH2030FFG	EGH3030FFG	—	EGH4030FFG	—
32	EGH1032FFG	EGH2032FFG	EGH3032FFG	EGH3032AFG	EGH4032FFG	EGH4032AFG
35	EGH1035FFG	EGH2035FFG	EGH3035FFG	—	EGH4035FFG	—
40	EGH1040FFG	EGH2040FFG	EGH3040FFG	EGH3040AFG	EGH4040FFG	EGH4040AFG
45	EGH1045FFG	EGH2045FFG	EGH3045FFG	—	EGH4045FFG	EGH4050AFG
50	EGH1050FFG	EGH2050FFG	EGH3050FFG	EGH3050AFG	EGH4050FFG	—
60	EGH1060FFG	EGH2060FFG	EGH3060FFG	—	EGH4060FFG	—
63	EGH1063FFG	EGH2063FFG	EGH3063FFG	EGH3063AFG	EGH4063FFG	EGH4063AFG
70	EGH1070FFG	EGH2070FFG	EGH3070FFG	—	EGH4070FFG	—
80	EGH1080FFG	EGH2080FFG	EGH3080FFG	EGH3080AFG	EGH4080FFG	EGH4080AFG
90	EGH1090FFG	EGH2090FFG	EGH3090FFG	—	EGH4090FFG	—
100	EGH1100FFG	EGH2100FFG	EGH3100FFG	EGH3100AFG	EGH4100FFG	EGH4100AFG
125	EGH1125FFG	EGH2125FFG	EGH3125FFG	EGH3125AFG	EGH4125FFG	EGH4125AFG

Notes

① 16, 32, 63A 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.