

Series G, 15–2500 Amperes for UL, CSA and IEC Applications

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Product Overview

Series G, 15–2500 Amperes for UL, CSA and IEC Applications

Eaton Series G molded case circuit breakers provide increased performance in considerably less space than standard circuit breakers or comparable fusible devices.

The “G” signifies global applications: Series G circuit breakers are marked with UL, CSA, CE, IEC and KEMA KEUR listings. Other advantages include:

- Field-fit accessories
- Common accessories through 630 amperes
- Electronic trip units from 20 to 2500 amperes
- UL-listed and IEC-rated, 30 mA ground fault/earth leakage modules
- Built-in ground fault protection down to 20 amperes

The EG, JG and LG frames are designed around space-saving footprints. The NG and RG use the proven Eaton Series C ND and RD designs.

The Series G family includes five frame sizes in ratings from 15 to 2500 amperes. Series G offers a choice of several interrupting capacities up to 200 kA at 480 volts AC (200 kA at 240 volts AC).

Series G molded case circuit breakers are also available in direct current options. Please see Specialty Breakers **Section 2.6** for more details.

Standard calibration is 40 °C. For applications in high ambient temperature conditions, 50 °C factory calibration is available on thermal-magnetic breakers (not UL).

The Most Logically Designed Contact Assembly

The flexibility and outstanding performance characteristics of Eaton circuit breakers are made possible by the best contact designs in circuit breaker history. Our technology creates a high-speed “blow-open” action using the electromechanical forces produced by high-level fault currents.

Eaton circuit breakers are operated by a toggle-type mechanism that is mechanically trip-free from the handle so that the contacts cannot be held closed against short circuit currents. Tripping due to overload or short circuits is clearly indicated by the position on the handle. This remarkably fast and dependable contact action is designed to enhance safety.

Thorough In-Plant Testing

The quality, dependability and reliability of every Eaton Circuit Breaker is ensured by a thorough program of in-plant testing. Two calibration tests are conducted on every pole of every circuit breaker to verify the trip mechanism, operating mechanism, continuity and accuracy.

Current Limiting Characteristics

Circuit breakers are current limiting because of their high repulsion contact arrangement and use of state-of-the-art arc extinguishing technology.

Eaton offers one of the most complete lines of current limiting breakers in the industry. The industrial breakers are available in current limiting versions with interrupting capacities up to 200 kA at 480 V without fuses in the same physical size as standard and high interrupting capacity breakers.

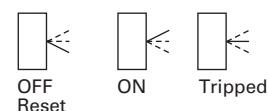
Operating Mechanisms

Eaton circuit breakers have a toggle handle operating mechanism, which also serves as a switching position indicator. The indicator shows the positions of: ON, OFF and TRIPPED.

The toggle handle snaps into the TRIPPED position if the breaker is tripped by one of its overcurrent, short circuit, shunt or undervoltage releases. Before the circuit breaker can be reclosed following a trip-out, the toggle handle must be brought beyond the OFF position (RESET). The circuit breaker can then be reclosed.

As an additional switching position indicator for EG- to RG-Frame circuit breakers, there are two windows on the right and on the left of the toggle handle, in which the switching state is indicated by means of the colors red, green and white corresponding to the ON, OFF and TRIPPED positions respectively.

Positions of the Toggle Handle Drive



Standards and Certifications

Eaton Series G circuit breakers meet applicable UL 489 and IEC 60947-2 standards.

Molded case circuit breakers from Eaton are designed to conform with the following international standards:

- Australian Standard AS 2184 and AS 3947-2 molded case circuit breakers
- British Standards Institution Standard EN60947.2
- International Electromechanical Commission Recommendations IEC 60947.2 circuit breakers
- Japanese T-Mark standard molded case circuit breakers
- National Electrical Manufacturers Association Standards Publication No. AB1-1993 molded case circuit breakers
- South African Bureau of Standards, Standard SANS 156, Standard Specification for molded case circuit breakers
- Swiss Electro-Technical Association Standard SEV 947.2, Safety Regulations for circuit breakers
- Union Technique de l'Electricite Standard NF C 63-120, low voltage switchgear and control gear circuit breaker requirements
- Verband Deutscher Elektrotechnike (Association of German Electrical Engineers) Standard VDE 0660, low voltage switchgear and control gear, circuit breakers



Global Third-Party Certification

Certification marks ensure product compliance with the total standard via the third party witnessing of tests by globally recognized independent certification organizations.

KEMA is a highly recognized, independent international organization that offers certification and inspection facilities for equipment in many industries. The KEMA-KEUR mark is the highest certification an electrical product can receive from KEMA. Our IEC 60947-2 molded case circuit breakers are KEMA tested and certified. These breakers are also listed in accordance with UL 489, as well as CSA C22.2 No. 5-02.

KEMA, UL and CSA provide ongoing follow-up testing and inspections to ensure that Eaton molded case circuit breakers continue to meet their exacting standards.

ISO Certification

Eaton circuit breakers are manufactured in ISO® certified facilities.

Product Selection Overview

Electronic Trip Units (Digitrip RMS Trip Units)—Multi-Function Electronic Trip Units for All Applications

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True rms Sensing

Digitrip RMS trip units use Eaton's microprocessor-based intelligence to provide true rms sensing, permitting increased accuracy and reliable system protection. True rms sensing is not susceptible to nuisance tripping when waveforms containing high harmonic currents are present.

Digitrip RMS 310+

Digitrip RMS 310+ electronic trip units are available with Eaton Series G circuit breakers JG, LG, NG and RG, as well as Series C FD, KD, LD and MDL circuit breakers.

Digitrip 310+ trip units are equipped with an integrated I_r switch that allows users to modify the continuous current rating of the breaker without having to replace a rating plug. This provides further flexibility for coordination in systems. The trip units may be used in 50 Hz or 60 Hz applications. The Digitrip 310+ offers true rms sensing, is front adjustable and has an optional local display of current and cause of trip.

Curve Shaping

When selectively coordinated systems are called for, Digitrip RMS 310+ will provide a cost-effective solution for a variety of applications.

The standard Digitrip RMS 310+ includes an adjustable short time pickup setting encompassing an I^2t ramp function that provides the basic LS curve shaping function.

Digitrip 310+ trip units also include selectable long time delay (t_{LD}) and pickup settings (I_p). A rating plug is not required.

The optional Digitrip RMS 310+ LSI and LSG provide additional flat response short time delay adjustments and an instantaneous setting to provide LSI curve shaping capability.

Digitrip RMS 310+ LSG and LSG units are available with ground fault pickup and flat response ground fault delay. Ground fault alarm options are available with trip and no trip functionality as a means to notify users of a ground fault condition with the option to maintain the breaker online.

Digitrip RMS 310+ trip units can effectively coordinate with both sophisticated upstream power breakers as well as downstream thermal-magnetic breakers, making Digitrip RMS 310+ trip units the cost-effective reliable choice for selectively coordinated systems.

Thermal Memory

All Digitrip RMS trip units incorporate a long delay. Thermal memory prevents the system from cumulative overheating due to repeated overcurrent events that may occur in quick succession.

Field Testing

A field test kit is available for Digitrip RMS 310+ trip units.

Arcflash Reduction Maintenance System

Arcflash Reduction Maintenance System is an available feature on KD, LG, LD, MDL, NG and RG frames with 310+ electronic trip units. This feature increases worker safety by providing an accelerated instantaneous trip unit to reduce arc flash. Additionally, LG, NG and RG frames with the Arcflash Reduction Maintenance System feature include a fully adjustable instantaneous setting.

Digitrip RMS 610 and 910

Digitrip RMS 610 and 910 trip units are available with Eaton R-Frame circuit breakers 800 through 2500 amperes. Digitrip 610 and 910 trip units provide unparalleled system protection with the added convenience of a local display.

Curve Shaping

Digitrip RMS 610 and 910 trip units are available with up to nine curve shaping choices achieved by adjusting up to seven switches on the front of the unit for optimum system coordination. Maximum curve shaping flexibility is provided by dependent long and short delay adjustments that are long delay pickup (I_p) based, depicted on the front of the unit by the blue portion of the time-current curve.

Additional coordination capability can be provided by utilizing the short delay and ground fault zone selective interlocking features available on these trip units.

System Diagnostics

Digitrip RMS 610 and 910 models of trip units provide long delay, short delay, instantaneous, and ground fault cause of trip LEDs on the front of the unit. Their display shows a magnitude of trip information, as well as remote signal contacts, for improved system alarming.

System Monitoring

Digitrip 610 and 910 trip units have the capability to monitor phase currents, as well as neutral or ground currents. This information is displayed on a large digital display mounted on the unit.

Digitrip RMS 910 trip units can also provide the user with power and energy monitoring capability. Peak power demand, present power demand, and total energy, as well as forward and reverse energy can be monitored with this unit.

Digitrip RMS 910 trip units have the additional capability of monitoring line-to-line voltage, as well as system power factor. Both parameters are displayed in the digital display window and are supported by LEDs to indicate which parameter is being displayed.

Harmonics Monitoring

Digitrip RMS 910 trip units are capable of displaying values of current harmonics in the digital display window. Percentage of harmonic content can be monitored for each phase, up to the 27th harmonic. Additionally, a total harmonic distortion value can be calculated and displayed.

Communications

Digitrip RMS 910 units have built-in communications options to allow all protection, monitoring, and control information to be transmitted back to a central location via the Eaton PowerNet™ system.

Field Testing

Integral field testing capability is provided on all 610 and 910 trip units. No additional test set is needed to perform both trip and no trip field testing.

Product Selection Guide

Electronic Trip Units

Digitrip—RMS 310+, 610 and 910

RMS 310+



RG



JG



LG/NG

RMS 610



RMS 910



Breaker Type					
Series G frame(s)		JG-, LG-, NG- and RG-Frames	RG-Frame	RG-Frame	RG-Frame
Ampere rating		20–2500 A	800–2500 A	800–2500 A	800–2500 A
Interrupting rating at 415 V		35, 70, 100 kA	70, 100 kA	70, 100 kA	70, 100 kA
Trip Unit Sensing					
rms sensing		Yes	Yes	Yes	Yes
Protection and Coordination ^①					
Protection	Ordering options	LS, LSG	LSI, LSIG	LI, LS, LSI, LIG, LSG, LSIG	LI, LS, LSI, LIG, LSG, LSIG
	Fixed rating plug (I_n) ^②	Yes	Yes	Yes	Yes
	Overtemperature trip	Yes	Yes	Yes	Yes
Long delay	Adjustable I_r switch	Yes	Yes	No	No
	Long delay setting	VAR/frame	VAR/frame	0.5–1.0 x (I_n)	0.5–1.0 x (I_n)
	Long delay time I^2t at 6x	10 seconds ^③	10 seconds ^③	2–24 seconds	2–24 seconds
	Long delay thermal memory	Yes	Yes	Yes	Yes
	High load alarm	1.05 I_r	1.05 I_r	0.85 x I_r	0.85 x I_r
Short delay	Short delay setting	VAR/frame ^④	VAR/frame ^④	200–600% S1 and S2 x (I_r)	200–600% S1 and S2 x (I_r)
	Short delay time I^2t	100 ms	No	100, 300, 500 ms	100, 300, 500 ms
	Short delay time flat	No	1–300 ms	100–500 ms	100–500 ms
	Short delay time ZSI	No	Yes	Yes	Yes
	Instantaneous	Independent adjustable Inst. setting	Yes ^⑤	Yes	Yes
Instantaneous	Instantaneous setting	No	VAR/frame	200–600% M1 and M2 x (I_n)	200–600% M1 and M2 x (I_n)
	Discriminator	No	No	Yes ^⑥	Yes ^⑥
	Instantaneous override	Yes	Yes	Yes	Yes
	Ground fault	Ground fault setting	VAR/frame ^⑦	25–100% x (I_n) ^⑦	25–100% x (I_n) ^⑦
Ground fault	Ground fault delay I^2t at 0.62x	No	No	100, 300, 500 ms	100, 300, 500 ms
	Ground fault delay flat	1–300 ms	1–300 ms	100–500 ms	100–500 ms
	Ground fault ZSI	No	Yes	Yes	Yes
	Ground fault thermal memory	No	No	Yes	Yes

Notes

I_n = Rating plug rating.
 I_r = Long delay setting.

① 310+ details are included by frame in **Pages V4-T2-182** (JG), **V4-T2-200** (LG), **V4-T2-210** (NG), and **V4-T2-221** (RG).

② 310+ trip units have selectable settings instead of a rating plug.

③ 310+ trip units have adjustable long delay times of 2–24 seconds, except NG 310+ for 800 A frame, for which it is 2–14 seconds.

④ JG/LG: 2X–14X (I_n); NG: 2X–8X (I_n); RG: 2X–9X (I_n); 2500 ampere RG-Frame 2X–6X% x (I_n).

⑤ LG, NG and RG ALSI and ALSIG 310+ trip units include an independently adjustable Instantaneous (I_i) setting.

⑥ LS, LSG only.

⑦ Not to exceed 1200 amperes.

Digitrip—RMS 310+, 610 and 910, continued

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RMS 310+



RG



JG



LG/NG

RMS 610



RMS 910



LS, LSG

LSI, LSIG

LSI, LSIG, LSIG (A)

LSI (A), LSIG

System Diagnostics

Cause of trip LEDs	Yes ^{① ②}	Yes ^{① ②}	Yes	Yes
Magnitude of trip information	No	No	Yes	Yes
Remote signal contacts	No	No	Yes	Yes

System Monitoring

Digital display	Yes ^③	Yes ^③	Yes	Yes
Current	Yes ^③	Yes ^③	Yes	Yes
Voltage	No	No	No	Yes
Power and energy	No	No	No	Yes
Power quality—harmonics	No	No	No	Yes
Power factor	No	No	No	Yes

System Communications

PowerNet	No	No	No	Yes
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Field Testing

Testing method	Test set ^④	Test set ^④	Integral	Integral
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Notes

- ① Using cause of trip module (catalog number **TRIP-LED**).
- ② RG 310+ trip units include integrated cause of trip LEDs.
- ③ Using ammeter or remote ammeter/cause of trip display (catalog number **DIGIVIEW** and **DIGIVIEWR06**).
- ④ Test kit available for field testing 310+ trip units (catalog number **MTST230V**).

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		15–160 A ①								20–250 A								100–630 A 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)							
Interchangeable		—	—	—	—	—	—	—	—	■	■	■	■	■	■	■	■	■	■	■	■				
Built-in		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Thermal magnetic	Fixed thermal	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	Adjustable thermal	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Magnetic		Fixed								Adjustable								Adjustable							
Electronic RMS ⑦	LS	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■	■	■	■	■	■				
	LSI	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■	■	■	■	■	■				
	LSG	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■	■	■	■	■	■				
	LSIG	—	—	—	—	—	—	—	—	■	■	■	■	■	■	■	■	■	■	■	■				
	ALSI	—	—	—	—	—	—	—	—	—	—	—	—	—	—	■	■	■	■	■	■				
	ALSIG	—	—	—	—	—	—	—	—	—	—	—	—	—	—	■	■	■	■	■	■				
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	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		400–1200 A	400–1200 A	400–1200 A	1600 A	800 A	800–2500 A	800–2500 A	
Trip units		Electronic (Digitrip RMS 310+)					Electronic (Digitrip RMS 310+ and 910)		
		Interchangeable	—	—	—	—	—	■ ⑤	■ ⑤
		Built-in	■	■	■	■	■	■	■
Electronic ④	LI	—	—	—	—	—	■ ⑥	■ ⑥	
	LS	■	■	■	■	■	■	■	
	LSI	■	■	■	■	■	■	■	
	LIG	—	—	—	—	—	■ ⑥	■ ⑥	
	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 RG 310+ are interchangeable with the exception of: FROM not ground fault equipped TO ground fault equipped
^⑥ Available only on Digitrip 910 trip units.

General Specifications

All Series G Frames

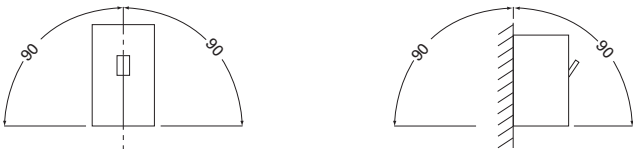
	EG		JG		LG		NG		RG	
Maximum rated current I _n depending on the version	160 A ①		250 A		400, 630 A ②		800, 1200, 1600 A ③		1600, 2000, 2500 A	
Rated insulation voltage U, according to IEC 60947-2										
Main conducting paths	500 Vac		750 Vac		750 Vac		750 Vac		750 Vac	
Auxiliary circuits	500 Vac		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%		
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%	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-T2-147 .				
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	—	—	—	600 A	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)			400 A:	600 A:	
For plant protection	40 W	45 W	65 W	120 W	87/210 W
As isolating circuit breaker	40 W	45 W	65 W	120 W	87/210 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}	6 A	6 A	6 A	6 A	6 A
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	125/250 V	125/250 V	125/250 V	125/250 V	125/250 V
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 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

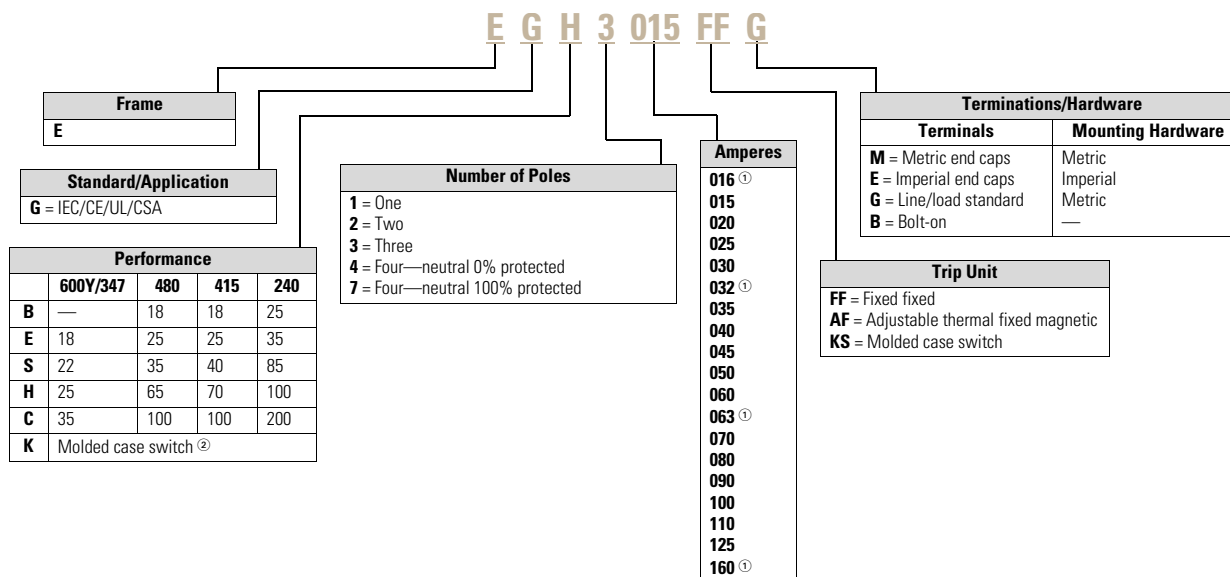
EG breaker is HACR rated.

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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.

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

	Single-Pole	Two-Pole	Three-Pole	Adjustable ^② Thermal, Fixed Magnetic	Four-Pole ^③	Adjustable ^② Thermal, Fixed Magnetic
Maximum Continuous Amps at 40 °C ^①	Fixed 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	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
110	EGB1110FFG	EGB2110FFG	EGB3110FFG	—	EGB4110FFG	—
125	EGB1125FFG	EGB2125FFG	EGB3125FFG	EGB3125AFG	EGB4125FFG	EGB4125AFG
160	—	—	EGB3160FFG	EGB3160AFG	EGB4160FFG	EGB4160AFG

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.

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	Four-Pole ^③	Adjustable ^② Thermal, Fixed Magnetic
	Fixed Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	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.

EG-Frame



EG-Frame—40/35

Maximum Continuous Amps at 40 °C ①	Single-Pole	Two-Pole	Three-Pole	Adjustable ② Thermal, Fixed Magnetic		Four-Pole ③	
	Fixed Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Adjustable ② Thermal, Fixed Magnetic Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Adjustable ② Thermal, Fixed Magnetic Catalog Number	Adjustable ② Thermal, Fixed Magnetic Catalog Number
15	EGS1015FFG	EGS2015FFG	EGS3015FFG	—	EGS4015FFG	—	—
16	EGS1016FFG	EGS2016FFG	EGS3016FFG	—	EGS4016FFG	—	—
20	EGS1020FFG	EGS2020FFG	EGS3020FFG	—	EGS4020FFG	EGS4020AFG	—
25	EGS1025FFG	EGS2025FFG	EGS3025FFG	EGS3025AFG	EGS4025FFG	EGS4025AFG	—
30	EGS1030FFG	EGS2030FFG	EGS3030FFG	—	EGS4030FFG	—	—
32	EGS1032FFG	EGS2032FFG	EGS3032FFG	EGS3032AFG	EGS4032FFG	EGS4032AFG	—
35	EGS1035FFG	EGS2035FFG	EGS3035FFG	—	EGS4035FFG	—	—
40	EGS1040FFG	EGS2040FFG	EGS3040FFG	EGS3040AFG	EGS4040FFG	EGS4040AFG	—
45	EGS1045FFG	EGS2045FFG	EGS3045FFG	—	EGS4045FFG	—	—
50	EGS1050FFG	EGS2050FFG	EGS3050FFG	EGS3050AFG	EGS4050FFG	EGS4050AFG	—
60	EGS1060FFG	EGS2060FFG	EGS3060FFG	—	EGS4060FFG	—	—
63	EGS1063FFG	EGS2063FFG	EGS3063FFG	EGS3063AFG	EGS4063FFG	EGS4063AFG	—
70	EGS1070FFG	EGS2070FFG	EGS3070FFG	—	EGS4070FFG	—	—
80	EGS1080FFG	EGS2080FFG	EGS3080FFG	EGS3080AFG	EGS4080FFG	EGS4080AFG	—
90	EGS1090FFG	EGS2090FFG	EGS3090FFG	—	EGS4090FFG	—	—
100	EGS1100FFG	EGS2100FFG	EGS3100FFG	EGS3100AFG	EGS4100FFG	EGS4100AFG	—
125	EGS1125FFG	EGS2125FFG	EGS3125FFG	EGS3125AFG	EGS4125FFG	EGS4125AFG	—
160	—	—	EGS3160FFG	EGS3160AFG	EGS4160FFG	EGS4160AFG	—

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.

EG-Frame



EG-Frame—70/65

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	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, 63 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.

EG-Frame—100/100 Current Limiting (Single-Pole and Two-Pole Unavailable)

EG-Frame



EG-Frame — 100/100

Maximum Continuous Amps at 40 °C ^①	Three-Pole Fixed Thermal, Fixed Magnetic	Adjustable ^② Thermal, Fixed Magnetic	Four-Pole 0% Protected Neutral ^③	
	Catalog Number	Catalog Number	Fixed Thermal, Fixed Magnetic Catalog Number	Adjustable ^② Thermal, Fixed Magnetic Catalog Number
15	EGC3015FFG	—	EGC7015FFG	—
16	EGC3016FFG	—	EGC7016FFG	—
20	EGC3020FFG	EGC3020AFG	EGC7020FFG	EGC7020AFG
25	EGC3025FFG	EGC3025AFG	EGC7025FFG	EGC7025AFG
30	EGC3030FFG	—	EGC7030FFG	—
32	EGC3032FFG	EGC3032AFG	EGC7032FFG	EGC7032AFG
35	EGC3035FFG	—	EGC7035FFG	—
40	EGC3040FFG	EGC3040AFG	EGC7040FFG	EGC7040AFG
45	EGC3045FFG	—	EGC7045FFG	—
50	EGC3050FFG	EGC3050AFG	EGC7050FFG	EGC7050AFG
60	EGC3060FFG	—	EGC7060FFG	—
63	EGC3063FFG	EGC3063AFG	EGC7063FFG	EGC7063AFG
70	EGC3070FFG	—	EGC7070FFG	—
80	EGC3080FFG	EGC3080AFG	EGC7080FFG	EGC7080AFG
90	EGC3090FFG	—	EGC7090FFG	—
100	EGC3100FFG	EGC3100AFG	EGC7100FFG	EGC7100AFG
125	EGC3125FFG	EGC3125AFG	EGC7125FFG	EGC7125AFG

Molded Case Switches ^④Catalog
Number

EGK3125KSG

EGK7125KSG

EGK3160KSG

EGK7160KSG

Notes

^① 16, 32, 63 A are not UL listed ratings.^② Adjustable thermal is not UL listed.^③ Change the fourth digit to 7 for 100% neutral protection. Neutral is on LH side.^④ Molded case switches may open above 1250 A.

EG Bolt-On Complete Breaker (Includes Frame, Trip Unit and Mounting Hardware)

2

EG-Frame**EG-Frame—18 kAIC at 480 Vac**

Maximum Continuous Amps at 40 °C	Single-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^①	Two-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^②	Three-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^③
15	EGB1015FFB	EGB2015FFB	EGB3015FFB
20	EGB1020FFB	EGB2020FFB	EGB3020FFB
25	EGB1025FFB	EGB2025FFB	EGB3025FFB
30	EGB1030FFB	EGB2030FFB	EGB3030FFB
35	EGB1035FFB	EGB2035FFB	EGB3035FFB
40	EGB1040FFB	EGB2040FFB	EGB3040FFB
45	EGB1045FFB	EGB2045FFB	EGB3045FFB
50	EGB1050FFB	EGB2050FFB	EGB3050FFB
60	EGB1060FFB	EGB2060FFB	EGB3060FFB
70	EGB1070FFB	EGB2070FFB	EGB3070FFB
80	EGB1080FFB	EGB2080FFB	EGB3080FFB
90	EGB1090FFB	EGB2090FFB	EGB3090FFB
100	EGB1100FFB	EGB2100FFB	EGB3100FFB
110	EGB1110FFB	EGB2110FFB	EGB3110FFB
125	EGB1125FFB	EGB2125FFB	EGB3125FFB

EG-Frame**EG-Frame—35 kAIC at 480 Vac**

Maximum Continuous Amps at 40 °C	Single-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^①	Two-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^②	Three-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^③
15	EGS1015FFB	EGS2015FFB	EGS3015FFB
20	EGS1020FFB	EGS2020FFB	EGS3020FFB
25	EGS1025FFB	EGS2025FFB	EGS3025FFB
30	EGS1030FFB	EGS2030FFB	EGS3030FFB
35	EGS1035FFB	EGS2035FFB	EGS3035FFB
40	EGS1040FFB	EGS2040FFB	EGS3040FFB
45	EGS1045FFB	EGS2045FFB	EGS3045FFB
50	EGS1050FFB	EGS2050FFB	EGS3050FFB
60	EGS1060FFB	EGS2060FFB	EGS3060FFB
70	EGS1070FFB	EGS2070FFB	EGS3070FFB
80	EGS1080FFB	EGS2080FFB	EGS3080FFB
90	EGS1090FFB	EGS2090FFB	EGS3090FFB
100	EGS1100FFB	EGS2100FFB	EGS3100FFB
110	EGS1110FFB	EGS2110FFB	EGS3110FFB
125	EGS1125FFB	EGS2125FFB	EGS3125FFB

Notes

- ^① For bulk pack 24, add suffix BP24 and order quantities of 24.
^② For bulk pack 12, add suffix BP12 and order quantities of 12.
^③ For bulk pack 8, add suffix BP8 and order quantities of 8.

EG-Frame



EG-Frame—65 kAIC at 480 Vac

Maximum Continuous Amps at 40 °C	Single-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^①	Two-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^②	Three-Pole Fixed Thermal, Fixed Magnetic Catalog Number ^③
15	EGH1015FFB	EGH2015FFB	EGH3015FFB
20	EGH1020FFB	EGH2020FFB	EGH3020FFB
25	EGH1025FFB	EGH2025FFB	EGH3025FFB
30	EGH1030FFB	EGH2030FFB	EGH3030FFB
35	EGH1035FFB	EGH2035FFB	EGH3035FFB
40	EGH1040FFB	EGH2040FFB	EGH3040FFB
45	EGH1045FFB	EGH2045FFB	EGH3045FFB
50	EGH1050FFB	EGH2050FFB	EGH3050FFB
60	EGH1060FFB	EGH2060FFB	EGH3060FFB
70	EGH1070FFB	EGH2070FFB	EGH3070FFB
80	EGH1080FFB	EGH2080FFB	EGH3080FFB
90	EGH1090FFB	EGH2090FFB	EGH3090FFB
100	EGH1100FFB	EGH2100FFB	EGH3100FFB
110	EGH1110FFB	EGH2110FFB	EGH3110FFB
125	EGH1125FFB	EGH2125FFB	EGH3125FFB

Load Terminals

Maximum Breaker Amps	Terminal, Body Material	Wire Type	Metric Wire Range mm ²	AWG Wire Range	(Package of Three Terminals) Catalog Number
Standard Cu/Al Pressure Type Terminals					
15–50	Aluminum	Cu/Al	2.5–50	#14–1/0	3TA125EF
60–125	Aluminum	Cu/Al	16–70	#6–3/0	3TA150EF

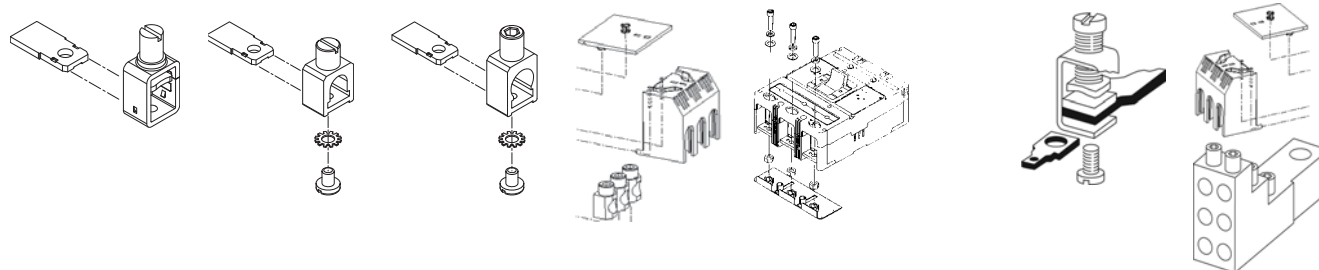
Notes

- ^① For bulk pack 24, add suffix BP24 and order quantities of 24.
^② For bulk pack 12, add suffix BP12 and order quantities of 12.
^③ For bulk pack 8, add suffix BP8 and order quantities of 8.

Accessories Selection Guide and Ordering Information

EG-Frame

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3T125EF

3TA125EF

3TA150EF

3TA160EFK

EF2RTWK, Two-Pole–Metric
 EF3RTWK, Three-Pole–Metric
 EF4RTWK, Four-Pole–Metric
 EF2RTDK, Two-Pole–Imperial
 EF3RTDK, Three-Pole–Imperial
 EF4RTDK, Four-Pole–Imperial

Control Wire
 Terminal Kit
 GCWTK

Multiwire
 Connectors

Line and Load Terminals

Maximum Breaker Amps	Terminal Body Material	Wire Type	Metric Wire Range mm ²	AWG Wire Range	(Package of Three Terminals) Catalog Number
Standard Cu/Al Pressure Type Terminals					
125	Steel	Al	4–6	#14-3/0	3T125EF ①
125	Steel	Cu	2.5–95	#14-3/0	3T125EF ①
125	Aluminum	Cu/Al	2.5–50	#14-1/0	3TA125EF
160	Aluminum	Cu/Al	16–70	#6-3/0	3TA150EF
160	Aluminum	Cu/Al	35–120	#3-250	3TA160EFK
160	Aluminum	Cu/Al	35–120	#3-250	4TA160EFK ②

EG-Frame circuit breakers and molded case switches have line and load terminals as standard equipment.

Insert collar enclosing conductor as shown. Locate nut on top of conductor and tighten securely with screw and washer.

Caution: Collar must surround conductor.

Insert collar enclosing conductor and center on extrusion. Tighten securely with screw and washer. Endcap kits are used on the E-Frame breaker line side to connect busbar or similar electrical connections. Includes hardware.

Notes

① Standard line and load terminals.

② Four-pole kit with four terminals.

Control Wire Terminal Kit

	Catalog Number
Control wire terminal kit	5652B38G01
Package of 12—priced individually	

For use with steel or stainless steel standard line and load terminals only.

Interphase Barriers

	Catalog Number
Interphase barriers	EIPBK
Package includes 2 barriers	

The interphase barrier is available for extended insulation between circuit breaker poles. Specify quantity when ordering.

Base Mounting Hardware—DIN Rail Mounting

	Catalog Number
DIN rail adapter—single-pole	EF1DIN
DIN rail adapter—two-pole	EGDIN
DIN rail adapter—three- or four-pole	EF34DIN
Metal DIN rail adapter—three-pole	EGGDDIN

Metric base mounting hardware is included with a circuit breaker or molded case switch. (Included with breaker.) If required separately, order S/N 8703C80G08.

Note: English mounting hardware kit can be supplied separate. Catalog number is **BMHE #6-32** x 3 inches for two-, three- and four-pole. Single-pole mounting hardware metric order **8703C80G11**. English hardware **8703C80G12**. Both sold in quantities of 100.

Terminal Shields

The terminal shield is available for line terminal areas in three- and four-pole circuit breakers. Special terminal shields are also available for use when an electrical (solenoid) operator is mounted on the circuit breaker. The standard style number by pole for each terminal shield is for a package of 10 and is priced per each package. Special terminal shields are packaged individually.

Terminal Shields—IP30 Protection

Number of Poles	Catalog Number
3	EFTS3K
4	EFTS4K

Terminal End Covers (Gas Barrier)

The terminal end cover is available for three-pole circuit breakers only. Two conductor opening sizes are available. Specify quantity (one per circuit breaker) when ordering.

Terminal End Covers

Conductor Opening Diameter Inches (mm)	Catalog Number
6.35 (0.25)	EEC3K
10.41 (0.41)	EEC4K

Multiwire Connectors

Field-installed multiwire connectors for the load side (OFF) end terminals. They are used to distribute the load from the circuit breaker to multiple devices without the use of separate distribution terminal blocks.

Multiwire lug kits include mounting hardware, terminal shield insulators and tin-plated aluminum connectors to replace three mechanical load lugs. UL listed as used on the load side (OFF) end.

EG-Frame Multiwire Connectors Ordering Information (Package of 3) ^①

Maximum Amperes	Wires per Terminal	Wire Size Range AWG Cu	Kit Catalog Number
125	3	14–2	3TA125E3K
125	6	14–6	3TA125E6K

Note

^① For four-pole kit, change “3” at beginning of catalog number to “4.”

Accessories

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Allowable Accessory Combinations

Different combinations of accessories can be supplied, depending on the types of accessories and the number of poles in the circuit breaker.

EG-Frame Accessories

Description	Reference Page	Single-Pole Center	Two-Pole Left	Right	Three-Pole Left	Center	Right	Four-Pole Left	Center	Right	Neutral
Internal Accessories (Only one internal accessory per pole)											
Alarm lockout (Make/Break)	V4-T2-247	—	—	■	—	—	■	—	—	■	—
Alarm lockout (2Make/2Break)	V4-T2-247	—	—	■	—	—	■	—	—	■	—
Auxiliary switch (1A, 1B)	V4-T2-247	—	—	■	—	—	■	—	—	■	—
Auxiliary switch (2A, 2B)	V4-T2-247	—	—	■	—	—	■	—	—	■	—
Auxiliary switch and alarm switch combination	V4-T2-247	—	—	■	—	—	■	—	—	■	—
Shunt trip—standard	V4-T2-247	—	—	—	■	—	—	■	—	—	—
Undervoltage release mechanism	V4-T2-248	—	—	—	■	—	—	■	—	—	—
External Accessories											
End cap kit	V4-T2-163	—	●	●	●	●	●	●	●	●	●
Control wire terminal kit	V4-T2-163	●	●	●	●	●	●	●	●	●	●
Multiwire connectors	V4-T2-163	●	●	●	●	●	●	●	●	●	●
Base mounting hardware	V4-T2-163	●	●	●	●	●	●	●	●	●	●
Terminal shields	V4-T2-163	●	●	●	●	●	●	●	●	●	●
Terminal end covers	V4-T2-163	—	—	—	●	●	●	—	—	—	—
Interphase barriers	V4-T2-163	—	●	●	●	●	●	●	●	●	●
Non-padlockable handle block	V4-T2-245	■	■	—	—	■	—	—	■	—	—
Snap-on padlockable handle lock hasp	V4-T2-245	■	■	—	—	■	—	—	■	—	—
Padlockable handle lock hasp	V4-T2-245	—	—	■	□	—	□	□	—	□	—
Walking beam interlock—requires two breakers	V4-T2-245	—	—	—	●	●	●	●	●	●	●
Plug-in adapters	V4-T2-245	—	●	●	●	●	●	●	●	●	●
Electrical operator	V4-T2-245	—	—	—	●	●	●	—	—	—	—
Handle mechanisms	V4-T2-527	—	—	—	●	●	●	—	—	—	—
Modifications (Refer to Eaton)											
Moisture fungus treatment	V4-T2-243	●	●	●	●	●	●	●	●	●	●
Freeze-tested circuit breakers	—	●	●	●	●	●	●	●	●	●	●
Marine/naval application, UL 489 Supplement SA and SB	—	●	●	●	●	●	●	●	●	●	●

Legend

- Applicable in indicated pole position
- May be mounted on left or right pole—not both
- Accessory available/modification available

Technical Data and Specifications

UL 489/IEC 60947-2 Interrupting Capacity (Symmetrical Amperes) (kA) Ratings

Circuit Breaker Type	Number of Poles	Volts AC (50/60 Hz)										Volts DC ①					
		220–240					380–415					690 ②		125		250 ③④	
		120	I _{cu}	I _{cs}	277	347	I _{cu}	I _{cs}	480	600Y/ 347	I _{cu}	I _{cs}	I _{cu}	I _{cs}	I _{cu}	I _{cs}	
EGB125	1	35	25	25	18	—	—	—	—	—	—	—	10	10	—	—	
	2, 3, 4	—	25	25	—	—	18	18	18	—	—	—	—	—	10	10	
EGE125	2, 3, 4	—	35	35	—	—	25	25	25	18	—	—	—	—	10	10	
EGS125	1	100	85	43	35	22	—	—	—	—	—	—	35	35	—	—	
	2, 3, 4	—	85	43	—	—	40	30	35	22	—	—	—	—	35	35	
EGH125	1	200	100	50	65	25	—	—	—	—	—	—	42	42	—	—	
	2, 3, 4	—	100	50	—	—	70	35	65	25	—	—	—	—	42	42	
EGC125 ⑤	3, 4	—	200	200	—	—	100	100	100	35	—	—	—	—	42	42	
EGB160 ②	3, 4	—	25	25	—	—	18	18	18	—	—	—	—	—	10	10	
EGE160 ②	3, 4	—	35	35	—	—	25	25	25	18	—	—	—	—	10	10	
EGS160 ②	3, 4	—	85	43	—	—	40	30	35	22	—	—	—	—	35	35	

UL 489 Current Limiting Data

Frame	Circuit	I _p (kA)	I ² T (10 ⁶ A ² S)
EGC	240 V/200 kA	24.5	0.6310
EGC	480 V/100 kA	24.5	0.6310
EGC	600 Y/35 kA	20.0	1.392

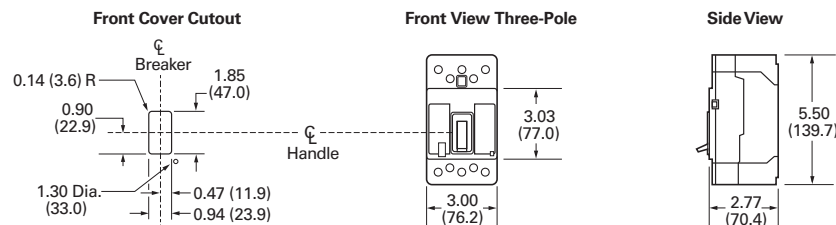
Dimensions and Weights

Approximate Dimensions in Inches (mm)

EG-Frame

Number of Poles	Width	Height	Depth
1	1.00 (25.4)	5.50 (139.7)	2.99 (75.9)
2	2.00 (50.8)	5.50 (139.7)	2.99 (75.9)
3	3.00 (76.2)	5.50 (139.7)	2.99 (75.9)
4	4.00 (101.6)	5.50 (139.7)	2.99 (75.9)

EG-Frame



Approximate Shipping Weight in Lbs (kg)

EG-Frame

EG Breaker Type	Number of Poles			
	1	2	3	4
EGB125	1.5 (0.68)	2.0 (0.91)	3.0 (1.36)	4.9 (1.82)

Notes

- ① DC ratings apply to substantially non-inductive circuits.
- ② IEC only.
- ③ Two-pole circuit breaker, or two poles of three-pole circuit breaker.
- ④ Time constant is 3 milliseconds minimum at 10 kA and 8 milliseconds minimum at 42 kA.
- ⑤ Current limiting per UL 489.

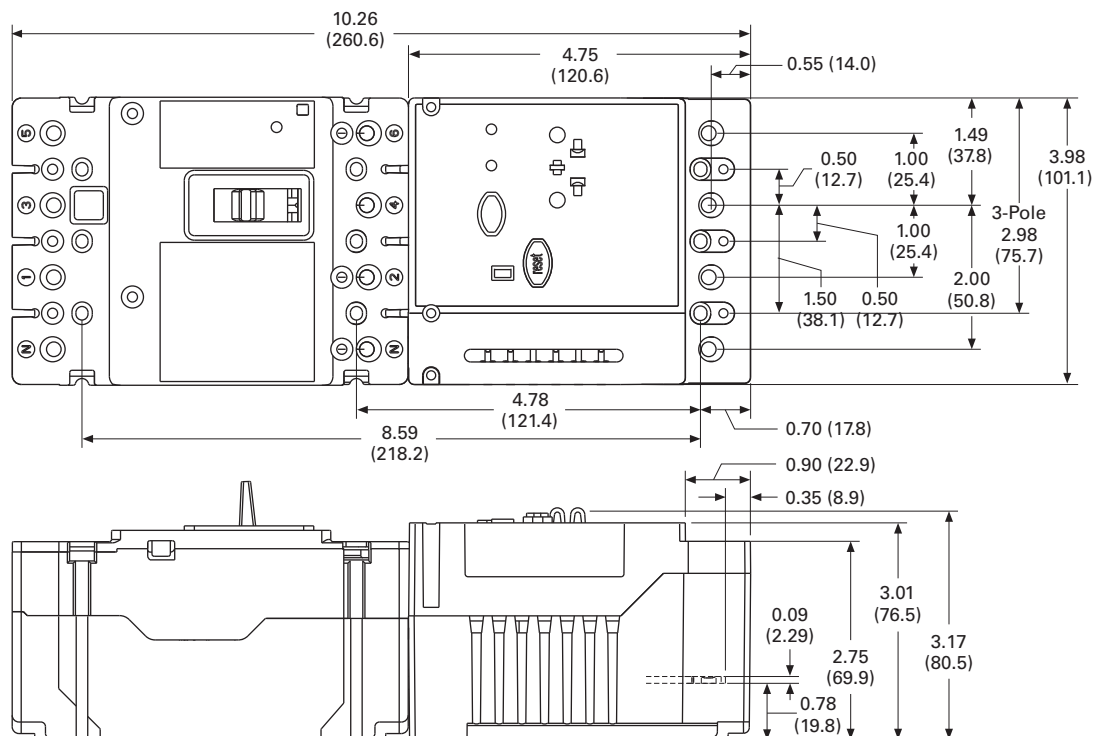
2.3

Molded Case Circuit Breakers

Series G

EG-Frame With Earth Leakage Module

2



EG-Frame With Current Limiter Module

