

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.

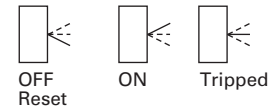
Operating Mechanisms

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
- CE
- 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

2

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_r). A rating plug is not required.

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

Digitrip RMS 310+ LSG and LSI \bar{G} 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 Mode (ARMS)

ARMS 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 ARMS 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_r) 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.

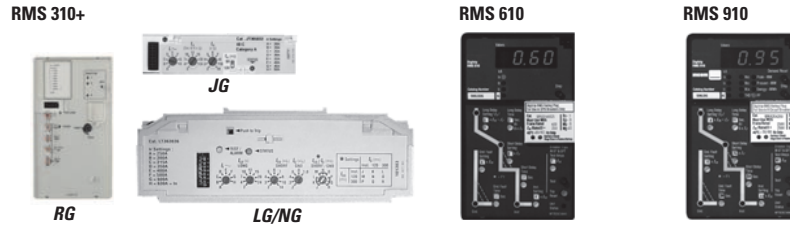
Field Testing

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



| Breaker Type | | | | | |
|------------------------------|--|-----------------------------|-------------------------|----------------------------------|----------------------------------|
| Series G frame(s) | | JG-, LG-, NG- and RG-Frames | | RG-Frame | RG-Frame |
| Ampere rating | | 20–2500 A | | 800–2500 A | 800–2500 A |
| Interrupting rating at 415 V | | 35, 70, 100 kA | | 70, 100 kA | 70, 100 kA |
| Trip Unit Sensing | | | | | |
| rms sensing | | Yes | | Yes | Yes |
| Protection and Coordination | | | | | |
| Protection | Ordering options | LS, LSG | LSI, LSIG | LI, LS, LSI, LIG, LSG, LSIG | LI, LS, LSI, LIG, LSG, LSIG |
| | Fixed rating plug (I_n) ^① | 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 ^② | 10 seconds ^② | 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 | No | Yes ^⑤ | Yes | Yes |
| | 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 | VAR/Frame ^⑦ | 25–100% x (I_n) ^⑦ | 25–100% x (I_n) ^⑦ |
| | 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+ trip units have selectable settings instead of a rating plug.

② 310+ 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.

③ 310+ details are included by frame in **Pages V4-T2-44** (JG), **V4-T2-62** (LG), **V4-T2-72** (NG), and **V4-T2-83** (RG).

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

2

RMS 310+



RG



JG



LG/NG

RMS 610



LSI, LSIG, LSIG (A)

RMS 910



LSI (A), LSIG

| | LS, LSG | LSI, LSIG | LSI, LSIG, LSIG (A) | LSI (A), LSIG |
|-------------------------------|-----------------------|-----------------------|---------------------|---------------|
| System Diagnostics | | | | |
| Cause of trip LEDs | Yes ^{①②} | Yes ^{①②} | 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 |
| Field Testing | | | | |
| Testing method | Test set ^④ | Test set ^④ | Integral | Integral |

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 **DIGVIEW** and **DIGVIEWR06**).
- 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>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 | 15–160 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 | — | | | | | | | | ■ | | | | | | ■ | | | | | | | |
| | ■ | | | | | | | | ■ | | | | | | ■ | | | | | | | |
| Thermal magnetic | ■ | | | | | | | | ■ | | | | | | ■ | | | | | | | |
| | ■ | | | | | | | | ■ | | | | | | ■ | | | | | | | |
| 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.

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 | | 400–1200 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% | 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.

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 | — | — | — | 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} | 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 | 6 A | 6 A | |
| | | | | 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

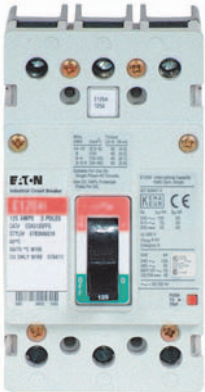
| | NG | | | RG | | |
|--------------------|---------------|---------------|--------------|---------------|---------------|--------------|
| | H | W | D | H | W | D |
| Single-pole | — | — | — | — | — | — |
| Two-pole | — | — | — | — | — | — |
| Three-pole | 16.00 (406.0) | 8.25 (210.0) | 5.50 (140.0) | 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.

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| <i>Description</i> | <i>Page</i> |
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| 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-T2-111 |
| Plug-In Blocks | V4-T2-113 |
| Drawout Cassette | V4-T2-114 |

2.2

Molded Case Circuit Breakers

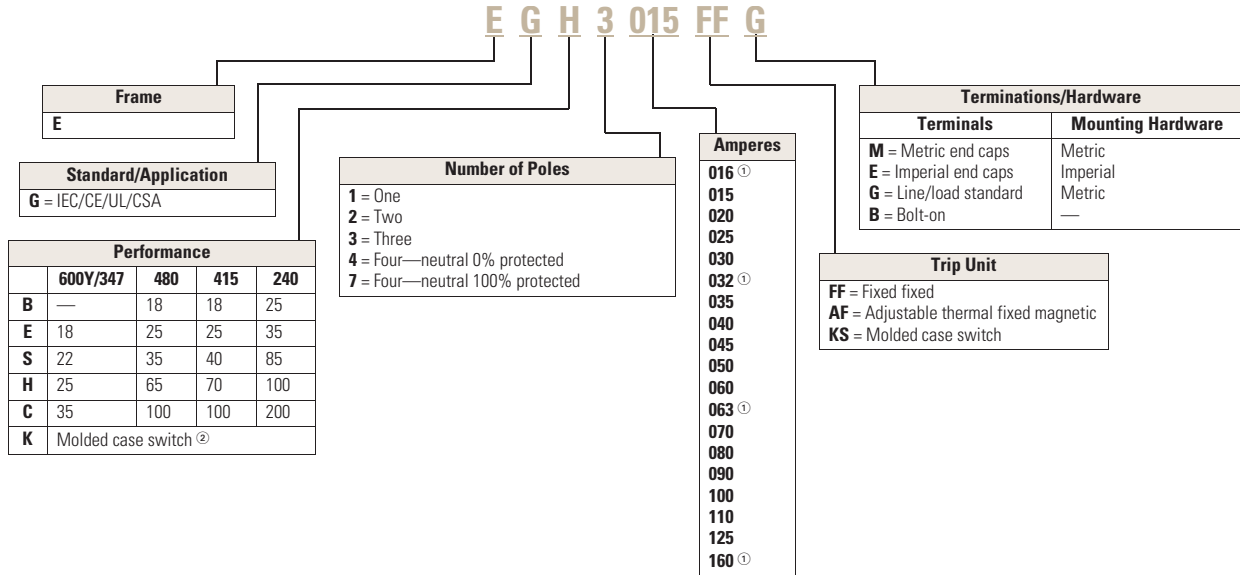
Series G

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.

2

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

2

EG-Frame



EG-Frame—18/18

| 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 | 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.

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.

EG-Frame



EG-Frame—40/35

| 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 | 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.

2.2

Molded Case Circuit Breakers

Series G

2

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 | 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, 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.

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 Fixed Thermal, Fixed Magnetic | Adjustable ^② Thermal, Fixed Magnetic |
|---|--|--|---|--|
| | Catalog Number | Catalog Number | Catalog Number | 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 ^④

Catalog Number

EGK3125KSG

EGK7125KSG

EGK3160KSG

EGK7160KSG

Notes

- ① 16, 32, 63A 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 |

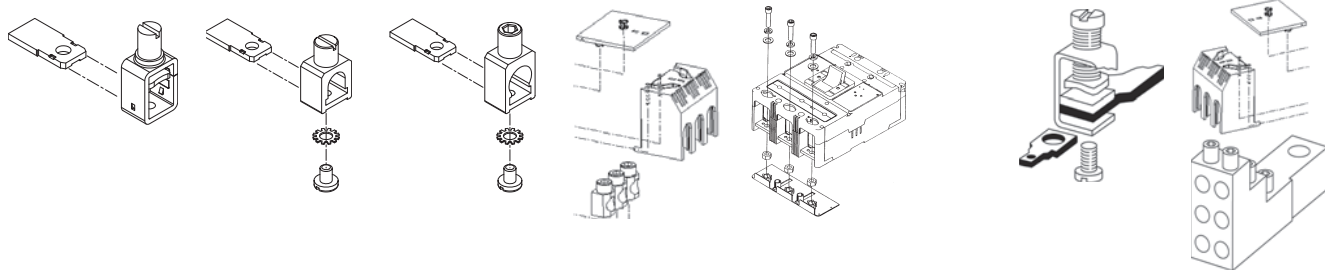
Notes

- 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

2

EG-Frame



| | | | | | | |
|---------|----------|----------|-----------|--|------------------------------------|----------------------|
| 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 | #12-10 | 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 of 12—priced individually | |

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 |

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 |

Multewire Connectors

Field-installed multewire 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.

Multewire 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 Multewire 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

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 | | | Two-Pole | | | Three-Pole | | | Four-Pole | | | Neutral |
|--|----------------|-------------|------|-------|----------|--------|-------|------------|--------|-------|-----------|--------|-------|---------|
| | | Center | Left | Right | Left | Center | Right | Left | Center | Right | Left | Center | Right | |
| Internal Accessories (Only one internal accessory per pole) | | | | | | | | | | | | | | |
| Alarm lockout (Make/Break) | V4-T2-109 | — | — | ■ | — | — | ■ | — | — | ■ | — | — | ■ | — |
| Alarm lockout (2Make/2Break) | V4-T2-109 | — | — | ■ | — | — | ■ | — | — | ■ | — | — | ■ | — |
| Auxiliary switch (1A, 1B) | V4-T2-109 | — | — | ■ | — | — | ■ | — | — | ■ | — | — | ■ | — |
| Auxiliary switch (2A, 2B) | V4-T2-109 | — | — | ■ | — | — | ■ | — | — | ■ | — | — | ■ | — |
| Auxiliary switch and alarm switch combination | V4-T2-109 | — | — | ■ | — | — | ■ | — | — | ■ | — | — | ■ | — |
| Shunt trip—standard | V4-T2-109 | — | — | — | ■ | — | — | ■ | — | — | — | — | — | — |
| Undervoltage release mechanism | V4-T2-110 | — | — | — | ■ | — | — | ■ | — | — | — | — | — | — |
| External Accessories | | | | | | | | | | | | | | |
| End cap kit | V4-T2-25 | — | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Control wire terminal kit | V4-T2-25 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Multewire connectors | V4-T2-25 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Base mounting hardware | V4-T2-25 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Terminal shields | V4-T2-25 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Terminal end covers | V4-T2-25 | — | — | — | ● | ● | ● | — | — | — | — | — | — | — |
| Interphase barriers | V4-T2-25 | — | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-padlockable handle block | V4-T2-107 | ■ | ■ | — | — | ■ | — | — | ■ | — | — | ■ | — | — |
| Snap-on padlockable handle lock hasp | V4-T2-107 | ■ | ■ | — | — | ■ | — | — | ■ | — | — | ■ | — | — |
| Padlockable handle lock hasp | V4-T2-107 | — | — | ■ | □ | — | □ | □ | — | □ | — | □ | — | — |
| Walking beam interlock—requires two breakers | V4-T2-107 | — | — | — | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Plug-in adapters | V4-T2-107 | — | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Electrical operator | V4-T2-107 | — | — | — | ● | ● | ● | — | — | — | — | — | — | — |
| Handle mechanisms | V4-T2-413 | — | — | — | ● | ● | ● | — | — | — | — | — | — | — |
| Modifications (Refer to Eaton) | | | | | | | | | | | | | | |
| Moisture fungus treatment | V4-T2-105 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 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 |
| | 1 | 100 | 85 | 43 | 35 | 22 | — | — | — | — | — | — | 35 | 35 | — | — |
| EGS125 | 2, 3, 4 | — | 85 | 43 | — | — | 40 | 30 | 35 | 22 | — | — | — | — | 35 | 35 |
| | 1 | 200 | 100 | 50 | 65 | 30 | — | — | — | — | — | — | 42 | 42 | — | — |
| EGH125 | 2, 3, 4 | — | 100 | 50 | — | — | 70 | 35 | 65 | 25 | — | — | — | — | 42 | 42 |
| | 3, 4 | — | 200 | 200 | — | — | 100 | 100 | 100 | 35 | — | — | — | — | 42 | 42 |
| EGB160 ② | 3, 4 | — | 25 | 25 | — | — | 18 | 18 | 18 | — | — | — | — | — | 10 | 10 |
| | 3, 4 | — | 35 | 35 | — | — | 25 | 25 | 25 | 18 | — | — | — | — | 10 | 10 |
| EGE160 ② | 3, 4 | — | 85 | 43 | — | — | 40 | 30 | 35 | 22 | — | — | — | — | 35 | 35 |
| | 3, 4 | — | 85 | 43 | — | — | 40 | 30 | 35 | 22 | — | — | — | — | 35 | 35 |

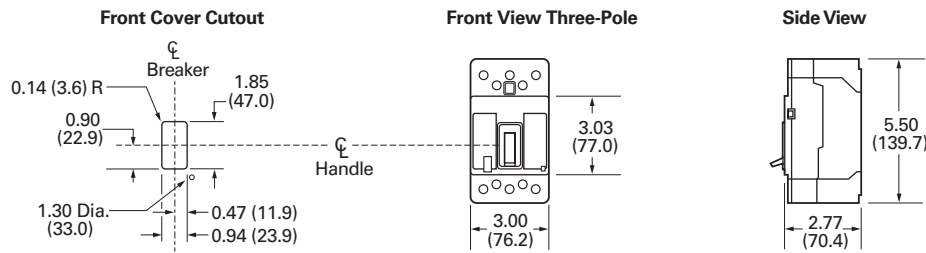
Dimensions and Weights

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

| Breaker Type | Number of Poles | | | | Breaker Type | Number of Poles | |
|--------------|-----------------|------------|------------|------------|--------------|-----------------|------------|
| | 1 | 2 | 3 | 4 | | 3 | 4 |
| EGB125 | 1.5 (0.68) | 2.0 (0.91) | 3.0 (1.36) | 4.9 (1.82) | EGB160 | 3.0 (1.36) | 4.9 (1.82) |
| EGC125 | 1.5 (0.68) | 2.0 (0.91) | 3.0 (1.36) | 4.9 (1.82) | EGE160 | 3.0 (1.36) | 4.9 (1.82) |
| EGE125 | 1.5 (0.68) | 2.0 (0.91) | 3.0 (1.36) | 4.9 (1.82) | EGS160 | 3.0 (1.36) | 4.9 (1.82) |
| EGH125 | 1.5 (0.68) | 2.0 (0.91) | 3.0 (1.36) | 4.9 (1.82) | | | |
| EGS125 | 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.

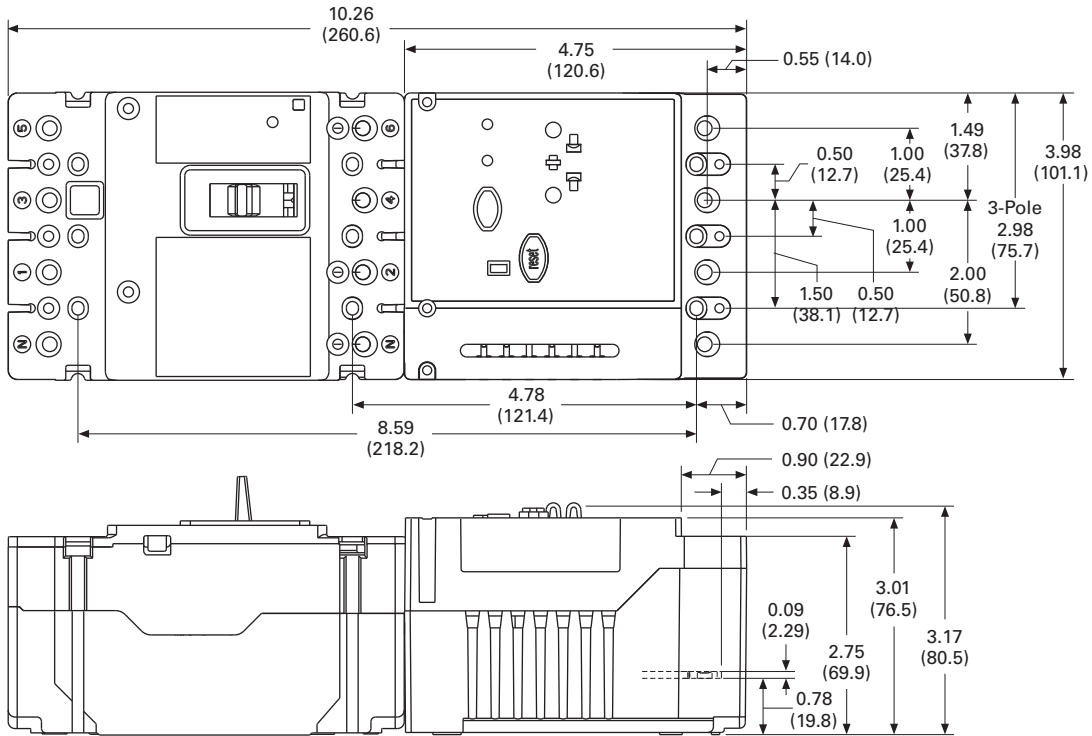
2.2

Molded Case Circuit Breakers

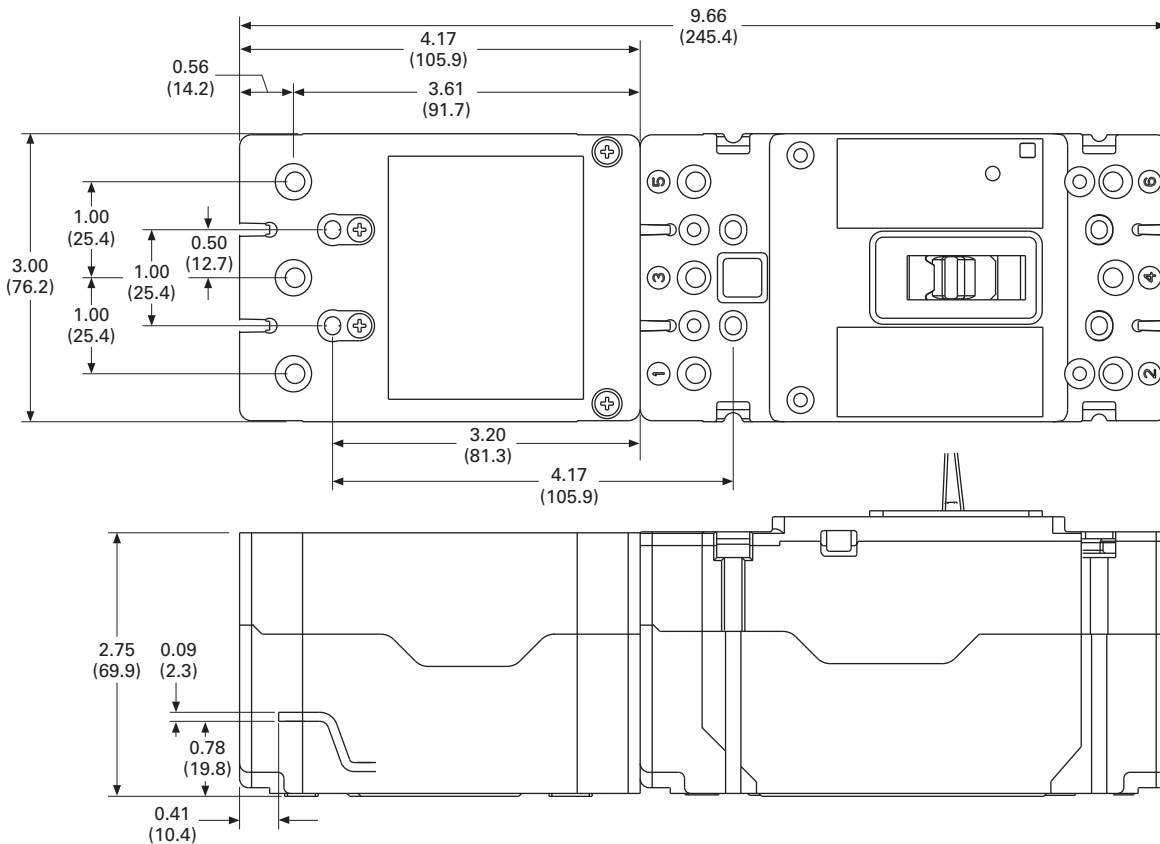
Series G

EG-Frame With Earth Leakage Module

2



EG-Frame With Current Limiter Module



JG-Frame (63–250 Amperes)



JG-Frame (63–250 Amperes)

Product Description

JG breaker is HACR rated.

Contents

| Description | Page |
|---|------------------|
| EG-Frame (15–125 Amperes) | V4-T2-15 |
| JG-Frame (63–250 Amperes) | |
| Catalog Number Selection | V4-T2-30 |
| Product Selection | V4-T2-31 |
| Accessories | V4-T2-42 |
| Technical Data and Specifications | V4-T2-43 |
| Dimensions and Weights | V4-T2-45 |
| 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 |
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| Special Features and Accessories | V4-T2-104 |
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| Plug-In Blocks | V4-T2-113 |
| Drawout Cassette | V4-T2-114 |

2.2

Molded Case Circuit Breakers

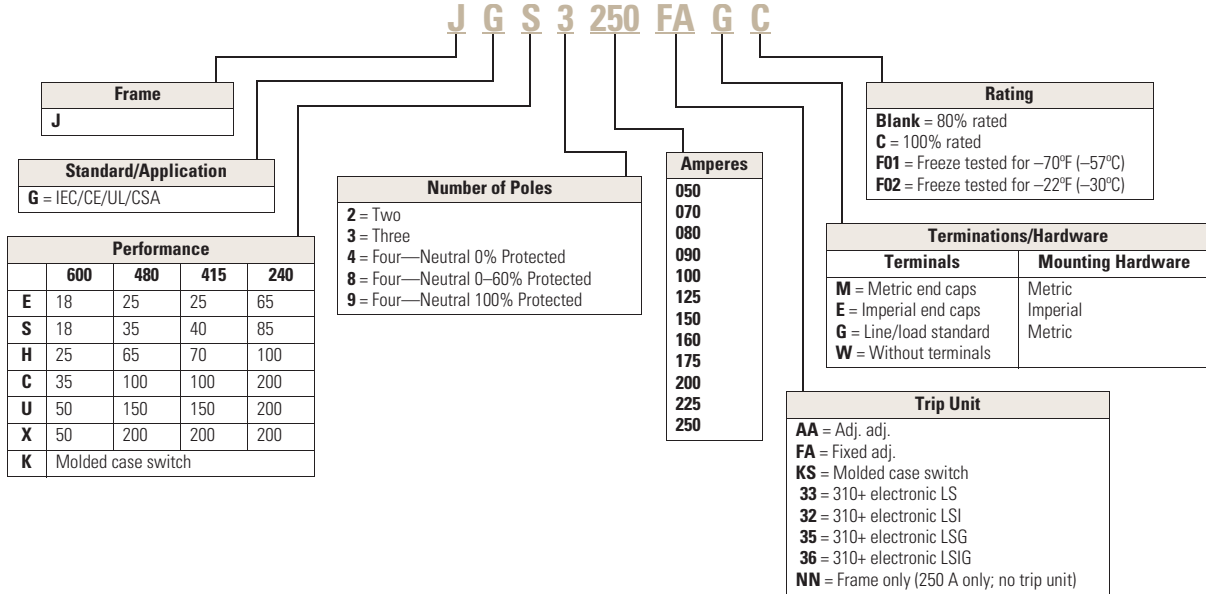
Series G

Catalog Number Selection

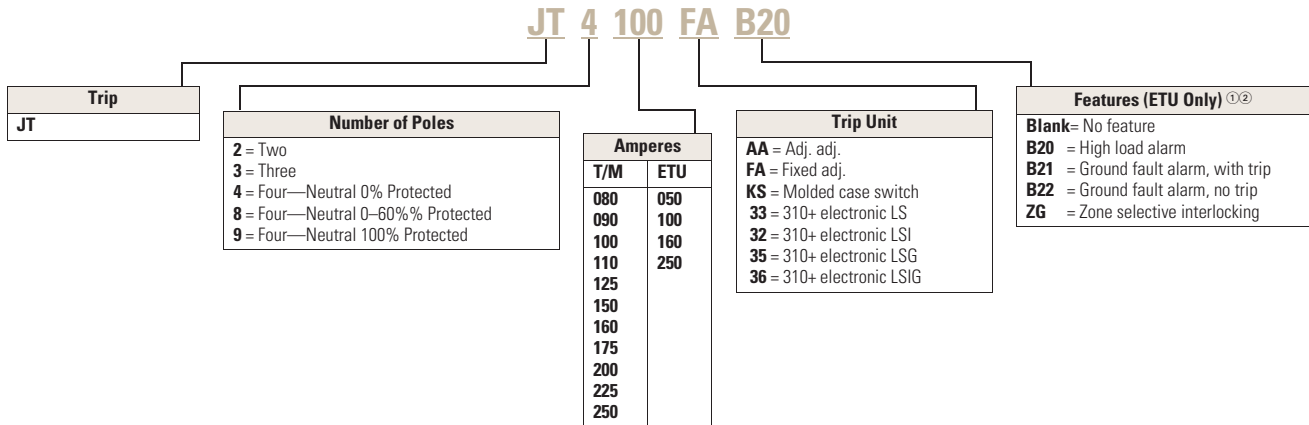
This information is presented only as an aid to understanding catalog numbers. It is not to be used to build catalog numbers for circuit breakers or trip units.

2

Series G—JG-Frame (63–250 Amperes)



Trip Unit



Notes

- ① Bxx features cannot be combined with other Bxx features.
- ② B21 and B22 available with LSG and LSIG trip units.

Product Selection

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

JG-Frame



JG-Frame—IEC/CE/UL/CSA—25/25

| Maximum Continuous Amperes | Magnetic Range | Two-Pole | Three-Pole | Adjustable Thermal, Adjustable Magnetic ^① | Four-Pole 0% ^② | Adjustable Thermal, Adjustable Magnetic ^① |
|----------------------------|----------------|------------------------------------|------------------------------------|--|------------------------------------|--|
| | | Fixed Thermal, Adjustable Magnetic | Fixed Thermal, Adjustable Magnetic | | Fixed Thermal, Adjustable Magnetic | |
| | | Catalog Number | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| 70 | 350–700 | JGE2070FAG | JGE3070FAG | — | JGE4070FAG | — |
| 90 | 450–900 | JGE2090FAG | JGE3090FAG | — | JGE4090FAG | — |
| 100 | 500–1000 | JGE2100FAG | JGE3100FAG | JGE3100AAG | JGE4100FAG | JGE4100AAG |
| 125 | 625–1250 | JGE2125FAG | JGE3125FAG | JGE3125AAG | JGE4125FAG | JGE4125AAG |
| 150 | 750–1550 | JGE2150FAG | JGE3150FAG | — | JGE4150FAG | — |
| 160 | 800–1600 | — | — | JGE3160AAG | — | JGE4160AAG |
| 175 | 875–1750 | JGE2175FAG | JGE3175FAG | — | JGE4175FAG | — |
| 200 | 1000–2000 | JGE2200FAG | JGE3200FAG | JGE3200AAG | JGE4200FAG | JGE4200AAG |
| 225 | 1125–2250 | JGE2225FAG | JGE3225FAG | — | JGE4225FAG | — |
| 250 | 1250–2500 | JGE2250FAG | JGE3250FAG | JGE3250AAG | JGE4250FAG | JGE4250AAG |

JG-Frame



JG-Frame—IEC/CE/UL/CSA—40/35, Two-Pole

| Maximum Continuous Amperes | Magnetic Range | Two-Pole | Three-Pole | Adjustable Thermal, Adjustable Magnetic ^① | Four-Pole 0% ^② | Adjustable Thermal, Adjustable Magnetic ^① |
|----------------------------|----------------|------------------------------------|------------------------------------|--|------------------------------------|--|
| | | Fixed Thermal, Adjustable Magnetic | Fixed Thermal, Adjustable Magnetic | | Fixed Thermal, Adjustable Magnetic | |
| | | Catalog Number | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| 70 | 350–700 | JGS2070FAG | JGS3070FAG | — | JGS4070FAG | — |
| 90 | 450–900 | JGS2090FAG | JGS3090FAG | — | JGS4090FAG | — |
| 100 | 500–1000 | JGS2100FAG | JGS3100FAG | JGS3100AAG | JGS4100FAG | JGS4100AAG |
| 125 | 625–1250 | JGS2125FAG | JGS3125FAG | JGS3125AAG | JGS4125FAG | JGS4125AAG |
| 150 | 750–1550 | JGS2150FAG | JGS3150FAG | — | JGS4150FAG | — |
| 160 | 800–1600 | — | — | JGS3160AAG | — | JGS4160AAG |
| 175 | 875–1750 | JGS2175FAG | JGS3175FAG | — | JGS4175FAG | — |
| 200 | 1000–2000 | JGS2200FAG | JGS3200FAG | JGS3200AAG | JGS4200FAG | JGS4200AAG |
| 225 | 1125–2250 | JGS2225FAG | JGS3225FAG | — | JGS4225FAG | — |
| 250 | 1250–2500 | JGS2250FAG | JGS3250FAG | JGS3250AAG | JGS4250FAG | JGS4250AAG |

Notes

- ① EC-EN 60947-2 only. Adjustment is 0.8 and 1.0.
- ② Change the fourth digit to 8 for adjustable 0–60% neutral protection, 9 for 0–100% neutral protection. Neutral is on LH side.

JG-Frame



JG-Frame—IEC/CE/UL/CSA—70/65

| Maximum Continuous Amperes | Magnetic Range | Two-Pole | Three-Pole | Four-Pole 0% ^② | | |
|----------------------------|----------------|--|--|---|--|---|
| | | Fixed Thermal, Adjustable Magnetic Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Fixed Magnetic ^① Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Fixed Magnetic ^① Catalog Number |
| 70 | 350–700 | JGH2070FAG | JGH3070FAG | — | JGH4070FAG | — |
| 90 | 450–900 | JGH2090FAG | JGH3090FAG | — | JGH4090FAG | — |
| 100 | 500–1000 | JGH2100FAG | JGH3100FAG | JGH3100AAG | JGH4100FAG | JGH4100AAG |
| 125 | 625–1250 | JGH2125FAG | JGH3125FAG | JGH3125AAG | JGH4125FAG | JGH4125AAG |
| 150 | 750–1550 | JGH2150FAG | JGH3150FAG | — | JGH4150FAG | — |
| 160 | 800–1600 | — | — | JGH3160AAG | — | JGH4160AAG |
| 175 | 875–1750 | JGH2175FAG | JGH3175FAG | — | JGH4175FAG | — |
| 200 | 1000–2000 | JGH2200FAG | JGH3200FAG | JGH3200AAG | JGH4200FAG | JGH4200AAG |
| 225 | 1125–2250 | JGH2225FAG | JGH3225FAG | — | JGH4225FAG | — |
| 250 | 1250–2500 | JGH2250FAG | JGH3250FAG | JGH3250AAG | JGH4250FAG | JGH4250AAG |

Notes

① EC-EN 60947-2 only. Adjustment is 0.8 and 1.0.

② Change the fourth digit to 8 for adjustable 0–60% neutral protection, 9 for 0–100% neutral protection. Neutral is on LH side.

Two-Pole not available in IEC/CE/UL/CSA 100/100, 150/150

JG-Frame



JG-Frame—IEC/CE/UL/CSA— 100/100, Current Limiting

| Maximum Continuous Amperes | Magnetic Range | Three-Pole | | Four-Pole 0% ^② | |
|----------------------------|----------------|---|---|---|---|
| | | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^① Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^① Catalog Number |
| 70 | 350–700 | JGC3070FAG | — | JGC4070FAG | — |
| 80 | 400–800 | — | JGC3080AAG | — | JGC4080AAG |
| 90 | 450–900 | JGC3090FAG | — | JGC4090FAG | — |
| 100 | 500–1000 | JGC3100FAG | JGC3100AAG | JGC4100FAG | JGC4100AAG |
| 125 | 625–1250 | JGC3125FAG | JGC3125AAG | JGC4125FAG | JGC4125AAG |
| 150 | 750–1550 | JGC3150FAG | — | JGC4150FAG | — |
| 160 | 800–1600 | — | JGC3160AAG | — | JGC4160AAG |
| 175 | 875–1750 | JGC3175FAG | — | JGC4175FAG | — |
| 200 | 1000–2000 | JGC3200FAG | JGC3200AAG | JGC4200FAG | JGC4200AAG |
| 225 | 1125–2250 | JGC3225FAG | — | JGC4225FAG | — |
| 250 | 1250–2500 | JGC3250FAG | JGC3250AAG | JGC4250FAG | JGC4250AAG |

JG-Frame



JG-Frame—IEC/CE/UL/CSA— 150/150, Current Limiting

| Maximum Continuous Amperes | Magnetic Range | Three-Pole | | Four-Pole 0% ^② | |
|----------------------------|----------------|---|---|---|---|
| | | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^① Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^① Catalog Number |
| 70 | 350–700 | JGU3070FAG | — | JGU4070FAG | — |
| 80 | 400–800 | — | JGU3080AAG | — | JGU4080AAG |
| 90 | 450–900 | JGU3090FAG | — | JGU4090FAG | — |
| 100 | 500–1000 | JGU3100FAG | JGU3100AAG | JGU4100FAG | JGU4100AAG |
| 125 | 625–1250 | JGU3125FAG | JGU3125AAG | JGU4125FAG | JGU4125AAG |
| 150 | 750–1550 | JGU3150FAG | — | JGU4150FAG | — |
| 160 | 800–1600 | — | JGU3160AAG | — | JGU4160AAG |
| 175 | 875–1750 | JGU3175FAG | — | JGU4175FAG | — |
| 200 | 1000–2000 | JGU3200FAG | JGU3200AAG | JGU4200FAG | JGU4200AAG |
| 225 | 1125–2250 | JGU3225FAG | — | JGU4225FAG | — |
| 250 | 1250–2500 | JGU3250FAG | JGU3250AAG | JGU4250FAG | JGU4250AAG |

Notes

① EC-EN 60947-2 only. Adjustment is 0.8 and 1.0.

② Change the fourth digit to 8 for adjustable 0–60% neutral protection, 9 for 0–100% neutral protection. Neutral is on LH side.

2.2

Molded Case Circuit Breakers

Series G

Two-Pole not available in IEC/CE/UL/CSA 200/200

2

JG-Frame



JG-Frame—IEC/CE/UL/CSA 200/200, Current Limiting

| Maximum Continuous Amperes | Magnetic Range | Three-Pole | | Four-Pole ^② | |
|----------------------------|----------------|---|---|---|---|
| | | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^① Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^① Catalog Number |
| 70 | 350–700 | JGX3070FAG | — | JGX4070FAG | — |
| 80 | 400–800 | — | JGX3080AAG | — | JGX4080AAG |
| 90 | 450–900 | JGX3090FAG | — | JGX4090FAG | — |
| 100 | 500–1000 | JGX3100FAG | JGX3100AAG | JGX4100FAG | JGX4100AAG |
| 125 | 625–1250 | JGX3125FAG | JGX3125AAG | JGX4125FAG | JGX4125AAG |
| 150 | 750–1550 | JGX3150FAG | — | JGX4150FAG | — |
| 160 | 800–1600 | — | JGX3160AAG | — | JGX4160AAG |
| 175 | 875–1750 | JGX3175FAG | — | JGX4175FAG | — |
| 200 | 1000–2000 | JGX3200FAG | JGX3200AAG | JGX4200FAG | JGX4200AAG |
| 225 | 1125–2250 | JGX3225FAG | — | JGX4225FAG | — |
| 250 | 1250–2500 | JGX3250FAG | JGX3250AAG | JGX4250FAG | JGX4250AAG |

Molded Case Switches^③

Catalog Number

JGK3250KSG

JGK7250KSG

Notes

- ① EC-EN 60947-2 only. Adjustment is 0.8 and 1.0.
- ② Change the fourth digit to 8 for adjustable 0–60% neutral protection, 9 for 0–100% neutral protection. Neutral is on LH side.
- ③ Molded case switches will trip above 2500 amperes.

Frame—IC Rating at 415/480 Volts

| Maximum Amperes | Two-Pole Catalog Number | Three-Pole Catalog Number | Four-Pole 0% Catalog Number |
|--|-------------------------|---------------------------|-----------------------------|
| 25/25 | | | |
| 250 | JGE2250NN | JGE3250NN | JGE4250NN |
| 40/35 | | | |
| 250 | JGS2250NN | JGS3250NN | JGS4250NN |
| 70/65 | | | |
| 250 | JGH2250NN | JGH3250NN | JGH4250NN |
| 100/100 Current Limiting Per UL 489 | | | |
| 250 | — | JGC3250NN | JGC4250NN |
| 150/150 Current Limiting Per UL 489 | | | |
| 250 | — | JGU3250NN | JGU4250NN |
| 200/200 Current Limiting Per UL 489 | | | |
| 250 | — | JGX3250NN | JGX4250NN |
| 25/25 100% Rated Per UL 489 ② | | | |
| 250 | — | JGE3250NNC | — |
| 40/35 100% Rated Per UL 489 ② | | | |
| 250 | — | JGS3250NNC | — |
| 70/65 100% Rated Per UL 489 ② | | | |
| 250 | — | JGH3250NNC | — |

Thermal-Magnetic Trip Unit

| Ampere Rating | Range | Catalog Number | | Range | Catalog Number | | Catalog Number |
|---------------|-----------|----------------|----------|------------|----------------|----------|----------------|
| 70 | 350–700 | JT2070FA | JT3070FA | — | — | JT4070FA | — |
| 80 | 400–800 | — | JT3080FA | JT3080AA ③ | 64–100 | — | JT4080AA ③ |
| 90 | 450–900 | JT2090FA | JT3090FA | — | — | JT4090FA | — |
| 100 | 500–1000 | JT2100FA | JT3100FA | JT3100AA ③ | 80–100 | JT4100FA | JT4100AA ③ |
| 125 | 625–1250 | JT2125FA | JT3125FA | JT3125AA ③ | 100–125 | JT4125FA | JT4125AA ③ |
| 150 | 750–1550 | JT2150FA | JT3150FA | — | — | JT4150FA | — |
| 160 | 800–1600 | — | — | JT3160AA ③ | 128–160 | — | JT4160AA ③ |
| 175 | 875–1750 | JT2175FA | JT3175FA | — | — | JT4175FA | — |
| 200 | 1000–2000 | JT2200FA | JT3200FA | JT3200AA ③ | 160–200 | JT4200FA | JT4200AA ③ |
| 225 | 1125–2250 | JT2225FA | JT3225FA | — | — | JT4225FA | — |
| 250 | 1250–2500 | JT2250FA | JT3250FA | JT3250AA ③ | 200–250 | JT4250FA | JT4250AA ③ |

Notes

- ① Standard line and load terminals.
- ② Components—100% rated frame.
- ③ Adjustable thermal trip units are typically used in IEC markets and are not UL or CSA listed.

310+ Electronic Trip UnitsSee 310+ adjustability specifications on **Page V4-T2-44**.

2

JG 310+ Electronic Trip Units

| Ampere Rating | LS | LSI | LSG | LSIG | Neutral CT for LSG and LSIG ^① |
|--------------------------------|----------------|----------------|----------------|----------------|--|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| Three-Pole | | | | | |
| 50 | JT305033 | JT305032 | JT305035 | JT305036 | JGFCT050 |
| 100 | JT310033 | JT310032 | JT310035 | JT310036 | JGFCT100 |
| 160 | JT316033 | JT316032 | JT316035 | JT316036 | JGFCT160 |
| 250 | JT325033 | JT325032 | JT325035 | JT325036 | JGFCT250 |
| Four-Pole ^{②③} | | | | | |
| 50 | JT405033 | JT405032 | JT405035 | JT405036 | — |
| 100 | JT410033 | JT410032 | JT410035 | JT410036 | — |
| 160 | JT416033 | JT416032 | JT416035 | JT416036 | — |
| 250 | JT425033 | JT425032 | JT425035 | JT425036 | — |

310+ Electronic Trip Unit Accessories

| Description | Catalog Number |
|--|----------------|
| Electronic portable test kit | MTST230V |
| Trip unit tamper protection wire seal | 5108A03H01 |
| External neutral sensor (250 A) | JGFCT250 |
| External neutral sensor (160 A) | JGFCT160 |
| External neutral sensor (100 A) | JGFCT100 |
| External neutral sensor (80 A) | JGFCT050 |
| Breaker-mount cause-of-trip indication | TRIP-LED |
| Breaker-mount ammeter module | DIGIVIEW |
| Remote-mount ammeter module | DIGIVIEWR06 |

Notes

- ^① For use on a three-pole breaker used in a four-wire system if ground fault protection for the neutral is required.
- ^② Neutral protection 4 = 0%, 6 = 60%, 7 = 100% electronic trip unit neutral protection is not adjustable.
- ^③ Four-pole breakers with LSG and LSIG trip units are only available with 0% neutral protection.

Complete Breaker with 310+ Electronic Trip UnitsSee 310+ adjustability specifications on **Page V4-T2-44**.**IEC/UL/CSA—25/25**

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|--------------------|-------------------------|--------------------------|--------------------------|---------------------------|---|
| Three-Pole | | | | | |
| 50 | JGE305033G | JGE305032G | JGE305035G | JGE305036G | JGFCT050 |
| 100 | JGE310033G | JGE310032G | JGE310035G | JGE310036G | JGFCT100 |
| 160 | JGE316033G | JGE316032G | JGE316035G | JGE316036G | JGFCT160 |
| 250 | JGE325033G | JGE325032G | JGE325035G | JGE325036G | JGFCT250 |
| Four-Pole ② | | | | | |
| 50 | JGE405033G | JGE405032G | JGE405035G | JGE405036G | — |
| 100 | JGE410033G | JGE410032G | JGE410035G | JGE410036G | — |
| 160 | JGE416033G | JGE416032G | JGE416035G | JGE416036G | — |
| 250 | JGE425033G | JGE425032G | JGE425035G | JGE425036G | — |

IEC/UL/CSA—40/35

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|---------------------|-------------------------|--------------------------|--------------------------|---------------------------|---|
| Three-Pole | | | | | |
| 50 | JGS305033G | JGS305032G | JGS305035G | JGS305036G | JGFCT050 |
| 100 | JGS310033G | JGS310032G | JGS310035G | JGS310036G | JGFCT100 |
| 160 | JGS316033G | JGS316032G | JGS316035G | JGS316036G | JGFCT160 |
| 250 | JGS325033G | JGS325032G | JGS325035G | JGS325036G | JGFCT250 |
| Four-Pole ②③ | | | | | |
| 50 | JGS405033G | JGS405032G | JGS405035G | JGS405036G | — |
| 100 | JGS410033G | JGS410032G | JGS410035G | JGS410036G | — |
| 160 | JGS416033G | JGS416032G | JGS416035G | JGS416036G | — |
| 250 | JGS425033G | JGS425032G | JGS425035G | JGS425036G | — |

IEC/UL/CSA—70/65

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|--------------------|-------------------------|--------------------------|--------------------------|---------------------------|---|
| Three-Pole | | | | | |
| 50 | JGH305033G | JGH305032G | JGH305035G | JGH305036G | JGFCT050 |
| 100 | JGH310033G | JGH310032G | JGH310035G | JGH310036G | JGFCT100 |
| 160 | JGH316033G | JGH316032G | JGH316035G | JGH316036G | JGFCT160 |
| 250 | JGH325033G | JGH325032G | JGH325035G | JGH325036G | JGFCT250 |
| Four-Pole ② | | | | | |
| 50 | JGH405033G | JGH405032G | JGH405035G | JGH405036G | — |
| 100 | JGH410033G | JGH410032G | JGH410035G | JGH410036G | — |
| 160 | JGH416033G | JGH416032G | JGH416035G | JGH416036G | — |
| 250 | JGH425033G | JGH425032G | JGH425035G | JGH425036G | — |

Notes

- ① Required for four-wire systems if neutral protection is required.
 ② Neutral protection 4 = 0%, 6 = 60%, 7 = 100% electronic trip unit neutral protection is not adjustable.
 ③ Four-pole breakers with LSG and LSIG trip units are only available with 0% neutral protection.

IEC/UL/CSA—100/100, Current Limiting Per UL 489

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ^① Catalog Number |
|-------------------------------|-------------------------|--------------------------|--------------------------|---------------------------|--|
| Three-Pole | | | | | |
| 50 | JGC305033G | JGC305032G | JGC305035G | JGC305036G | JGFCT050 |
| 100 | JGC310033G | JGC310032G | JGC310035G | JGC310036G | JGFCT100 |
| 160 | JGC316033G | JGC316032G | JGC316035G | JGC316036G | JGFCT160 |
| 250 | JGC335033G | JGC325032G | JGC325035G | JGC325036G | JGFCT250 |
| Four-Pole ^② | | | | | |
| 50 | JGC405033G | JGC405032G | JGC405035G | JGC405036G | — |
| 100 | JGC410033G | JGC410032G | JGC410035G | JGC410036G | — |
| 160 | JGC416033G | JGC416032G | JGC416035G | JGC416036G | — |
| 250 | JGC435033G | JGC425032G | JGC425035G | JGC425036G | — |

IEC/UL/CSA—150/150, Current Limiting Per UL 489

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ^① Catalog Number |
|--------------------------------|-------------------------|--------------------------|--------------------------|---------------------------|--|
| Three-Pole | | | | | |
| 50 | JGU305033G | JGU305032G | JGU305035G | JGU305036G | JGFCT050 |
| 100 | JGU310033G | JGU310032G | JGU310035G | JGU310036G | JGFCT100 |
| 160 | JGU316033G | JGU316032G | JGU316035G | JGU316036G | JGFCT160 |
| 250 | JGU335033G | JGU325032G | JGU325035G | JGU325036G | JGFCT250 |
| Four-Pole ^{②③} | | | | | |
| 50 | JGU405033G | JGU405032G | JGU405035G | JGU405036G | — |
| 100 | JGU410033G | JGU410032G | JGU410035G | JGU410036G | — |
| 160 | JGU416033G | JGU416032G | JGU416035G | JGU416036G | — |
| 250 | JGU435033G | JGU425032G | JGU425035G | JGU425036G | — |

IEC/UL/CSA—200/200, Current Limiting Per UL 489

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ^① Catalog Number |
|-------------------------------|-------------------------|--------------------------|--------------------------|---------------------------|--|
| Three-Pole | | | | | |
| 50 | JGX305033G | JGX305032G | JGX305035G | JGX305036G | JGFCT050 |
| 100 | JGX310033G | JGX310032G | JGX310035G | JGX310036G | JGFCT100 |
| 160 | JGX316033G | JGX316032G | JGX316035G | JGX316036G | JGFCT160 |
| 250 | JGX325033G | JGX325032G | JGX325035G | JGX325036G | JGFCT250 |
| Four-Pole ^② | | | | | |
| 50 | JGX405033G | JGX405032G | JGX405035G | JGX405036G | — |
| 100 | JGX410033G | JGX410032G | JGX410035G | JGX410036G | — |
| 160 | JGX416033G | JGX416032G | JGX416035G | JGX416036G | — |
| 250 | JGX425033G | JGX425032G | JGX425035G | JGX425036G | — |

Notes

- ① Required for four-wire systems if neutral protection is required.
 ② Neutral protection 4 = 0%, 6 = 60%, 7 = 100% electronic trip unit neutral protection is not adjustable.
 ③ Four-pole breakers with LSG and LSIG trip units are only available with 0% neutral protection.

JG 100% Rated Circuit Breaker—Thermal-Magnetic Trip Unit

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

JG-Frame



JG-Frame—IEC/CE/UL/CSA—25/25

| Maximum Continuous Amperes | Magnetic Range | Three-Pole |
|----------------------------|----------------|---|
| | | Fixed Thermal, Adjustable Magnetic Catalog Number |
| 70 | 350–700 | JGE3070FAGC |
| 90 | 450–900 | JGE3090FAGC |
| 100 | 500–1000 | JGE3100FAGC |
| 125 | 625–1250 | JGE3125FAGC |
| 150 | 750–1550 | JGE3150FAGC |
| 160 | 800–1600 | — |
| 175 | 875–1750 | JGE3175FAGC |
| 200 | 1000–2000 | JGE3200FAGC |
| 225 | 1125–2250 | JGE3225FAGC |
| 250 | 1250–2500 | JGE3250FAGC |

JG-Frame—IEC/CE/UL/CSA—70/65

| Maximum Continuous Amperes | Magnetic Range | Three-Pole |
|----------------------------|----------------|---|
| | | Fixed Thermal, Adjustable Magnetic Catalog Number |
| 70 | 350–700 | JGH3070FAGC |
| 90 | 450–900 | JGH3090FAGC |
| 100 | 500–1000 | JGH3100FAGC |
| 125 | 625–1250 | JGH3125FAGC |
| 150 | 750–1550 | JGH3150FAGC |
| 160 | 800–1600 | — |
| 175 | 875–1750 | JGH3175FAGC |
| 200 | 1000–2000 | JGH3200FAGC |
| 225 | 1125–2250 | JGH3225FAGC |
| 250 | 1250–2500 | JGH3250FAGC |

JG-Frame—IEC/CE/UL/CSA—40/35

| Maximum Continuous Amperes | Magnetic Range | Three-Pole |
|----------------------------|----------------|---|
| | | Fixed Thermal, Adjustable Magnetic Catalog Number |
| 70 | 350–700 | JGS3070FAGC |
| 90 | 450–900 | JGS3090FAGC |
| 100 | 500–1000 | JGS3100FAGC |
| 125 | 625–1250 | JGS3125FAGC |
| 150 | 750–1550 | JGS3150FAGC |
| 160 | 800–1600 | — |
| 175 | 875–1750 | JGS3175FAGC |
| 200 | 1000–2000 | JGS3200FAGC |
| 225 | 1125–2250 | JGS3225FAGC |
| 250 | 1250–2500 | JGS3250FAGC |

2.2

Molded Case Circuit Breakers

Series G

JG 100% Rated 310+ Electronic Trip Unit Circuit Breaker

See 310+ adjustability specifications on **Page V4-T2-44**.

2

IEC/UL/CSA—25/25

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|---------------|-------------------------|--------------------------|--------------------------|---------------------------|---|
| 50 | JGE305033GC | JGE305032GC | JGE305035GC | JGE305036GC | JGFCT050 |
| 100 | JGE310033GC | JGE310032GC | JGE310035GC | JGE310036GC | JGFCT100 |
| 160 | JGE316033GC | JGE316032GC | JGE316035GC | JGE316036GC | JGFCT160 |
| 250 | JGE325033GC | JGE325032GC | JGE325035GC | JGE325036GC | JGFCT250 |

IEC/UL/CSA—40/35

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|---------------|-------------------------|--------------------------|--------------------------|---------------------------|---|
| 50 | JGS305033GC | JGS305032GC | JGS305035GC | JGS305036GC | JGFCT050 |
| 100 | JGS310033GC | JGS310032GC | JGS310035GC | JGS310036GC | JGFCT100 |
| 160 | JGS316033GC | JGS316032GC | JGS316035GC | JGS316036GC | JGFCT160 |
| 250 | JGS325033GC | JGS325032GC | JGS325035GC | JGS325036GC | JGFCT250 |

IEC/UL/CSA—70/65

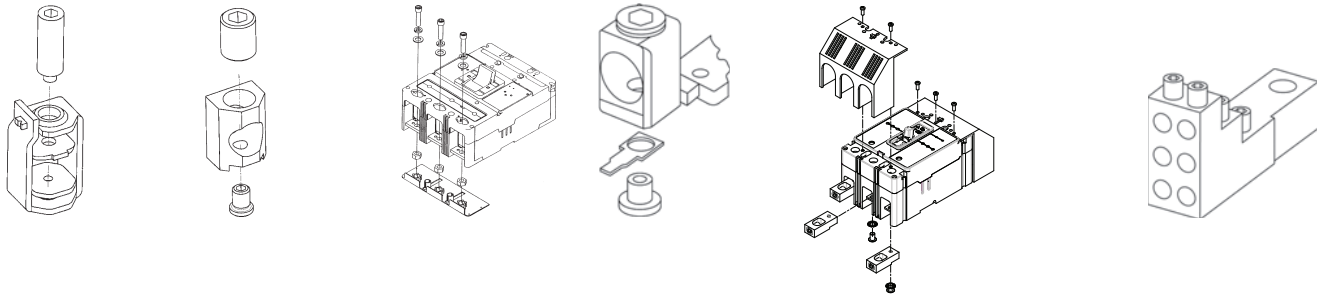
| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|---------------|-------------------------|--------------------------|--------------------------|---------------------------|---|
| 50 | JGH305033GC | JGH305032GC | JGH305035GC | JGH305036GC | JGFCT050 |
| 100 | JGH310033GC | JGH310032GC | JGH310035GC | JGH310036GC | JGFCT100 |
| 160 | JGH316033GC | JGH316032GC | JGH316035GC | JGH316036GC | JGFCT160 |
| 250 | JGH325033GC | JGH325032GC | JGH325035GC | JGH325036GC | JGFCT250 |

Note

① Required for four-wire systems if neutral protection is required.

Accessories Selection Guide and Ordering Information

JG-Frame



T250FJ TA250FJ Endcap Kit Control Wire Terminal Kit Rear Fed Terminals Multiwire Connectors

Load and Line Terminals

| Maximum Breaker Amperes | Terminal Body Material | Wire Type | Metric Wire Range mm ² | AWG Wire Range/ Number of Conductors | Catalog Number |
|---|------------------------|-----------|-----------------------------------|--------------------------------------|----------------|
| Standard Pressure Type Terminals | | | | | |
| 250 | Stainless steel | Cu | 25–185 | #4–350 (1) | T250FJ ① |
| 250 | Aluminum | Cu/Al | 10–185 | #8–350 (1) | TA250FJ ①② |

JG-Frame circuit breakers include aluminum terminals TA250FJ as standard. When optional stainless steel only terminals are required, order by catalog number.

Endcap Kits

| Number of Poles | Catalog Number | |
|-----------------|----------------|----------|
| | Metric | Imperial |
| 3 | FJ3RTWK | FJ3RTDK |
| 4 | FJ4RTWK | FJ4RTDK |

Endcap kits are used on J250-Frame breaker to connect busbar or similar electrical connections. Includes hardware.

Control Wire Terminal Kit

| Description | Catalog Number |
|-------------------------------------|----------------|
| Package of 14 (priced individually) | FJCWTK |

For use with aluminum or copper terminals only.

Rear Fed Terminals

| Maximum Amperes | Wire Size Range AWG Cu | Catalog Number |
|-----------------|------------------------|-------------------------|
| 250 | #4–350 kcmil | TA250JGRF 3TA250JGRF |

Rear fed terminals allow the cable to connect to the breaker from the back instead of the top. Terminal shields or interphase barriers are included with each rear fed terminal kit (depending on frame size). When catalog number starts with a 3, it indicates a kit with three terminals in each kit. Catalog number beginning with a TA indicates one terminal.

Base Mounting Hardware

Base mounting hardware is included with a circuit breaker or molded case switch. (Included with breaker.) If required separately, order 66A2546G02.

Terminal Shields IP30

| Location | Number of Poles | Catalog Number |
|--------------|-----------------|----------------|
| Line or Load | 2, 3 | FJTS3K |
| | 4 | FJTS4K |

Interphase Barriers

| Number of Poles | Catalog Number |
|-----------------|----------------|
| 3 | FJIPBK ③ |
| 4 | FJIPBK4 ③ |

Multiwire Connectors

Field-installed multiwire connectors for the load side (OFF) end terminals 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 terminal shield, mounting hardware, insulators and tin-plated aluminum connectors to replace three mechanical load lugs. UL listed as used on the load side (OFF) end.

JG-Frame Multiwire Connectors Ordering Information (Package of 3)

| Maximum Amperes | Wires per Terminal | Wire Size Range AWG Cu | Kit Catalog Number |
|-----------------|--------------------|------------------------|--------------------|
| 250 | 3 | 14–2 | 3TA250FJ3 |
| 250 | 6 | 14–6 | 3TA250FJ6 |

Notes

- ① Individually packed.
- ② Standard line and load.
- ③ Individually priced.

Accessories

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.

JG-Frame Accessories

| Description | Reference Page | Two- and Three-Pole | | | Four-Pole | | | Neutral |
|--|----------------|---------------------|--------|-------|-----------|--------|-------|---------|
| | | Left | Center | Right | Left | Center | Right | |
| Internal Accessories (Only one internal accessory per pole) | | | | | | | | |
| Alarm lockout (Make/Break) | V4-T2-109 | — | — | ■ | — | — | ■ | — |
| Auxiliary switch (1A, 1B) | V4-T2-109 | — | — | ■ | — | — | ■ | — |
| Auxiliary switch (2A, 2B) | V4-T2-109 | — | — | ■ | — | — | ■ | — |
| Auxiliary switch and alarm switch combination | V4-T2-109 | — | — | ■ | — | — | ■ | — |
| Shunt trip—standard | V4-T2-109 | ■ | — | — | ■ | — | — | — |
| Undervoltage release mechanism | V4-T2-110 | ■ | — | — | ■ | — | — | — |
| External Accessories | | | | | | | | |
| End cap kit | V4-T2-41 | ● | ● | ● | ● | ● | ● | ● |
| Control wire terminal kit | V4-T2-41 | ● | ● | ● | ● | ● | ● | ● |
| Rear fed terminals | V4-T2-41 | ● | ● | ● | ● | ● | ● | ● |
| Multewire connectors | V4-T2-41 | ● | ● | ● | ● | ● | ● | ● |
| Base mounting hardware | V4-T2-41 | ● | ● | ● | ● | ● | ● | ● |
| Interphase barriers | V4-T2-41 | ● | ● | ● | ● | ● | ● | ● |
| Padlockable handle block | V4-T2-107 | — | ■ | — | — | ■ | — | — |
| Padlockable handle lock hasp | V4-T2-107 | □ | — | □ | □ | — | □ | — |
| Key interlock kit | V4-T2-107 | □ | — | □ | □ | — | □ | — |
| Sliding bar interlock—requires two breakers | V4-T2-107 | ● | ● | ● | — | — | — | — |
| Electrical operator | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Plug-in adapters | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Handle mechanisms | V4-T2-413 | ● | ● | ● | ● | ● | ● | ● |
| Earth leakage/ground fault protector | V4-T2-92 | ● | ● | ● | ● | ● | ● | ● |
| Drawout cassette | V4-T2-114 | ● | ● | ● | ● | ● | ● | ● |
| Digitrip 310+ test kit | V4-T2-36 | ● | ● | ● | ● | ● | ● | ● |
| Ammeter/cause of trip display | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Cause of trip LED module | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Modifications (Refer to Eaton) | | | | | | | | |
| Moisture fungus treatment | V4-T2-105 | ● | ● | ● | ● | ● | ● | ● |
| Freeze-tested circuit breakers | — | ● | ● | ● | ● | ● | ● | ● |
| Marine/naval application, UL 489 supplement SA and SB | ① | ● | ● | ● | ● | ● | ● | ● |

Legend

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

Note

① Contact Eaton.

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 | | 480 | | 600 | | | 690 ^② |
| | | I _{cu} | I _{cs} | I _{cu} | I _{cs} | 480 | 600 | I _{cu} | I _{cs} | | |
| JGE250 | 2, 3, 4 | 65 | 65 | 25 | 25 | 25 | 18 | 12 | 6 | 10 | |
| JGS250 | 2, 3, 4 | 85 | 85 | 40 | 40 | 35 | 18 | 12 | 6 | 22 | |
| JGH250 | 2, 3, 4 | 100 | 100 | 70 | 70 | 65 | 25 | 14 | 7 | 22 | |
| JGC250 ^④ | 3, 4 | 200 | 200 | 100 | 100 | 100 | 35 | 16 | 12 | 42 | |
| JGU250 ^④ | 3, 4 | 200 | 200 | 150 | 150 | 150 | 50 | 18 | 14 | 50 | |
| JGX250 ^④ | 3, 4 | 200 | 200 | 200 | 200 | 200 | 50 | 18 | 14 | 50 | |

JG 310+ Specifications

| Description | Specification |
|---|--------------------------|
| Trip Unit Type | Digitrip RMS 310+ |
| Breaker Type | |
| Frame designation | JG |
| Frames available | 50 A, 100 A, 160 A 250 A |
| Continuous current range (A) | 20–250A |
| Ground fault pickup (A) | 10–250A |
| Interrupting capacities at 480 Vac (kAIC) | 35, 65, 100, 150, 200 |
| 100% rated | Yes |
| Protection | |
| Ordering options | LS, LSI, LSG, LSIG |
| Arcflash reduction maintenance system (or maintenance mode) | No |
| Interchangeable trip unit | Yes |
| High load alarm (suffix B20) ^⑤ | Yes |
| Ground fault alarm with trip (suffix B21) ^⑤ | Yes |
| Ground fault alarm, no trip (suffix B22) ^⑤ | Yes |
| Zone selective interlocking (suffix ZG) | LSI, LSIG |
| Cause of trip indication | Yes |
| Thru-cover accessories | Yes |

Notes

- ① DC ratings apply to substantially non-inductive circuits.
- ② Two-pole circuit breaker, or two poles of three-pole circuit breaker.
- ③ Time constant is 3 milliseconds minimum at 10 kA and 8 milliseconds minimum at 22 kA.
- ④ Current limiting per UL 489.
- ⑤ B2x suffixes cannot be combined with B2x suffixes.

2.2

Molded Case Circuit Breakers

Series G

JG 310+ Adjustability Specifications

2

| 310+ Settings | | JG Frame | | | |
|---|--------------|----------|----------|----------|----------|
| | | 50 A | 100 A | 160 A | 250 A |
| I_r = continuous current or long delay pickup (amperes) (All 310+) | I_r | | | | |
| | A | 20 | 40 | 63 | 100 |
| | B | 20 | 45 | 80 | 125 |
| | C | 25 | 50 | 90 | 150 |
| | D | 30 | 63 | 100 | 160 |
| | E | 32 | 70 | 110 | 175 |
| | F | 40 | 80 | 125 | 200 |
| | G | 45 | 90 | 150 | 225 |
| | H (= I_n) | 50 | 100 | 160 | 250 |
| t_r = long delay time (seconds) (All 310+) | Position 1 | 2 | 2 | 2 | 2 |
| | Position 2 | 4 | 4 | 4 | 4 |
| | Position 3 | 7 | 7 | 7 | 7 |
| | Position 4 | 10 | 10 | 10 | 10 |
| | Position 5 | 12 | 12 | 12 | 12 |
| | Position 6 | 15 | 15 | 15 | 15 |
| | Position 7 | 20 | 20 | 20 | 20 |
| | Position 8 | 24 | 24 | 24 | 24 |
| I_{sd} (x I_r) = short delay pickup (All 310+) | Position 1 | 2x | 2x | 2x | 2x |
| | Position 2 | 3x | 3x | 3x | 3x |
| | Position 3 | 4x | 4x | 4x | 4x |
| | Position 4 | 5x | 5x | 5x | 5x |
| | Position 5 | 6x | 6x | 6x | 6x |
| | Position 6 | 7x | 7x | 7x | 7x |
| | Position 7 | 8x | 8x | 8x | 8x |
| | Position 8 | 10x | 10x | 10x | 10x |
| | Position 9 | 14x | 14x | 14x | 14x |
| t_{sd} = short delay time I^2t (milliseconds) (LS, LSG) | Fixed | 67 at10x | 67 at10x | 67 at10x | 67 at10x |
| t_{sd} = short delay time flat (milliseconds) (LSI, LSIG) | Position 1 | Inst | Inst | Inst | Inst |
| | Position 2 | 120 | 120 | 120 | 120 |
| | Position 3 | 300 | 300 | 300 | 300 |
| I_g = ground fault pickup (amperes) (LSG, LSIG) | Position 1 | 10 | 20 | 32 | 50 |
| | Position 2 | 15 | 30 | 48 | 75 |
| | Position 3 | 20 | 40 | 64 | 100 |
| | Position 4 | 30 | 60 | 96 | 150 |
| | Position 5 | 40 | 80 | 128 | 200 |
| | Position 6 | 50 | 100 | 160 | 250 |
| t_g = ground fault delay time (milliseconds) (LSG, LSIG) | Position 1 | Inst | Inst | Inst | Inst |
| | Position 2 | 120 | 120 | 120 | 120 |
| | Position 3 | 300 | 300 | 300 | 300 |
| Independently Adjustable Instantaneous (I_i) setting ^① | | N/A | | | |
| Maintenance Mode pickup (2.5 x I_r) (amperes) ^② | | N/A | | | |

Notes

- ① Not available for JG. Independently adjustable I_i setting available in LG, NG and RG ALSI and ALSIG trip units.
- ② Maintenance Mode not available for JG frames. It is available for KD, LD, MDL, LG, NG, and RG.

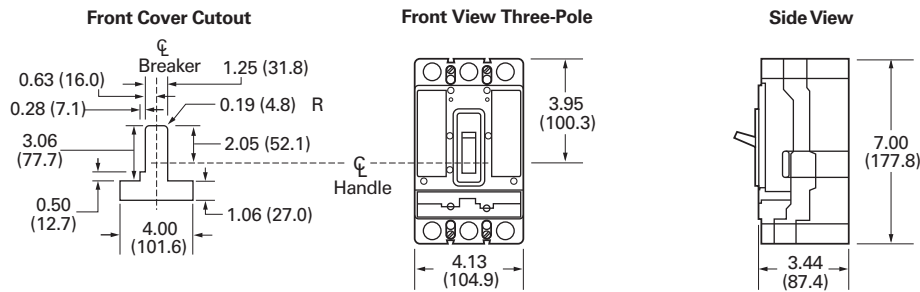
Dimensions and Weights

Approximate Dimensions in Inches (mm)

JG-Frame

| Number of Poles | Width | Height | Depth |
|-----------------|--------------|--------------|-------------|
| 2, 3 | 4.13 (104.9) | 7.00 (177.8) | 3.57 (90.7) |
| 4 | 5.34 (135.6) | 7.00 (177.8) | 3.57 (90.7) |

JG-Frame



Approximate Shipping Weight in Lbs (kg)

JG-Frame

| Breaker Type | Number of Poles | |
|--------------|-----------------|-------------|
| | 2, 3 | 4 |
| JGC | 6.00 (2.70) | 8.00 (3.60) |
| JGE | 6.00 (2.70) | 8.00 (3.60) |
| JGH | 6.00 (2.70) | 8.00 (3.60) |
| JGS | 6.00 (2.70) | 8.00 (3.60) |
| JGU | 6.00 (2.70) | 8.00 (3.60) |
| JGX | 6.00 (2.70) | 8.00 (3.60) |

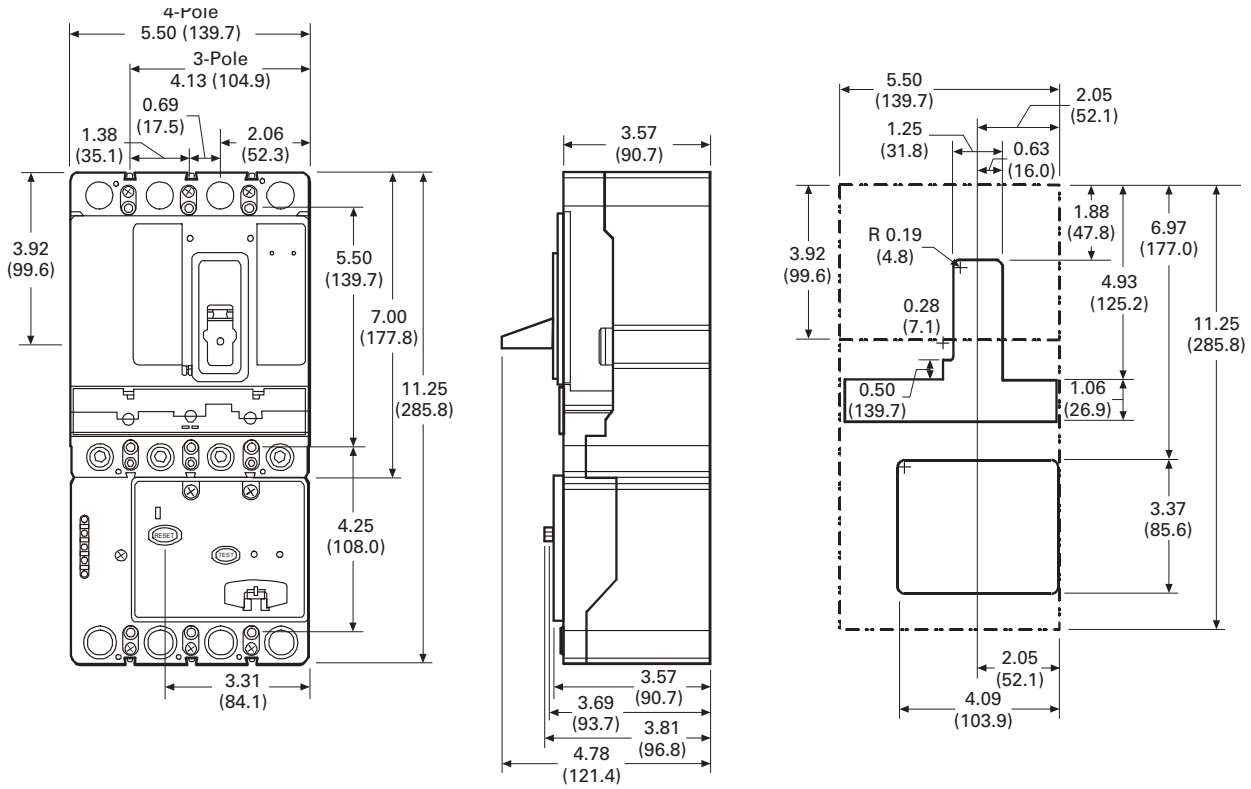
2.2

Molded Case Circuit Breakers

Series G

JG-Frame With Earth Leakage Module

2



LG-Frame (250–630 Amperes)



LG-Frame (250–630 Amperes)

Product Description

LG breaker is HACR rated.

Contents

| <i>Description</i> | <i>Page</i> |
|---|------------------|
| EG-Frame (15–125 Amperes) | V4-T2-15 |
| JG-Frame (63–250 Amperes) | V4-T2-29 |
| LG-Frame (250–630 Amperes) | |
| Catalog Number Selection | V4-T2-48 |
| Product Selection | V4-T2-49 |
| Accessories | V4-T2-60 |
| Technical Data and Specifications | V4-T2-61 |
| Dimensions and Weights | V4-T2-63 |
| 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-T2-111 |
| Plug-In Blocks | V4-T2-113 |
| Drawout Cassette | V4-T2-114 |

2.2

Molded Case Circuit Breakers

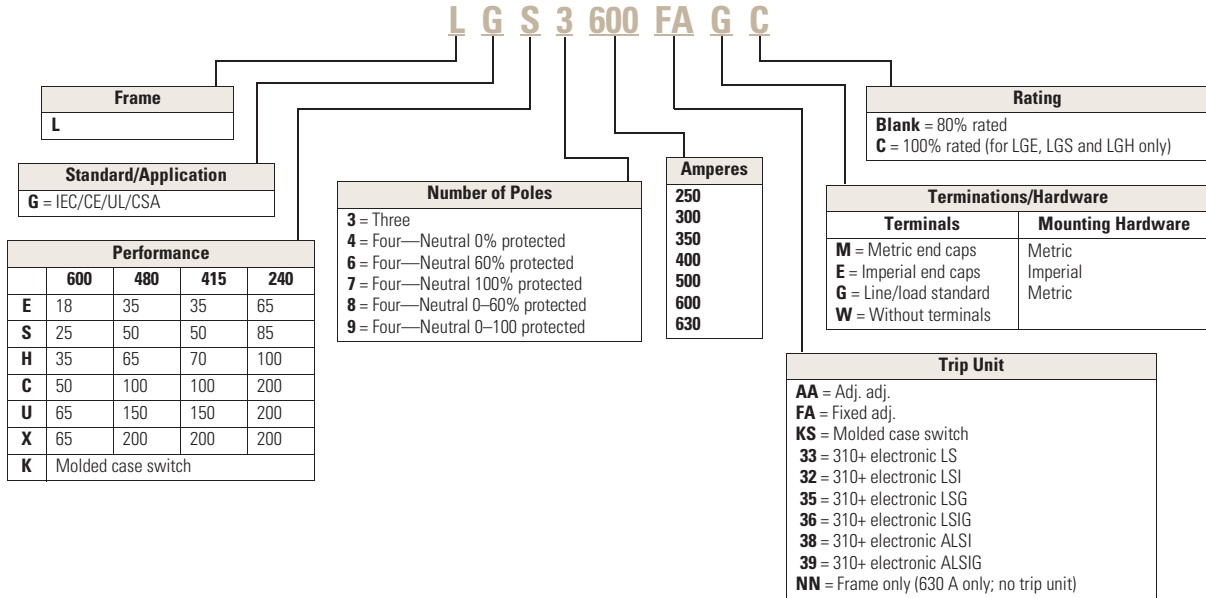
Series G

Catalog Number Selection

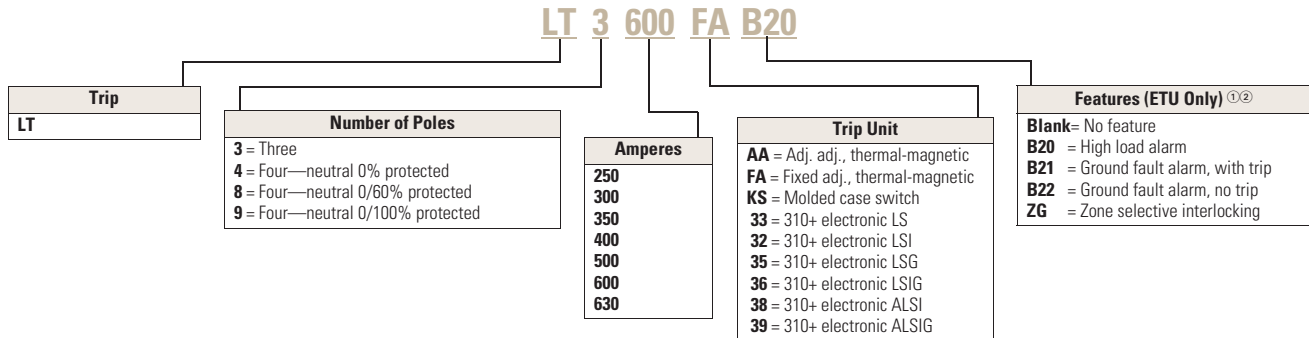
This information is presented only as an aid to understanding catalog numbers. It is not to be used to build catalog numbers for circuit breakers or trip units.

2

Series G—LG-Frame (250–630 Amperes)



Trip Unit



Notes

- ① Bxx features cannot be combined with other Bxx features.
- ② B21 and B22 available with LSG and LSIG trip units.

Product Selection

Complete Breaker (Includes Frame, Trip Unit, Standard Terminals and Mounting Hardware)

LG-Frame



LG-Frame—630 Amperes (600 Amperes UL, CSA)
 IC Rating: 35 kAIC at 415 and 480 Vac ^①

| Ampere Rating | Three-Pole ^② | | Four-Pole (0%) ^③ | |
|------------------|--|---|--|---|
| | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^{④⑤} Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^{④⑤} Catalog Number |
| 250 | LGE3250FAG | LGE3250AAG | LGE4250FAG | LGE4250AAG |
| 300 | LGE3300FAG | — | LGE4300FAG | — |
| 320 | — | LGE3320AAG | — | LGE4320AAG |
| 350 | LGE3350FAG | — | LGE4350FAG | — |
| 400 | LGE3400FAG | LGE3400AAG | LGE4400FAG | LGE4400AAG |
| 500 | LGE3500FAG | LGE3500AAG | LGE4500FAG | LGE4500AAG |
| 600 | LGE3600FAG | — | LGE4600FAG | — |
| 630 ^④ | — | LGE3630AAG | — | LGE4630AAG |

LG-Frame



LG-Frame—630 Amperes (600 Amperes UL, CSA)
 IC Rating: 50 kAIC at 415 and 480 Vac ^①

| Ampere Rating | Three-Pole ^② | | Four-Pole (0%) ^③ | |
|------------------|--|---|--|---|
| | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^{④⑤} Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^{④⑤} Catalog Number |
| 250 | LGS3250FAG | LGS3250AAG | LGS4250FAG | LGS4250AAG |
| 300 | LGS3300FAG | — | LGS4300FAG | — |
| 320 | — | LGS3320AAG | — | LGS4320AAG |
| 350 | LGS3350FAG | — | LGS4350FAG | — |
| 400 | LGS3400FAG | LGS3400AAG | LGS4400FAG | LGS4400AAG |
| 500 | LGS3500FAG | LGS3500AAG | LGS4500FAG | LGS4500AAG |
| 600 | LGS3600FAG | — | LGS4600FAG | — |
| 630 ^④ | — | LGS3630AAG | — | LGS4630AAG |

LG-Frame



LG-Frame—630 Amperes (600 Amperes UL, CSA)
 IC Rating: 70 kAIC at 415, 65 kAIC at 480 Vac ^①

| Ampere Rating | Three-Pole ^② | | Four-Pole (0%) ^③ | |
|------------------|--|---|--|---|
| | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^{④⑤} Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ^{④⑤} Catalog Number |
| 250 | LGH3250FAG | LGH3250AAG | LGH4250FAG | LGH4250AAG |
| 300 | LGH3300FAG | — | LGH4300FAG | — |
| 320 | — | LGH3320AAG | — | LGH4320AAG |
| 350 | LGH3350FAG | — | LGH4350FAG | — |
| 400 | LGH3400FAG | LGH3400AAG | LGH4400FAG | LGH4400AAG |
| 500 | LGH3500FAG | LGH3500AAG | LGH4500FAG | LGH4500AAG |
| 600 | LGH3600FAG | — | LGH4600FAG | — |
| 630 ^④ | — | LGH3630AAG | — | LGH4630AAG |

Notes

- ① Replace suffix “G” with “W” for no line and load terminals.
- ② For two-pole applications, use two outer poles.
- ③ Neutral protection is indicated by the fourth character: 4 = 0%, 7 = 100%, 8 = adjustable 0–60% and 9 = 0–100%. Neutral is on LH side.
- ④ 320/630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA rating for the LG.
- ⑤ Adjustable thermal units are typically used in IEC markets and are not UL or CSA listed.

2.2

Molded Case Circuit Breakers

Series G

Complete Breaker (Includes Frame, Trip Unit, Standard Terminals and Mounting Hardware)

2

LG-Frame



LG-Frame—630 Amperes (600 Amperes UL, CSA), Current Limiting Per UL 489 IC Rating: 100 kAIC at 415 and 480 Vac ①

| Ampere Rating | Three-Pole ② | | Four-Pole (0%) ③ | |
|---------------|--|--|--|--|
| | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ④⑤ Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ④⑤ Catalog Number |
| 250 | LGC3250FAG | LGC3250AAG | LGC4250FAG | LGC4250AAG |
| 300 | LGC3300FAG | — | LGC4300FAG | — |
| 320 | — | LGC3320AAG | — | LGC4320AAG |
| 350 | LGC3350FAG | — | LGC4350FAG | — |
| 400 | LGC3400FAG | LGC3400AAG | LGC4400FAG | LGC4400AAG |
| 500 | LGC3500FAG | LGC3500AAG | LGC4500FAG | LGC4500AAG |
| 600 | LGC3600FAG | — | LGC4600FAG | — |
| 630 ④ | — | LGC3630AAG | — | LGC4630AAG |

LG-Frame



LG-Frame—630 Amperes (600 Amperes UL, CSA), Current Limiting Per UL 489 IC Rating: 150 kAIC at 415 and 480 Vac ①

| Ampere Rating | Three-Pole ② | | Four-Pole (0%) ③ | |
|---------------|--|--|--|--|
| | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ④⑤ Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ④⑤ Catalog Number |
| 250 | LGU3250FAG | LGU3250AAG | LGU4250FAG | LGU4250AAG |
| 300 | LGU3300FAG | — | LGU4300FAG | — |
| 320 | — | LGU3320AAG | — | LGU4320AAG |
| 350 | LGU3350FAG | — | LGU4350FAG | — |
| 400 | LGU3400FAG | LGU3400AAG | LGU4400FAG | LGU4400AAG |
| 500 | LGU3500FAG | LGU3500AAG | LGU4500FAG | LGU4500AAG |
| 600 | LGU3600FAG | — | LGU4600FAG | — |
| 630 ④ | — | LGU3630AAG | — | LGU4630AAG |

LG-Frame



LG-Frame—630 Amperes (600 Amperes UL, CSA), Current Limiting Per UL 489 IC Rating: 200 kAIC at 415 and 480 Vac ①

| Ampere Rating | Three-Pole ② | | Four-Pole (0%) ③ | |
|---------------|--|--|--|--|
| | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ④⑤ Catalog Number | Fixed Thermal, Adjustable Magnetic Catalog Number | Adjustable Thermal, Adjustable Magnetic ④⑤ Catalog Number |
| 250 | LGX3250FAG | LGX3250AAG | LGX4250FAG | LGX4250AAG |
| 300 | LGX3300FAG | — | LGX4300FAG | — |
| 320 | — | LGX3320AAG | — | LGX4320AAG |
| 350 | LGX3350FAG | — | LGX4350FAG | — |
| 400 | LGX3400FAG | LGX3400AAG | LGX4400FAG | LGX4400AAG |
| 500 | LGX3500FAG | LGX3500AAG | LGX4500FAG | LGX4500AAG |
| 600 | LGX3600FAG | — | LGX4600FAG | — |
| 630 ④ | — | LGX3630AAG | — | LGX4630AAG |

Notes

- ① Replace suffix "G" with "W" for no line and load terminals.
- ② For two-pole applications, use two outer poles.
- ③ Neutral protection is indicated by the fourth character: 4 = 0%, 7 = 100%, 8 = adjustable 0–60% and 9 = 0–100%. Neutral is on LH side.
- ④ 320/630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA rating for the LG.
- ⑤ Adjustable thermal units are typically used in IEC markets and are not UL or CSA listed.

Molded Case Switches ^①

| Ampere Rating | Number of Poles | Catalog Number |
|------------------|-----------------|----------------|
| 400 | 3 ^② | LGK3400KSG |
| | 4 | LGK4400KSG |
| 630 ^③ | 3 ^② | LGK3630KSG |
| | 4 | LGK4630KSG |

Frame—IC Rating at 415/480 Volts

| Maximum Amperes ^③ | Three-Pole ^② Catalog Number | Four-Pole 0% Catalog Number |
|--|---|--------------------------------|
| 35/35 | | |
| 630 ^③ | LGE3630NN | LGE4630NN |
| | LGE3630NNWC | — |
| 50/50 | | |
| 630 ^③ | LGS3630NN | LGS4630NN |
| | LGS3630NNWC | — |
| 70/53 | | |
| 630 ^③ | LGH3630NN | LGH4630NN |
| | LGH3630NNWC | — |
| 100/100 Current Limiting Per UL 489 | | |
| 630 | LGC3630NN | LGC4630NN |
| 150/150 Current Limiting Per UL 489 | | |
| 630 | LGU3630NN | LGU4630NN |
| 200/200 Current Limiting | | |
| 630 | LGX3630NN | LGX4630NN |

Thermal-Magnetic Trip Unit

| Ampere Rating | Three-Pole ^② Fixed Thermal, Adjustable Magnetic | Adjustable Thermal, Adjustable Magnetic ^④ | Four-Pole (0%) ^⑤ Fixed Thermal, Adjustable Magnetic | Adjustable Thermal, Adjustable Magnetic ^④ |
|---------------|--|---|--|---|
| | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| 250 | LT3250FA | LT3250AA | LT4250FA | LT4250AA |
| 300 | LT3300FA | — | LT4300FA | — |
| 320 | — | LT3320AA | — | LT4320AA |
| 350 | LT3350FA | — | LT4350FA | — |
| 400 | LT3400FA | LT3400AA | LT4400FA | LT4400AA |
| 500 | LT3500FA | LT3500AA | LT4500FA | LT4500AA |
| 600 | LT3600FA | — | LT4600FA | — |
| 630 | — | LT3630AA | — | LT4630AA |

Notes

- ① Molded case switches will trip above 6300 amperes.
 ② For two-pole applications, use two outer poles.
 ③ 630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA rating for the LG.
 ④ Adjustable thermal, adjustable magnetic trip units are typically used in IEC markets and are not UL or CSA listed.
 ⑤ Neutral protection is indicated by the third character: 4 = 0%, 7 = 100%, 8 = adjustable 0–60% and 9 = 0–100%.
 ⑥ 100% rated frame.

Digitrip 310+ Electronic Trip UnitsSee 310+ adjustability specifications on **Page V4-T2-62**.

2

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ^① Catalog Number |
|--------------------------------|-------------------|--------------------|--------------------|---------------------|---|
| Three-Pole | | | | | |
| 250 | LT325033 | LT325032 | LT325035 | LT325036 | LGFACT250 |
| 400 | LT340033 | LT340032 | LT340035 | LT340036 | LGFACT400 |
| 600 | LT360033 | LT360032 | LT360035 | LT360036 | LGFACT600 |
| 630 ^② | LT363033 | LT363032 | LT363035 | LT363036 | LGFACT600 |
| Four-Pole ^{③④} | | | | | |
| 250 | LT425033 | LT425032 | LT425035 | LT425036 | — |
| 400 | LT440033 | LT440032 | LT440035 | LT440036 | — |
| 600 | LT460033 | LT460032 | LT460035 | LT460036 | — |
| 630 ^② | LT463033 | LT463032 | LT463035 | LT463036 | — |

310+ Electronic Trip Unit Accessories

| Description | Catalog Number |
|--|----------------|
| Electronic portable test kit | MTST230V |
| Trip unit tamper protection wire seal | 5108A03H01 |
| External neutral sensor (630 A) | LGFACT630 |
| External neutral sensor (600 A) | LGFACT600 |
| External neutral sensor (400 A) | LGFACT400 |
| External neutral sensor (250 A) | LGFACT250 |
| Breaker-mount cause-of-trip indication | TRIP-LED |
| Breaker-mount ammeter module | DIGIVIEW |
| Remote-mount ammeter module | DIGIVIEWR06 |

Notes

- ① Required for four-wire systems if neutral protection is desired.
- 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 Neutral protection: 4 = 0%, 6 = 60%, 7 = 100%. Electronic trip unit neutral protection is not adjustable.
- ④ Four-pole LSG and LSIG trip units are only available with 0% neutral protection.

IC Rating at 415/480 V**Complete LG Breakers with Electronic Trip Unit (Includes Frame, Trip Unit, Standard Terminals and Mounting Hardware) ①**See 310+ adjustability specifications on **Page V4-T2-62**.**IC Rating: 35 kAIC at 415 and 480 Vac**

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ② Catalog Number |
|---------------------|----------------------|-----------------------|-----------------------|------------------------|--|
| Three-Pole ③ | | | | | |
| 250 | LGE325033G | LGE325032G | LGE325035G | LGE325036G | LGFACT250 |
| 400 | LGE340033G | LGE340032G | LGE340035G | LGE340036G | LGFACT400 |
| 600 | LGE360033G | LGE360032G | LGE360035G | LGE360036G | LGFACT600 |
| 630 ④ | LGE363033G | LGE363032G | LGE363035G | LGE363036G | LGFACT600 |
| Four-Pole ⑤ | | | | | |
| 250 | LGE425033G | LGE425032G | LGE425035G | LGE425036G | — |
| 400 | LGE440033G | LGE440032G | LGE440035G | LGE440036G | — |
| 600 | LGE460033G | LGE460032G | LGE460035G | LGE460036G | — |
| 630 ④ | LGE463033G | LGE463032G | LGE463035G | LGE463036G | — |

IC Rating: 50 kAIC at 415 and 480 Vac

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ② Catalog Number |
|---------------------|----------------------|-----------------------|-----------------------|------------------------|--|
| Three-Pole ③ | | | | | |
| 250 | LGS325033G | LGS325032G | LGS325035G | LGS325036G | LGFACT250 |
| 400 | LGS340033G | LGS340032G | LGS340035G | LGS340036G | LGFACT400 |
| 600 | LGS360033G | LGS360032G | LGS360035G | LGS360036G | LGFACT600 |
| 630 ④ | LGS363033G | LGS363032G | LGS363035G | LGS363036G | LGFACT600 |
| Four-Pole ⑤⑥ | | | | | |
| 250 | LGS425033G | LGS425032G | LGS425035G | LGS425036G | — |
| 400 | LGS440033G | LGS440032G | LGS440035G | LGS440036G | — |
| 600 | LGS460033G | LGS460032G | LGS460035G | LGS460036G | — |
| 630 ④ | LGS463033G | LGS463032G | LGS463035G | LGS463036G | — |

IC Rating: 70 kAIC at 415 Vac, 65 kAIC at 480 Vac

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ② Catalog Number |
|---------------------|----------------------|-----------------------|-----------------------|------------------------|--|
| Three-Pole ③ | | | | | |
| 250 | LGH325033G | LGH325032G | LGH325035G | LGH325036G | LGFACT250 |
| 400 | LGH340033G | LGH340032G | LGH340035G | LGH340036G | LGFACT400 |
| 600 | LGH360033G | LGH360032G | LGH360035G | LGH360036G | LGFACT600 |
| 630 ④ | LGH363033G | LGH363032G | LGH363035G | LGH363036G | LGFACT600 |
| Four-Pole ⑤⑥ | | | | | |
| 250 | LGH425033G | LGH425032G | LGH425035G | LGH425036G | — |
| 400 | LGH440033G | LGH440032G | LGH440035G | LGH440036G | — |
| 600 | LGH460033G | LGH460032G | LGH460035G | LGH460036G | — |
| 630 ④ | LGH463033G | LGH463032G | LGH463035G | LGH463036G | — |

Notes

- ① Replace suffix "G" with "W" for no line and load terminals.
- ② Required for four-wire systems if neutral protection is desired.
- ③ For two-pole applications, use two outer poles.
- ④ 630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA listed rating for the LG.
- ⑤ Neutral protection: 4 = 0%, 6 = 60%, 7 = 100%. Electronic trip unit neutral protection is not adjustable.
- ⑥ Four-pole breakers with LSG and LSIG trip units are only available with 0% neutral protection.

2.2

Molded Case Circuit Breakers

Series G

2

IC Rating at 415/480 V

Complete LG Breakers with Electronic Trip Unit (Includes Frame, Trip Unit, Standard Terminals and Mounting Hardware) ①

See 310+ adjustability specifications on **Page V4-T2-62**.

IC Rating: 100 kAIC at 415 Vac and 480 Vac, Current Limiting Per UL 489

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ② |
|---------------------|-------------------|--------------------|--------------------|---------------------|-------------------------------|
| Three-Pole ③ | | | | | |
| 250 | LGC325033G | LGC325032G | LGC325035G | LGC325036G | LGFACT250 |
| 400 | LGC340033G | LGC340032G | LGC340035G | LGC340036G | LGFACT400 |
| 600 | LGC360033G | LGC360032G | LGC360035G | LGC360036G | LGFACT600 |
| 630 ④ | LGC363033G | LGC363032G | LGC363035G | LGC363036G | LGFACT600 |
| Four-Pole ⑤⑥ | | | | | |
| 250 | LGC425033G | LGC425032G | LGC425035G | LGC425036G | — |
| 400 | LGC440033G | LGC440032G | LGC440035G | LGC440036G | — |
| 600 | LGC460033G | LGC460032G | LGC460035G | LGC460036G | — |
| 630 ④ | LGC463033G | LGC463032G | LGC463035G | LGC463036G | — |

IC Rating: 150 kAIC at 415 Vac and 480 Vac, Current Limiting Per UL 489

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ② |
|---------------------|-------------------|--------------------|--------------------|---------------------|-------------------------------|
| Three-Pole ③ | | | | | |
| 250 | LGU325033G | LGU325032G | LGU325035G | LGU325036G | LGFACT250 |
| 400 | LGU340033G | LGU340032G | LGU340035G | LGU340036G | LGFACT400 |
| 600 | LGU360033G | LGU360032G | LGU360035G | LGU360036G | LGFACT600 |
| 630 ④ | LGU363033G | LGU363032G | LGU363035G | LGU363036G | LGFACT600 |
| Four-Pole ⑤ | | | | | |
| 250 | LGU425033G | LGU425032G | LGU425035G | LGU425036G | — |
| 400 | LGU440033G | LGU440032G | LGU440035G | LGU440036G | — |
| 600 | LGU460033G | LGU460032G | LGU460035G | LGU460036G | — |
| 630 ④ | LGU463033G | LGU463032G | LGU463035G | LGU463036G | — |

IC Rating: 200 kAIC at 415 Vac and 480 Vac, Current Limiting Per UL 489

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ② |
|---------------------|-------------------|--------------------|--------------------|---------------------|-------------------------------|
| Three-Pole ③ | | | | | |
| 250 | LGX325033G | LGX325032G | LGX325035G | LGX325036G | LGFACT250 |
| 400 | LGX340033G | LGX340032G | LGX340035G | LGX340036G | LGFACT400 |
| 600 | LGX360033G | LGX360032G | LGX360035G | LGX360036G | LGFACT600 |
| 630 ④ | LGX363033G | LGX363032G | LGX363035G | LGX363036G | LGFACT600 |
| Four-Pole ⑤ | | | | | |
| 250 | LGX425033G | LGX425032G | LGX425035G | LGX425036G | — |
| 400 | LGX440033G | LGX440032G | LGX440035G | LGX440036G | — |
| 600 | LGX460033G | LGX460032G | LGX460035G | LGX460036G | — |
| 630 ④ | LGX463033G | LGX463032G | LGX463035G | LGX463036G | — |

Notes

- ① Replace suffix "G" with "W" for no line and load terminals.
- ② Required for four-wire systems if neutral protection is desired.
- ③ For two-pole applications, use two outer poles.
- ④ 630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA listed rating for the LG.
- ⑤ Neutral protection: 4 = 0%, 6 = 60%, 7 = 100%. Electronic trip unit neutral protection is not adjustable.
- ⑥ Four-pole breakers with LSG and LSIG trip units are only available with 0% neutral protection.

LG 100% Rated Circuit Breaker—Thermal-Magnetic Trip Unit

Complete Breaker (Includes Frame, Trip Unit, Standard Terminals and Mounting Hardware)

LG-Frame



LG-Frame—630 Amperes (600 Amperes UL, CSA) IC Rating: 35 kAIC at 415 and 480 Vac ^①

| Ampere Rating | Three-Pole ^② Fixed Thermal, Adjustable Magnetic Catalog Number |
|------------------|--|
| 250 | LGE3250FAGC |
| 300 | LGE3300FAGC |
| 320 | — |
| 350 | LGE3350FAGC |
| 400 | LGE3400FAGC |
| 500 | LGE3500FAGC |
| 600 | LGE3600FAGC |
| 630 ^④ | — |

LG-Frame—630 Amperes (600 Amperes UL, CSA) IC Rating: 50 kAIC at 415 and 480 Vac ^①

| Ampere Rating | Three-Pole ^② Fixed Thermal, Adjustable Magnetic Catalog Number |
|------------------|--|
| 250 | LGS3250FAGC |
| 300 | LGS3300FAGC |
| 320 | — |
| 350 | LGS3350FAGC |
| 400 | LGS3400FAGC |
| 500 | LGS3500FAGC |
| 600 | LGS3600FAGC |
| 630 ^④ | — |

LG-Frame—630 Amperes (600 Amperes UL, CSA) IC Rating: 70 kAIC at 415, 65 kAIC at 480 Vac ^①

| Ampere Rating | Three-Pole ^② Fixed Thermal, Adjustable Magnetic Catalog Number |
|------------------|--|
| 250 | LGH3250FAGC |
| 300 | LGH3300FAGC |
| 320 | — |
| 350 | LGH3350FAGC |
| 400 | LGH3400FAGC |
| 500 | LGH3500FAGC |
| 600 | LGH3600FAGC |
| 630 ^④ | — |

Notes

- ^① Replace suffix "G" with "W" for no line and load terminals.
- ^② For two-pole applications, use two outer poles.

2.2

Molded Case Circuit Breakers

Series G

LG 100% Rated Electronic Breaker Per UL 489

See 310+ adjustability specifications on **Page V4-T2-62**.

2

IEC/UL/CSA 35 kAIC at 415 and 480 Vac

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ^① Catalog Number |
|------------------|----------------------|-----------------------|-----------------------|------------------------|--|
| 250 | LGE325033GC | LGE325032GC | LGE325035GC | LGE325036GC | LGFACT250 |
| 400 | LGE340033GC | LGE340032GC | LGE340035GC | LGE340036GC | LGFACT400 |
| 600 | LGE360033GC | LGE360032GC | LGE360035GC | LGE360036GC | LGFACT600 |
| 630 ^② | LGE363033GC | LGE363032GC | LGE363035GC | LGE363036GC | LGFACT600 |

IEC/UL/CSA 50 kAIC at 415 and 480 Vac

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ^① Catalog Number |
|------------------|----------------------|-----------------------|-----------------------|------------------------|--|
| 250 | LGS325033GC | LGS325032GC | LGS325035GC | LGS325036GC | LGFACT250 |
| 400 | LGS340033GC | LGS340032GC | LGS340035GC | LGS340036GC | LGFACT400 |
| 600 | LGS360033GC | LGS360032GC | LGS360035GC | LGS360036GC | LGFACT600 |
| 630 ^② | LGS363033GC | LGS363032GC | LGS363035GC | LGS363036GC | LGFACT600 |

IEC/UL/CSA 70 kAIC at 415 and 480 Vac

| Ampere Rating | LS Catalog Number | LSI Catalog Number | LSG Catalog Number | LSIG Catalog Number | Neutral CT for LSG and LSIG ^① Catalog Number |
|------------------|----------------------|-----------------------|-----------------------|------------------------|--|
| 250 | LGH325033GC | LGH325032GC | LGH325035GC | LGH325036GC | LGFACT250 |
| 400 | LGH340033GC | LGH340032GC | LGH340035GC | LGH340036GC | LGFACT400 |
| 600 | LGH360033GC | LGH360032GC | LGH360035GC | LGH360036GC | LGFACT600 |
| 630 ^② | LGH363033GC | LGH363032GC | LGH363035GC | LGH363036GC | LGFACT600 |

Notes

^① Required for four-wire systems if neutral protection is required.

^② 630 amperes is not a UL or CSA listed rating. 600 amperes is the maximum UL and CSA listed rating for the LG.

LG Electronic Breaker with Arcflash Reduction Maintenance System

See 310+ adjustability specifications on **Page V4-T2-62**.

Series G LG circuit breakers are available with the Arcflash Reduction Maintenance System™ integrated into the electronic trip units helping to improve safety by providing a

simple and reliable method to reduce fault clearing time. The Arcflash Reduction Maintenance System unit utilizes a separate analog trip circuit that provides faster

interruption times than the standard (digital) “instantaneous” protection. Work locations downstream of a circuit breaker with an Arcflash Reduction

Maintenance System unit can have a significantly lower incident energy level, reducing arc flash potential to the system.

LG with Arcflash Reduction Maintenance System



LG Electronic Breaker with Arcflash Reduction Maintenance System

| Ampere Rating | ALSI Catalog Number | ALSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|--|---------------------|----------------------|--|
| IEC/UL/CSA 35 kAIC at 415 and 480 Vac | | | |
| 250 | LGE325038G | LGE365039G | LGFACT250 |
| 400 | LGE340038G | LGE340039G | LGFACT400 |
| 600 | LGE360038G | LGE360039G | LGFACT600 |
| 630 | LGE363038G | LGE363039G | LGFACT600 |
| IEC/UL/CSA 50 kAIC at 415 and 480 Vac | | | |
| 250 | LGS325038G | LGS365039G | LGFACT250 |
| 400 | LGS340038G | LGS340039G | LGFACT400 |
| 600 | LGS360038G | LGS360039G | LGFACT600 |
| 630 | LGS363038G | LGS363039G | LGFACT600 |
| IEC/UL/CSA 70 kAIC at 415 and 480 Vac | | | |
| 250 | LGH325038G | LGH365039G | LGFACT250 |
| 400 | LGH340038G | LGH340039G | LGFACT400 |
| 600 | LGH360038G | LGH360039G | LGFACT600 |
| 630 | LGH363038G | LGH363039G | LGFACT600 |
| IEC/UL/CSA 100 kAIC at 415 and 480 Vac, Current Limiting Per UL 489 | | | |
| 250 | LGC325038G | LGC365039G | LGFACT250 |
| 400 | LGC340038G | LGC340039G | LGFACT400 |
| 600 | LGC360038G | LGC360039G | LGFACT600 |
| 630 | LGC363038G | LGC363039G | LGFACT600 |
| IEC/UL/CSA 150 kAIC at 415 and 480 Vac, Current Limiting Per UL 489 | | | |
| 250 | LGU325038G | LGU365039G | LGFACT250 |
| 400 | LGU340038G | LGU340039G | LGFACT400 |
| 600 | LGU360038G | LGU360039G | LGFACT600 |
| 630 | LGU363038G | LGU363039G | LGFACT600 |
| IEC/UL/CSA 200 kAIC at 415 and 480 Vac, Current Limiting Per UL 489 | | | |
| 250 | LGX325038G | LGX365039G | LGFACT250 |
| 400 | LGX340038G | LGX340039G | LGFACT400 |
| 600 | LGX360038G | LGX360039G | LGFACT600 |
| 630 | LGX363038G | LGX363039G | LGFACT600 |

LG Electronic Trip Units with Arcflash Reduction Maintenance System

| Ampere Rating | ALSI Catalog Number | ALSIG Catalog Number | Neutral CT for LSG and LSIG ① Catalog Number |
|---------------|---------------------|----------------------|--|
| 250 | LT325038 | LT325039 | LGFACT250 |
| 400 | LT340038 | LT340039 | LGFACT400 |
| 600 | LT360038 | LT360039 | LGFACT600 |
| 630 | LT363038 | LT363039 | LGFACT600 |

Note

① Required for four-wire systems if neutral protection is required.

Accessories Selection Guide and Ordering Information

2

Line and Load Terminals

| Maximum Breaker Amperes | Terminal Body Material | Wire Type | AWG Wire Range/ Number of Conductors | Metric Wire Range (mm ²) | Number of Terminals Included | Catalog Number |
|-------------------------|------------------------|-----------|---|--------------------------------------|------------------------------|------------------------|
| 400 | Aluminum | Cu/Al | 500–750 (1) | 240–380 (1) | 3 | 3TA631LK ^① |
| 400 | Aluminum | Cu/Al | 500–750 (1) | 240–380 (1) | 4 | 4TA631LK ^① |
| 400 | Copper | Cu | 500–750 (1) | 240–380 (1) | 3 | 3T631LK ^① |
| 400 | Copper | Cu | 500–750 (1) | 240–380 (1) | 4 | 4T631LK ^① |
| 630 | Aluminum | Cu/Al | 2–500 (2) | 35–240 (2) | 1 | TA632L |
| 630 | Aluminum | Cu/Al | 2–500 (2) | 35–240 (2) | 3 | 3TA632LK ^{①②} |
| 630 | Aluminum | Cu/Al | 2–500 (2) | 35–240 (2) | 4 | 4TA632LK ^{①②} |
| 630 | Copper | Cu | 2–500 (2) | 35–240 (2) | 3 | 3T632LK ^① |
| 630 | Copper | Cu | 2–500 (2) | 35–240 (2) | 4 | 4T632LK ^① |
| 400 | Aluminum | Cu/Al | 3–500 (1) | 35–240 (1) | 1 | TA350LK ^② |
| 400 | Copper | Cu | 3–500 (1) | 35–240 (1) | 1 | T350LK |

Base Mounting Hardware

Base mounting hardware is included with a circuit breaker or molded case switch. (Included with breaker.) If required separately, order 66A4560G03.

Terminal Covers

| Description | Catalog Number |
|--|----------------|
| Three-pole terminal cover ^③ | LTS3K |
| Four-pole terminal cover ^③ | LTS4K |

End Cap Kits (MIO Metric Nuts)

| Number of Poles | Catalog Number |
|-----------------|----------------|
| 3 | L3RTWK |
| 4 | L4RTWK |

Control Wire Terminal Kit

| Description | Terminal Body Type | Catalog Number |
|----------------|--------------------|----------------|
| Three-pole kit | Aluminum | 3TA632LKW |
| Four-pole kit | Aluminum | 4TA632LKW |
| Three-pole kit | Copper | 3T632LKW |
| Four-pole kit | Copper | 4T632LKW |

Terminal Spreaders

| Number of Poles | Catalog Number |
|-----------------|----------------|
| 3 | LGTEW3 |
| 4 | LGTEW4 |

Terminal Extensions

| Number of Poles | Catalog Number |
|-----------------|----------------|
| 3 | LGTES3 |
| 4 | LGTES4 |

Handle Extension

| Description | Catalog Number |
|------------------|----------------|
| Handle extension | HEXLG |

Interphase Barrier

| Package of 2 | Catalog Number |
|--------------------|----------------|
| Interphase barrier | IPB3 |

Rear Fed Terminals

| Maximum Amperes | Wire Size Range AWG Cu | Catalog Number |
|-----------------|------------------------|----------------|
| 400 | 2–500 kcmil | TA350LKRF |
| 400 | 2–500 kcmil | 3TA350LKRF |
| 630 | 2–500 (2) kcmil | TA632LKRF |
| 630 | 2–500 (2) kcmil | 3TA632LKRF |

Rear fed terminals allow the cable to connect to the breaker from the back instead of the top. Terminal shields or interphase barriers are included with each rear fed terminal kit (depending on frame size). When catalog number starts with a 3, it indicates a kit with three terminals in each kit. Catalog number beginning with a TA indicates one terminal.

Multiwire Connectors

Field-installed multiwire connectors for the load side (OFF) end terminals 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 terminal shield, mounting hardware, insulators and tin-plated aluminum connectors to replace three mechanical load lugs. UL listed as used on the load side (OFF) end.

LG-Frame Multiwire Connectors Ordering Information (Package of 3)

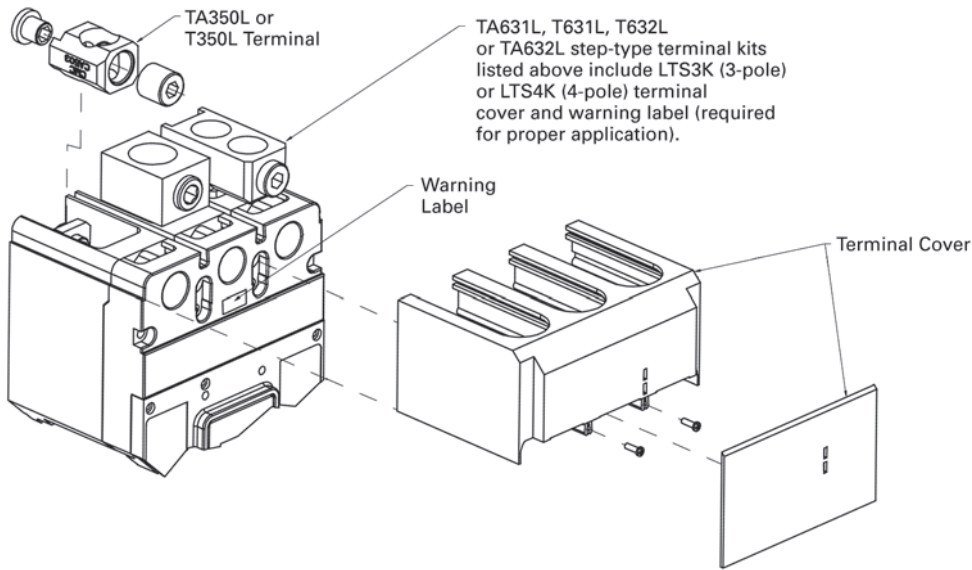
| Maximum Amperes | Wires per Terminal | Wire Size Range AWG Cu | Kit Catalog Number |
|-----------------|--------------------|------------------------|--------------------|
| 600 | 6 | 14–1/0 | 3TA600L6K |

Notes

- ① Includes LTS3K (three-pole) or LTS4K (four-pole) terminal covers.
- ② Standard terminal included with complete breaker.
- ③ Included in TA631L, T631L, TA632L kits listed above.

Terminals and Terminal Cover for the LG Breaker—Includes LTS3K (Three-Pole) or LTS4K (Four-Pole) Terminal Covers

Note: Extended terminal covers add 2.13 inches (54.0 mm) to breaker length.



Accessories

2

Base Mounting Hardware

Base mounting hardware is included with a circuit breaker or molded case switch. (Included with breaker.) If required separately, order 66A4560G03.

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.

LG-Frame Accessories

| Description | Reference Page | Three-Pole | | | Four-Pole | | | Neu. |
|--|----------------|------------|--------|-------|-----------|--------|-------|------|
| | | Left | Center | Right | Left | Center | Right | |
| Internal Accessories (Only One Internal Accessory Per Pole) | | | | | | | | |
| Alarm lockout (Make/Break) | V4-T2-109 | | | ■ | | | ■ | |
| Auxiliary switch (1A, 1B) | V4-T2-109 | | | ■ | | | ■ | |
| Auxiliary switch (2A, 2B) | V4-T2-109 | | | ■ | | | ■ | |
| Auxiliary switch and alarm switch combination | V4-T2-109 | | | ■ | | | ■ | |
| Shunt trip—standard | V4-T2-109 | ■ | | | ■ | | | |
| Undervoltage release mechanism | V4-T2-110 | ■ | | | ■ | | | |
| External Accessories | | | | | | | | |
| End cap kit | V4-T2-58 | ● | | | ● | | | |
| Handle extension | V4-T2-58 | ● | | | ● | | | |
| Terminal cover | V4-T2-58 | ● | | | ● | | | |
| Rear fed terminals | V4-T2-58 | ● | ● | ● | ● | ● | ● | ● |
| Multiwire connectors | V4-T2-58 | ● | ● | ● | ● | ● | ● | ● |
| Padlockable handle block | V4-T2-107 | | ■ | | | ■ | | |
| Padlockable handle lock hasp | V4-T2-107 | □ | | □ | □ | | □ | |
| Key interlock kit | V4-T2-107 | □ | | □ | □ | | □ | |
| Sliding bar interlock—requires two breakers | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Electrical operator | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Plug-in adapters | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Rear connecting studs | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Handle mechanisms | V4-T2-413 | ● | ● | ● | ● | ● | ● | ● |
| Earth leakage/ground fault protector | V4-T2-92 | ● | ● | ● | ● | ● | ● | ● |
| Drawout cassette | V4-T2-114 | ● | ● | ● | ● | ● | ● | ● |
| Digitrip 310+ test kit | V4-T2-52 | ● | ● | ● | ● | ● | ● | ● |
| Ammeter/cause of trip display | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Cause of trip LED module | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Modifications (Refer to Eaton) | | | | | | | | |
| Moisture fungus treatment | V4-T2-105 | ● | ● | ● | ● | ● | ● | ● |
| Freeze-tested circuit breakers | — | ● | ● | ● | ● | ● | ● | ● |
| Marine/naval application, UL 489 Supplement SA and SB | ① | ● | ● | ● | ● | ● | ● | ● |

Legend

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

Note

① Contact Eaton.

Technical Data and Specifications

Interrupting Capacity Ratings

UL 489/IEC 60947-2 Interrupting Capacity Ratings

| Circuit Breaker Type | Number of Poles | Interrupting Capacity (kA rms Symmetrical Amperes) (kA) | | | | | | | | Volts DC ^① | |
|----------------------|-----------------|---|-----|---------|-----|-----|-----|-----|-----|-----------------------|-----|
| | | Volts AC (50/60 Hz) | | | | | | | | 250 ^{②③} | |
| | | 240–240 | | 380–415 | | 480 | 600 | 690 | | | Icu |
| | | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics |
| LGE630 | 3, 4 | 65 | 65 | 35 | 35 | 35 | 18 | 12 | 6 | 22 | 22 |
| LGS630 | 3, 4 | 85 | 85 | 50 | 50 | 50 | 25 | 20 | 10 | 22 | 22 |
| LGH630 | 3, 4 | 100 | 100 | 70 | 70 | 65 | 35 | 25 | 13 | 42 | 42 |
| LGC630 ^④ | 3, 4 | 200 | 200 | 100 | 100 | 100 | 50 | 30 | 15 | 42 | 42 |
| LGU630 ^④ | 3, 4 | 200 | 200 | 150 | 150 | 150 | 65 | 35 | 18 | 50 | 50 |
| LGX630 ^④ | 3, 4 | 200 ^⑤ | 200 | 200 | 200 | 200 | 65 | 35 | 18 | 50 | 50 |

LG 310+ Specifications

| Description | Specification |
|---|---------------------------------|
| Trip Unit Type | Digitrip RMS 310+ |
| Breaker Type | |
| Frame designation | LG |
| Frames available | 250 A, 400 A, 600 A |
| Continuous current range (A) | 100–600 A |
| Ground fault pickup (A) | 50–600 A |
| Interrupting capacities at 480 Vac (kAIC) | 35, 65, 100, 150, 200 |
| 100% rated | Yes |
| Protection | |
| Ordering options | LS, LSI, LSG, LSIG, ALSI, ALSIG |
| Arcflash reduction maintenance system (or maintenance mode) | Yes |
| Interchangeable trip unit | Yes |
| High load alarm (suffix B20) ^⑤ | Yes |
| Ground fault alarm with trip (suffix B21) ^⑤ | Yes |
| Ground fault alarm, no trip (suffix B22) ^⑤ | Yes |
| Zone selective interlocking (suffix ZG) | LSI, LSIG, ALSI, ALSIG |
| Cause of trip indication | Yes |
| Thru-cover accessories | Yes |

Notes

- ① DC rating apply to substantially non-inductive circuits.
- ② Two-pole circuit breaker, or two poles of three-pole circuits.
- ③ Time constant is 3 milliseconds minimum at 10 kA and 8 milliseconds minimum at–kA.
- ④ Current limiting per UL 489.
- ⑤ B2x suffixes cannot be combined with B2x suffixes.

2.2

Molded Case Circuit Breakers

Series G

LG 310+ Adjustability Specifications

2

| 310+ Settings | | LG Frame | | |
|---|--------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | 250 A | 400 A | 600 A |
| I_r = continuous current or long delay pickup (amperes) (All 310+) | I_r | | | |
| | A | 100 | 160 | 250 |
| | B | 125 | 200 | 300 |
| | C | 150 | 225 | 315 |
| | D | 160 | 250 | 350 |
| | E | 175 | 300 | 400 |
| | F | 200 | 315 | 450 |
| | G | 225 | 350 | 500 |
| | H (= I_n) | 250 | 400 | 600 |
| t_r = long delay time (seconds) (All 310+) | Position 1 | 2 | 2 | 2 |
| | Position 2 | 4 | 4 | 4 |
| | Position 3 | 7 | 7 | 7 |
| | Position 4 | 10 | 10 | 10 |
| | Position 5 | 12 | 12 | 12 |
| | Position 6 | 15 | 15 | 15 |
| | Position 7 | 20 | 20 | 20 |
| | Position 8 | 24 | 24 | 24 |
| I_{sd} (x I_r) = short delay pickup (All 310+) | Position 1 | 2x | 2x | 2x |
| | Position 2 | 3x | 3x | 3x |
| | Position 3 | 4x | 4x | 4x |
| | Position 4 | 5x | 5x | 5x |
| | Position 5 | 6x | 6x | 6x |
| | Position 6 | 7x | 7x | 7x |
| | Position 7 | 8x | 8x | 8x |
| | Position 8 | 10x | 10x | 10x |
| | Position 9 | 12x | 12x | 12x |
| t_{sd} = short delay time I^2t (milliseconds) (LS, LSG) | Fixed | 67 at 10x | 67 at 10x | 67 at 10x |
| t_{sd} = short delay time flat (milliseconds) ① (LSI, LSIG, ALSI, ALSIG) | Position 1 | Inst | Inst | Inst |
| | Position 2 | 120 | 120 | 120 |
| | Position 3 | 300 | 300 | 300 |
| I_g = ground fault pickup (amperes) (LSG, LSIG, ALSIG) | Position 1 | 50 | 80 | 120 |
| | Position 2 | 75 | 120 | 180 |
| | Position 3 | 100 | 160 | 240 |
| | Position 4 | 150 | 240 | 360 |
| | Position 5 | 200 | 320 | 480 |
| | Position 6 | 250 | 400 | 600 |
| t_g = ground fault delay time (milliseconds) (LSG, LSIG, ALSIG) | Position 1 | Inst | Inst | Inst |
| | Position 2 | 120 | 120 | 120 |
| | Position 3 | 300 | 300 | 300 |
| Independently Adjustable Instantaneous (I_i) setting (ALSI, ALSIG) | Yes | 2.5x, 4x, 6x, 7x, 8x, 10x, 12x | 2.5x, 4x, 6x, 7x, 8x, 10x, 12x | 2.5x, 4x, 6x, 7x, 8x, 10x, 12x |
| Maintenance Mode (remote) pickup ($2.5 \times I_n$) ② (ALSI, ALSIG) | Fixed | 2.5x | | |

Notes

- ① 50 ms for ALSI and ALSIG trip units.
- ② Maintenance Mode is enabled remotely using a 24 Vdc circuit.

Dimensions and Weights

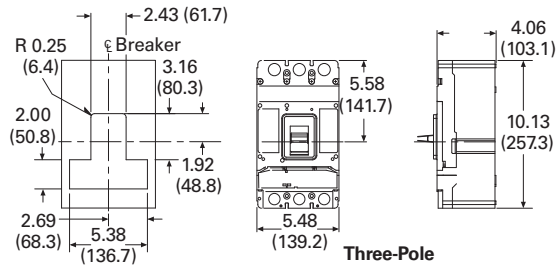
Approximate Dimensions in Inches (mm)

LG-Frame

| Number of Poles | Width | Height | Depth |
|-----------------|--------------|---------------|--------------|
| 2, 3 | 5.48 (139.2) | 10.13 (257.3) | 4.09 (103.9) |
| 4 | 7.22 (183.4) | 10.13 (257.3) | 4.09 (103.9) |

LG-Frame

Note: TA631L, T631L, T632L, TA632L terminals add 1.19 inches (30.2 mm) to line or load side of LG. LTS3K or LTS4K terminal covers add 2.13 inches (54.1 mm) to line or load side of LG.



Approximate Shipping Weight in Lbs (kg)

LG-Frame

| Breaker Type | Two- and Three-Pole | Four-Pole |
|------------------------------|---------------------|-----------|
| LGE, LGS, LGH, LGC, LGU, LGX | 16 (7.3) | 20 (9.1) |

Notes

- ① DC rating apply to substantially non-inductive circuits.
- ② Two-pole circuit breaker, or two poles of three-pole circuits.
- ③ Time constant is 3 milliseconds minimum at 10 kA and 8 milliseconds minimum at -kA.
- ④ Three-poles in series. 750 Vdc ratings available (four-pole in series, not UL listed). Contact Eaton.
- ⑤ IEC rating is 300 kA at 240 Vac.
- ⑥ Current limiting per UL 489.

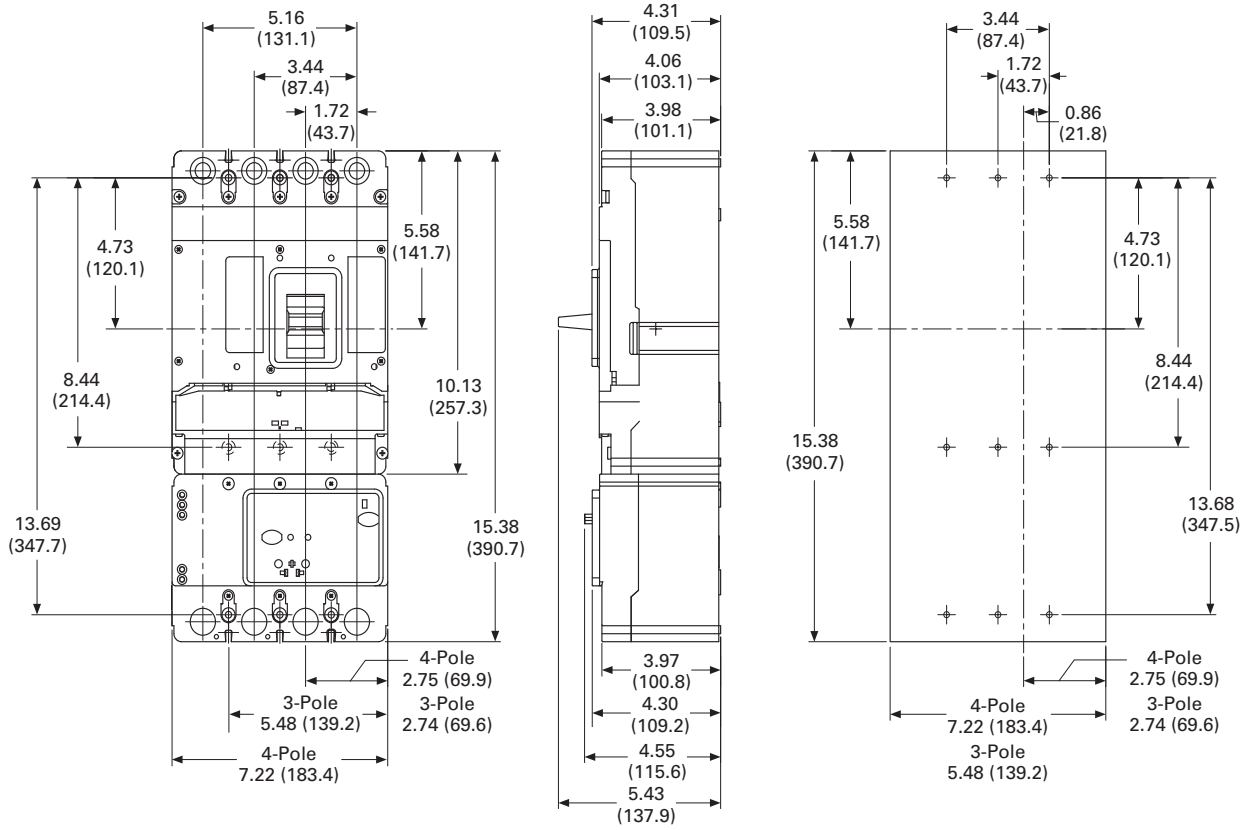
2.2

Molded Case Circuit Breakers

Series G

LG-Frame With Earth Leakage Module

2



NG-Frame (1200 Ampere)



Contents

| <i>Description</i> | <i>Page</i> |
|---|------------------|
| EG-Frame (15–125 Amperes) | V4-T2-15 |
| JG-Frame (63–250 Amperes) | V4-T2-29 |
| LG-Frame (250–630 Amperes) | V4-T2-47 |
| NG-Frame (320–1200 Amperes) | |
| Catalog Number Selection | V4-T2-66 |
| Product Selection Guide and Ordering Information | V4-T2-67 |
| Accessories | V4-T2-70 |
| Technical Data and Specifications | V4-T2-71 |
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| 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-T2-111 |
| Plug-In Blocks | V4-T2-113 |
| Drawout Cassette | V4-T2-114 |

NG-Frame (320–1200 Amperes)

Product Description

- All Eaton NG-Frame circuit breakers are suitable for reverse feed use
- All NG-Frame circuit breakers are HACR rated

2.2

Molded Case Circuit Breakers

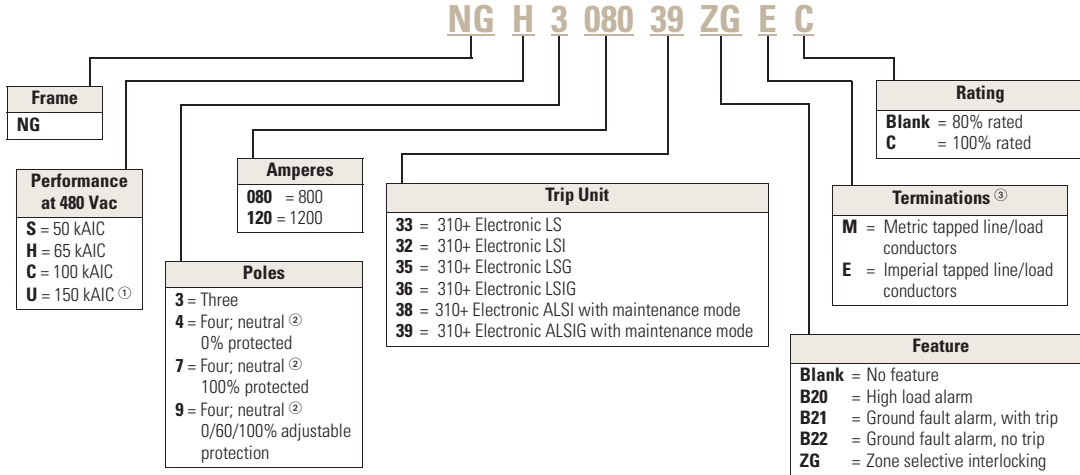
Series G

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.

2

NG Circuit Breaker with 310+ Electronic Trip Unit



Notes

- ① 800 A only.
 - ② Neutral inn left pole on GN; right pole on NG.
 - ③ Breakers do not ship with lugs.
- Trip units are factory installable only.

Product Selection Guide and Ordering Information

Type NGS Standard Interrupting Capacity— U_e Max. 690 Vac, 50 kA I_{cu} at 480 Vac or 415 Vac

See 310+ adjustability specifications on Page V4-T2-72.

2

| Maximum Continuous Ampere Rating at 40 °C ^{①②} | Number of Poles | Circuit Breaker Frame Including Digitrip Electronic Trip Unit with Imperial Tapped Conductors | | | | | | Neutral CT for LSG and LSIG |
|---|-----------------|---|------------|------------|------------|------------|------------|-----------------------------|
| | | LS | LSI | LSG | LSIG | ALSI | ALSIG | |
| 800 | 3 | NGH308033E | NGH308032E | NGH308035E | NGH308036E | NGH308038E | NGH308039E | NGFCT120 |
| | 4 ^④ | NGH408033E | NGH408032E | NGH408035E | NGH408036E | NGH408038E | NGH408039E | — |
| | 4 ^⑤ | NGH708033E | NGH708032E | — | — | NGH708038E | — | — |
| | 4 ^⑥ | NGH908033E | NGH908032E | — | — | NGH908038E | — | — |
| 1200 ^③ | 3 | NGH312033E | NGH312032E | NGH312035E | NGH312036E | NGH312038E | NGH312039E | NGFCT120 |
| | 4 ^④ | NGH412033E | NGH412032E | NGH412035E | NGH412036E | — | NGH412039E | — |
| | 4 ^⑤ | NGH712033E | NGH712032E | — | — | NGH712038E | — | — |
| | 4 ^⑥ | NGH912033E | NGH912032E | — | — | NGH912038E | — | — |

Type NGS Standard Interrupting Capacity— U_e Max. 690 Vac, 50 kA I_{cu} at 415 Vac

See 310+ adjustability specifications on Page V4-T2-72.

| Maximum Continuous Ampere Rating at 40 °C ^{①②} | Number of Poles | Circuit Breaker Frame Including Digitrip Electronic Trip Unit with Metric Tapped Conductors | | | | | | Neutral CT for LSG and LSIG |
|---|-----------------|---|------------|------------|------------|------------|------------|-----------------------------|
| | | LS | LSI | LSG | LSIG | ALSI | ALSIG | |
| 800 | 3 | NGH308033E | NGH308032E | NGH308035E | NGH308036E | NGH308038E | NGH308039E | NGFCT120 |
| | 4 ^④ | NGH408033E | NGH408032E | NGH408035E | NGH408036E | NGH408038E | NGH408039E | — |
| | 4 ^⑤ | NGH708033E | NGH708032E | — | — | NGH708038E | — | — |
| | 4 ^⑥ | NGH908033E | NGH908032E | — | — | NGH908038E | — | — |
| 1200 | 3 | NGH312033E | NGH312032E | NGH312035E | NGH312036E | NGH312038E | NGH312039E | NGFCT120 |
| | 4 ^④ | NGH412033E | NGH412032E | NGH412035E | NGH412036E | — | NGH412039E | — |
| | 4 ^⑤ | NGH712033E | NGH712032E | — | — | NGH712038E | — | — |
| | 4 ^⑥ | NGH912033E | NGH912032E | — | — | NGH912038E | — | — |

Molded Case Switches ^{⑦⑧} U_e Maximum 690 Vac

| Ampere Rating | Three-Pole | | Catalog Number | Four-Pole | | Catalog Number |
|---------------|---|--|----------------|---|--|----------------|
| | | | | | | |
| 800 | MCS with Imperial line and load terminals | | NGK3080KSE | MCS with Imperial line and load terminals | | NGK4080KSE |
| 1200 | MCS with Imperial line and load terminals | | NGK3120KSE | MCS with Imperial line and load terminals | | NGK4120KSE |
| 1250 | MCS with Imperial line and load terminals | | NGK3125KSE | MCS with Imperial line and load terminals | | NGK43125KSE |

Notes

- ① For AC use only.
- ② NG MCCBs are suitable for 40 °C or 50 °C applications. Order suffix V3 to eliminate standard 40 °C labeling.
- ③ Non-UL listed NG 1250 with 1250 ampere trip unit is also available.
- ④ Neutral 0% protected. NG, neutral in right pocket; GN, neutral in left pocket.
- ⑤ Neutral 100% protected (denoted by 7 in digit four); no neutral protection available with LSG or LSIG trip units.
- ⑥ Neutral 0%/60%/100% adjustable protection (denoted by 9 in digit four).
- ⑦ For AC use only. Molded case switch will trip above 14,000 amperes.
- ⑧ For two-pole applications, use outer poles of three-pole molded case switch.

2.2

Molded Case Circuit Breakers

Series G

Type NGH High Interrupting Capacity— U_g Max. 690 Vac, 65 kA I_{cu} at 480 Vac or 415 Vac

See 310+ adjustability specifications on **Page V4-T2-72**.

2

| Maximum Continuous Ampere Rating at 40 °C ^{①②} | Number of Poles | Circuit Breaker Frame Including Digitrip Electronic Trip Unit | | | | | | Neutral CT for LSG and LSIG |
|---|-----------------|---|------------|------------|------------|------------|------------|-----------------------------|
| | | LS | LSI | LSG | LSIG | ALSI | ALSIG | |
| 800 | 3 | NGH308033E | NGH308032E | NGH308035E | NGH308036E | NGH308038E | NGH308039E | NGFCT120 |
| | 4 ^③ | NGH408033E | NGH408032E | NGH408035E | NGH408036E | NGH408038E | NGH408039E | — |
| | 4 ^④ | NGH708033E | NGH708032E | — | — | NGH708038E | — | — |
| | 4 ^⑤ | NGH908033E | NGH908032E | — | — | NGH908038E | — | — |
| 1200 | 3 | NGH312033E | NGH312032E | NGH312035E | NGH312036E | NGH312038E | NGH312039E | NGFCT120 |
| | 4 ^③ | NGH412033E | NGH412032E | NGH412035E | NGH412036E | — | NGH412039E | — |
| | 4 ^④ | NGH712033E | NGH712032E | — | — | NGH712038E | — | — |
| | 4 ^⑤ | NGH912033E | NGH912032E | — | — | NGH912038E | — | — |

Type NGC Very High Capacity— U_g Max. 690 Vac, 100 kA I_{cu} at 480 Vac or 415 Vac

See 310+ adjustability specifications on **Page V4-T2-72**.

| Maximum Continuous Ampere Rating at 40 °C ^{①②} | Number of Poles | Circuit Breaker Frame Including Digitrip Electronic Trip Unit | | | | | | Neutral CT for LSG and LSIG |
|---|-----------------|---|------------|------------|------------|------------|------------|-----------------------------|
| | | LS | LSI | LSG | LSIG | ALSI | ALSIG | |
| 800 | 3 | NGH308033E | NGH308032E | NGH308035E | NGH308036E | NGH308038E | NGH308039E | NGFCT120 |
| | 4 ^③ | NGH408033E | NGH408032E | NGH408035E | NGH408036E | NGH408038E | NGH408039E | — |
| | 4 ^④ | NGH708033E | NGH708032E | — | — | NGH708038E | — | — |
| | 4 ^⑤ | NGH908033E | NGH908032E | — | — | NGH908038E | — | — |
| 1200 | 3 | NGH312033E | NGH312032E | NGH312035E | NGH312036E | NGH312038E | NGH312039E | NGFCT120 |
| | 4 ^③ | NGH412033E | NGH412032E | NGH412035E | NGH412036E | — | NGH412039E | — |
| | 4 ^④ | NGH712033E | NGH712032E | — | — | NGH712038E | — | — |
| | 4 ^⑤ | NGH912033E | NGH912032E | — | — | NGH912038E | — | — |

Notes

- ① For AC use only.
- ② NG MCCBs are suitable for 40 °C or 50 °C applications. Order suffix V3 to eliminate standard 40 °C labeling.
- ③ Neutral 0% protected. NG, neutral in right pocket; GN, neutral in left pocket.
- ④ Neutral 100% protected (denoted by 7 in digit four); no neutral protection available with LSG or LSIG trip units.
- ⑤ Neutral 0%/60%/100% adjustable protection (denoted by 9 in digit four).

Accessories Selection Guide and Ordering Information

Line and Load Terminals

N-Frame circuit breakers do not include terminals as standard. When copper or Cu/Al terminals are required, order by catalog number.

2

Line and Load Terminals

| Maximum Breaker Amperes | Terminal Body Material | Wire Type | AWG Wire (Number of Conductors) | AWG Wire Catalog Number ^① | Metric Wire Range mm ² | Metric Catalog Number ^① |
|--|------------------------|-----------|---------------------------------|--------------------------------------|-----------------------------------|------------------------------------|
| Standard Cu/Al Pressure Terminals | | | | | | |
| 700 | Aluminum | Cu/Al | 1–500 (2) | TA700NB1 | 50–240 | TA700NB1M |
| 1000 | Aluminum | Cu/Al | 3/0–400 (3) | TA1000NB1 | 95–185 | TA1000NB1M |
| 1200 | Aluminum | Cu/Al | 4/0–500 (4) | TA1200NB1 | 120–240 | TA1200NB1M |
| 1200 | Aluminum | Cu/Al | 500–750 (3) | TA1201NB1 | 300–400 | TA1201NB1M |
| Optional Copper and Cu/Al Pressure Type Terminals | | | | | | |
| 700 | Copper | Cu | 2/0–500 (2) | T700NB1 | 70–240 | T700NB1M |
| 1000 | Copper | Cu | 3/0–500 (3) | T1000NB1 | 95–240 | T1000NB1M |
| 1200 | Copper | Cu | 3/0–400 (4) | T1200NB3 | 95–185 | T1200NB3M |

310+ Electronic Trip Unit Accessories

| Description | Catalog Number |
|--|-------------------|
| Electronic portable test kit | MTST230V |
| Trip unit tamper protection wire seal | 5108A03H01 |
| External neutral sensor (1200 A) | NGFCT120 |
| External neutral sensor (800 A) | NGFCT120 |
| Breaker-mount cause-of-trip indication | TRIP-LED |
| Breaker-mount ammeter module | DIGVIEW |
| Remote-mount ammeter module | DIGVIEWR06 |

Base Mounting Hardware

Base mounting hardware is included with a circuit breaker or molded case switch.

Base Mounting Hardware ^②

| Number of Poles | Description | Catalog Number |
|----------------------|--|----------------|
| Three- and four-pole | Imperial hardware: 0.3125–18 x 1.25 pan-head steel screws and lock washers | BMH5 |
| Three- and four-pole | Metric hardware: M8 pan-head steel screws and lock washers | BMH5M |

Terminal Shield

Terminal Shield

| Description | Catalog Number |
|----------------------------|----------------|
| Three-pole terminal shield | NTS3K |

Conductor Extension Kit

Conductor Extension Kit ^③

| Description | Catalog Number |
|------------------------------|-------------------|
| Three-pole both ends Metric | 5104A24G04 |
| Three-pole both ends English | 5104A24G02 |

Keeper Nut

Not required on NG-Frame. Terminals are threaded.

Handle Extension

Included with breaker. Additional handle extensions are available.

Handle Extension

| Description | Catalog Number |
|-------------------------|----------------|
| Single handle extension | HEX5 |

Interphase Barriers

The interphase barriers provide additional electrical clearance between circuit breaker poles for special termination applications. Barriers are high dielectric insulating plates that are installed in the molded slots between the terminals. (Field installation only.)

Interphase Barriers

| Description | Catalog Number |
|------------------------------------|----------------|
| Interphase barriers ^{①②③} | IPB5 |

Notes

- ① Single terminals individually packed.
- ② Metric hardware included with breaker.
- ③ Included as standard on 100% rated 800/1200 A breakers.

Accessories

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.

NG-Frame Accessories

| Description | Reference Page | Three-Pole | | | Four-Pole | | | Neu. |
|--|----------------|------------|--------|-------|-----------|--------|-------|------|
| | | Left | Center | Right | Left | Center | Right | |
| Internal Accessories (Only One Internal Accessory Per Pole) | | | | | | | | |
| Alarm lockout (Make/Break) | V4-T2-109 | ● | | ■ | ● | | ■ | |
| Auxiliary switch (1A, 1B) | V4-T2-109 | ● | | ■ | ● | | ■ | |
| Auxiliary switch (2A, 2B) | V4-T2-109 | ● | | ■ | ● | | ■ | |
| Auxiliary switch and alarm switch combination | V4-T2-109 | ● | | ■ | ● | | ■ | |
| Shunt trip—standard | V4-T2-109 | ■ | | | ■ | | | |
| Undervoltage release mechanism | V4-T2-110 | ■ | | | ■ | | | |
| External Accessories | | | | | | | | |
| Base mounting hardware | V4-T2-69 | ● | ● | ● | ● | ● | ● | ● |
| Interphase barriers | V4-T2-69 | ● | ● | ● | ● | ● | ● | ● |
| Non-padlockable handle block | V4-T2-107 | | ■ | | | ■ | | |
| Padlockable handle lock hasp | V4-T2-107 | □ | | □ | □ | | □ | |
| Key interlock kit | V4-T2-107 | □ | | □ | □ | | □ | |
| Sliding bar interlock—requires two breakers | V4-T2-107 | ● | ● | ● | | | | |
| Electrical operator | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Plug-in adapters | V4-T2-113 | ● | ● | ● | ● | ● | ● | ● |
| Rear connecting studs | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Handle mechanisms | V4-T2-413 | ● | ● | ● | ● | ● | ● | ● |
| Drawout cassette | V4-T2-114 | ● | ● | ● | ● | ● | ● | ● |
| Handle extension | V4-T2-69 | ● | ● | ● | ● | ● | ● | ● |
| Ammeter/cause of trip display | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Cause of trip LED module | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Digitrip 310+ test kit | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Modifications (Refer to Eaton) | | | | | | | | |
| Moisture fungus treatment | V4-T2-105 | ● | ● | ● | ● | ● | ● | ● |
| Freeze-tested circuit breakers | — | ● | ● | ● | ● | ● | ● | ● |
| Marine/Naval application, UL 489 Supplement SA and SB | ① | ● | ● | ● | ● | ● | ● | ● |

Legend

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

Note

① Contact Eaton.

Technical Data and Specifications

Interrupting Capacity Ratings

UL 489/IEC 60947-2 Interrupting Capacity Ratings ^①

| Circuit Breaker Type | Number of Poles | 240 (UL) | Interrupting Capacity (kA Symmetrical Amperes) | | | | | | | |
|----------------------|-----------------|----------|--|----------|----------|----------|-----|----|----------|----------|
| | | | Volts AC (50/60 Hz) | | | | | | | |
| | | | 220–240 | | 380–415 | | 480 | | 600 | |
| | | | I_{CU} | I_{CS} | I_{CU} | I_{CS} | | | I_{CU} | I_{CS} |
| NGS ^① | 2, 3, 4 | 65 | 85 | 85 | 50 | 50 | 50 | 25 | 20 | 10 |
| NGH | 2, 3, 4 | 100 | 100 | 100 | 70 | 50 | 65 | 35 | 25 | 13 |
| NGC | 2, 3, 4 | 200 | 200 | 100 | 100 | 50 | 100 | 65 | 35 | 18 |

NG-Frame Digitrip Specifications

NG 310+ Specifications

| Description | Specification |
|---|---------------------------------|
| Trip Unit Type | Digitrip RMS 310+ |
| Breaker Type | |
| Frame designation | NG |
| Frames available | 800 A, 1200 A |
| Continuous current range (A) | 320–1200A |
| Ground fault pickup (A) | 160–1200A |
| Interrupting capacities at 480 Vac (kAIC) | 35, 65, 100, 150 |
| 100% rated | Yes |
| Protection | |
| Ordering options | LS, LSI, LSG, LSIG, ALSI, ALSIG |
| Arcflash reduction maintenance system (or maintenance mode) | Yes |
| Interchangeable trip unit | No |
| High load alarm (suffix B20) ^② | Yes |
| Ground fault alarm with trip (suffix B21) ^② | Yes |
| Ground fault alarm, no trip (suffix B22) ^② | Yes |
| Zone selective interlocking (suffix ZG) | LSI, LSIG, ALSI, ALSIG |
| Cause of trip indication | Yes |
| Thru-cover accessories | No |

Notes

^① 1600 amperes is not a UL or CSA listed rating. 1200 amperes is the maximum UL and CSA rating for NG.

^② B2x suffixes cannot be combined with B2x suffixes.

2.2

Molded Case Circuit Breakers

Series G

NG 310+ Adjustability Specifications

2

| 310+ Settings | | RG Frame | |
|---|--------------|-----------------------------------|-----------------------------------|
| | | 800 A | 1200 A |
| I_r = continuous current or long delay pickup (amperes) (All 310+) | I_r | | |
| | A | 320 | 500 |
| | B | 400 | 600 |
| | C | 450 | 630 |
| | D | 500 | 700 |
| | E | 600 | 800 |
| | F | 630 | 900 |
| | G | 700 | 1000 |
| | H (= I_n) | 800 | 1200 |
| t_r = long delay time (seconds) (All 310+) | Position 1 | 2 | 2 |
| | Position 2 | 4 | 4 |
| | Position 3 | 6 | 7 |
| | Position 4 | 8 | 10 |
| | Position 5 | 10 | 12 |
| | Position 6 | 12 | 15 |
| | Position 7 | 14 | 20 |
| | Position 8 | 14 | 24 |
| I_{sd} (x I_r) = short delay pickup (All 310+) | Position 1 | 2x | 2x |
| | Position 2 | 3x | 3x |
| | Position 3 | 4x | 4x |
| | Position 4 | 5x | 5x |
| | Position 5 | 6x | 6x |
| | Position 6 | 7x | 7x |
| | Position 7 | 8x | 8x |
| | Position 8 | 9x | 9x |
| | Position 9 | 9x | 9x |
| t_{sd} = short delay time I^2t (milliseconds) (LS, LSG) | Fixed | 67 at10x | 67 at10x |
| t_{sd} = short delay time flat (milliseconds) (LSI, LSIG, ALSI, ALSIG) ① | Position 1 | Inst | Inst |
| | Position 2 | 120 | 120 |
| | Position 3 | 300 | 300 |
| I_g = ground fault pickup (amperes) (LSG, LSIG, ALSIG) | Position 1 | 160 | 240 |
| | Position 2 | 240 | 360 |
| | Position 3 | 320 | 480 |
| | Position 4 | 480 | 720 |
| | Position 5 | 640 | 960 |
| | Position 6 | 800 | 1200 |
| t_g = ground fault delay time (milliseconds) (LSG, LSIG, ALSIG) | Position 1 | Inst | Inst |
| | Position 2 | 120 | 120 |
| | Position 3 | 300 | 300 |
| Independently Adjustable Instantaneous (I_i) setting (ALSI, ALSIG) | Yes | 2.5x, 4x, 6x, 7x, 8x, 10x, 18x | 2.5x, 4x, 6x, 7x, 8x, 10x, 12x |
| Maintenance Mode (remote) pickup ($2.5 \times I_n$) (ALSI, ALSIG) ② | Fixed | 2.5x | 2.5x |

Notes

① 50 ms for ALSI and ALSIG trip units.

② Maintenance Mode is enabled remotely using a 24 Vdc circuit.

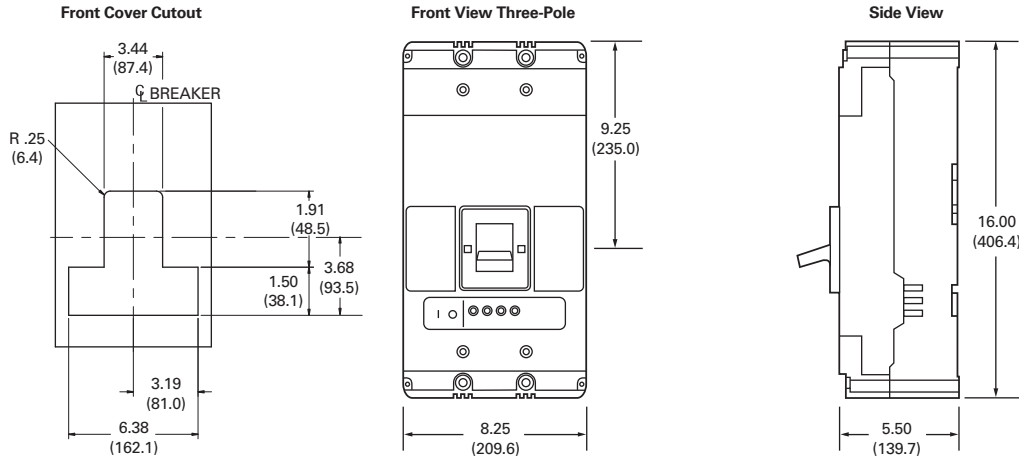
Dimensions and Weights

Approximate Dimensions in Inches (mm)

NG-Frame

| Number of Poles | Width | Height | Depth |
|-----------------|---------------|---------------|--------------|
| 3 | 8.25 (209.6) | 16.00 (406.4) | 5.50 (139.7) |
| 4 | 11.13 (282.6) | 16.00 (406.4) | 5.50 (139.7) |

NG-Frame



Approximate Shipping Weight in Lbs (kg)

NG-Frame

| Breaker Type | Complete Breaker | |
|---------------|------------------|-----------|
| | Three-Pole | Four-Pole |
| NGS, NGH, NGC | 45 (20.4) | 58 (26.3) |

RG-Frame (800–2500 Amperes)

2



Contents

| <i>Description</i> | <i>Page</i> |
|--|------------------|
| EG-Frame (15–125 Amperes) | V4-T2-15 |
| 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) | |
| Catalog Number Selection | V4-T2-75 |
| Product Selection | V4-T2-76 |
| Accessories | V4-T2-81 |
| Technical Data and Specifications | V4-T2-82 |
| Dimensions and Weights | V4-T2-84 |
| 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-T2-111 |
| Plug-In Blocks | V4-T2-113 |
| Drawout Cassette | V4-T2-114 |

RG-Frame (800–2500 Amperes)

Product Description

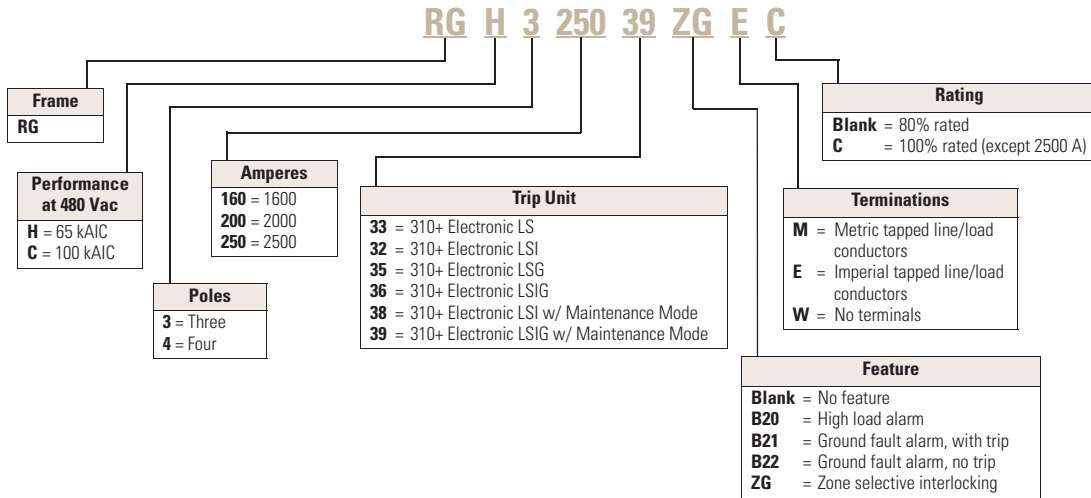
- Eaton's RG-Frame circuit breakers are available as frame (which includes trip unit), rating plug and terminals
- All R-Frame circuit breakers are suitable for reverse feed use

Catalog Number Selection

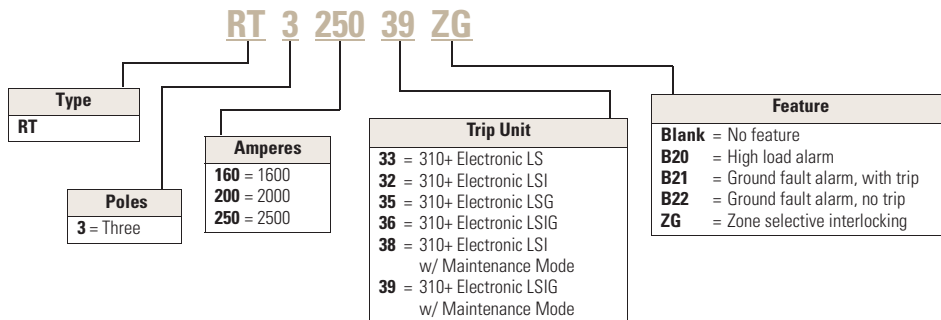
This information is presented only as an aid to understanding catalog numbers. It is not to be used to build catalog numbers for circuit breakers or trip units.

70 kA at 415 Vac and 65 kA at 480 Vac

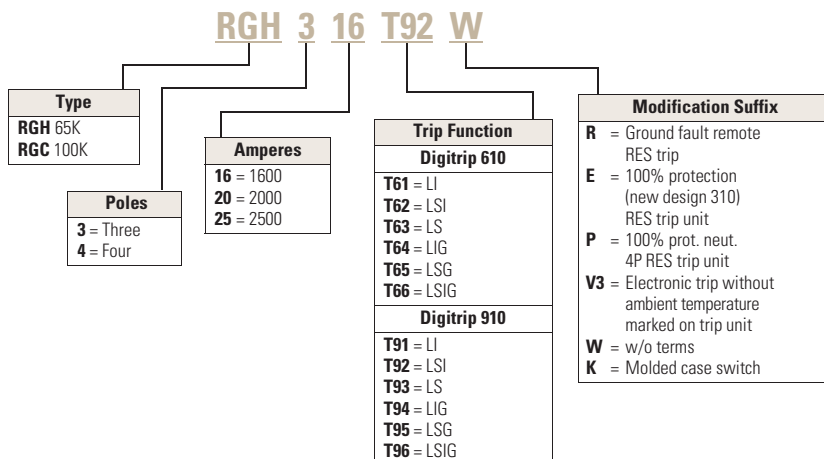
RG Circuit Breaker With 310+ Electronic Trip Unit



RG 310+ Electronic Trip Unit



RG Circuit Breaker with OPTIM 610 and 910 Electronic Trip Unit



Product Selection

70 kA at 415 Vac and 65 kA at 480 Vac

Type RGH with Digitrip 310+ High Interrupting Capacity— U_e Maximum 690 Vac, 70 kA I_{cu} at 415 Vac

See 310+ adjustability specifications on Page V4-T2-83.

| Maximum Continuous Ampere Rating at 40 °C ① | Number of Poles | Circuit Breaker Frame Including Digitrip RMS 310+ Electronic Trip Unit with Adjustable Rating Plugs—Catalog Number ② | | | | | | Neutral CT for LSG and LSIG |
|---|-----------------|--|------------|------------|------------|------------|------------|-----------------------------|
| | | LS | LSI | LSG ③ | LSIG ③ | ALSI | ALSIG | |
| 1600 ① | 3 | RGH316033E | RGH316032E | RGH316035E | RGH316036E | RGH316038E | RGH316039E | RGFCT160A |
| 2000 | 3 | RGH320033E | RGH320032E | RGH320035E | RGH320036E | RGH320038E | RGH320039E | RGFCT200A |
| 2500 | 3 | RGH325033E | RGH325032E | RGH325035E | RGH325036E | RGH325038E | RGH325039E | RGFCT250A |

100 kA at Both 415 Vac and 480 Vac

Type RGH with Digitrip 310+ High Interrupting Capacity— U_e Maximum 690 Vac, 70 kA I_{cu} at 415 Vac

See 310+ adjustability specifications on Page V4-T2-83.

| Maximum Continuous Ampere Rating at 40 °C ① | Number of Poles | Circuit Breaker Frame Including Digitrip RMS 310+ Electronic Trip Unit with Adjustable Rating Plugs—Catalog Number ② | | | | | |
|---|-----------------|--|------------|--------|---------|------------|----------|
| | | LS | LSI | LSG ③④ | LSIG ③④ | ALSI | ALSIG ③④ |
| 1600 ① | 4 ⑤ | RGH416033E | RGH416032E | — | — | RGH416038E | — |
| 2000 | 4 ⑤ | RGH420033E | RGH420032E | — | — | RGH420038E | — |
| 2500 | 4 ⑤ | RGH425033E | RGH425032E | — | — | RGH425038E | — |

Notes

- ① For SCR application, use 2000 ampere frame.
 - ② Order terminals separately. Mounting hardware not included.
 - ③ Ground fault equipped trip units available with remote indicating panel. Add "R" to catalog number, for example, "RGH316035RW."
 - ④ No neutral protection available on four-pole breakers with LSG or LSIG trip units.
 - ⑤ Unprotected left pole neutral. Add "P" to catalog number for 100% protected left pole neutral, add "E" for 60% protected, for example, "RGH416033PW," "RGH416033EW."
- RG MCCBs have English threading on line and load conductors. Use suffix "M" for metric threading.

100 kA at Both 415 Vac and 480 Vac**Type RGC with Digitrip 310+ Very High Interrupting Capacity— U_e Maximum 690 Vac, 100 kA I_{cu} at 415 Vac**See 310+ adjustability specifications on **Page V4-T2-83**.

| Maximum Continuous Ampere Rating at 40 °C ^① | Number of Poles | Circuit Breaker Frame Including Digitrip RMS 310+ Electronic Trip Unit with Adjustable Rating Plugs—Catalog Number ^② | | | | | | Neutral CT for LSG and LSIG |
|--|-----------------|---|------------|------------------|-------------------|------------|------------|-----------------------------|
| | | LS | LSI | LSG ^③ | LSIG ^③ | ALSI | ALSIG | |
| 1600 ^① | 3 | RGC316033E | RGC316032E | RGC316035E | RGC316036E | RGC316038E | RGC316039E | RGFCT160A |
| 2000 | 3 | RGC320033E | RGC320032E | RGC320035E | RGC320036E | RGC320038E | RGC320039E | RGFCT200A |
| 2500 | 3 | RGC325033E | RGC325032E | RGC325035E | RGC325036E | RGC325038E | RGC325039E | RGFCT250A |

Type RGC with Digitrip 310+ Very High Interrupting Capacity— U_e Maximum 690 Vac, 100 kA I_{cu} at 415 Vac, continuedSee 310+ adjustability specifications on **Page V4-T2-83**.

| Maximum Continuous Ampere Rating at 40 °C ^① | Number of Poles | Circuit Breaker Frame Including Digitrip RMS 310+ Electronic Trip Unit with Adjustable Rating Plugs—Catalog Number ^② | | | | | |
|--|-----------------|---|------------|-------------------|--------------------|------------|---------------------|
| | | LS | LSI | LSG ^{③④} | LSIG ^{③④} | ALSI | ALSIG ^{③④} |
| 1600 ^① | 4 ^⑤ | RGC416033E | RGC416032E | — | — | RGC416038E | — |
| 2000 | 4 ^⑤ | RGC420033E | RGC420032E | — | — | RGC420038E | — |
| 2500 | 4 ^⑤ | RGC425033E | RGC425032E | — | — | RGC425038E | — |

Molded Case Switches ^⑥

| Ampere Rating | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| 1600 | 3 | RGK3160KSE |
| 2000 | 3 | RGK3200KSE |
| 1600 | 4 | RGK4160KSE |
| 2000 | 4 | RGK4200KSE |

Notes

- ① For SCR application, use 2000 ampere frame.
- ② Order terminals separately. Mounting hardware not included.
- ③ Ground fault equipped trip units available with remote indicating panel. Add "R" to catalog number, for example, "RGH316035RW."
- ④ No neutral protection available on four-pole breakers with LSG or LSIG trip units.
- ⑤ Unprotected left pole neutral. Add "P" to catalog number for 100% protected left pole neutral, add "E" for 60% protected, for example, "RGH416033PW," "RGH416033EW."
- ⑥ Molded case switch will trip above 17,500 amperes.

RG MCCBs have English threading on line and load conductors. Use suffix "M" for metric threading.

2.2

Molded Case Circuit Breakers

Series G

2

Type RG with Digitrip 610 and 910

Circuit Breaker Frame Including Digitrip RMS 610 and 910 Electronic Trip Unit with Rating Plugs
Order as Individual Component—Catalog Number ①

L—Adjustable Long Delay Pickup (I_t) with Adjustable Long Delay Time
S—Adjustable Short Delay Pickup with Adjustable Short Delay Time (I^2t or Flat Response)
I—Adjustable Instantaneous Pickup
G—Adjustable Ground Fault Pickup with Adjustable Ground Fault Time Delay (I^2t or Flat Response)

| Maximum Continuous Ampere Rating at 40 °C | Number of Poles | Digitrip RMS Interchangeable Rating Plug (Order as Individual Component) | | | | | | Fixed Rating Plug | Ampere Rating | Catalog Number |
|---|-----------------|--|-----------------|--------------------|-----------------|--------------------|--------------------|-------------------|---------------|----------------|
| | | LI | LS | LSI | LIG | LSG | LSIG | | | |
| Long Delay Pickup | 0.5–1.0 x I_n | 0.5–1.0 _n | 0.5–1.0 x I_n | 0.5–1.0 x I_n | 0.5–1.0 x I_n | 0.5–1.0 x I_n | 0.5–1.0 x I_n | | | |
| Long Delay Time | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | | | |
| Short Time Range | 2–6 x I_t | 2–6 x I_t | 2–6 x I_t | 2–6 x I_t | 2–6 x I_t | 2–6 x I_t | 2–6 x I_t | | | |
| Short Time Delay | — | 100–500 ms | 100–500 ms | — | 100–500 ms | 100–500 ms | 100–500 ms | | | |
| Instantaneous | 2–6 x M1 and M2 | — | 2–6 x M1 and M2 | 2–6 x M1 and M2 | — | 2–6 x M1 and M2 | 2–6 x M1 and M2 | | | |
| Ground Fault Pickup | — | — | — | 0.25–1.0 x I_n ② | — | 0.25–1.0 x I_n ② | 0.25–1.0 x I_n ② | | | |
| Ground Fault Delay | — | — | — | 100–500 ms | — | 100–500 ms | 100–500 ms | | | |

Type RGH with Digitrip 610 High Interrupting Capacity— U_e Max. 690 Vac, 70 kA I_{cu} at 415 Vac

| | | | | | | | | | |
|-----------------------------|---|---------------|---------------|---------------|---------------|---------------|---------------|------|------------|
| 1600 | 3 | RGH316T61WP44 | RGH316T63WP44 | RGH316T62WP44 | RGH316T64WP44 | RGH316T65WP44 | RGH316T66WP44 | 800 | RP6R16A080 |
| | | | | | | | | 1000 | RP6R16A100 |
| | | | | | | | | 1200 | RP6R16A120 |
| | | | | | | | | 1250 | RP6R16A125 |
| | | | | | | | | 1600 | RP6R16A160 |
| Includes 1600 A rating plug | | | | | | | | | |
| 2000 | 3 | RGH320T61WP49 | RGH320T63WP49 | RGH320T62WP49 | RGH320T64WP49 | RGH320T65WP49 | RGH320T66WP49 | 1000 | RP6R20A100 |
| | | | | | | | | 1200 | RP6R20A120 |
| | | | | | | | | 1250 | RP6R20A125 |
| | | | | | | | | 1600 | RP6R20A160 |
| | | | | | | | | 2000 | RP6R20A200 |
| Includes 2000 A rating plug | | | | | | | | | |
| 2500 | 3 | RGH325T61WP53 | RGH325T63WP53 | RGH325T62WP53 | RGH325T64WP53 | RGH325T65WP53 | RGH325T66WP53 | 1600 | RP6R25A160 |
| | | | | | | | | 2000 | RP6R25A200 |
| | | | | | | | | 2500 | RP6R25A250 |

Type RGC with Digitrip 610 Very High Interrupting Capacity— U_e Max. 690 Vac, 100 kA I_{cu} at 415 Vac

| | | | | | | | | | |
|-----------------------------|---|---------------|---------------|---------------|---------------|---------------|---------------|------|------------|
| 1600 | 3 | RGC316T61WP44 | RGC316T63WP44 | RGC316T62WP44 | RGC316T64WP44 | RGC316T65WP44 | RGC316T66WP44 | 800 | RP6R16A080 |
| | | | | | | | | 1000 | RP6R16A100 |
| | | | | | | | | 1200 | RP6R16A120 |
| | | | | | | | | 1250 | RP6R16A125 |
| | | | | | | | | 1600 | RP6R16A160 |
| Includes 1600 A rating plug | | | | | | | | | |
| 2000 | 3 | RGC320T61WP49 | RGC320T63WP49 | RGC320T62WP49 | RGC320T64WP49 | RGC320T65WP49 | RGC320T66WP49 | 1000 | RP6R20A100 |
| | | | | | | | | 1200 | RP6R20A120 |
| | | | | | | | | 1250 | RP6R20A125 |
| | | | | | | | | 1600 | RP6R20A160 |
| | | | | | | | | 2000 | RP6R20A200 |
| Includes 2000 A rating plug | | | | | | | | | |
| 2500 | 3 | RGC325T61WP53 | RGC325T63WP53 | RGC325T62WP53 | RGC325T64WP53 | RGC325T65WP53 | RGC325T66WP53 | 1600 | RP6R25A160 |
| | | | | | | | | 2000 | RP6R25A200 |
| | | | | | | | | 2500 | RP6R25A250 |

Notes

① Order terminals separately. Mounting hardware not included.

② Not to exceed 1200 ampere ground fault pickup.

RG MCCBs have metric threading on line and load conductors. Use RD MCCBs if imperial threading is required.

Type RG with Digitrip 610 and 910, continued

| Maximum Continuous Ampere Rating at 40 °C | Number of Poles | Circuit Breaker Frame Including Digitrip RMS 610 and 910 Electronic Trip Unit with Rating Plugs Order as Individual Component—Catalog Number ① | | | | | | Digitrip RMS Interchangeable Rating Plug (Order as Individual Component) | | |
|---|-----------------|---|----------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--|---------------|----------------|
| | | LI | LS | LSI | LIG | LSG | LSIG | Fixed Rating Plug | Ampere Rating | Catalog Number |
| Long Delay Pickup | | 0.5–1.0 x I _n | 0.5–1.0 _n | 0.5–1.0 x I _n | 0.5–1.0 x I _n | 0.5–1.0 x I _n | 0.5–1.0 x I _n | | | |
| Long Delay Time | | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | 2–24 Seconds | | | |
| Short Time Range | | 2–6 x I _t | 2–6 x I _t | 2–6 x I _t | 2–6 x I _t | 2–6 x I _t | 2–6 x I _t | | | |
| Short Time Delay | | — | 100–500 ms | 100–500 ms | — | 100–500 ms | 100–500 ms | | | |
| Instantaneous | | 2–6 x M1 and M2 | — | 2–6 x M1 and M2 | 2–6 x M1 and M2 | — | 2–6 x M1 and M2 | | | |
| Ground Fault Pickup | | — | — | — | 0.25–1.0 x I _n ② | — | 0.25–1.0 x I _n ② | | | |
| Ground Fault Delay | | — | — | — | 100–500 ms | — | 100–500 ms | | | |

Type RGH with Digitrip 910 High Interrupting Capacity—U_e Max. 690 Vac, 70 kA I_{cu} at 415 Vac

| | | | | | | | | | |
|------------------------------------|---|---------------|---------------|---------------|---------------|---------------|---------------|------|------------|
| 1600 | 3 | RGH316T91WP44 | RGH316T93WP44 | RGH316T92WP44 | RGH316T94WP44 | RGH316T95WP44 | RGH316T96WP44 | 800 | RP6R16A080 |
| | | | | | | | | 1000 | RP6R16A100 |
| | | | | | | | | 1200 | RP6R16A120 |
| | | | | | | | | 1250 | RP6R16A125 |
| | | | | | | | | 1600 | RP6R16A160 |
| Includes 1600 A rating plug | | | | | | | | | |
| 2000 | 3 | RGH320T91WP49 | RGH320T93WP49 | RGH320T92WP49 | RGH320T94WP49 | RGH320T95WP49 | RGH320T96WP49 | 1000 | RP6R20A100 |
| | | | | | | | | 1200 | RP6R20A120 |
| | | | | | | | | 1250 | RP6R20A125 |
| | | | | | | | | 1600 | RP6R20A160 |
| | | | | | | | | 2000 | RP6R20A200 |
| Includes 2000 A rating plug | | | | | | | | | |
| 2500 | 3 | RGH325T91WP53 | RGH325T93WP53 | RGH325T92WP53 | RGH325T94WP53 | RGH325T95WP53 | RGH325T96WP53 | 1600 | RP6R25A160 |
| | | | | | | | | 2000 | RP6R25A200 |
| | | | | | | | | 2500 | RP6R25A250 |
| | | | | | | | | | |
| | | | | | | | | | |
| Includes 2500 A rating plug | | | | | | | | | |

Type RGC with Digitrip 910 Very High Interrupting Capacity—U_e Max. 690 Vac, 100 kA I_{cu} at 415 Vac

| | | | | | | | | | |
|------------------------------------|---|---------------|---------------|---------------|---------------|---------------|---------------|------|------------|
| 1600 | 3 | RGC316T91WP44 | RGC316T93WP44 | RGC316T92WP44 | RGC316T94WP44 | RGC316T95WP44 | RGC316T96WP44 | 800 | RP6R16A080 |
| | | | | | | | | 1000 | RP6R16A100 |
| | | | | | | | | 1200 | RP6R16A120 |
| | | | | | | | | 1250 | RP6R16A125 |
| | | | | | | | | 1600 | RP6R16A160 |
| Includes 1600 A rating plug | | | | | | | | | |
| 2000 | 3 | RGC320T91WP49 | RGC320T93WP49 | RGC320T92WP49 | RGC320T94WP49 | RGC320T95WP49 | RGC320T96WP49 | 1000 | RP6R20A100 |
| | | | | | | | | 1200 | RP6R20A120 |
| | | | | | | | | 1250 | RP6R20A125 |
| | | | | | | | | 1600 | RP6R20A160 |
| | | | | | | | | 2000 | RP6R20A200 |
| Includes 2000 A rating plug | | | | | | | | | |
| 2500 | 3 | RGC325T91WP53 | RGC325T93WP53 | RGC325T92WP53 | RGC325T94WP53 | RGC325T95WP53 | RGC325T96WP53 | 1600 | RP6R25A160 |
| | | | | | | | | 2000 | RP6R25A200 |
| | | | | | | | | 2500 | RP6R25A250 |
| | | | | | | | | | |
| | | | | | | | | | |
| Includes 2500 A rating plug | | | | | | | | | |

Notes

- ① Order terminals separately. Mounting hardware not included.
- ② Not to exceed 1200 ampere ground fault pickup.

RG MCCBs have metric threading on line and load conductors. Use RD MCCBs if imperial threading is required.

Accessories Selection Guide and Ordering Information

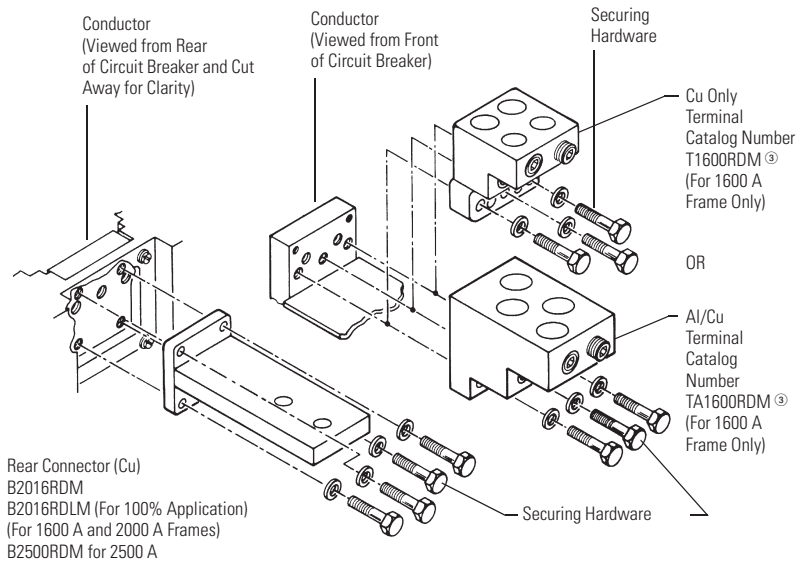
Line and Load Terminals

R-Frame circuit breakers use Cu/Al terminals as standard and copper only terminals as an option. Specify if factory installation is required. Must have terminals for 100% rated and or freeze testing requirements.

Line and Load Terminals

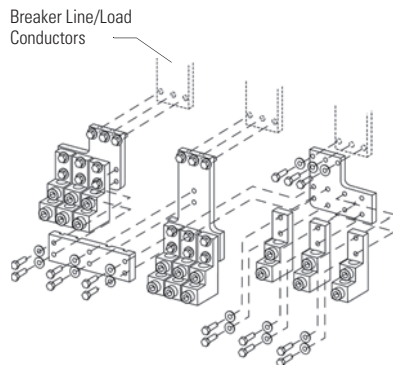
| Maximum Breaker Amperes | Terminal Body Material | Wire Type | Hardware | AWG/kcmil Wire Range/ Number of Conductors | Metric Wire Range mm ² | Catalog Number |
|-------------------------|------------------------|-----------|----------|--|-----------------------------------|--------------------|
| Wire Terminals | | | | | | |
| 1600 | Aluminum | Cu/Al | Metric | 500–1000 (4) | 300–500 | TA1600RDM ① |
| 1600 | Copper | Cu | Metric | 1–600 (4) | 50–300 | T1600RDM ① |
| 2000 | Aluminum | Cu/Al | Metric | 2–600 (6) | 35–300 | TA2000RDM ② |
| Rear Connectors | | | | | | |
| 2000 | Copper | — | Metric | — | — | B2016RDM ① |
| 2000 | Copper | — | Metric | — | — | B2016RDLM ① |
| 2500 | Copper | — | Metric | — | — | B2500RDM ① |

RG Rear Connector Exploded View



TA2000RD Wire Terminal

Note: Order one TA2000RDM kit per three poles. Catalog number includes bus connection, terminals and hardware for either line side or load side of three-pole breaker.



Base Mounting Hardware

Supplied by customer.

Handle Extension

Included with breaker. Additional handle extensions are available.

Handle Extension

| Description | Catalog Number |
|-------------------------|----------------|
| Single handle extension | HEX6 |

Wire Seal

The wire seal can be used to secure the cover on the trip unit to prevent adjustments after settings are confirmed.

Wire Seal

| Description | Catalog Number |
|-------------|-------------------|
| Wire seal | 5108A03H01 |

Notes

- ① Order one per pole—single terminals individually packed.
- ② Order one TA2000RD kit per three poles. Catalog number includes bus connection, terminals and hardware for either line side or load side of three-pole breaker.
- ③ For use with 2500 A Frame. Do not order separately unless for replacement purposes. Included in breaker carton when 2500 A frame is ordered.

RG MCCBs have metric threading on line and load conductors. Use RD MCCBs if imperial threading is required.

Accessories

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.

RG-Frame Accessories

| Description | Reference Page | Three-Pole | | | Four-Pole | | | Neutral |
|--|----------------|------------|--------|-------|-----------|--------|-------|---------|
| | | Left | Center | Right | Left | Center | Right | |
| Internal Accessories (Only One Internal Accessory Per Pole) | | | | | | | | |
| Alarm lockout (Make/Break) | V4-T2-109 | | | ■ | | | ■ | |
| Auxiliary switch (1A, 1B) | V4-T2-109 | | | ■ | | | ■ | |
| Auxiliary switch (2A, 2B) | V4-T2-109 | | | ■ | | | ■ | |
| Auxiliary switch and alarm switch combination | V4-T2-109 | | | ■ | | | ■ | |
| Shunt trip—standard | V4-T2-109 | | | ● | | | ● | |
| Undervoltage release mechanism | V4-T2-110 | | | ● | | | ● | |
| External Accessories | | | | | | | | |
| Base mounting hardware | V4-T2-80 | ● | ● | ● | ● | ● | ● | ● |
| Padlockable handle lock hasp | V4-T2-107 | □ | | □ | □ | | □ | |
| Key interlock kit | V4-T2-107 | □ | | □ | □ | | □ | |
| Electrical operator | V4-T2-107 | ● | ● | ● | ● | ● | ● | ● |
| Handle mechanisms | V4-T2-413 | ● | ● | ● | ● | ● | ● | ● |
| Handle extension | V4-T2-80 | ● | ● | ● | ● | ● | ● | ● |
| Digitrip 310+ test kit | V4-T2-106 | ● | ● | ● | ● | ● | ● | ● |
| Modifications (Refer to Eaton) | | | | | | | | |
| Moisture fungus treatment | V4-T2-105 | ● | ● | ● | ● | ● | ● | ● |
| Freeze-tested circuit breakers | — | ● | ● | ● | ● | ● | ● | ● |
| Marine/naval application, UL 489 Supplement SA and SB | ① | ● | ● | ● | ● | ● | ● | ● |

Legend

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

310+ Electronic Trip Unit Accessories

| Description | Catalog Number |
|--|----------------|
| Electronic portable test kit | MTST230V |
| Trip unit tamper protection wire seal | 5108A03H01 |
| External neutral sensor (2500 A) | RGFCT250A |
| External neutral sensor (2000 A) | RGFCT200A |
| External neutral sensor (1600 A) | RGFCT160A |
| Breaker-mount cause-of-trip indication ② | — |
| Breaker-mount ammeter module | DIGIVIEW |
| Remote-mount ammeter module | DIGIVIEWR06 |

Notes

- ① Contact Eaton.
- ② Cause-of-trip indication LEDs integrated in RG 310+ trip units.

Technical Data and Specifications

2

UL 489/CSA Interrupting Capacity Ratings ^①

| Circuit Breaker Type | Number of Poles | Interrupting Capacity (kA Symmetrical Amperes) | | | |
|----------------------|-----------------|--|-----|-----|-----|
| | | Volts AC (50/60 Hz) | | | |
| | | 240 | 277 | 480 | 600 |
| RGH | 3, 4 | 125 | — | 65 | 50 |
| RGC | 3, 4 | 200 | — | 100 | 65 |

IEC 947-2 Interrupting Capacity Ratings ^①

| Circuit Breaker Type | Number of Poles | Interrupting Capacity (kA Symmetrical Amperes) | | |
|----------------------|-----------------|--|-----|-----|
| | | Volts AC (50/60 Hz) | | |
| | | 240 | 415 | 690 |
| RGH | 3, 4 | | | |
| I_{cu} | | 135 | 70 | 25 |
| I_{cs} | | 100 | 50 | 13 |
| RGC | 3, 4 | | | |
| I_{cu} | | 200 | 100 | 35 |
| I_{cs} | | 100 | 50 | 18 |

RG 310+ Specifications

| Description | Specification |
|---|---------------------------------|
| Trip Unit Type | Digitrip RMS 310+ |
| Breaker Type | |
| Frame designation | RG |
| Frames available | 1600 A, 2000 A, 2500 A |
| Continuous current range (A) | 800–2500 A |
| Ground fault pickup (A) | 200–1200 A |
| Interrupting capacities at 480 Vac (kAIC) | 65, 100 |
| 100% rated | Yes |
| Protection | |
| Ordering options | LS, LSI, LSG, LSIG, ALSI, ALSIG |
| Arcflash reduction maintenance system (or maintenance mode) | Yes |
| Interchangeable trip unit | Yes |
| High load alarm (suffix B20) ^② | Yes |
| Ground fault alarm with trip (suffix B21) ^② | Yes |
| Ground fault alarm, no trip (suffix B22) ^② | Yes |
| Zone selective interlocking (suffix ZG) | LSI, LSIG, ALSI, ALSIG |
| Cause of trip indication | Yes |
| Thru-cover accessories | No |

Notes

^① Utilization Category A circuit breakers.

^② B2x suffixes cannot be combined with B2x suffixes.

See **Page V4-T2-74** for trip unit specifications.

RG 310+ Adjustability Specifications

| 310+ Settings | RG Frame | | | |
|---|--------------|------------------------------|-----------------------------|---------------------|
| | 1600 A | 2000 A | 2500 A | |
| I_r = continuous current or long delay pickup (amperes) (All 310+) | I_r | | | |
| | A | 800 | 1000 | 1600 |
| | B | 900 | 1200 | 1700 |
| | C | 1000 | 1400 | 1800 |
| | D | 1100 | 1600 | 2000 |
| | E | 1200 | 1700 | 2100 |
| | F | 1400 | 1800 | 2200 |
| | G | 1500 | 1900 | 2400 |
| | H (= I_n) | 1600 | 2000 | 2500 |
| t_r = long delay time (seconds) (All 310+) | Position 1 | 2 | 2 | 2 |
| | Position 2 | 4 | 4 | 4 |
| | Position 3 | 7 | 7 | 7 |
| | Position 4 | 10 | 10 | 10 |
| | Position 5 | 12 | 12 | 12 |
| | Position 6 | 15 | 15 | 15 |
| | Position 7 | 20 | 20 | 20 |
| | Position 8 | 24 | 24 | 24 |
| I_{sd} (x I_r) = short delay pickup (All 310+) | Position 1 | 2x | 2x | 2x |
| | Position 2 | 3x | 3x | 2x |
| | Position 3 | 4x | 4x | 2x |
| | Position 4 | 5x | 5x | 3x |
| | Position 5 | 6x | 6x | 4x |
| | Position 6 | 7x | 7x | 5x |
| | Position 7 | 8x | 8x | 6x |
| | Position 8 | 8x | 8x | 6x |
| | Position 9 | 9x | 9x | 6x |
| t_{sd} = short delay time I^2t (milliseconds) (LS, LSG) | Fixed | 67 at10x | 67 at10x | 67 at10x |
| t_{sd} = short delay time flat (milliseconds) (LSI, LSIG, ALSI, ALSIG) ① | Position 1 | Inst | Inst | Inst |
| | Position 2 | 120 | 120 | 120 |
| | Position 3 | 300 | 300 | 300 |
| I_g = ground fault pickup (amperes) (LSG, LSIG, ALSIG) | Position 1 | 200 | 200 | 200 |
| | Position 2 | 400 | 400 | 400 |
| | Position 3 | 600 | 600 | 600 |
| | Position 4 | 800 | 800 | 800 |
| | Position 5 | 1000 | 1000 | 1000 |
| | Position 6 | 1200 | 1200 | 1200 |
| t_g = ground fault delay time (milliseconds) (LSG, LSIG, ALSIG) | Position 1 | Inst | Inst | Inst |
| | Position 2 | 120 | 120 | 120 |
| | Position 3 | 300 | 300 | 300 |
| Independently Adjustable Instantaneous (I_i) setting (ALSI, ALSIG) | Yes | 2.5x, 4x, 6x, 7x, 8x, 11x | 2.5x, 4x, 6x, 7x, 8x, 9x | 2.5x, 4x, 6x, 7x |
| Maintenance Mode (remote) pickup ($2.5 \times I_n$) (ALSI, ALSIG) ② | Fixed | 2.5x | 2.5x | 2.5x |

Notes

- ① 50 ms for ALSI and ALSIG trip units.
- ② Maintenance Mode is enabled remotely using a 24 Vdc circuit.

2.2

Molded Case Circuit Breakers

Series G

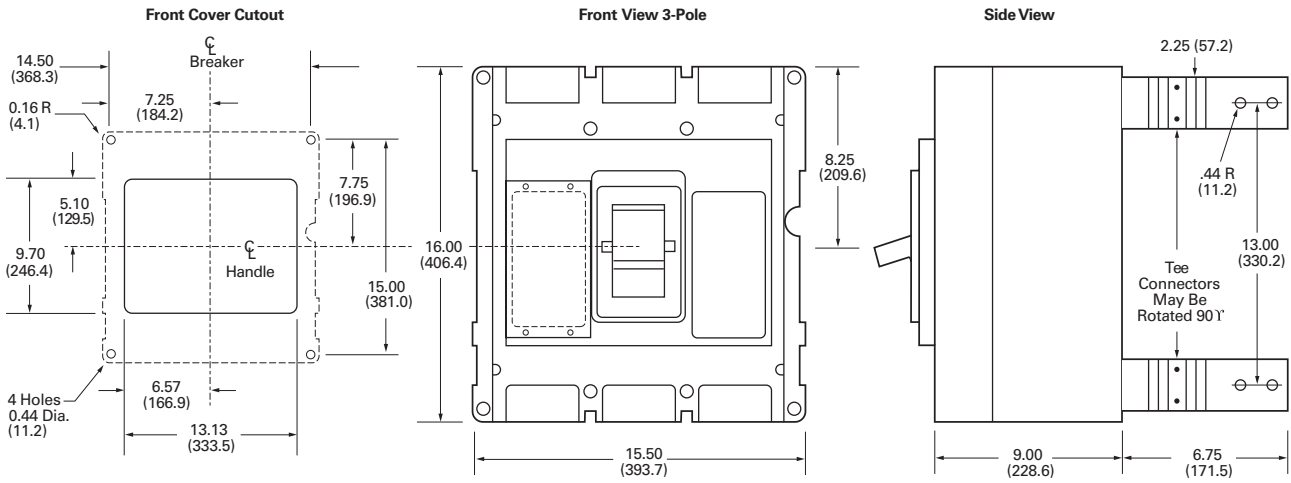
Dimensions and Weights

Approximate Dimensions in Inches (mm)

2

RG-Frame

| Number of Poles | Width | Height | Depth |
|-----------------|---------------|---------------|--------------|
| 3 | 15.50 (393.7) | 16.00 (406.4) | 9.75 (247.7) |
| 4 | 20.00 (508.0) | 16.00 (406.4) | 9.75 (247.7) |



Approximate Shipping Weight in Lbs (kg)

RG-Frame

| Breaker Type | Complete Breaker | |
|---------------------|------------------|------------|
| | Three-Pole | Four-Pole |
| 1600 Amperes | | |
| RGH, RGC | 102 (46.3) | 135 (61.2) |
| 2000 Amperes | | |
| RGH, RGC | 102 (46.3) | 135 (61.2) |
| 2500 Amperes | | |
| RGH, RGC | 135 (61.2) | 182 (82.6) |

Motor Circuit 480 Vac, Protectors



Motor Circuit Protectors (MCP)

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| 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) Product Selection Guide and Ordering Information | V4-T2-86 |
| 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-T2-111 |
| Plug-In Blocks | V4-T2-113 |
| Drawout Cassette | V4-T2-114 |

Product Selection Guide and Ordering Information

2

EG-Frame—480 Vac, 600Y/347 Vac Maximum ^①

| Continuous Amperes | Cam Setting | Motor Full Load Current Amperes ^② | MCP Trip Setting ^③ | MCP Catalog Number |
|--------------------|-------------|--|-------------------------------|--------------------|
| 3 | A | 0.69–0.91 | 9 | HMCPE003A0C |
| | B | 1.1–1.3 | 15 | |
| | C | 1.6–1.7 | 21 | |
| | D | 2.0–2.2 | 27 | |
| | E | 2.3–2.5 | 30 | |
| | F | 2.6–2.8 | 33 | |
| 7 | A | 1.5–2.0 | 21 | HMCPE007C0C |
| | B | 2.6–3.1 | 35 | |
| | C | 3.7–3.9 | 49 | |
| | D | 4.8–5.2 | 63 | |
| | E | 5.3–5.7 | 70 | |
| | F | 5.8–6.1 | 77 | |
| 15 | A | 3.4–4.5 | 45 | HMCPE015E0C |
| | B | 5.7–6.8 | 75 | |
| | C | 8.0–9.1 | 105 | |
| | D | 10.4–11.4 | 135 | |
| | E | 11.5–12.6 | 150 | |
| | F | 12.7–13.0 | 165 | |
| 30 | A | 3.9–9.1 | 90 | HMCPE030H1C |
| | B | 11.5–13.7 | 150 | |
| | C | 16.1–18.3 | 210 | |
| | D | 20.7–22.9 | 270 | |
| | E | 23.0–25.2 | 300 | |
| | F | 25.3–26.1 | 330 | |

Notes

^① UL listed for use with Eaton Motor Starters.

^② Motor FLA ranges are typical. The corresponding trip setting is at 13 times the minimum FLA value shown.

Where a 13 times setting is required for an intermediate FLA value, alternate cam settings and/or MCP ratings should be used.

^③ For DC applications, actual trip levels are approximately 40% higher than values shown.

EG-Frame—480 Vac, 600Y/347 Vac Maximum, continued ^①

| Continuous Amperes | Cam Setting | Motor Full Load Current Amperes ^② | MCP Trip Setting ^③ | MCP Catalog Number |
|--------------------|-------------|--|-------------------------------|--------------------|
| 50 | A | 11.5–15.2 | 150 | HMCPE050K2C |
| | B | 19.2–22.9 | 250 | |
| | C | 26.9–30.6 | 350 | |
| | D | 34.6–38.3 | 450 | |
| | E | 38.4–42.1 | 500 | |
| | F | 42.2–43.5 | 550 | |
| 70 | A | 16.1–30.6 | 210 | HMCPE070M2C |
| | B | 26.9–32.2 | 350 | |
| | C | 37.6–42.9 | 490 | |
| | D | 48.4–53.7 | 630 | |
| | E | 53.8–59.1 | 700 | |
| | F | 59.2–60.9 | 770 | |
| 100 | A | 23.0–30.6 | 300 | HMCPE100R3C |
| | B | 38.4–46.0 | 500 | |
| | C | 53.8–61.4 | 700 | |
| | D | 69.2–76.8 | 900 | |
| | E | 76.9–84.5 | 1000 | |
| | F | 84.6–87.0 | 1100 | |
| 100 | A | 38.4–46.0 | 500 | HMCPE100T3C |
| | B | 57.6–65.2 | 750 | |
| | C | 76.9–84.5 | 1000 | |
| | D | ④ | 1250 | |
| | E | ④ | 1375 | |
| | F | ④ | 1500 | |

JG-Frame—600 Vac Maximum, 250 Vdc Maximum ^①

| Continuous Amperes | MCP Trip Range (Amperes) | MCP Catalog Number |
|--------------------|--------------------------|--------------------|
| 250 | 500–1000 | HMCPJ250D5L |
| | 625–1250 | HMCPJ250F5L |
| | 750–1500 | HMCPJ250G5L |
| | 875–1750 | HMCPJ250J5L |
| | 1000–2000 | HMCPJ250K5L |
| | 1125–2250 | HMCPJ250L5L |
| | 1250–2500 | HMCPJ250W5L |

Notes

- ^① UL listed for use with Eaton Motor Starters.
- ^② Motor FLA ranges are typical. The corresponding trip setting is at 13 times the minimum FLA value shown. Where a 13 times setting is required for an intermediate FLA value, alternate cam settings and/or MCP ratings should be used.
- ^③ For DC applications, actual trip levels are approximately 40% higher than values shown.
- ^④ Settings above 10 x I_n are for special applications. Where the ampere rating of the disconnecting means cannot be less than 115% of the motor full load ampere rating.

LG-Frame—600 Vac Maximum, 250 Vdc Maximum ^①

| Continuous Amperes | MCP Trip Range (Amperes) | MCP Catalog Number |
|---------------------------|---------------------------------|---------------------------|
| 600 | 1250–2500 | HMCPL600L6G |
| | 1500–3000 | HMCPL600N6G |
| | 1750–3500 | HMCPL600R6G |
| | 2000–4000 | HMCPL600X6G |
| | 2250–4500 | HMCPL600Y6G |
| | 2500–5000 | HMCPL600P6G |
| | 3000–6000 | HMCPL600M6G |

Notes

^① UL listed for use with Eaton Motor Starters.

800 and 1200 ampere, 600 Vac maximum motor circuit protectors are available as Series C HMCP product.

Series G Motor Protector Circuit Breakers (MPCB)



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| Motor Protector Circuit Breakers (MPCB) | |
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| Technical Data and Specifications | V4-T2-91 |
| 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-T2-111 |
| Plug-In Blocks | V4-T2-113 |
| Drawout Cassette | V4-T2-114 |

Motor Protector Circuit Breakers (MPCB)

Product Description

- Eliminates need for separate overload relay

Application Description

- Can be used with contactor to eliminate need for overload relay and still create manual motor control
- Meets requirement for motor branch protection, including:
 - Disconnecting means
 - Branch circuit short circuit protection
 - Overload protection

Features and Benefits

- Phase unbalance protection
- Phase loss protection
- Hot trip/cold trip
- High load alarm
- Pre-detection trip relay option
- Class 10, 15, 20, 30 protection

Standards and Certifications

- IEC 60947-2
- UL 489 100% rated
- UL 508
- CSA C22.2



Product Selection

2

JGMP Catalog Numbers

| Continuous Amperes | 35 kAIC Catalog Number | 65 kAIC Catalog Number |
|--------------------|------------------------------|------------------------------|
| 50 | JGMPS050G | JGMPH050G |
| 100 | JGMPS100G | JGMPH100G |
| 160 | JGMPS160G | JGMPH160G |
| 250 | JGMPS250G | JGMPH250G |

JGMP FLA Ie Dial Setting

| Continuous Amperes | A | B | C | D | E | F | G | H |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 50 | 20 | 20 | 25 | 30 | 32 | 40 | 45 | 50 |
| 100 | 40 | 45 | 50 | 63 | 70 | 80 | 90 | 100 |
| 160 | 63 | 80 | 90 | 100 | 110 | 125 | 150 | 160 |
| 250 | 100 | 125 | 150 | 160 | 175 | 200 | 225 | 250 |

LGMP Catalog Numbers

| Continuous Amperes | 50 kAIC Catalog Number | 65 kAIC Catalog Number |
|--------------------|------------------------------|------------------------------|
| 250 | LGMP250G | LGMPH250G |
| 400 | LGMP400G | LGMPH400G |
| 600 | LGMP600G | LGMPH600G |
| 630 ^① | LGMP630G | LGMPH630G |

LGMP FLA Ie Dial Setting

| Continuous Amperes | A | B | C | D | E | F | G | H |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 250 | 100 | 125 | 150 | 160 | 175 | 200 | 225 | 250 |
| 400 | 160 | 200 | 225 | 250 | 300 | 315 | 350 | 400 |
| 600 | 250 | 300 | 315 | 350 | 400 | 450 | 500 | 600 |
| 630 ^① | 250 | 300 | 315 | 350 | 400 | 500 | 600 | 630 |

Notes

^① 630 amperes is not a UL listed rating. 600 amperes is the maximum UL or CSA for LG breaker.

For pre-trip alarm option, order Style Number 5721B31G02.

For additional breaker solutions, see **Page V4-T2-265**.

Technical Data and Specifications

JGMPS and JGMPH Rating and Ampere Range

| Breaker Capacity (kA rms) AC 50–60 Hz | | | Maximum Rated Current—250 A | |
|---------------------------------------|-------------|-----------------|-----------------------------|--------|
| | | | Breaker Type | |
| | | | JGMPS | JGMPH |
| IEC 60947-2 | 220–240 Vac | I _{cu} | 85 | 100 |
| | | I _{cs} | 85 | 100 |
| | 380–415 Vac | I _{cu} | 40 | 70 |
| | | I _{cs} | 40 | 70 |
| | 660–690 Vac | I _{cu} | 12 | 14 |
| | | I _{cs} | 6 | 7 |
| NEMA UL 489 | 240 Vac | | 85 | 100 |
| | 480 Vac | | 35 | 65 |
| | 600 Vac | | 25 | 35 |
| Number of poles | | | 3 | 3 |
| Ampere range | | | 50–250 | 50–250 |

LGMP5 and LGMPH Rating and Ampere Range

| Breaker Capacity (kA rms) AC 50–60 Hz | | | Maximum Rated Current—630 A ^① | |
|---------------------------------------|-------------|-----------------|--|----------------------|
| | | | Breaker Type | |
| | | | LGMP5 | LGMPH |
| IEC 60947-2 | 220–240 Vac | I _{cu} | 85 | 100 |
| | | I _{cs} | 85 | 100 |
| | 380–415 Vac | I _{cu} | 50 | 70 |
| | | I _{cs} | 50 | 53 |
| | 660–690 Vac | I _{cu} | 20 | 25 |
| | | I _{cs} | 10 | 13 |
| NEMA UL 489 | 240 Vac | | 85 | 100 |
| | 480 Vac | | 50 | 65 |
| | 600 Vac | | 25 | 35 |
| Number of poles | | | 3 | 3 |
| Ampere range | | | 250–630 ^① | 250–630 ^① |

Notes

^① 630 amperes is not a UL listed rating. 600 amperes is the maximum UL or CSA for LG breaker.

For pre-trip alarm option, order Style Number 5721B31G02.

30 mA Ground Fault (Earth Leakage) Modules



Clockwise from Left:
JG, LG, EG MCCBs Shown with
Ground Fault (Earth Leakage) Module

30 mA Ground Fault (Earth Leakage) Module

Product Description

Eaton offers three- and four-pole 30 mA ground fault (earth leakage) protection modules for Series G E-, J- and L-frame molded case circuit breakers (MCCBs). Separate UL listed and IEC rated devices are available for each frame.

The modules are bottom mounted and are available for each frame circuits up to:

- EG: 125 amperes
- JG: 150 (UL), 160 (IEC) or 250 amperes
- LG: 400, 600 (UL) or 630 (IEC) amperes

The module is completely self contained, including a current sensor, relay and power supply inside the device. Current pickup settings are selectable from 0.03 to 10 amperes for all devices, except for the UL listed module, for which settings are selectable from 0.03 to 30 amperes. Time delays are also selectable from Instantaneous to 1.0 second for pickup settings of 0.10 amperes and above. The current pickup setting of 0.03 amperes defaults to an Instantaneous time setting regardless of the time dial's position.

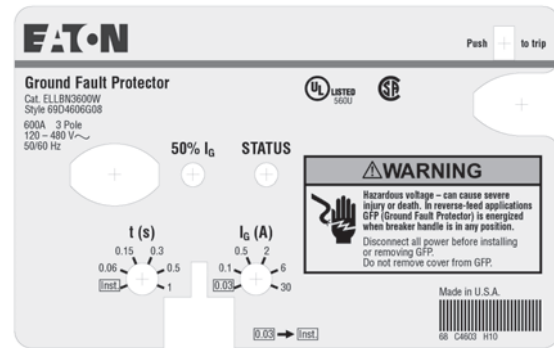
Two alarm contacts are included with each device, which can be wired externally for remote indication. Both of these are also indicated by an LED on the front of the device:

1. 50% pre-trip: alarms when the earth leakage current reaches 50% of the set pickup setting value.
2. 100% after trip: alarms when the breaker reaches the set pickup setting value and the breaker trips.

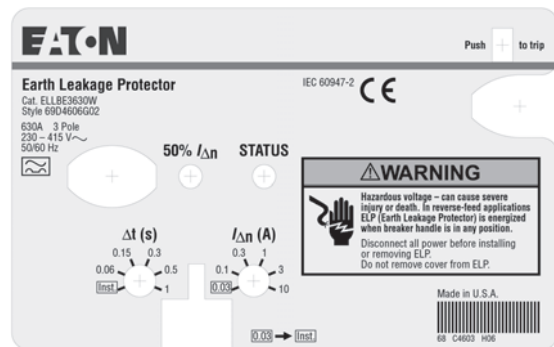
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UL-Rated LG-Frame Earth Leakage Module Faceplate



IEC-Rated LG-Frame Earth Leakage Module Faceplate



Product Selection

EG-Frame



EG-Frame Ground Fault Modules, UL-Rated (Bottom Mounted, 120–480 Vac, 50/60 Hz) ①

| Ampere Rating | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| 125 | 3 | ELEBN3125G |
| 125 | 4 | ELEBN4125G |

EG-Frame Earth Leakage Modules, IEC-Rated (Bottom Mounted, 230–415 Vac, 50/60 Hz)

| Ampere Rating | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| 125 | 3 | ELEBE3125G |
| 125 | 4 | ELEBE4125G |

JG-Frame



JG-Frame Ground Fault Modules, UL-Rated (Bottom Mounted, 120–480 Vac, 50/60 Hz)

| Ampere Rating | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| 150 | 3 | ELJBN3150W |
| 150 | 4 | ELJBN4150W |
| 250 | 3 | ELJBN3250W |
| 250 | 4 | ELJBN4250W |

JG-Frame Earth Leakage Modules, IEC-Rated (Bottom Mounted, 230–415 Vac, 50/60 Hz)

| Ampere Rating | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| 160 | 3 | ELJBE3160W |
| 160 | 4 | ELJBE4160W |
| 250 | 3 | ELJBE3250W |
| 250 | 4 | ELJBE4250W |

Note

① Shunt trip and undervoltage release cannot be used in an EG breaker connected to an earth leakage module.

LG-Frame



LG-Frame Ground Fault Modules, UL-Rated (Bottom Mounted, 120–480 Vac, 50/60 Hz)

| Ampere Rating | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| 400 | 3 | ELLBN3400W |
| 400 | 4 | ELLBN4400W |
| 600 | 3 | ELLBN3600W |
| 600 | 4 | ELLBN4600W |

LG-Frame Earth Leakage Modules, IEC-Rated (Bottom Mounted, 230–415 Vac, 50/60 Hz)

| Ampere Rating | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| 400 | 3 | ELLBE3400W |
| 400 | 4 | ELLBE4400W |
| 630 | 3 | ELLBE3630W |
| 630 | 4 | ELLBE4630W |

2.2

Molded Case Circuit Breakers

Series G

Dimensions

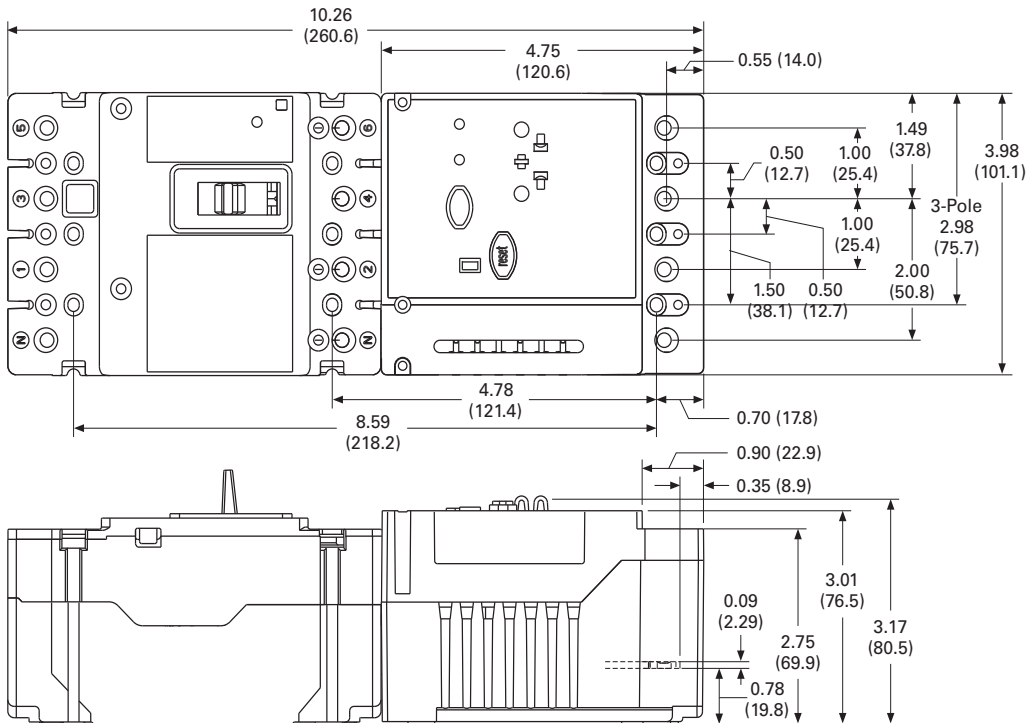
Approximate Dimensions in Inches (mm)

2

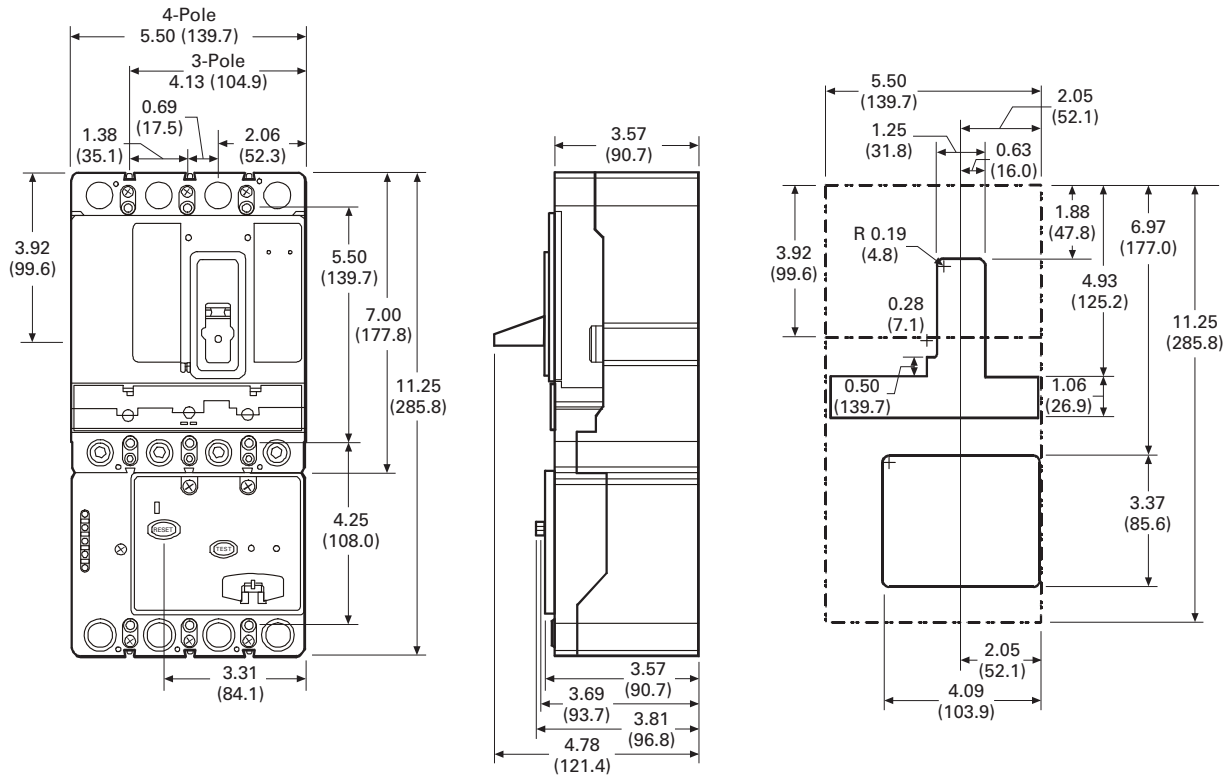
Assembled Breaker and Earth Leakage Module

| Frame | Height | Width | Depth |
|-------------------|---------------|--------------|--------------|
| Three-Pole | | | |
| EG | 10.25 (260.3) | 3.00 (76.2) | 2.98 (75.8) |
| JG | 11.25 (285.8) | 4.13 (104.9) | 3.57 (90.7) |
| LG | 15.38 (390.7) | 5.48 (139.2) | 4.06 (103.1) |
| Four-Pole | | | |
| EG | 10.25 (260.3) | 4.00 (101.6) | 2.98 (75.8) |
| JG | 11.25 (285.8) | 5.50 (139.7) | 3.57 (90.7) |
| LG | 15.38 (390.7) | 7.23 (183.6) | 4.06 (103.1) |

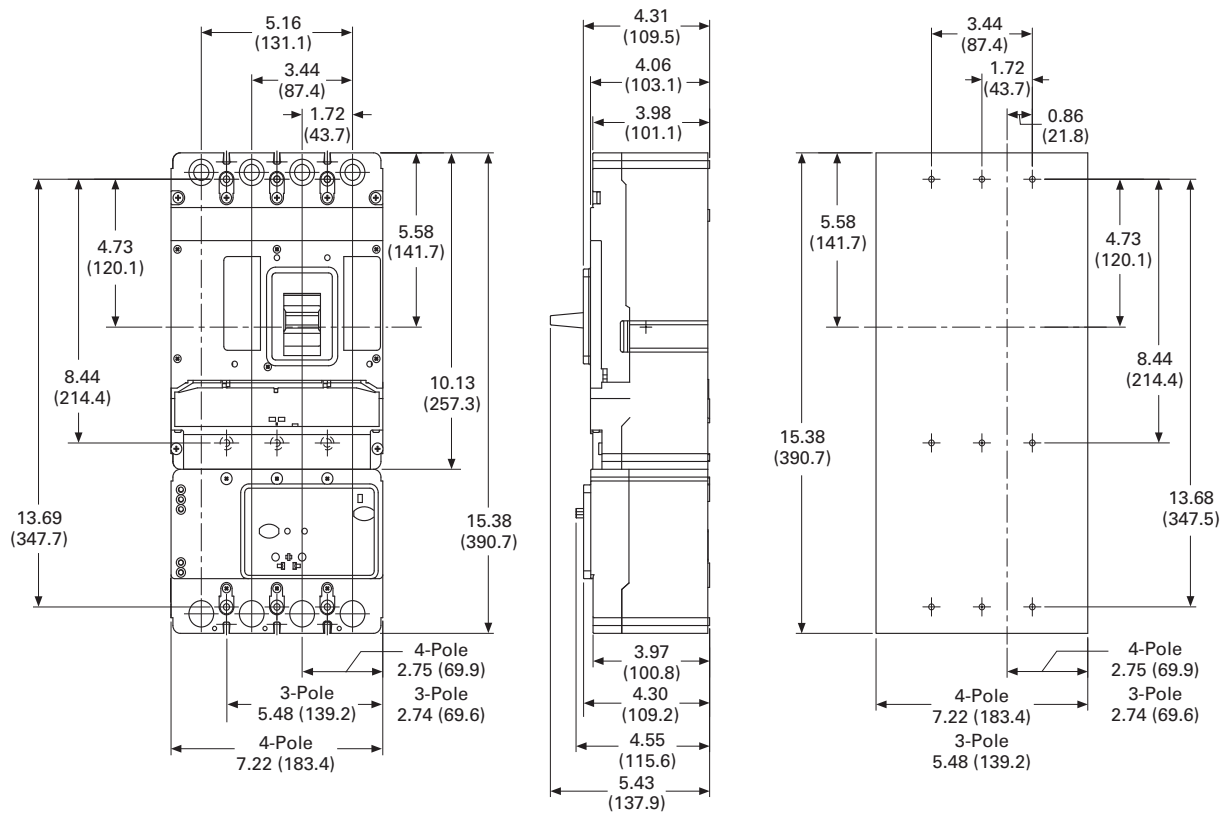
EG-Frame With Earth Leakage Module



JG-Frame With Earth Leakage Module



LG-Frame With Earth Leakage Module



Current Limiting Circuit Breaker Modules



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Current Limiting Circuit Breaker Module

Product Overview

Power demand continues to grow in new and existing facilities. To meet increased demand, larger utility supplies, spot networks and large facility transformers are installed. The increased capacity of the electrical source results in increased fault currents in excess of 100 kA short-circuit protection. Eaton manufactures non-fused current limiting modules with interrupting capacities up to 200 kA at 600 Vac or 70 kA at 690 Vac. Unlike fused current limiters with a one-time use, a current limiter module provides an automatic reset of the module after a short-circuit event. Resetting the molded-case circuit breaker is the only action required to restore critical power to the system; there is no time wasted with sourcing the correct replacement fuses or module to bring system back online.

Product Description

The current limiting breaker modules use a unique contact design to enhance the system protection similar to that of the circuit breaker. When high short-circuit current is flowing through the contacts of these modules, the design results in very high interrupting capacities and improved current limiting characteristics.

Application Description

High-performance breakers are most commonly applied when very high fault levels are available and with applications where the current limiting capability is used upstream of the final load to limit current. Typical loads include lighting, power distribution, and motor control applications.

Features and Benefits

Superior system protection:

- Auto reset improves system uptime and eliminates the need for finding replacement parts
- No fuses to replace, reducing the overall cost of ownership and the waste created by fuses
- Overloads, by using inverse time current tripping characteristics of the molded-case circuit breaker
- Low-level short circuits, by using instantaneous and/or short-time delay tripping characteristics of the molded-case circuit breaker
- High-level short circuits, by using ultra-high-speed, blow-apart contacts of the current limiting module in series with the circuit breaker contacts
- Let-through currents, by improved opening speed of the contacts, the resultant rapid rise of arc voltage introduces impedance into the system

Standards and Certifications

- IEC 60947-2
- UL 489
- CSA C22.2



Product Selection

Series G High Performance Family Offering

| Type | Product | Amperes | 480 Vac (UL) | 600 Vac (UL) | 415 Vac (IEC) | | 690 Vac (IEC) | |
|-------------------------|--------------|---------|--------------|--------------|-----------------|-----------------|-----------------|-----------------|
| | | | | | I _{cu} | I _{cs} | I _{cu} | I _{cs} |
| EGC 3P thermal-magnetic | Breaker only | 15–125 | 100 | 35 ① | 100 | 100 | — | — |
| | With limiter | 15–100 | 150 | 100 ① | 150 | 150 | — | — |
| JG 3P thermal-magnetic | Breaker only | 70–250 | 200 | 50 | 200 | 200 | 18 | 14 |
| | With limiter | 70–225 | 200 | 200 | 200 | 150 | 70 | 18 |
| JG 3P electronic | Breaker only | 20–250 | 200 | 50 | 200 | 200 | 18 | 14 |
| | With limiter | 100–250 | 200 | 200 | 200 | 150 | 70 | 18 |
| LG 3P thermal-magnetic | Breaker only | 250–600 | 200 | 65 | 200 | 200 | 35 | 18 |
| LG3P electronic | Breaker only | 100–600 | 200 | 65 | 200 | 200 | 35 | 18 |

EG-Frame



EG IC Rating—150 kAIC at 415 and 480 Vac

| UL Listed (NEMA/IEC Rated) Base Molded Case Circuit Breaker | Breaker with Line Side Mounted Current Limiter | Breaker with Load Side Mounted Current Limiter | Line and Load Terminations Included ② | Interphase Barrier Included for Limiter |
|---|--|--|---------------------------------------|---|
| EGC3015FFG | EGC3015FFGQ01 | EGC3015FFGQ02 | T125EF | EIPBSK |
| EGC3016FFG | EGC3016FFGQ01 | EGC3016FFGQ02 | T125EF | EIPBSK |
| EGC3020FFG | EGC3020FFGQ01 | EGC3020FFGQ02 | T125EF | EIPBSK |
| EGC3025FFG | EGC3025FFGQ01 | EGC3025FFGQ02 | T125EF | EIPBSK |
| EGC3030FFG | EGC3030FFGQ01 | EGC3030FFGQ02 | T125EF | EIPBSK |
| EGC3032FFG | EGC3032FFGQ01 | EGC3032FFGQ02 | T125EF | EIPBSK |
| EGC3035FFG | EGC3035FFGQ01 | EGC3035FFGQ02 | T125EF | EIPBSK |
| EGC3040FFG | EGC3040FFGQ01 | EGC3040FFGQ02 | T125EF | EIPBSK |
| EGC3045FFG | EGC3045FFGQ01 | EGC3045FFGQ02 | T125EF | EIPBSK |
| EGC3050FFG | EGC3050FFGQ01 | EGC3050FFGQ02 | T125EF | EIPBSK |
| EGC3060FFG | EGC3060FFGQ01 | EGC3060FFGQ02 | T125EF | EIPBSK |
| EGC3063FFG | EGC3063FFGQ01 | EGC3063FFGQ02 | T125EF | EIPBSK |
| EGC3070FFG | EGC3070FFGQ01 | EGC3070FFGQ02 | T125EF | EIPBSK |
| EGC3080FFG | EGC3080FFGQ01 | EGC3080FFGQ02 | T125EF | EIPBSK |
| EGC3090FFG | EGC3090FFGQ01 | EGC3090FFGQ02 | T125EF | EIPBSK |
| EGC3100FFG | EGC3100FFGQ01 | EGC3100FFGQ02 | T125EF | EIPBSK |

Notes

- ① 600Y/347V.
- ② Two interphase barriers included on line end mounted limiter; (2) line end of limiter. Four interphase barriers included on load end mounted limiter; (2) line end of breaker (2) load end of limiter.

2.2

Molded Case Circuit Breakers

Series G

Dimensions and Weights

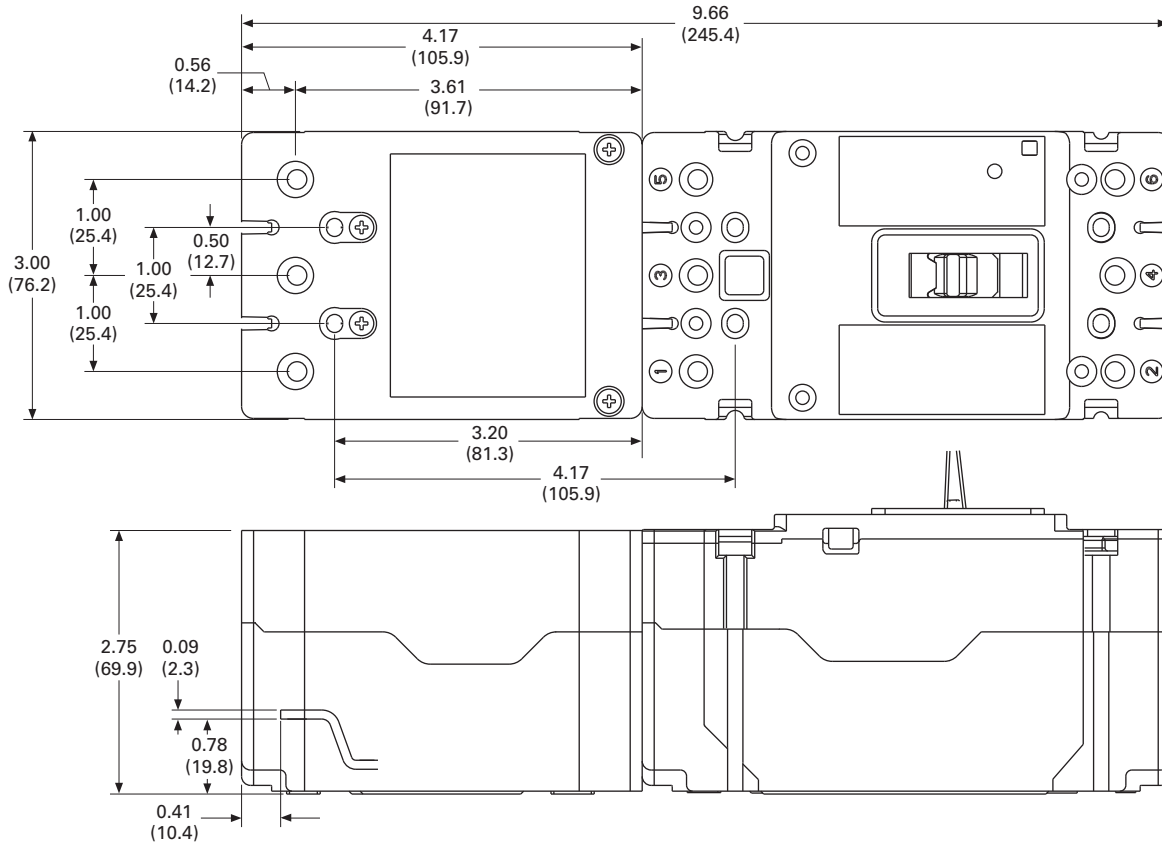
Approximate Dimensions in Inches (mm)

2

Assembled Breaker and Current Limiting Module

| Frame | Height | Width | Depth | Weight in lbs (kg) |
|-------|--------------|-------------|-------------|--------------------|
| EG | 9.66 (245.7) | 3.00 (76.2) | 2.98 (75.8) | 2.91 (1.32) |
| HMCP | 9.66 (245.7) | 3.00 (76.2) | 2.98 (75.8) | 4.18 (1.90) |

EG-Frame With Current Limiter Module



JG Frame



JG IC Rating—200 kAIC at 600 Vac and 70 kAIC at 690 Vac

| Ampere Rating | Magnetic Range | UL Listed, IEC Rated Breaker With Line Side Mounted Current Limiter ^① | UL Listed, IEC Rated Breaker With Load Side Mounted Current Limiter ^② | IEC Rated Breaker With Line Side Mounted Current Limiter ^① | IEC Rated Breaker With Load Side Mounted Current Limiter ^② |
|---------------|----------------|--|--|---|---|
| | | Fixed Thermal, Adjustable Magnetic | | Adjustable Thermal, Adjustable Magnetic | |
| 70 | 350–700 | JGH3070FAGQ01 | JGH3070FAGQ02 | — | — |
| 90 | 450–900 | JGH3090FAGQ01 | JGH3090FAGQ02 | — | — |
| 100 | 500–1000 | JGH3100FAGQ01 | JGH3100FAGQ02 | JGH3100AAGQ01 | JGH3100AAGQ02 |
| 125 | 625–1250 | JGH3125FAGQ01 | JGH3125FAGQ02 | JGH3125AAGQ01 | JGH3125AAGQ02 |
| 150 | 750–1550 | JGH3150FAGQ01 | JGH3150FAGQ02 | — | — |
| 160 | 800–1600 | — | — | JGH3160AAGQ01 | JGH3160AAGQ02 |
| 175 | 875–1750 | JGH3175FAGQ01 | JGH3175FAGQ02 | — | — |
| 200 | 1000–2000 | JGH3200FAGQ01 | JGH3200FAGQ02 | JGH3200AAGQ01 | JGH3200AAGQ02 |
| 225 | 1125–2250 | JGH3225FAGQ01 | JGH3225FAGQ02 | — | — |
| | | Electronic Trip LS | | | |
| 250 | — | JGH325033GQ01 | JGH325033GQ02 | — | — |
| | | Electronic Trip LSI | | | |
| 250 | — | JGH325032GQ01 | JGH325032GQ02 | — | — |
| | | Electronic Trip LSG | | | |
| 250 | — | JGH325035GQ01 | JGH325035GQ02 | — | — |
| | | Electronic Trip LSIG | | | |
| 250 | — | JGH325036GQ01 | JGH325036GQ02 | — | — |

Series G HMCP

| Ampere Rating | Motor Circuit Protector with Line Side Mounted Current Limiter | Breaker with Load Side Mounted Current Limiter |
|---------------|--|--|
| 250 | HMCPJ250D5LQ01 | HMCPJ250D5LQ02 |
| 250 | HMCPJ250F5LQ01 | HMCPJ250F5LQ02 |
| 250 | HMCPJ250G5LQ01 | HMCPJ250G5LQ02 |
| 250 | HMCPJ250J5LQ01 | HMCPJ250J5LQ02 |
| 250 | HMCPJ250K5LQ01 | HMCPJ250K5LQ02 |
| 250 | HMCPJ250L5LQ01 | HMCPJ250L5LQ02 |

Line and Load Terminals

| Maximum Breaker Amperes | Terminal Body Material | Wire Type | Metric Wire Range mm ² | AWG Wire Range/ Number of Conductors | Catalog Number |
|---|------------------------|-----------|-----------------------------------|--------------------------------------|----------------------|
| Standard Pressure Type Terminals | | | | | |
| 250 | Aluminum | Cu/Al | 10–185 | #8–350 (1) | TA250FJ ^③ |

Notes

- ① Two interphase barriers provided, mounted on line end of limiter, catalog number FJIPBK
- ② Four interphase barriers provided, (2) line end of breaker, (2) load end of limiter.
- ③ Line and load terminals included with products listed above.

2.2

Molded Case Circuit Breakers

Series G

Dimensions and Weights

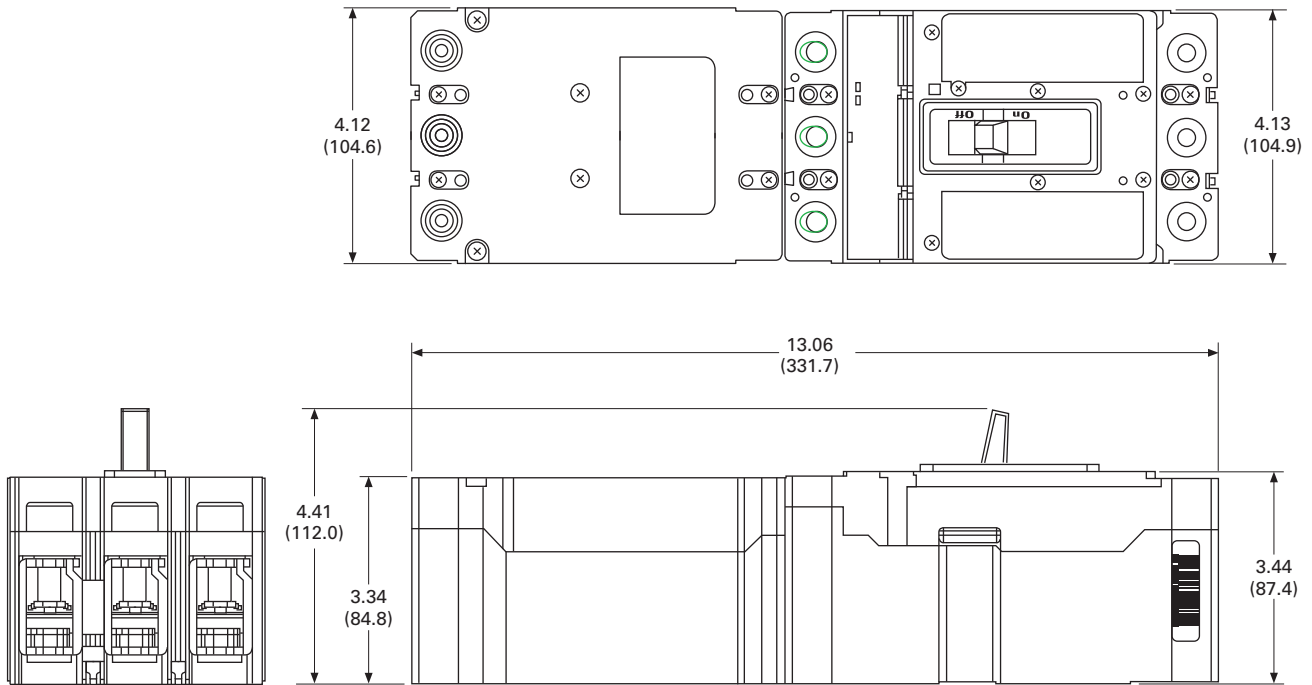
Approximate Dimensions in Inches (mm)

2

Assembled Breaker and Current Limiting Module

| Frame | Height | Width | Depth | Weight in lbs (kg) |
|--------------|---------------|--------------|-------------|--------------------|
| JG + limiter | 13.06 (331.7) | 4.13 (104.9) | 3.44 (87.4) | 9.87 (4.48) |
| HMCP | 13.06 (331.7) | 4.13 (104.9) | 3.44 (87.4) | 9.87 (4.48) |

JG-Frame With Current Limiter Module



High Instantaneous Circuit Breaker for Selective Coordination**Contents**

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High Instantaneous Circuit Breaker for Selective Coordination**Product Description**

Eaton's Electrical Sector introduces new high-magnetic withstand molded case circuit breakers, specifically designed for critical operations and selective coordination requirements. The high-magnetic withstand LHH and NHH frames continue the legacy of circuit breaker innovation for which Eaton is recognized throughout the world. The LHH and NHH breakers are equipped with 125 to 400 ampere trip units with high-magnetic capability. This design enables the breakers to withstand up to 90 times rated current before opening under short-circuit conditions.

The LHH and NHH circuit breakers incorporate a higher level of instantaneous pickup, thus allowing for higher current levels of selective coordination. Standard molded case circuit breakers typically are furnished with a magnetic pickup or electronic instantaneous adjustment or instantaneous override set at 10 times (10x) the continuous trip rating.

Features, Benefits and Functions

Eaton's new LHH and NHH molded case circuit breakers are furnished with a higher level of magnetic pickup or electronic instantaneous settings as indicated in table on **Page V4-T2-103**. These higher levels of magnetic pickup and electronic instantaneous values in turn allow the system designer to obtain selective coordination at fault current levels up to these higher ratings. Greater values of selective coordination are available based on manufacturer tested combinations using the LHH and NHH as line-side breakers and standard breakers as load-side devices. Refer to IA01200002E to determine the maximum fault values that selective coordination achieves. When the line-side and load-side molded case circuit breaker trip ratings are chosen to coordinate in the overload range, they also can be selectively coordinated in the fault range up to the values listed in the table on **Page V4-T2-103** or IA01200002E. For overcurrents protected by circuit breakers on the load-side of the LHH or NHH, only the effected load-side

circuit breaker will open, while the line-side LHH and/or NHH circuit breakers remain closed, thus providing continuity of power to the other critical loads supplied by the LHH or NHH circuit breakers.

Benefits of Using the LHH and NHH Molded Case Circuit Breakers

Customer expectations and codes are driving product development to protect customers' critical operations. NEC® 2005 and 2008 requires circuits with elevators, emergency systems, legally required standby systems, health care essential systems and critical operation power systems to be selectively coordinated. Simply stated, only the closest protective device directly protecting the circuit having an overcurrent (overload or fault) condition should open.

All other overcurrent protective devices within these systems shall remain closed. Similarly, backup power system designs of a critical nature that are not code mandated may also require overcurrent protective devices to be selectively coordinated as much as practicable to provide a higher level of uptime.

Proven Technology and Performance

The LHH is based on the Series G L-Frame circuit breaker, sharing the same small footprint and field-fit accessories as the L-Frame breaker. The NHH is based on the Series G N-Frame circuit breaker and shares the same footprint and accessories as the N-Frame breaker. NHH accessories must be factory installed.

The LHH incorporates a thermal-magnetic trip unit with fixed thermal and fixed magnetic settings. The NHH has an OPTIM™ electronic trip unit with LSI adjustment capabilities. The instantaneous setting is adjustable from 1000–4000 A or may be turned off to default to the frame override of 14,000 A. A hand-held OPTIMizer must be used with the NHH to adjust short-time delay and instantaneous, however, the long delay pickup is fixed and cannot be adjusted.

The LHH and NHH breakers are available in Eaton's panelboards and switchboards.

Standards and Certifications

- UL
- CSA

**Product Selection**

LHH

**LHH and NHH Catalog Numbers**

| Ampere Rating | Thermal-Magnetic Trip Unit | | LSI Electronic Trip Unit | |
|---------------|----------------------------|---------------|--------------------------|-----------|
| | LHH Frame | NHH Frame | LHH Frame | NHH Frame |
| 125 | LHH3125FFG | — | — | — |
| 150 | LHH3150FFG | NHH3150T52X15 | — | — |
| 175 | LHH3175FFG | NHH3175T52X15 | — | — |
| 200 | LHH3200FFG | NHH3200T52X15 | — | — |
| 225 | LHH3225FFG | NHH3225T52X15 | — | — |
| 250 | LHH3250FFG | NHH3250T52X15 | — | — |
| 300 | LHH3300FFG | NHH3300T52X15 | — | — |
| 350 | LHH3350FFG | NHH3350T52X15 | — | — |
| 400 | LHH3400FFG | — | — | — |

Technical Data and Specifications

- Three-pole
- 65 kAIC at 480 Vac
- 125–400 ampere LHH
- 150–350 ampere NHH
- Trip units:
- LHH—thermal-magnetic
- NHH—LSI electronic trip unit
- No rating plugs required
- Factory-sealed breakers
- LHH uses same internal and external accessories as standard Series G L-Frame circuit breaker
- NHH uses same internal and external accessories as standard Series G N-Frame circuit breaker

LHH and NHH Electrical Characteristics

Short-Circuit Current Ratings (kA rms) AC 50–60 Hz

| Description | Breaker Type | |
|------------------------------|--------------|-----------|
| | LHH | NHH |
| Max. rated current (amperes) | 400 | 350 |
| NEMA UL 489 | | |
| 240 Vac | 100 | 100 |
| 480 Vac | 65 | 65 |
| 600 Vac | 35 | 35 |
| 250 Vac | 42 | — |
| IEC 60947-2 | | |
| 220 Vac | 100 | 100 |
| 415 Vac | 70 | 70 |
| 690 Vac | 25 | 25 |
| 125/250 Vdc | 22 | — |
| Number of poles | 3 | 3 |
| Ampere range | 125–400 A | 150–350 A |

Continuous Current Ratings

| Continuous Current Rating (I _c) | Magnetic Trip Point | Continuous Current Multiplier | Instantaneous Trip Point | Continuous Current Multiplier | Short Delay Pickup |
|---|---------------------|-------------------------------|--------------------------|-------------------------------|--------------------|
| 125 A | 2500 A | 20x | — | — | — |
| 150 A | 2500 A | 16x | 14,000 A | 93x | 225–1200 A |
| 175 A | 4000 A | 22x | 14,000 A | 80x | 260–1400 A |
| 200 A | 4000 A | 20x | 14,000 A | 70x | 300–1600 A |
| 225 A | 6000 A | 26x | 14,000 A | 62x | 338–1800 A |
| 250 A | 6000 A | 24x | 14,000 A | 56x | 375–2000 A |
| 300 A | 6000 A | 20x | 14,000 A | 47x | 450–2400 A |
| 350 A | 6000 A | 17x | 14,000 A | 40x | 525–2800 A |
| 400 A | 6000 A | 15x | — | — | — |

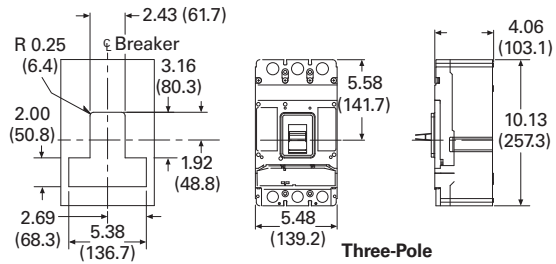
Dimensions

Approximate Dimensions in Inches (mm)

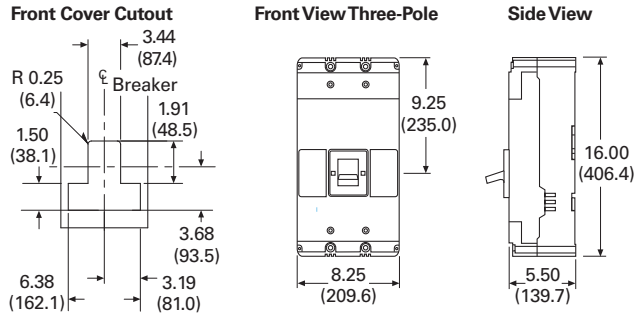
Dimensions

| Description | Height | Width | Depth | Weight in Lbs (kg) |
|-------------|---------------|--------------|--------------|--------------------|
| LHH | 10.13 (257.3) | 5.48 (139.2) | 4.09 (103.9) | 12.36 (5.6) |
| NHH | 16.00 (406.4) | 8.25 (209.5) | 5.50 (139.7) | 46.80 (21.2) |

L-Frame



N-Frame



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| Motor Protector Circuit Breakers (MPCB) | V4-T2-89 |
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Special Features and Accessories

Eaton’s molded case circuit breakers are designed to provide circuit protection for low voltage distribution systems. They are described by NEMA as, “... a device for closing and interrupting a circuit between separable contacts under both normal and abnormal conditions,” and furthermore as, “... a breaker assembled as an integral unit in a supporting and enclosing housing of insulating material.” The National Electrical Code (NEC) describes them as, “A device designed to open and close a circuit by non-automatic means, and to open the circuit automatically on a predetermined overload of current, without injury to itself when properly applied within its rating.”

So designed, Eaton circuit breakers protect conductors against overloads and conductors and connected apparatus, such as motors and motor starters, against short circuits.

In low voltage distribution systems, there are many varied applications of molded case circuit breakers. Eaton offers the most comprehensive family of molded case circuit breakers in the industry.

This section of circuit breakers includes:

- Thermal-magnetic trip breakers
- Electronic rms trip breakers
- Molded case switches
- Motor circuit protectors
- Current limiting breakers
- Special application breakers

Modified Breakers

Eaton breakers can be ordered with internal accessories installed. These modified breakers will be subject to an addition charge.

Special Calibration

Special non-UL listed calibrations are available for certain ambient temperatures other than 40 °C and for frequencies other than 50/60 Hz or DC. Reduced interrupting ratings will apply for 400 Hz applications.

- Add suffix H01 to breaker catalog number for 400 Hz rating

50 °C Calibration

Note: Breakers equipped with electronic trip units can operate reliably in ambient temperatures of 50 °C. Add suffix “V3” to NG MCCBs to remove standard 40 °C labeling.

Add suffix “V” to catalog number for complete thermal magnetic breaker when ordering listed ampere ratings for breakers to be used in 50 °C ambients. 50 °C ambient MCCBs are not UL listed.

Contact Eaton for availability.

Calibrations and Treatment

| Description | Frame | | | | |
|---------------------------|-------|----|----|----|----|
| | EG | JG | LG | NG | RG |
| Special calibration | ■ | ■ | ■ | ■ | ■ |
| Moisture-fungus treatment | ■ | ■ | ■ | ■ | ■ |

Moisture-Fungus Treatment

All Eaton circuit breaker cases are molded from glass-polyester, which does not support the growth of fungus. Any parts that are susceptible to the growth of fungus will require special treatment.

Order by description.

- Add suffix J01 to breaker catalog number

Freeze-Tested Circuit Breakers

The circuit breakers may be ordered with freeze testing. This option uses special lubrication and mechanical operation is verified at -40°C .

- Add suffix F01 to catalog number -57°F , F02 -30°F

Marine Applications

E- to R-Framed circuit breakers can be supplied to meet the following marine specifications:

- U.S. Coast Guard CFR 46; ABS—American Bureau of Shipping; IEEE 45; DNV; and Lloyds

These specifications generally require molded case circuit breakers to be supplied with 50°C ambient, and plug-in adapter kits. When plug-in adapter kits are used, no terminals need be supplied (switchboard applications).

Circuit breakers can also be supplied to meet UL 489 Supplement SA (Marine use) and UL 489 Supplement SB (Naval Use).

UL 489 Supplement SA applies to vessels over 65 feet (19.8m) in length.

Requirements include 40°C ambient calibration, special labeling, and no use of aluminum conductors or terminals. (No 50°C .)

- Add suffix H08

Or you can choose to add 50°C ambient but then there is no "UL" mark.

- Add suffix VH08

UL 489 Supplement SB requires partial 50°C ambient calibration, vibration testing, special nameplating and no use of aluminum conductors or terminals. Eaton chooses to always fully calibrate to 50°C ambient. ("Naval" labeled per UL but no "UL" mark due to 50°C label.)

- Add suffix VH09

Certified Test Reports

Eaton breakers can be ordered with certified test reports at the time of order entry. Test report documents the thermal and magnetic or electronic tripping characteristics of the individual breaker. Breaker and test report must be ordered together. Add suffix 12 to breaker catalog number and enter separate line item on order for certified test report.

Standards and Certifications

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

- Underwriters Laboratories Inc., Standard UL 489, molded case circuit breakers and circuit breaker enclosures
- National Electrical Manufacturers Association (NEMA) Standards Publication No. AB1-1993, molded case circuit breakers
- Australian Standard AS 2184, molded case circuit breakers
- British Standards Institution Standard BS 4752: Part 1, switchgear and control gear Part 1: circuit breakers
- Canadian Standards Association (CSA) Standard C22.2 No. 5, service entrance and branch circuit breakers
- International Electrotechnical Commission Recommendations IEC 60947-2, circuit breakers
- Japanese T-Mark Standard molded case circuit breakers
- South African Bureau of Standards, Standard SABS 156, Standard Specification for molded case circuit breakers
- Swiss Electro-Technical Association Standard SEV 157-1, 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 Elektrotechniker (Association of German Electrical Engineers) Standard VDE 0660, low voltage switchgear and control gear, circuit breakers

Conformance with these standards satisfies most local and international codes, assuming user acceptability and simplified application.

Molded case circuit breakers equal or exceed Federal Specification Classification W-C-375b requirements for the particular class associated with the circuit breaker frame being considered.

Open breakers do not have service entrance ratings. Service entrance rating is part of the enclosure.



Internal Accessories

Alarm Lockout

The alarm switches operate when the circuit breaker is tripped by a short circuit or overcurrent, but also when it is tripped by a shunt trip or undervoltage release.

Auxiliary Switches

Auxiliary switches are used for signaling and control purposes. The various functions of the auxiliary switches (changeover) are shown on **Page V4-T2-108**.

Shunt Trips

The shunt trip is used for remote tripping.

The coil of the shunt trip is rated only for short-time operation.

It is not permissible with the circuit breaker open to apply a continuous opening command to the shunt trip in order to prevent the breaker from closing. This means that interlocking circuits with continuous commands may not be set up with shunt trips.

Undervoltage Releases

The circuit breaker cannot be closed until the undervoltage release is energized. If the release is not energized, the circuit breaker can only perform an idle switching operation.

Frequent idle switching actions should be avoided as they shorten the endurance of the circuit breaker.

Digitrip 310+ Electronic Trip Unit Accessories

Cause of Trip Display/Remote Mount Cause of Trip Display

The Cause of Trip Display can be field-installed on any Digitrip RMS 310+ trip unit. The device provides breaker information through an LCD screen, such as cause of trip, phase current, ground current and low loads. The display is ideal for troubleshooting common trips such as ground fault, long delay, and instantaneous/short delay. The DIGIVIEW version will provide a local display at the breaker without additional wiring by connecting directly onto the trip unit. The DIGIVIEWR06 version has a 6 foot cable that allows users to mount the display on the outside of an enclosure door and connect to the trip unit that is contained inside the enclosure.

The DIGIVIEWR06 is NEMA 3R rated.

Cause of Trip Display/Remote Mount Cause of Trip Display

Catalog
Number

DIGIVIEW

DIGIVIEWR06

Cause of Trip LED Module

The Cause of Trip LED Module can be field-installed on any Digitrip RMS 310+ trip unit. The device provides a cause of trip indication via LED. The Cause of Trip LED Module connects directly onto the trip unit. When the breaker trips, the module indicates the cause of trip (long delay, short delay, instantaneous and ground) via LED indication. The module is reset after the breaker is reset.

Cause of Trip LED Module

Catalog
Number

TRIP-LED

Electronic Portable Test Kit

The electronic portable test kit provides a means to complete field tests using secondary injection on all 310+ trip units. The same test kit is also capable of secondary injection testing on Magnum and Series NRX low voltage power circuit breakers' 520 and 1150 trip units.

Electronic Portable Test Kit

Catalog
Number

MTST230V

Wire Seal

The wire seal can be used to secure the cover of the trip unit to prevent adjustments after settings are confirmed.

Wire Seal

Catalog
Number

5108A03H01

External Accessories and Test Kit

External Accessories

| Description | Fit Type | Frame | | | | |
|---------------------------------------|------------|-----------|-----------|--------------|----------|----------|
| | | EG | JG | LG | NG | RG |
| Non-padlockable handle block | Field | EFHB | — | — | LKD4 | — |
| Padlockable handle block | Field | EFPHB | — | — | — | — |
| Padlockable handle block off-only | Field | EFPHBOFF | FJPHBOFF | LBHPOFF | — | — |
| Padlockable handle lock hasp | Field | EFPLK | FJPHL | LPHL | PLK5 | HLK6 |
| Padlockable handle lock hasp off-only | Field | EFPHLOFF | FJPHLOFF | LPHLOFF | PLK55OFF | HLK60FF |
| Kirk key interlock kit ①② | Field | — | KYKJG | KYKLG | KYK4 | KYK6 |
| Castell key interlock kit ②③ | Field | — | CTKJG | CTKLG | CTK4 | CTK6 |
| Slide bar interlock ④ | Field | EFSBI | FJSBI | LGSBI | SBK5 | — |
| Walking beam interlock ④ | Three-pole | EG3WBI | JG3WBI | LG3WBI | WBL5 | WBL6 |
| | Four-pole | EG4WBI | JG4WBI | LG4WBI | WBL5 | — |
| Electrical operator ⑤ | 120 Vac | MOPEG240C | MOPJG120C | MOPLG120C | EOP5T07 | EOP6T08K |
| | 240 Vac | MOPEG240C | MOPJG240C | MOPLG240C | EOP5T11 | EOP6T11K |
| | 24 Vdc | MOPEG48D | MOPJG24D | MOPLG24D | EOP5T21 | — |
| | 48 Vdc | MOPEG48D | — | — | EOP5T22 | EOP6T21K |
| | 125 Vdc | MOPEG120C | MOPJG120C | MOPLG120C | EOP5T26 | — |
| | 220 Vdc | — | MOPJG240C | MOPLG240C | — | — |
| | 250 Vdc | — | MOPJG240C | MOPLG240C | — | — |
| Plug-in adapters | Three-pole | PAD3E | PAD3J | PAD3L | PAD53 | — |
| | Four-pole | PAD4E | PAD4J | PAD4L | — | — |
| Rear connecting studs ⑥ | Field | EFRCSDL | FJRCSL | LRCS3WK (3P) | — | — |
| | | EFRCSDS | FJRCSDS | LRCS4WK (4P) | — | — |
| | | EFRCSWL | FJRCSWL | — | — | — |
| | | EFRCSWS | FJRCSWS | — | — | — |

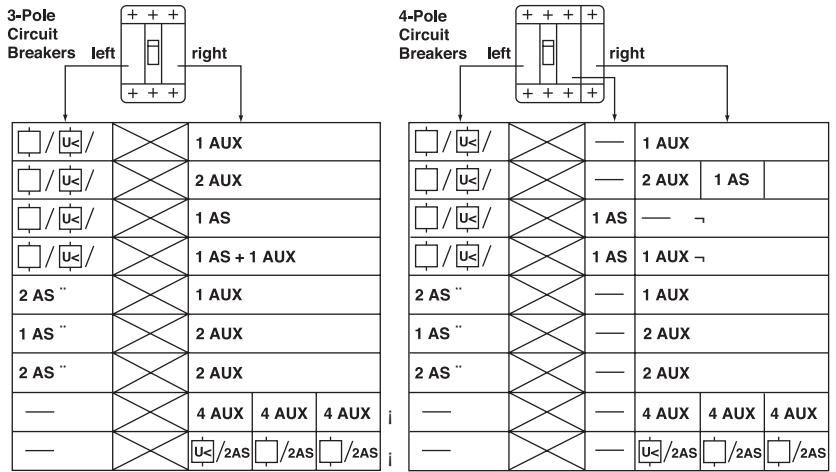
Notes

- ① Provision only.
- ② See **Page V4-T2-314** for bolt projection dimensions.
- ③ Castell bolt mounting hole must be 10 mm.
- ④ Requires two breakers.
- ⑤ Contact Eaton for availability of operators for EG- and NG-Frames before December 2004.
- ⑥ D = Imperial threads UL, W = metric threads IEC, L = long studs, S = short studs.

Accessory Configurations for EG–RG Circuit Breakers

2

Internal Accessory Configurations



/ / = Shunt Trip or Undervoltage Release

AUX = Auxiliary Switch

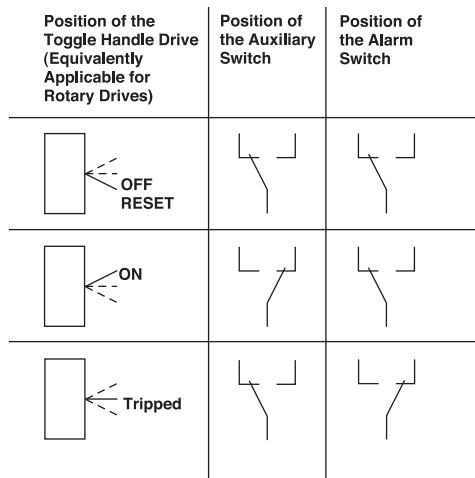
AS = Alarm Switch

.. = For N-Frame Circuit Breakers Only

≠ = For R-Frame Circuit Breakers Only

↵ = For N and R-Frame Circuit Breakers Only

Contact Making by the Auxiliary and Alarm Switches as a Function of the Switching Position of the Circuit Breaker



Accessories

Field Fit Kit Catalog Numbers

Alarm Lockout

| Description | Pole Location | Frame | | |
|----------------|---------------|---------------|---------|---------|
| | | EG, JG and LG | NG | RG ① |
| Make/Break | Left | — | A1L5LPK | — |
| | Right | ALM1M1BEPK ② | A1L5RPK | A1L6RPK |
| 2 Make/2 Break | Left | — | A2L5LPK | — |
| | Right | ALM2M2BEPK ③ | A2L5RPK | A2L6RPK |

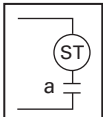
Auxiliary Switch

| Description | Pole Location | Frame | | |
|-------------|---------------|---------------|---------|---------|
| | | EG, JG and LG | NG | RG ① |
| 1A, 1B | Left | — | A1X5PK | — |
| | Right | AUX1A1BPK | A1X5PK | — |
| 2A, 2B | Left | — | A2X5PK | — |
| | Right | AUX2A2BPK | A2X5PK | A2X6RPK |
| 3A, 3B | Left | — | A3X5LPK | — |
| | Right | — | A3X5RPK | — |
| 4A, 4B | Left | — | — | — |
| | Right | — | — | A4X6RPK |

Auxiliary Switch/Alarm Lockout

| Description | Pole Location | Frame | | |
|-------------|---------------|---------------|----------|------|
| | | EG, JG and LG | NG | RG ① |
| — | Left | — | AA115LPK | — |
| | Right | AUXALRMEPK ④ | AA115RPK | — |

Shunt Trip—Standard



Shunt Trip—Standard

| Description | Pole Location | Frame | | |
|----------------------------|---------------|-----------------|-----------|----------|
| | | EG, JG and LG ⑤ | NG | RG ① |
| 48–60 Vac | Left | SNT060CPK | SNT5LP05K | — |
| | Right | — | — | SNT6P05K |
| 110–240 Vac | Left | SNT120CPK | SNT5LP11K | — |
| | Right | — | — | SNT6P11K |
| 380–600 Vac | Left | SNT480CPK ⑥ | — | — |
| | Right | — | — | — |
| 220–250 Vdc or 380–440 Vac | — | — | SNT5LP14K | SNT6P14K |
| 480–600 Vac | — | — | SNT5LP18K | SNT6P18K |
| 12 Vdc | Left | SNT012CPK | — | — |
| | Right | — | — | — |
| 24 Vac/dc | Left | SNT060CPK | SNT5LP03K | — |
| | Right | — | — | SNT6P03K |
| 48–60 Vdc | Left | SNT060CPK | SNT5LP23K | — |
| | Right | — | — | SNT6P23K |
| 110–125 Vdc | Left | SNT125DPK | SNT5LP26K | — |
| | Right | — | — | SNT6P26K |
| 250 Vdc | Left | SNT250DPK | — | — |
| | Right | — | — | — |

Notes

- ① All accessories mount in the RH cavity which will accept one each of shunt trip, UVR, auxiliary switch and alarm switch.
- ② Part number for JG and LG is ALM1M1BJPK.
- ③ Part number for JG and LG is ALM2M2BJPK.
- ④ Part number for JG and LG is AUXALRMJPK.
- ⑤ LH cavity not available for EG frame with earth leakage module.
- ⑥ 380–600 Vdc, 50/60 Hz.

Shunt Trip—Low Energy

| Description | Pole Location | Frame | | |
|-------------|---------------|---------------|---------|-----------------|
| | | EG, JG and LG | NG | RG ^① |
| — | Left | — | LST5LPK | — |
| | Right | — | — | LST6RPK |

Undervoltage Release Mechanism

| Description | Pole Location | Frame | | |
|-------------|---------------|----------------------------|------------------------|------------------------|
| | | EG, JG and LG ^③ | NG | RG ^① |
| 110–127 Vac | Left | UVR120APK | UVH5LP08K | — |
| | Right | — | — | UVH6RP08K |
| 208–240 Vac | Left | UVR240APK | UVH5LP11K | — |
| | Right | — | — | UVH6RP11K |
| 24 Vdc | Left | UVR024DPK | UVH5LP21K ^② | — |
| | Right | — | — | UVH6RP21K ^② |
| 24 Vac | Left | UVR024APK | UVH5LP21K ^② | — |
| | Right | — | — | UVH6RP21K ^② |
| 48–60 Vdc | Left | UVR048DPK | UVH5LP23K | — |
| | Right | — | — | UVH6RP23K |
| 48–60 Vac | Left | UVR048APK | UVH5LP05K | — |
| | Right | — | — | UVH6RP05K |
| 120 Vdc | Left | UVR125DPK | UVH5LP26K | — |
| | Right | — | — | UVH6RP26K |
| 220–250 Vdc | Left | UVR250DPK | UVH5LP28K | — |
| | Right | — | — | UVH6RP28K |
| 380–500 Vac | Left | UVR480APK | UVH5LP29K | — |
| | Right | — | — | UVH6RP29K |
| 525–600 Vac | Left | UVR600APK | — | — |
| | Right | — | — | — |
| 12 Vdc | Left | — | UVH5LP20K | — |
| | Right | — | — | UVH6RP20K |
| 12 Vac | Left | — | UVH5LP02K | — |
| | Right | — | — | UVH6RP02K |

Notes

① All accessories mount in the RH cavity which will accept one each of shunt trip, UVR, auxiliary switch and alarm switch.

② 24 Vdc only use UVH5LP03K (NG) UVH6RP03K (RG) for 24 Vac.

③ LH cavity not available for EG frame with earth leakage module.

Series G Motor Operators



Motor Operators

Product Description

Eaton’s motor operator mechanism enables local and remote ON, OFF and reset switching of a circuit breaker. The motor operator is mounted on the circuit breaker cover within the dimensions of the circuit breaker.

The robust motor operators offer various voltages to maximize customer flexibility. Standard load transfer switching can be accomplished through the use of two circuit breakers fitted with motor operators and a mechanical interlock.

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| Current Limiting Circuit Breaker Module | V4-T2-96 |
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2.2

Molded Case Circuit Breakers

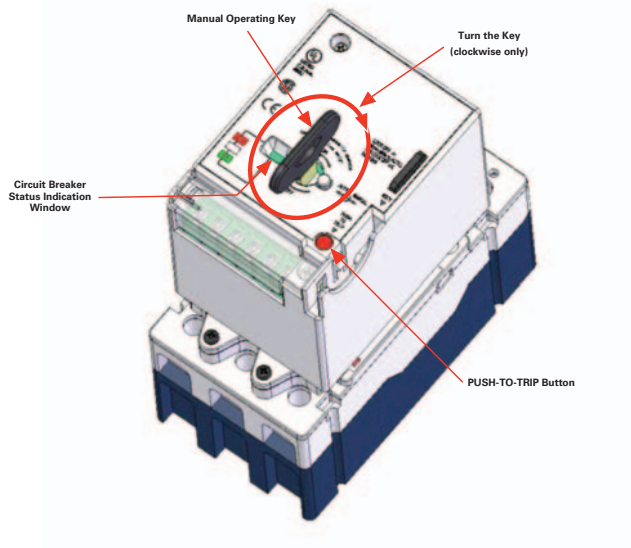
Series G

2

Features, Benefits and Functions

The motor operator provides special features for ease of customer use and status indication.

- The motor operator allows the circuit breaker to be opened, closed or reset remotely
- The motor operator contains a motor connected to a cam drive mechanism. The cam drives a slide mechanism to operate the circuit breaker handle
- Internal limit switches and relays are used to control motor operation to prevent overdriving the circuit breaker handle and motor overload conditions
- A key is provided to manually operate the circuit breaker
- A special pull-out locking mechanism provides a method for padlocking the circuit breaker handle in the OFF position
- The locking device will accept three padlock shackles with a maximum diameter of 1/4-inch (6.4 mm) each
- The cover provides visual status of the circuit breaker: ON, OFF or TRIPPED. A PUSH-TO-TRIP button allows the user to manually trip the breaker



Standards and Certifications

The motor operators are UL and CSA listed, and CE marked.

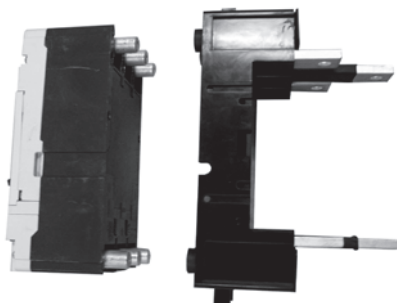


Product Selection

Motor Operators

| Frame | Voltage | Frequency | Inrush Current | Catalog Number |
|------------------|-------------|-----------|----------------|------------------|
| Series G E-Frame | 100–240 Vac | 50/60 Hz | 1A | MOPEG240C |
| | 100–220 Vdc | DC | 1A | MOPEG240C |
| | 24/48 Vdc | DC | 3A | MOPEG48D |
| Series C F-Frame | 208–240 Vac | 50/60 Hz | 1A | MOPFD240C |
| | 110–127 Vac | 50/60 Hz | 1A | MOPFD120C |
| | 220–250 Vdc | DC | 1A | MOPFD240C |
| | 110–125 Vdc | DC | 1A | MOPFD120C |
| | 24 Vdc | DC | 3A | MOPFD24D |
| Series G J-Frame | 208–240 Vac | 50/60 Hz | 1A | MOPJG240C |
| | 110–127 Vac | 50/60 Hz | 1A | MOPJG120C |
| | 220–250 Vdc | DC | 1A | MOPJG240C |
| | 110–125 Vdc | DC | 1A | MOPJG120C |
| | 24 Vdc | DC | 3A | MOPJG24D |
| Series G L-Frame | 208–240 Vac | 50/60 Hz | 2A | MOPLG240C |
| | 110–127 Vac | 50/60 Hz | 2A | MOPLG120C |
| | 220–250 Vdc | DC | 2A | MOPLG240C |
| | 110–125 Vdc | DC | 2A | MOPLG120C |
| | 24 Vdc | DC | 6A | MOPLG24D |

LG Breaker with Plug-In Block



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Plug-In Blocks

Product Description

Plug-in adapters simplify installation and front removal of circuit breakers. Plug-ins are available for rear connection applications on three- and four-pole circuit breakers. Trip on drawout interlock kits are included. Stabs for EG, JG and LG plug-ins rotate 90 ° for flexible installation. Use terminal shields for IP30 protection.

Product Selection

Plug-In Blocks

| Breaker Frame | Number of Poles | Catalog Number |
|---|-----------------|----------------|
| EG-, JG- and LG-Frame Plug-In Blocks | | |
| EG | 3 | PAD3E |
| EG | 4 | PAD4E |
| JG | 3 | PAD3J |
| JG | 4 | PAD4J |
| LG | 3 | PAD3L |
| LG | 4 | PAD4L |
| Trip-On Drawout Interlock Kit ① | | |
| EG | 3, 4 | PIILEG |
| JG | 3, 4 | PIILJG |
| LG | 3, 4 | PIILLG |
| Terminal Shields IP30 | | |
| EG | 3 | EFTS3K |
| EG | 4 | EFTS4K |
| JG | 3 | FJTS3K |
| JG | 4 | FJTS4K |
| LG | 3 | LTS3K |
| LG | 4 | LTS4K |
| Position Switch | | |
| EG | 3, 4 | PADILE |
| JG | 3, 4 | PADILJ |
| LG | 3, 4 | PADILL |

Note

① Included with plug-in block. Trips the breaker when breaker is removed from plug-in block.

Drawout Cassettes



Drawout Cassette

Product Description

The drawout cassette is available for use with JG, LG and NG, three- and four-pole breakers. The cassettes consist of two separate components: the movable mechanism, which attaches to the breaker, and the stationary mechanism, which houses in the cassette. For the JG, LG and NG drawout cassettes, all necessary parts for installation are included in the one catalog number.

Features

Features of the drawout cassettes for the JG, LG and NG include:

- Trip on drawout—breaker will trip if it is in the ON position when withdrawn from the cassette
- Secondary terminal block—the drawout cassettes include a secondary terminal block for easier access when wiring low voltage accessories, including shunts and undervoltage releases

The drawout mechanism has three primary positions:

- Connected—the breaker is fully connected to the primary stabs and secondary contacts
- Disconnected—both the primary stabs and the secondary contacts are disconnected
- Withdraw—the breaker can be removed from the cassette

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Product Selection

JG Drawout Cassette



LG Drawout Cassette



JG, LG and NG Drawout Cassettes

| Breaker Frame | Number of Poles | Catalog Number |
|---------------|-----------------|----------------|
| JG | 3 | JG3DOM |
| | 4 | JG4DOM |
| LG | 3 | LG3DOM |
| | 4 | LG4DOM |
| NG | 3 | NG3DOM |
| | 4 | NG4DOM |