

Molded Case Circuit Breakers

Section 6



Industrial Circuit Breakers

| | |
|-----------------------------|-----|
| How to Order | 6-2 |
| Features | 6-4 |
| Quick Reference Guide | 6-6 |

Q-Line Circuit Breakers

| | |
|---|------|
| Plug-In 120/240V Class | 6-14 |
| Plug-In 240V Class | 6-16 |
| Bolt-On 240V Class | 6-20 |
| Cable-In Cable Out (lug-lug) 240V Class | 6-25 |
| DIN-Rail Mount 240V Class | 6-27 |
| Cable-In Cable Out (lug-lug) 240V Class | 6-28 |
| Molded Case Switches 240V Class | 6-29 |
| Accessories 240V Class | 6-30 |

Thermal Magnetic Trip

| | |
|---|------|
| 15-100A Type TEY/TEYF Bolt-On | 6-32 |
| 15-125A Type TEYD/TEYH/TEYL | 6-33 |
| 10-150A E-150 Line Types TEB, TED, THED | 6-35 |
| 200-600A J600 Line Types TJJ, TJK, THJK | 6-37 |

Internal Accessories – Molded Case Circuit Breakers

| | |
|-------------------------------------|------|
| Accessory Devices and Ratings | 6-39 |
| Auxiliary Switches | 6-40 |
| Shunt Trip | 6-41 |
| Undervoltage Release | 6-43 |

Spectra™ RMS

| | |
|-------------------------------|------|
| 15-150A, SE150 Frame | 6-45 |
| 70-250A, SF250 Frame | 6-47 |
| 125-600A, SG600 Frame | 6-49 |
| 300-1200A, SK1200 Frame | 6-52 |

Spectra™ RMS with *micro*EntelliGuard™ Trip Unit

| | |
|--|------|
| Features | 6-54 |
| <i>micro</i> EntelliGuard™ Trip Unit Characteristics | 6-55 |
| How to Order | 6-56 |
| 60-600A, SG600 Line | 6-58 |
| 300-1200A, SK1200 Line | 6-60 |

Accessories for Spectra™ RMS Circuit Breakers with

*micro*EntelliGuard™ Trip Units

| | |
|---|------|
| Power Management System Accessories | 6-62 |
| Other Accessories | 6-66 |
| Internal Accessories | 6-67 |

Record Plus™

| | |
|-------------------------------|------|
| 15-100A, FB Line | 6-69 |
| FB Internal Accessories | 6-73 |
| FB External Accessories | 6-74 |
| 15-100A, FC Line | 6-75 |
| FC Internal Accessories | 6-78 |
| FC External Accessories | 6-79 |
| 25-250A, FE Line | 6-80 |
| FE Internal Accessories | 6-82 |
| FE External Accessories | 6-82 |
| 100-600A, FG Line | 6-84 |
| FG with PremEon™ S | 6-85 |
| FG with SMR2 | 6-86 |
| FG Internal Accessories | 6-88 |
| FG External Accessories | 6-89 |

Molded Case Switches – 100-1200 A6-90

Motor Circuit Protectors

| | |
|--|------|
| 3-250A Spectra™ RMS Mag Break | 6-91 |
| 125-1200A Spectra™ RMS Mag Break | 6-92 |
| 25-600A Record Plus Mag Break | 6-93 |

External Accessories

| | |
|---|-------|
| Cable Operators | 6-94 |
| Flange-Mounted Operators | 6-96 |
| Door Mounted Operators | 6-98 |
| Motor Operators and Plug-in Hardware | 6-100 |
| Mechanical Interlocks and Locking Devices | 6-101 |
| Breaker Mounting Hardware and Kits | 6-102 |
| Lugs and Associated Hardware | 6-103 |
| Neutral Grounds and Sensors | 6-104 |
| Plug-in Hardware | 6-106 |



How to Order

Q-Line

- Thermal Magnetic Circuit Breakers
- Molded-Case Switches

The product number as shown in the following pages includes the complete breaker or switch. TQD and TJD breakers are complete with Cu/Al line and load lugs.

E 150 Line

- Thermal Magnetic Circuit Breakers
- Magnetic Circuit Breakers
- Molded Case Switches

The product numbers as shown in the following pages include the complete breaker or switch. All devices listed come with Cu/Al line and load lugs. If line lugs are not required on a breaker, eliminate “WL” from product number; for molded case switches see page 6-3. Unless otherwise noted, all circuit breakers are UL listed in File E-11592. Molded case switches are UL listed in File E-57546.

J 600 Line

- Thermal Magnetic Circuit Breakers
- Magnetic Circuit Breakers
- Molded Case Switches

These breakers are available with either noninterchangeable trip (designated Type TJJ) or interchangeable trip (designated Type TJK and THJK). Type TJJ product numbers include frame, trip, Cu/Al line, and load lugs factory assembled. If line lugs are not required on the breaker, eliminate “WL” from product number, and subtract price of line lugs from price of complete breaker.

TJK breakers are available in two frames, 400 ampere frame (125 to 400 amperes) and 600 ampere frame (250 to 600 amperes). Trip units are not interchangeable between frames.

“Complete Circuit Breaker” price includes frame, trip unit, Cu/Al line, and load lugs. Unit will be shipped unassembled unless order specifies “must be factory assembled.” If line lugs are not required, eliminate “WL” from product number and subtract price of line lugs from price of complete breaker.

To order the frame, trip, and lugs separately, select the required components from table. Magnetic breakers must be ordered as components. A complete breaker consists of frame, trip, and one line and one load lug per pole.

Price of ordering “Complete Circuit Breaker” vs. frame, trip, and line and load lugs separately is the same.

Molded case switches can also be ordered as complete units (designated Type TJK---Y) or as separate components. They are UL listed only as complete units. To indicate required lugs, see page 6-3.

Unless otherwise noted, all circuit breakers are UL listed in File E-11592. Molded case switches are UL listed in File E-57546.



Q-Line Thermal Magnetic Circuit Breakers
and Molded-Case Switches

Tri-Break™ Line

- Integrally Fused Thermal Magnetic Circuit Breakers
- Integrally Fused Magnetic Circuit Breakers
- Integrally Fused Molded Case Switches

These breakers are available in three types. Type TB1 (15-100 amperes) product numbers include frame, trip, line and load lugs, and current limiters all factory assembled. TB6 (300 to 600 amperes) and TB8 (600 to 800 amperes) include frame, trip and limiters, factory assembled, but do not include line or load lugs. If line and load lugs are required, order separately. Unless otherwise noted, TB1, TB6, and TB8 breaker components are UL listed in File E-42263. Fused molded case switches are UL listed in File E-57546.

Mag-Break Line

- Magnetic only circuit breakers (motor circuit protectors)

These breakers are available only with noninterchangeable adjustable magnetic trip, in frame Types E, F, J, K, and Tri-Break™. All breakers are shipped factory assembled, complete with Cu/Al line and load lugs.

All magnetic only circuit breakers and limiters are UL Component Recognized in Files E-11592 and E-66390, respectively, unless otherwise noted.



Spectra™ RMS

—Circuit Breakers

Determine the required breaker frame, IC rating, and load requirements. Select frame, trip unit (rating plug), and lug, if required, product numbers from the tables on pages 6-45 to 6-53. For Spectra™ breakers with *microEntelliGuard™* Trip Units refer to pages 6-54 through 6-61. Select field-mounted internal accessory product numbers, if required, on pages 6-67 and 6-68. Select field-mounted external accessory product numbers, if required, on pages 6-95 through 6-106 and pages 6-62 to 6-66 for Spectra™ breakers with *microEntelliGuard™* Trip Units. Order as separate items.

—Mag-Break Motor Circuit Protectors

Determine the required frame and ampere requirements. Select frame, trip unit (rating plug), and lug, if required, product numbers from the table on pages 6-91 through 6-92. Select accessories as noted above for circuit breakers. The same accessories are used with both circuit breakers and motor circuit protectors. Order as separate items.

—Molded Case Switches

Determine the required frame and ampere requirements. Select frame and lug, if required, product numbers from the table on page 6-90. Rating plugs are not used. Select accessories as noted above for circuit breakers. Internal accessories do not require dummy trips. The same accessories are used with both circuit breakers and molded case switches. Order as separate items.

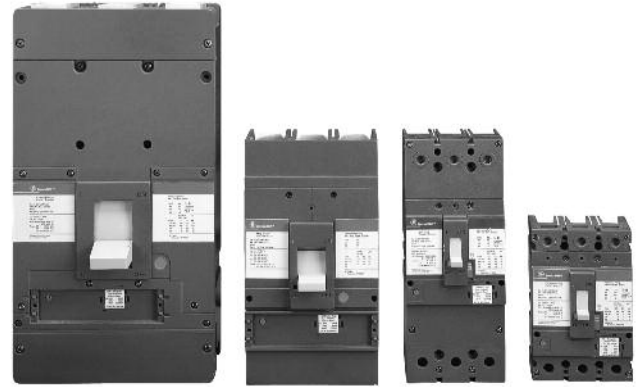
Unless otherwise noted, all circuit breakers are UL listed in File E-11592. Molded case switches are UL listed in File E-57546. Field-Installable Internal Accessories are UL listed in File E-57253. Distribution Cable Accessories for *microEntelliGuard™* Trip Units are UL listed in File E-57253.

Accessories

Order accessories from the appropriate table:

- Thermal Magnetic Circuit Breakers, Magnetic Circuit Breakers, and Molded Case Switches¹—pages 6-39 to 6-44 and 6-94 to 6-106.
- Spectra™ RMS Breakers—pages 6-66 to 6-67 and 6-94 to 6-106.
- Spectra™ RMS Breakers with *microEntelliGuard™* Trip Units—pages 6-62 to 6-68, and 6-94 to 6-106.

¹Installation of accessories in molded case switches requires dummy trip; see page 6-44 for information. Dummy trip not required for Tri-Break™ or Q-Line molded case switches.



Spectra Circuit Breakers
and Molded Case Switches

Molded Case Circuit Breaker and Switch Terminal Configuration Code

Order standard Cu/Al lugs by using suffix codes presented. Order lugs separately if special lugs are required. For optional lugs, see pages 6-103 and 6-104.

| Breaker/Switch Type | Suffix | | | | |
|--|--------------------|--------------------|---------|-----------------------|----------------|
| | Blank | WL | XL | X2 | LL |
| TQD/TJD | Load Lugs Only | Line and Load Lugs | — | Line Lugs Only | No Lugs |
| Molded Case Breakers, Thermal Magnetic | Load Lugs Only | Line and Load Lugs | — | Load Lugs Only | No Lugs |
| Molded Case Switch | Line and Load Lugs | — | No Lugs | Line Lugs Only | Load Lugs Only |
| Spectra RMS™ Breakers | No Lugs | | | Order Lugs Separately | |
| Mine Duty™ Breakers | No Lugs | | | Order Lugs Separately | |
| Mag-Break™ Breakers | Line and Load Lugs | — | — | — | — |



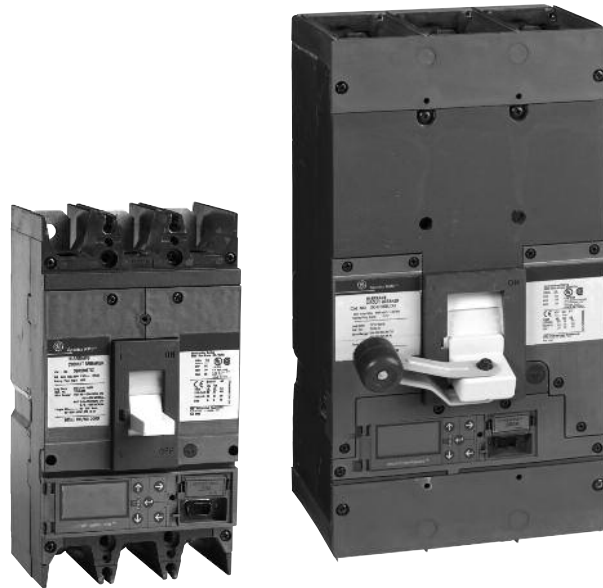
Features

Spectra™ RMS Molded Case Circuit Breakers

SE150, SF250, SG600, and SK1200 circuit breaker frames have a digital, solid-state, rms sensing trip system with field installable, front-mounted rating plugs to establish or change the breaker ampere rating. Adjustable instantaneous with tracking short-time is standard on all frames including SE150. The trip system uses digital sampling to determine the rms value of sinusoidal and nonsinusoidal currents.

microEntelliGuard™ Trip Units

Spectra™ SG600 and SK1200 breakers are now available with *microEntelliGuard™* trip units - the newest and most advanced trip unit available in the Spectra™ line of molded case circuit breakers. Based on the EntelliGuard™ TU trip unit platform, the *microEntelliGuard™* trip unit has the same HMI interface and incorporates the advanced features and protective functions for improved system protection, coordination, selectivity, performance, and diagnostic capabilities. New features offered with the *microEntelliGuard™* trip unit include enhanced time-current curve shaping capability, ground fault alarm, direct Modbus communications, reduced energy let-through setting, zone selective interlock, neutral protection, waveform capture, and programmable output contacts. The *microEntelliGuard™* trip unit utilizes the same power management accessories offered for the Spectra™ MicroVersaTrip™ with the addition of a new advanced junction box and interconnect cables. The breakers have the same footprint and interrupt ratings as their SG/SK counterparts and are backwards compatible with existing equipment and installations. The *microEntelliGuard™* trip unit uses the same universal rating plugs and test kit offered for the EntelliGuard TU™ trip unit.



Spectra™ SG600 and SK1200 Breakers
with *microEntelliGuard™* Trip Units

Record Plus™ Molded Case Circuit Breakers

Record Plus™ represents the very latest in molded case circuit breaker design. Utilizing design features such as double-break rotary contact structures and advanced ablative materials to enhance interruption, Record Plus™ is capable of interrupting ratings up to 200kA. High kAIC ratings, selective coordination, reduced arc flash energy, and current limitation embody the core design principles of Record Plus™.

FC 100 and FB 100 circuit breakers are supplied with factory installed non-user interchangeable thermal-magnetic trip units and can be supplied with or without lugs. FB breakers are available in 1-, 2- and 3-pole versions. FC is available in 2- and 3-pole versions, both in a 3-pole footprint.

FE 250 circuit breakers are supplied with factory installed, non-user interchangeable PremEon S electronic trip units that feature the use of front accessible, user adjustable dials to establish or change the breaker's amp rating. Adjustable instantaneous with tracking short-time is standard. Ground fault protection is optional. FE is available in 2- or 3-pole versions, both in a 3-pole footprint.

FG 600 circuit breakers are supplied with factory installed, non-user interchangeable electronic trip units. Customers can select from the PremEon S or SMR2 electronic trip units. PremEon S features the use of front accessible, user adjustable dials to establish or change the breaker's amp rating. Adjustable instantaneous with tracking short-time is standard. Ground fault protection is optional.

SMR2 uses rating plugs to establish or change the breaker's amp rating. Rating plugs are user specified and ordered under separate product number. SMR2 allows individual adjustment of Long-Time delay, Short-Time pickup and Delay, and Ground Fault Pickup and Delay (if so equipped). Zone Selective Interlocking (ZSI), Ground Fault Alarm, and Modbus Communications are also available via the SMR2's interface. FG is available in 2- and 3-pole versions, both in a 3-pole footprint.

All frames use common internal accessories (auxiliary switches, UV releases, shunt trips, and bell alarms) UL listed for field installation.

UL listed maximum short circuit ratings at 480VAC are 150kA for the 100A frames, 100kA for the 250A frame and 200kA for the 600A frames.

Unless noted otherwise, all circuit breakers and accessories are listed in UL file number E11592.



Record Plus™ Molded Case Circuit Breakers

Other MCCB Features

- UL489/cUL489 Listed
- Broad product line to meet virtually any application need.
- Reduced downtime. A tripped breaker is easily spotted and can be immediately reset after the fault has been corrected.
- Eliminates single phasing. A common trip bar disconnects all poles simultaneously on both overloads and short circuits.
- Offers application flexibility through the use of a wide variety of accessory devices and special attachments.
- Repetitive operation—no fuses to replace.
- Breakers can be repetitively tested. Fuses must be destroyed to confirm calibration accuracy.

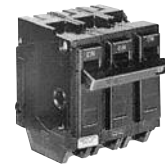
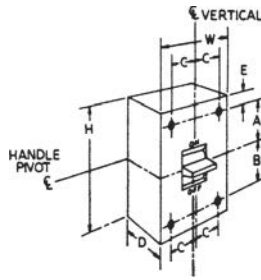
For more information on these products, order publications listed in Sections 27 and 28.



Quick Reference Guide

Ratings do not apply to molded case switches.

The interruption ratings and voltages shown in the table are maximum ratings. A circuit breaker of the type given in the left-hand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table. That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.



THQL 32015

Q-Line (UL file E-11592; Fixed Thermal Magnetic Trip Unit)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Voltage Rating | | UL Listed Interrupting Ratings—rms Symmetrical kA | | | | | | | | Dimensions (in.) | | | | | | | Std. Pack | | | |
|---|---------------|-----------|------------------------|---|---|----------------|-----|---------|-----|-----|-----|-----|------------------|--------|--------|-------|---------|---------|---------|-----------|--------|-----|----|
| | | | | | Vac | | | | | | Vdc | | H | W | D | A | B | C | E | | | | |
| | | | | | ac | dc | 120 | 120/240 | 240 | 277 | 480 | 600 | | | | | | | | | 125 | 250 | |
| TQ | 15-50 | 1 | 120/240 | — | — | 10 | — | — | — | — | — | — | — | 3 | 3/4 | 2 3/8 | — | — | — | — | 10 | | |
| | 15-60 | 2 | 120/240 | — | — | 10 | — | — | — | — | — | — | — | 3 | 1 1/2 | 2 3/8 | — | — | — | — | 5 | | |
| THQP ¹ | 15-50 | 1 | 120/240 | — | — | 10 | — | — | — | — | — | — | — | 3 9/32 | 1/2 | 2 3/8 | — | — | — | — | — | 100 | |
| | | 2 | | | | | | | | | | | | | 1 | | | | | | | 50 | |
| TQL/TQB/ TQC | 10 | 1 | 120/240 | — | — | 5 ² | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 50 |
| | | 2 | | | | | | | | | | | | | 2 | | | | | | | | 25 |
| | | 3 | | | | | | | | | | | | | 3 | | | | | | | | 15 |
| THQL ¹ THQB ¹ THQC ¹ | 15-70 | 1 | 120/240 | — | — | 10 | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 50 |
| | 15-125 | 2 | | | | | | | | | | | | | 2 | | | | | | | | 25 |
| | 15-100 | 3 | | | | | | | | | | | | | 3 | | | | | | | | 15 |
| THHQB ¹ THHQC ¹ | 15-70 | 1 | 120/240 | — | — | 22 | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 50 |
| | 15-100 | 2 | | | | | | | | | | | | | 2 | | | | | | | | 25 |
| | 15-100 | 3 | | | | | | | | | | | | | 3 | | | | | | | | 15 |
| THHQL ¹ | 15-70 | 1 | 120/240 | — | — | 22 | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 50 |
| | 15-125 | 2 | | | | | | | | | | | | | 2 | | | | | | | | 25 |
| | 15-100 | 3 | | | | | | | | | | | | | 3 | | | | | | | | 15 |
| TXQL ¹ TXQB ¹ TXQC ¹ | 15-30 | 1 | 120/240 | — | — | 65 | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 50 |
| | | 2 | | | | | | | | | | | | | 2 | | | | | | | | 25 |
| | | 3 | | | | | | | | | | | | | 3 | | | | | | | | 15 |
| TQD ¹ | 100-225 | 2 | 240 | — | — | 10 | 10 | — | — | — | — | — | — | 6 9/16 | 2 3/4 | 2 5/8 | 2 7/16 | 2 7/16 | — | 27/32 | — | 1 | |
| | 100-225 | 3 | 240 | | | — | 10 | | | | | | | | — | | | | | | | — | — |
| THQD ¹ | 100-225 | 2 | 240 | — | — | 22 | 22 | — | — | — | — | — | — | 6 9/16 | 2 3/4 | 2 5/8 | 2 7/16 | 2 7/16 | — | 27/32 | — | 1 | |
| | 100-225 | 3 | 240 | | | — | 22 | | | | | | | | — | | | | | | | — | — |
| TJD | 250-400 | 2 | 240 | — | — | 22 | 22 | — | — | — | — | — | — | 10 | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | — | 1 |
| | | 3 | 240 | | | — | 22 | | | | | | | | | | | | | | | | — |

CB3 Ground Fault, Equipment Ground Fault and Arc Fault (UL File E-51075; Fixed Thermal Magnetic Trip Unit)

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|-------|---|---------|---|----|----|----|---|---|---|---|---|---|--------|---|-------|---|---|---|---|---|---|----|
| THQL THQB THQC ...GF, GFEP | 15-30 | 1 | 120 | — | 10 | — | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 10 |
| | | 2 | 120/240 | | | — | 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| THHQL THHQB ...GF | 15-30 | 1 | 120 | — | 22 | — | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 10 |
| THQL THQB THQC ...AF | 15-20 | 1 | 120/240 | — | — | 10 | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 10 |
| THHQL THHQB ...AF | 15-20 | 1 | 120/240 | — | — | 22 | — | — | — | — | — | — | — | 3 9/32 | 1 | 2 3/8 | — | — | — | — | — | — | 10 |

¹ UL listed as HACR (heating, air conditioning and refrigeration).

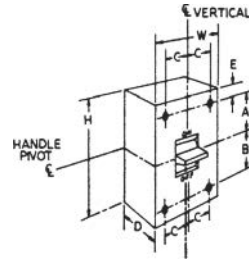
² Not UL listed.



Molded Case Circuit Breakers Industrial Circuit Breakers

Quick Reference Guide 10-1200A Circuit Breakers Thermal Magnetic Trip

Ratings do not apply to molded case switches. The interruption ratings and voltages shown in the table are maximum ratings. A circuit breaker of the type given in the left-hand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table. That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.



TEYD, TEYH, TEYL

TEY and TEYF (UL File E-11592; CSA LR 57114), TEYD/H/L (UL/cUL File E-11592)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Voltage Rating | | UL Listed Interrupting Rating—kA | | | | | | | | | | Dimensions (in) | | | | | | Approx. Ship Wt./Std. Pack | | |
|----------------------|---------------|-----------|------------------------|-----|----------------------------------|---------|-----|-----|---------|-----|-----|-----|-----|-----|-----------------|---|--------|---|---|---|----------------------------|--------|--------|
| | | | | | Vac | | | | | Vdc | | | | | H | W | D | A | B | C | | E | |
| | | | | | 120 | 120/240 | 240 | 277 | 480/277 | 480 | 600 | 125 | 250 | 500 | | | | | | | | | |
| TEY ^{2,3} | 15-100 | 1 | 277 | 125 | 65 | — | 14 | 14 | — | — | — | 10 | — | — | 5 1/4 | 1 | 3 1/16 | — | — | — | — | — | |
| | | 2 | 480/277 | 250 | — | — | 65 | 14 | 14 | — | — | — | — | 10 | | — | | | | | | | 2 |
| | | 3 | | — | — | — | — | — | — | — | — | — | — | — | | 3 | | | | | | | |
| TEYF ^{2,3} | 15-60 | 1 | 277 | 125 | 65 | — | 14 | 18 | — | — | — | 10 | — | — | 5 1/4 | 1 | 3 1/16 | — | — | — | — | | |
| | 15-125 | 2 | 480/277 | 250 | — | — | 65 | 18 | 18 | — | — | — | 10 | — | | 2 | | | | | | | |
| | | 3 | | — | — | — | — | — | — | — | — | — | — | — | | 3 | | | | | | | |
| TEYD | 15-70 | 1 | 277 | — | 65 | 65 | — | 25 | — | — | — | — | — | — | 5 1/4 | 1 | 3 1/16 | — | — | — | — | 1 lb | |
| | 15-125 | 2 | 480/277 | — | — | 65 | 65 | — | 25 | — | — | — | — | — | | 2 | | | | | | 2 lb | |
| | | 3 | | — | — | — | — | — | — | — | — | — | — | — | | 3 | | | | | | 2.7 lb | |
| TEYH | 15-70 | 1 | 277 | — | 65 | 65 | — | 35 | — | — | — | — | — | — | 5 1/4 | 1 | 3 1/16 | — | — | — | — | 1 lb | |
| | 15-125 | 2 | 480/277 | — | — | 65 | 65 | — | 35 | — | — | — | — | — | | 2 | | | | | | 2 lb | |
| | | 3 | | — | — | — | — | — | — | — | — | — | — | — | | 3 | | | | | | 2.7 lb | |
| TEYL | 15-70 | 1 | 277 | 125 | 100 | 100 | — | 65 | — | — | — | 15 | — | — | 5 1/4 | 1 | 3 1/16 | — | — | — | — | 1 lb | |
| | 15-125 | 2 | 480/277 | 250 | — | 100 | 100 | — | 65 | — | — | 42 | 20 | — | | 2 | | | | | | 2 lb | |
| | | 3 | | — | — | — | — | — | — | — | — | — | 42 | 35 | | — | | | | | | 3 | 2.7 lb |

E150 (UL File E-11592; CSA LR 57114)

| | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---------------------|---|-----------------------|-----|----|----|----|----|---|----|----|-----------------|-----------------|-----------------|--------|-------|-------|---------|---------|---|-------|----------|
| TEB ^{2,3} | 10-100 ⁴ | 1 | 120 | 125 | 10 | — | — | — | — | — | — | 5 | — | — | 6 5/16 | 1 3/8 | 3 3/8 | 2 41/64 | 2 15/64 | — | 23/32 | 26 lb/24 |
| | | 2 | 250 | — | — | 10 | — | — | — | — | — | — | 5 | — | | 2 3/4 | | | | | | 24 lb/12 |
| | | 3 | 240 | — | — | 10 | — | — | — | — | — | — | — | — | | 4 1/8 | | | | | | 28 lb/8 |
| TED ^{2,3} | 10-100 ⁴ | 1 | 277, 347 ⁵ | 125 | — | — | — | 14 | — | 10 | — | 10 | — | — | 6 5/16 | 1 3/8 | 3 3/8 | 2 41/64 | 2 15/64 | — | 23/32 | 26 lb/24 |
| | 10-150 ⁴ | 2 | 480 | 250 | — | — | 18 | — | — | 18 | — | — | 10 | — | | 2 3/4 | | | | | | 24 lb/12 |
| | | 3 | 480, 600 | 500 | — | — | 18 | — | — | 18 | 14 | — | — | 10 ¹ | | 4 1/8 | | | | | | 28 lb/8 |
| THED ^{2,3} | 15-30 | 1 | 277, 347 ⁵ | 125 | — | — | — | 65 | — | — | — | 10 ⁶ | — | — | 6 5/16 | 1 3/8 | 3 3/8 | 2 41/64 | 2 15/64 | — | 23/32 | 26 lb/24 |
| | 15-100 | 2 | 480 | 250 | — | — | 65 | — | — | 25 | — | — | 10 ⁶ | — | | 4 1/8 | | | | | | 24 lb/12 |
| | | 3 | 600 | 500 | — | — | 65 | — | — | 25 | 18 | — | — | 10 ¹ | | 4 1/8 | | | | | | 28 lb/8 |
| | 110-150 | 3 | 600 | 500 | — | — | 42 | — | — | — | — | — | — | — | | 4 1/8 | | | | | | 28 lb/8 |

¹UL listed with poles in series for 500 Vdc ungrounded battery applications.

²UL listed as HACR (heating, air conditioning, and refrigeration).

³15-50A UL listed as HID (high intensity discharge).

⁴10 amp not UL listed, rated 5kA @ 120V, 240V and 480V

⁵UL listed/CSA Certified for 10kA @ 347 Vac (TED) and 18kA @ 347V (THED). Also rated 10kA @ 480V but not UL listed.

⁶UL listed 10kA, GE tested to 20kA.

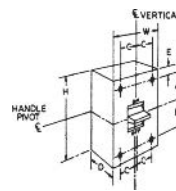


Molded Case Circuit Breakers Industrial Circuit Breakers

Section 6

Quick Reference Guide 15-1200A Circuit Breakers Thermal Magnetic Trip

Ratings do not apply to molded case switches. The interruption ratings and voltages shown in the table are maximum ratings. A circuit breaker of the type given in the left-hand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table. That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.



TJJ, TJK, THJK

F225 (UL File E-11592; TFJ, Fixed Thermal Magnetic Trip Unit; TFK, THFK: Interchangeable Thermal Mag. Trip Unit; CSA LR 40350)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Voltage Rating | | UL Listed Interrupting Rating—kA | | | | | | | | | | | | Dimensions (in) | | | | | | Approx. Ship Wt./Std. Pack |
|----------------------|---------------|-----------|------------------------|-----|----------------------------------|-----|-----|---------|-----|-----|-----|-----|-----------------|-----|--------|-------|-----------------|-------|-------|-------|--------|---------|----------------------------|
| | | | | | Vac | | | | | | Vdc | | | | | | | | | | | | |
| | | | | | ac | dc | 120 | 120/240 | 240 | 277 | 480 | 600 | 125 | 250 | 500 | 600 | H | W | D | A | B | C | |
| TFJ ^{2,9} | 70-225 | 2 | 480 | 250 | — | — | 25 | — | 22 | — | — | 10 | — | — | 10 1/8 | 4 1/8 | 3 13/16 | 3 7/8 | 3 7/8 | 11/16 | 1 3/16 | 10 lb/1 | |
| | 70-250 | 3 | 600 | 500 | — | — | 25 | — | 22 | 18 | — | 10 | 10 ¹ | — | | | | | | | | 12 lb/1 | |
| TFK ^{2,9} | 70-225 | 2 | 480 | 250 | — | — | 25 | — | 22 | — | — | 10 | — | — | 10 1/8 | 4 1/8 | 3 13/16 | 3 7/8 | 3 7/8 | 11/16 | 1 3/16 | 10 lb/1 | |
| | | 3 | 600 | 500 | — | — | 25 | — | 22 | 18 | — | 10 | 10 ¹ | — | | | | | | | | 12 lb/1 | |
| THFK ^{2,9} | 70-225 | 2 | 480 | 250 | — | — | 65 | — | 25 | — | — | 10 | — | — | 10 1/8 | 4 1/8 | 3 13/16 | 3 7/8 | 3 7/8 | 11/16 | 1 3/16 | 10 lb/1 | |
| | | 3 | 600 | 500 | — | — | 65 | — | 25 | 18 | — | 10 | 10 ¹ | — | | | | | | | | 12 lb/1 | |
| TFL ^{8,9} | 70-225 | 3 | 600 | — | — | 100 | 100 | — | 65 | 25 | — | — | — | — | 10 1/8 | 4 1/8 | 3 13/16 | 3 7/8 | 3 7/8 | 11/16 | 1 3/16 | — | |

J600 (UL File E-11592; TJJ, Fixed Thermal Magnetic Trip Unit; TJK, THJK: Interchangeable Thermal Mag. Trip Unit; CSA LR 40350)

| | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------|---|-----|-----|---|---|----|---|----|----|---|----|----|----|--------|-------|---------|---------|---------|-------|--------|-------------|
| TJJ, TJK4 | 200-400 | 2 | 600 | 250 | — | — | 42 | — | 30 | 22 | — | 20 | — | — | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | 16 lb/1 |
| | | 3 | | 500 | | | | | | | | — | — | — | | | | | | | | 20 |
| TJK6 | 250-600 | 2 | 600 | 250 | — | — | 42 | — | 30 | 22 | — | 20 | — | — | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | 18 lb/1 |
| | | 3 | | 500 | | | | | | | | — | — | — | | | | | | | | 20 |
| THJK4 | 200-400 | 2 | 600 | 250 | — | — | 65 | — | 35 | 25 | — | 40 | — | — | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | 16 lb/1 |
| | | 3 | | 500 | | | | | | | | — | — | — | | | | | | | | 40 |
| THJK6 | 250-600 | 2 | 600 | 250 | — | — | 65 | — | 35 | 25 | — | 40 | — | — | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | 18 lb/1 |
| | | 3 | | 500 | | | | | | | | — | — | — | | | | | | | | 40 |
| THJK4 D ⁹ | 125-400 | 3 | — | 600 | — | — | — | — | — | — | — | 40 | 50 | 25 | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | 17 1/2 lb/1 |
| THJK6 D ⁹ | 250-400 | 3 | — | 600 | — | — | — | — | — | — | — | 40 | 50 | 25 | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | 20 lb/1 |

K1200 (UL File E-11592; Interchangeable Thermal Magnetic Trip Unit; CSA LR 40350)

| | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|----------|---|-----|-----|---|---|----|---|----|----|---|----|---|---|--------|-------|-------|--------|---------|-------|-----|---------|
| TKM8 ⁹ | 300-800 | 2 | 600 | 250 | — | — | 42 | — | 30 | 22 | — | 20 | — | — | 15 1/2 | 8 1/4 | 5 1/2 | 8 9/16 | 5 11/16 | 1 3/8 | 5/8 | 33 lb/1 |
| | | 3 | | 500 | | | | | | | | — | — | — | | | | | | | | 20 |
| TKM12 ⁹ | 600-1200 | 2 | 600 | — | — | — | 42 | — | 30 | 22 | — | — | — | — | 15 1/2 | 8 1/4 | 5 1/2 | 8 9/16 | 5 11/16 | 1 3/8 | 5/8 | 38 lb/1 |
| | | 3 | | — | | | | | | | | — | — | — | | | | | | | | — |
| THKM8 ⁹ | 300-800 | 2 | 600 | 250 | — | — | 65 | — | 35 | 25 | — | 40 | — | — | 15 1/2 | 8 1/4 | 5 1/2 | 8 9/16 | 5 11/16 | 1 3/8 | 5/8 | 33 lb/1 |
| | | 3 | | 500 | | | | | | | | — | — | — | | | | | | | | 40 |
| THKM12 ⁹ | 600-1200 | 2 | 600 | — | — | — | 65 | — | 35 | 25 | — | — | — | — | 15 1/2 | 8 1/4 | 5 1/2 | 8 9/16 | 5 11/16 | 1 3/8 | 5/8 | 38 lb/1 |
| | | 3 | | — | | | | | | | | — | — | — | | | | | | | | — |

¹UL listed with poles in series for 500 Vdc ungrounded battery applications.

²UL listed as HACR (heating, air conditioning, and refrigeration).

³15-50A UL listed as HID (high intensity discharge).

⁴10 amp not UL listed, rated 5kA @ 120V, 240V and 480V

⁵UL listed/CSA Certified for 10kA @ 347 Vac (TED) and 18kA @ 347V (THED). Also rated 10kA @ 480V but not UL listed.

⁶480V/277 Vac.

⁷UL listed 10kA, GE tested to 20kA.

⁸Not CSA listed

⁹Obsolete as of 12/13.



TF and TK Cross Reference Table

Transition guide – Obsolete TF and TK Molded Case Circuit Breakers, switches and Motor Circuit Protectors to Spectra RMS equivalents. Spectra RMS products are not DC rated. For DC applications, continue use of TJ frame Molded Case Circuit Breakers.

Molded Case Circuit Breakers

| F225 | AIC | Frame Rating | Trip Unit | Poles | Voltage | Obsolete Product Number | Spectra | AIC | Poles | Voltage | Frame Product Number | Rating Plug Product Number | Lugs Product Number |
|------|------|--------------|--------------------|-------|---------|-------------------------|---------|------|-------|---------|----------------------|----------------------------|---------------------|
| TFJ | 22kA | 225A | noninterchangeable | 2 | 480V | TFJ224XXX | SFH | 35kA | 2 | 480V | SFHA24AT0250 | SRPF250AXXX | (2) TCAL29 |
| | 22kA | 225A | noninterchangeable | 3 | 600V | TFJ236XXX | SFH | 35kA | 3 | 600V | SFHA36AT0250 | SRPF250AXXX | (3) TCAL29 |
| TFK | 22kA | 225A | interchangeable | 2 | 480V | TFK224XXX | SFH | 35kA | 2 | 480V | SFHA24AT0250 | SRPF250AXXX | (2) TCAL29 |
| | 22kA | 225A | interchangeable | 3 | 600V | TFK236XXX | SFH | 35kA | 3 | 600V | SFHA36AT0250 | SRPF250AXXX | (3) TCAL29 |
| THFK | 25kA | 225A | interchangeable | 2 | 480V | THFK224XXX | SFH | 35kA | 2 | 480V | SFHA24AT0250 | SRPF250AXXX | (2) TCAL29 |
| | 25kA | 225A | interchangeable | 3 | 600V | THFK236XXX | SFH | 35kA | 3 | 600V | SFHA36AT0250 | SRPF250AXXX | (3) TCAL29 |

Molded Case Circuit Breakers

| K1200 | AIC | Frame Rating | Trip Unit | Poles | Voltage | Obsolete Product Number | Spectra | AIC | Poles | Voltage | Frame Product Number | Rating Plug Product Number | Lugs Product Number |
|-------|------|--------------|-----------------|-------|---------|-------------------------|---------|------|-------|---------|----------------------|----------------------------|---------------------|
| TKMA | 30kA | 800A | interchangeable | 2 | 600V | TKMA826XXX | SKHA | 50kA | 2 | 600V | SKHA26AT0800 | SRPK800AXXX | (2) TCAL81 |
| | 30kA | 800A | interchangeable | 3 | 600V | TKMA836XXX | SKHA | 50kA | 3 | 600V | SKHA36AT0800 | SRPK800AXXX | (3) TCAL81 |
| THKMA | 35kA | 800A | interchangeable | 2 | 600V | THKMA826XXX | SKHA | 50kA | 2 | 600V | SKHA26AT0800 | SRPK800AXXX | (2) TCAL81 |
| | 35kA | 800A | interchangeable | 3 | 600V | THKMA836XXX | SKHA | 50kA | 3 | 600V | SKHA36AT0800 | SRPK800AXXX | (3) TCAL81 |
| TKMA | 30kA | 1200A | interchangeable | 2 | 600V | TKMA2XXXX | SKHA | 50kA | 2 | 600V | SKHA26AT1200 | SRPK1200AXXX | (2) TCAL125 |
| | 30kA | 1200A | interchangeable | 3 | 600V | TKMA3XXXX | SKHA | 50kA | 3 | 600V | SKHA36AT1200 | SRPK1200AXXX | (3) TCAL125 |
| THKMA | 35kA | 1200A | interchangeable | 2 | 600V | THKMA2XXXX | SKHA | 50kA | 2 | 600V | SKHA26AT1200 | SRPK1200AXXX | (2) TCAL125 |
| | 35kA | 1200A | interchangeable | 3 | 600V | THKMA3XXXX | SKHA | 50kA | 3 | 600V | SKHA36AT1200 | SRPK1200AXXX | (3) TCAL125 |

Molded Case Switches

| Type | AIC | Frame Rating | Trip Unit | Poles | Voltage | Obsolete Product Number | Spectra | AIC | Poles | Amps | Product Number | Rating Plug Product Number | Lugs Product Number |
|------|-----|--------------|-----------|-------|---------|-------------------------|---------|-----|-------|-------|----------------|----------------------------|---------------------|
| TFK | N/A | 225A | N/A | 2 | 600V | TFK226Y225 | SF250 | N/A | 3 | 250A | SFDA36AN0250 | N/A | (3) TCAL29 |
| TFK | N/A | 225A | N/A | 3 | 600V | TFK236Y225 | SF250 | N/A | 3 | 250A | SFDA36AN0250 | N/A | (3) TCAL29 |
| TKM | N/A | 800A | N/A | 2 | 600V | TKMA826Y800 | SK1200 | N/A | 3 | 800A | SKDA36AN0800 | N/A | (3) TCAL81 |
| TKM | N/A | 800A | N/A | 3 | 600V | TKMA836Y800 | SK1201 | N/A | 3 | 800A | SKDA36AN0800 | N/A | (3) TCAL81 |
| TKM | N/A | 1000A | N/A | 2 | 600V | TKMA2Y1000 | SK1202 | N/A | 3 | 1000A | SKDA36AN1000 | N/A | (3) TCAL125 |
| TKM | N/A | 1000A | N/A | 3 | 600V | TKMA3Y1000 | SK1203 | N/A | 3 | 1000A | SKDA36AN1000 | N/A | (3) TCAL125 |
| TKM | N/A | 1200A | N/A | 2 | 600V | TKMA2Y1200 | SK1204 | N/A | 3 | 1200A | SKDA36AN1200 | N/A | (3) TCAL125 |
| TKM | N/A | 1200A | N/A | 3 | 600V | TKMA3Y1200 | SK1205 | N/A | 3 | 1200A | SKDA36AN1200 | N/A | (3) TCAL125 |

Motor Circuit Protectors

| Type | AIC | Frame Rating | Inst Trip Amp Rating | Poles | Voltage | Obsolete Product Number | Spectra | AIC | Poles | Amps | Product Number | Rating Plug Product Number | Lugs Product Number |
|------|------|--------------|----------------------|-------|---------|-------------------------|---------|-------|-------|-------|----------------|----------------------------|---------------------|
| TF | 30kA | 225A | 600 - 1400 | 3 | N/A | TFC36225 | SFLA | 65kA | 3 | 250A | SFLA36AI0250 | SRPF250AXXX | (3) TCAL29 |
| TF | 30kA | 225A | 100 - 2250 | 3 | N/A | TFC36225A | SFPA | 100kA | 3 | 250A | SFPA36AI0250 | SRPF250AXXX | (3) TCAL29 |
| TK | 30kA | 800A | 3000 - 6000 | 3 | N/A | TKC36800L | SKLA | 65kA | 3 | 800A | SKLA36AI0800 | SRPK800AXXX | (3) TCAL81 |
| TK | 30kA | 800A | 5000 - 10000 | 3 | N/A | TKC36800M | SKLA | 65kA | 3 | 800A | SKLA36AI0800 | SRPK800AXXX | (3) TCAL81 |
| TK | 30kA | 1200A | 3000 - 6000 | 3 | N/A | TKC361200L | SKLA | 65kA | 3 | 1200A | SKLA36AI1200 | SRPK1200AXXX | (3) TCAL125 |
| TK | 30kA | 1200A | 5000 - 10000 | 3 | N/A | TKC361200M | SKLA | 65kA | 3 | 1200A | SKLA36AI1200 | SRPK1200AXXX | (3) TCAL125 |

Legend

XXX = Variable in Product Number changes per application

Spectra RMS Accessories

| Description | Product Number |
|------------------|----------------|
| Shunt Trip | SASTX |
| Auxiliary Switch | SAUXPABX |
| UV Release | SAUVX |
| Bell Alarm | SABAP1 |
| Actuator | SACTUATOR |

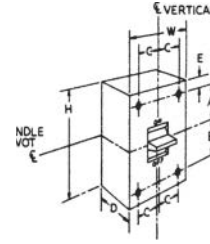


Molded Case Circuit Breakers Industrial Circuit Breakers

Section 6

Quick Reference Guide 15-1200A Circuit Breakers Electronic Trip

Ratings do not apply to molded case switches. The interruption ratings and voltages shown in the table are maximum ratings. A circuit breaker of the type given in the left-hand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table. That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.



SE 150

Spectra™ RMS Circuit Breakers UL/CSA Ratings

Solid-State with Interchangeable Trip Unit (Rating Plug)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Vac | UL Listed Interrupting Rating—kA | | | Dimensions Inches (mm) | | | | | | | Approx. Ship Wt./Std. Pack |
|---|---------------|-----------|-------------|----------------------------------|---------|---------|-----------------------------|---------------|---------------|---------------|---------------|--------------|---------------------------|----------------------------|
| | | | | 240 Vac | 480 Vac | 600 Vac | H | W | D | A | B | C | E | |
| SE150 Current Limiting (UL File No. E-11592; CSA LR 40350)¹ | | | | | | | | | | | | | | |
| SED ^{2,3} | 15-150 | 2 | 480 | 18 | 18 | — | 6.31 (160) | 4.12 (105) | 3.38 (86) | 2.41 (61) | 2.47 (63) | .69 (18) | .72 (18) | 5.65 lb/1 |
| | | 3 | 600 | | | 14 | | | | | | | | |
| SEH ² | 15-150 | 2 | 480 | 65 | 25 | — | | | | | | | | |
| | | 3 | 600 | | | 18 | | | | | | | | |
| SEL | 15-150 | 2 | 480 | 100 | 65 | — | | | | | | | | |
| | | 3 | 600 | | | 25 | | | | | | | | |
| SEP | 15-150 | 2 | 480 | 200 | 100 | — | | | | | | | | |
| | | 3 | 600 | | | 25 | | | | | | | | |
| SF-250 Current Limiting (UL File No. E-11592; CSA LR 40350)¹ | | | | | | | | | | | | | | |
| SFH ² | 70-250 | 2 | 480 | 65 | 35 | — | 10.12 (257) | 4.12 (105) | 3.81 (97) | 3.87 (98) | 3.87 (98) | .69 (18) | 1.19 (30) | 9.15 lb/1 |
| | | 3 | 600 | | | 22 | | | | | | | | |
| SFL | 70-250 | 2 | 480 | 100 | 65 | — | | | | | | | | |
| | | 3 | 600 | | | 25 | | | | | | | | |
| SFP | 70-250 | 2 | 480 | 200 | 100 | — | | | | | | | | |
| | | 3 | 600 | | | 25 | | | | | | | | |
| SG600 Current Limiting (UL File No. E-11592; CSA LR 40350)^{1,4} | | | | | | | | | | | | | | |
| SGH1 ^{2,5} | 6-150 | 3 | 600 | 65 | 35 | 25 | 10.09 ⁶ (256) | 5.50 (140) | 3.81 (97) | 4.45 (113) | 3.30 (84) | .91 (23) | 1.18 ⁶ (30) | 15.85 lb/1 |
| SGD ² | 125-400 | 2 | 240 | 65 | — | — | | | | | | | | |
| | | 3 | 600 | 65 | 35 | 25 | | | | | | | | |
| SGH4 ² | 125-400 | 2 | 600 | 65 | 35 | 25 | | | | | | | | |
| | | 3 | 600 | 65 | 35 | 25 | | | | | | | | |
| SGH6 ² | 250-600 | 2 | 600 | 65 | 35 | 25 | | | | | | | | |
| | | 3 | 600 | 65 | 35 | 25 | | | | | | | | |
| SGL1 ⁵ | 60-150 | 3 | 600 | 100 | 65 | 65 | | | | | | | | |
| | | 3 | 600 | 200 | 100 | 65 | | | | | | | | |
| SGP1 ⁵ | 60-150 | 2 | 600 | 100 | 65 | 65 | | | | | | | | |
| | | 3 | 600 | 100 | 65 | 65 | | | | | | | | |
| SGL4 | 125-400 | 2 | 600 | 100 | 65 | 65 | | | | | | | | |
| | | 3 | 600 | 100 | 65 | 65 | | | | | | | | |
| SGP4 | 125-400 | 2 | 600 | 200 | 100 | 65 | | | | | | | | |
| | | 3 | 600 | 200 | 100 | 65 | | | | | | | | |
| SGL6 | 250-600 | 2 | 600 | 100 | 65 | 65 | | | | | | | | |
| | | 3 | 600 | 100 | 65 | 65 | | | | | | | | |
| SGP6 | 250-600 | 2 | 600 | 200 | 100 | 65 | | | | | | | | |
| | | 3 | 600 | 200 | 100 | 65 | | | | | | | | |
| SK1200 (UL File No. E-11592; CSA LR 40350)^{1,4} | | | | | | | | | | | | | | |
| SKH8 | 300-800 | 2 | 600 | 65 | 50 | 25 | 15.50 ⁷ (394) | 8.25 (210) | 5.50 (140) | 8.56 (217) | 5.69 (145) | 1.38 (35) | .62 ⁷ (16) | 47.6 lb/1 |
| | | 3 | 600 | 100 | 65 | 42 | | | | | | | | |
| SKL8 | 300-800 | 2 | 600 | 100 | 65 | 42 | | | | | | | | |
| | | 3 | 600 | 100 | 65 | 42 | | | | | | | | |
| SKP8 | 300-800 | 2 | 600 | 200 | 100 | 65 | | | | | | | | |
| | | 3 | 600 | 200 | 100 | 65 | | | | | | | | |
| SKH12 | 600-1200 | 2 | 600 | 65 | 50 | 25 | | | | | | | | |
| | | 3 | 600 | 65 | 50 | 25 | | | | | | | | |
| SKL12 | 600-1200 | 2 | 600 | 100 | 65 | 42 | | | | | | | | |
| | | 3 | 600 | 100 | 65 | 42 | | | | | | | | |
| SKP12 | 600-1200 | 2 | 600 | 200 | 100 | 65 | | | | | | | | |
| | | 3 | 600 | 200 | 100 | 65 | | | | | | | | |
| SKS8 | 800-1200 | 3 | 480 | 200 | 100 | — | | | | | | | | |
| | | 3 | 480 | 100 | 65 | — | | | | | | | | |
| SKT8 | 800-1200 | 3 | 480 | 100 | 65 | — | | | | | | | | |
| | | 3 | 480 | 100 | 65 | — | | | | | | | | |
| SKS12 | 800-1200 | 3 | 480 | 200 | 100 | — | | | | | | | | |
| | | 3 | 480 | 100 | 65 | — | | | | | | | | |
| SKT12 | 800-1200 | 3 | 480 | 100 | 65 | — | | | | | | | | |
| | | 3 | 480 | 100 | 65 | — | | | | | | | | |

¹UL listed as HACR (heating, air conditioning and refrigeration).

²Not current-limiting circuit breaker.

³UL listed as HID (high intensity discharge).

⁴Includes microEntelliGuard™ Trip Units.

⁵microEntelliGuard™, MicroVersaTrip™ Plus and MicroVersaTrip™ PM Trip Units only.

⁶Add 1.76 inches (45 mm) to each end with lugs and lug cover installed.

⁷Add 4.00 inches (101 mm) to upper end for SKP (100 kAIC-480V) lug cover.



Molded Case Circuit Breakers

Industrial Circuit Breakers

Quick Reference Guide
 15-1200A Circuit Breakers
 Electronic Trip

Ratings do not apply to molded case switches

IEC/JIS Ratings

| Solid-State with Interchangeable Trip Unit (Rating Plug) | | | | | | | | | | | | | | |
|--|---------------|-----------|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|---------|-----|-----|
| Circuit Breaker Type | Ampere Rating | No. Poles | IEC 947-2 Interruption Capacity – kA | | | | | | | | Japanese Industry Standard Interruption Capacity kA | | | |
| | | | 220-240 Vac | | 380-415 Vac | | 500 Vac | | 690 Vac | | Vac | | | |
| | | | I _{cu} | I _{cs} | I _{cu} | I _{cs} | I _{cu} | I _{cs} | I _{cu} | I _{cs} | 220-240 | 380-415 | 500 | 690 |
| SE150 Current Limiting, 15-32A | | | | | | | | | | | | | | |
| SED | 15-32 | 2 | 18 | 9 | 10 | 5 | — | — | — | — | 18 | 10 | — | — |
| | | 3 | | | | | 4 | 4 | — | — | | | 4 | — |
| SEH | 15-32 | 2 | 65 | 33 | 15 | 10 | — | — | — | — | 65 | 15 | — | — |
| | | 3 | | | | | 6 | 6 | — | — | | | 6 | — |
| SEL | 15-32 | 2 | 100 | 50 | 20 | 15 | — | — | — | — | 100 | 20 | — | — |
| | | 3 | | | | | 8 | 8 | 3 | 3 | | | 8 | 3 |
| SEP | 15-32 | 2 | 200 | 100 | 20 | 20 | — | — | — | — | 200 | 20 | — | — |
| | | 3 | | | | | 10 | 10 | 5 | 5 | | | 10 | 5 |
| SE150 Current Limiting, 40-160A | | | | | | | | | | | | | | |
| SED | 40-160 | 2 | 18 | 9 | 14 | 7 | — | — | — | — | 18 | 14 | — | — |
| | | 3 | | | | | 14 | 7 | — | — | | | 14 | — |
| SEH | 40-160 | 2 | 65 | 33 | 35 | 17 | — | — | — | — | 65 | 25 | — | — |
| | | 3 | | | | | 25 | 12 | — | — | | | 18 | — |
| SEL | 40-160 | 2 | 100 | 50 | 65 | 33 | — | — | — | — | 100 | 65 | — | — |
| | | 3 | | | | | 40 | 20 | 5 | 5 | | | 25 | 5 |
| SEP | 40-160 | 2 | 200 | 100 | 100 | 50 | — | — | — | — | 200 | 100 | — | — |
| | | 3 | | | | | 50 | 25 | 10 | 5 | | | 65 | 10 |
| SF250 Current Limiting | | | | | | | | | | | | | | |
| SFH | 70-250 | 2 | 65 | 33 | 35 | 17 | — | — | — | — | 65 | 25 | — | — |
| | | 3 | | | | | 25 | 12 | — | — | | | 18 | — |
| SFL | 70-250 | 2 | 100 | 50 | 65 | 33 | — | — | — | — | 100 | 65 | — | — |
| | | 3 | | | | | 40 | 20 | 14 | 7 | | | 25 | 14 |
| SFP | 70-250 | 2 | 200 | 100 | 100 | 50 | — | — | — | — | 200 | 100 | — | — |
| | | 3 | | | | | 65 | 33 | 18 | 9 | | | 65 | 18 |
| SG600 Current Limiting | | | | | | | | | | | | | | |
| SGH1 ¹ | 60-150 | 3 | 65 | 33 | 25 | 13 | 18 | 9 | — | — | 65 | 25 | 18 | — |
| SGL1 ¹ | | | 100 | 50 | 65 | 33 | 35 | 18 | 14 | 7 | 100 | 65 | 35 | 22 |
| SGP1 ¹ | | | 200 | 100 | 100 | 50 | 50 | 25 | 18 | 9 | 200 | 100 | 65 | 35 |
| SGH4 | 125-400 | 2 | 65 | 33 | 25 | 13 | — | — | — | — | 65 | 25 | — | — |
| | | 3 | | | | | 18 | 9 | — | — | | | 18 | — |
| SGL4 | 125-400 | 2 | 100 | 50 | 65 | 33 | — | — | — | — | 100 | 65 | — | — |
| | | 3 | | | | | 35 | 18 | 14 | 7 | | | 35 | 22 |
| SGP4 | 125-400 | 2 | 200 | 100 | 100 | 50 | — | — | — | — | 200 | 100 | — | — |
| | | 3 | | | | | 50 | 25 | 18 | 9 | | | 65 | 35 |
| SGH6 | 250-600 | 2 | 65 | 33 | 25 | 13 | — | — | — | — | 65 | 25 | — | — |
| | | 3 | | | | | 18 | 9 | — | — | | | 18 | — |
| SGL6 | 250-600 | 2 | 100 | 50 | 65 | 33 | — | — | — | — | 100 | 65 | — | — |
| | | 3 | | | | | 35 | 18 | 14 | 7 | | | 35 | 22 |
| SGP6 | 250-600 | 2 | 200 | 100 | 100 | 50 | — | — | — | — | 200 | 100 | — | — |
| | | 3 | | | | | 50 | 25 | 18 | 9 | | | 65 | 35 |
| SK1200 | | | | | | | | | | | | | | |
| SKH8 | 300-800 | 2 | 65 | 16 | 50 | 13 | 25 | 13 | — | — | 65 | 50 | 25 | — |
| | | 3 | | | | | | | | | | | | |
| SKL8 | 300-800 | 2 | 100 | 25 | 65 | 16 | 42 | 21 | 14 | 14 | 100 | 65 | 42 | 14 |
| | | 3 | | | | | | | | | | | | |
| SKP8 | 300-800 | 2 | 140 | 35 | 85 | 25 | 50 | 25 | 18 | 18 | 140 | 85 | 50 | 18 |
| | | 3 | | | | | | | | | | | | |
| SKH12 | 600-1250 | 2 | 65 | 16 | 50 | 13 | 25 | 13 | — | — | 65 | 50 | 25 | — |
| | | 3 | | | | | | | | | | | | |
| SKL12 | 600-1250 | 2 | 100 | 25 | 65 | 21 | 42 | 16 | 14 | 14 | 100 | 65 | 42 | 14 |
| | | 3 | | | | | | | | | | | | |
| SKP12 | 600-1250 | 2 | 140 | 35 | 70 | 25 | 50 | 25 | 18 | 18 | 140 | 85 | 50 | 18 |
| | | 3 | | | | | | | | | | | | |

¹ microEntelliGuard™, MicroVersaTrip™ Plus, and MicroVersaTrip™ PM Trip Units only.



SE



SF



SG



SK

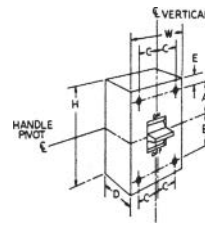


Molded Case Circuit Breakers Industrial Circuit Breakers

Quick Reference Guide

Section 6

Ratings do not apply to molded case switches. The interruption ratings and voltages shown in the table are maximum ratings. A circuit breaker of the type given in the left-hand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table. That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.



TJC



TJL6S

| Mag-Break (UL Files E-11592, E-66390; Magnetic Trip Unit) ¹ | | | | | | | | | | | | | | | | | | | | |
|--|----------|---|-----|---|---|-----|-----|---|-----|-----|---|---|--------|-------|---------|---------|----------|-------|--------|---------------------|
| TFC ⁵ | 225 | 3 | 600 | — | — | — | 25 | — | 22 | 18 | — | — | 10 1/8 | 4 1/8 | 3 13/16 | 3 7/8 | 3 7/8 | 11/16 | 1 3/16 | 10 lb/1 12 lb/1 |
| TBC4 ⁵ | 225-400 | 3 | 600 | — | — | — | 100 | — | 100 | 100 | — | — | 16 1/8 | 8 1/4 | 4 1/2 | 3 15/16 | 9 13/16 | 1 3/8 | 1 3/16 | 31 lb/1 33 lb/1 |
| TJC | 400-600 | 3 | 600 | — | — | — | 42 | — | 30 | 22 | — | — | 10 1/8 | 8 1/4 | 3 13/16 | 3 13/16 | 3 13/16 | 1 3/8 | 1 3/16 | 16 lb/1 17 1/2/1 |
| TBC6 | 600 | 3 | 600 | — | — | — | 100 | — | 100 | 100 | — | — | 21 7/8 | 8 1/4 | 5 7/8 | 8 9/16 | 12 1/16 | 1 3/8 | 5/8 | 53 lb/1 55 lb/1 |
| TKC | 800-1200 | 3 | 600 | — | — | — | 42 | — | 30 | 22 | — | — | 15 1/2 | 8 1/4 | 5 1/2 | 8 9/16 | 5 11/16 | 1 3/8 | 5/8 | 38 lb/1 41 1/2/1 |
| TBC8 | 800 | 3 | 600 | — | — | — | 100 | — | 100 | 100 | — | — | 21 7/8 | 8 1/4 | 5 7/8 | 8 9/16 | 12 1/16 | 1 3/8 | 5/8 | 53 lb/1 55 lb/1 |
| TJ4V ^{2,3,4} | 150-600 | 3 | 600 | — | — | 42 | 42 | — | 30 | 22 | — | — | 10 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 3 13/16 | 1 3/8 | 1 3/16 | — |
| THJ4V ^{2,3,4} | | | | | | 65 | 65 | | 35 | 25 | | | | | | | | | | |
| TJL4V ² | | | | | | 100 | 100 | | 65 | 30 | | | | | | | | | | |
| TK4V ^{2,4} | 800-1200 | 3 | 600 | — | — | 42 | 42 | — | 30 | 22 | — | — | 15 1/2 | 8 1/4 | 5 1/2 | 8 9/16 | 5 11/16 | 1 3/8 | 5/8 | — |
| TKL4V ^{2,4} | 800-1200 | 3 | 600 | — | — | 100 | 100 | — | 65 | 42 | — | — | 15 1/2 | 8 1/4 | 5 1/2 | 8 9/16 | 5 11/16 | 1 3/8 | 5/8 | — |
| TJH1S-6S | 60-600 | 3 | 600 | — | — | 65 | 65 | — | 35 | 25 | — | — | 16 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 9 13/16 | 1 3/8 | 1 3/16 | — |
| TJL1S-6S | 60-600 | 3 | 600 | — | — | 100 | 100 | — | 65 | 30 | — | — | 16 1/8 | 8 1/4 | 3 13/16 | 3 15/16 | 9 13/16 | 1 3/8 | 1 3/16 | — |
| TKH8S ⁴ , 12S ⁴ | 300-1200 | 3 | 600 | — | — | 65 | 65 | — | 50 | 25 | — | — | 21 7/8 | 8 1/4 | 5 1/2 | 8 9/16 | 12 11/16 | 1 3/8 | 5/8 | — |
| TKL8S ⁴ , 12S ⁴ | 300-1200 | 3 | 600 | — | — | 100 | 100 | — | 65 | 42 | — | — | 21 7/8 | 8 1/4 | 5 1/2 | 8 9/16 | 12 11/16 | 1 3/8 | 5/8 | — |

¹ Per UL 489, interrupting capacities are not shown on product label. Contact GE Sales Office for availability of 200 kAIC ratings with internal accessories.

² With Power+ 4 trip unit.

³ Suitable for single-phase, use outer two poles.

⁴ Obsolete as of 12/13.

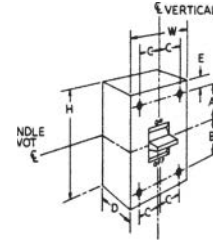


Molded Case Circuit Breakers Industrial Circuit Breakers

Quick Reference Guide

15-600A Record Plus™ Circuit Breakers

The interruption ratings and voltages shown in the table are maximum ratings. A circuit breaker of the type given in the left-hand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table. That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.



FG 600

Ratings

FC 100 Amp Frame; Current Limiting (UL/cUL File No. E-11592)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Voltage Rating | | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) | | | | | IEC Listed Interrupting Ratings, Icu, Amperes (in Thousands) | | | | | Dimensions in. (mm.) | | | Approx. Ship Wt./Std. Pack |
|----------------------|---------------|-----------|------------------------|-----|---|-----|---------|----------|----------|--|---------|-----|----------|----------|----------------------|------------|------------|----------------------------|
| | | | | | Vac | | Vdc | | | Vac | | | Vdc | | H | W | D | |
| | | | | | 240 | 480 | 600/347 | 250 (2p) | 500 (3p) | 220-240 | 400-415 | 500 | 250 (2p) | 500 (3p) | | | | |
| FCS | 15-100 | 2, 3 | 600 | 500 | 42 | 25 | 18 | 22 | 30 | 36 | 22 | 14 | 22 | 30 | 6.4 (162.6) | 3.0 (76.2) | 3.2 (81.3) | 2.5 lb/1 |
| FCV | 15-100 | 2, 3 | 600 | 500 | 65 | 35 | 22 | 25 | 35 | 50 | 30 | 18 | 25 | 35 | 6.4 (162.6) | 3.0 (76.2) | 3.2 (81.3) | 2.5 lb/1 |
| FCN | 15-100 | 2, 3 | 600 | 500 | 150 | 65 | 25 | 30 | 42 | 85 | 50 | 22 | 30 | 42 | 6.4 (162.6) | 3.0 (76.2) | 3.2 (81.3) | 2.5 lb/1 |
| FCH | 15-100 | 2, 3 | 600 | 500 | 200 | 100 | 35 | 42 | 65 | 100 | 80 | 36 | 42 | 65 | 6.4 (162.6) | 3.0 (76.2) | 3.2 (81.3) | 2.5 lb/1 |
| FCL | 15-100 | 2, 3 | 600 | 500 | 200 | 150 | 42 | 65 | 80 | 200 | 150 | 50 | 65 | 80 | 6.4 (162.6) | 3.0 (76.2) | 3.2 (81.3) | 2.5 lb/1 |

FB 100 Amp Frame; Current Limiting (UL/cUL File No. E-11592)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Voltage Rating | | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) | | | | | Dimensions in. (mm.) | | | Approx. Ship Wt./Std. Pack |
|----------------------|---------------|-----------|------------------------|---|---|-----|-----|-----|---------|----------------------|--------------|-------------|----------------------------|
| | | | | | Vac | | | | | H | W | D | |
| | | | | | 240 | 277 | 347 | 480 | 600/347 | | | | |
| FBV | 15-100 | 1 | 600/347 | — | 35 | 35 | 22 | — | — | 6.45 (163.8) | 1.36 (34.5) | 3.28 (83.3) | 1.1 lb/1 |
| | | 2 | 600/347 | — | 65 | — | — | 35 | 22 | 6.45 (163.8) | 2.74 (69.6) | 3.28 (83.3) | 2.6 lb/1 |
| | | 3 | 600/347 | — | 65 | — | — | 35 | 22 | 6.45 (163.8) | 4.11 (104.4) | 3.28 (83.3) | 3.3 lb/1 |
| FBN | 15-100 | 1 | 600/347 | — | 65 | 65 | 25 | — | — | 6.45 (163.8) | 1.36 (34.5) | 3.28 (83.3) | 1.1 lb/1 |
| | | 2 | 600/347 | — | 150 | — | — | 65 | 25 | 6.45 (163.8) | 2.74 (69.6) | 3.28 (83.3) | 2.6 lb/1 |
| | | 3 | 600/347 | — | 150 | — | — | 65 | 25 | 6.45 (163.8) | 4.11 (104.4) | 3.28 (83.3) | 3.3 lb/1 |
| FBH | 15-100 | 1 | 600/347 | — | 100 | 100 | 35 | — | — | 6.45 (163.8) | 1.36 (34.5) | 3.28 (83.3) | 1.1 lb/1 |
| | | 2 | 600/347 | — | 200 | — | — | 100 | 35 | 6.45 (163.8) | 2.74 (69.6) | 3.28 (83.3) | 2.6 lb/1 |
| | | 3 | 600/347 | — | 200 | — | — | 100 | 35 | 6.45 (163.8) | 4.11 (104.4) | 3.28 (83.3) | 3.3 lb/1 |
| FBL | 15-100 | 1 | 600/347 | — | 100 | 100 | 42 | — | — | 6.45 (163.8) | 1.36 (34.5) | 3.28 (83.3) | 1.1 lb/1 |
| | | 2 | 600/347 | — | 200 | — | — | 150 | 42 | 6.45 (163.8) | 2.74 (69.6) | 3.28 (83.3) | 2.6 lb/1 |
| | | 3 | 600/347 | — | 200 | — | — | 150 | 42 | 6.45 (163.8) | 4.11 (104.4) | 3.28 (83.3) | 3.3 lb/1 |

FE 250 Amp Frame; Current Limiting (UL/cUL File No. E-11592)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Voltage Rating | | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) | | | Dimensions in. (mm.) | | | Approx. Ship Wt./Std. Pack |
|----------------------|---------------|-----------|------------------------|---|---|-----|-----|----------------------|--------------|-------------|----------------------------|
| | | | | | Vac | | | H | W | D | |
| | | | | | 240 | 480 | 600 | | | | |
| FEN | 250 | 2 | 480 | - | 150 | 65 | - | 6.70 (170.1) | 4.11 (104.4) | 3.52 (89.5) | 4.5 lb/1 |
| FEN | 250 | 3 | 480 | - | 150 | 65 | - | 6.70 (170.1) | 4.11 (104.4) | 3.52 (89.5) | 4.5 lb/1 |
| FEH | 250 | 2 | 480 | - | 200 | 100 | - | 6.70 (170.1) | 4.11 (104.4) | 3.52 (89.5) | 4.5 lb/1 |
| FEH | 250 | 3 | 480 | - | 200 | 100 | - | 6.70 (170.1) | 4.11 (104.4) | 3.52 (89.5) | 4.5 lb/1 |

FG 600 Amp Frame; Current Limiting (UL/cUL File No. E-11592)

| Circuit Breaker Type | Ampere Rating | No. Poles | Maximum Voltage Rating | | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) | | | EN 60947-2 Interrupting Ratings, Icu, Amperes (in Thousands) | | | Dimensions in. (mm.) | | | Approx. Ship Wt./Std. Pack |
|----------------------|---------------|-----------|------------------------|---|---|-----|-----|--|---------|-----|----------------------|--------------|--------------|----------------------------|
| | | | | | Vac | | | Vac | | | H | W | D | |
| | | | | | 240 | 480 | 600 | 240 | 400-415 | 690 | | | | |
| FGN | 250-600 | 2 | 600 | — | 150 | 65 | 25 | — | — | — | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |
| | | 3 | 600 | — | 150 | 65 | 25 | 85 | 50 | 10 | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |
| FGH | 250-600 | 2 | 600 | — | 200 | 100 | 35 | — | — | — | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |
| | | 3 | 600 | — | 200 | 100 | 35 | 100 | 80 | 22 | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |
| FGL | 250-600 | 2 | 600 | — | 200 | 150 | 42 | — | — | — | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |
| | | 3 | 600 | — | 200 | 150 | 42 | 200 | 150 | 40 | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |
| FGP | 250-600 | 2 | 600 | — | 200 | 200 | 65 | — | — | — | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |
| | | 3 | 600 | — | 200 | 200 | 65 | — | — | — | 10.31 (262.0) | 5.46 (138.7) | 4.53 (115.0) | 22 lb/1 |



Molded Case Circuit Breakers

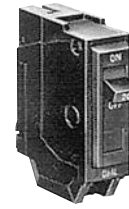
Q-Line Circuit Breakers

Section 6

Plug-in Circuit Breakers
120/240V Class

TQL and THQL 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|-----------------|-------------------------|---------------------------------|----------------|
| 1 | 10 ⁴ | | 5kA | TQL1110 |
| 1 | 15 ² | (1) 14-8 Cu/12-8 Al | 10kA | THQL1115 |
| 1 | 20 ² | (1) 14-8 Cu/12-8 Al | 10kA | THQL1120 |
| 1 | 25 | (1) 14-8 Cu/12-8 Al | 10kA | THQL1125 |
| 1 | 30 | (1) 14-8 Cu/12-8 Al | 10kA | THQL1130 |
| 1 | 35 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1135 |
| 1 | 40 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1140 |
| 1 | 45 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1145 |
| 1 | 50 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1150 |
| 1 | 60 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1160 |
| 1 | 70 | (1) 6-1/0 Cu/4-1/0 Al | 10kA | THQL1170 |



THQL1120

THQL 120/240 Vac, with Factory Installed Shunt

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 1 | 15 | (1) 14-8 Cu/12-8 Al | 10kA | THQL1115ST1 |
| 1 | 20 | (1) 14-8 Cu/12-8 Al | 10kA | THQL1120ST1 |
| 1 | 30 | (1) 14-8 Cu/12-8 Al | 10kA | THQL1130ST1 |
| 1 | 35 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1135ST1 |
| 1 | 40 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1140ST1 |
| 1 | 45 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1145ST1 |
| 1 | 50 | (1) 8-3 Cu/8-3 Al | 10kA | THQL1150ST1 |

TQL and THQL 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|-----------------|-------------------------|---------------------------------|------------------------|
| 2 | 10 ⁴ | | 5kA | TQL2110 |
| 2 | 15 | (1) 14-8 Cu/12-8 Al | 10kA | THQL2115 |
| 2 | 20 | (1) 14-8 Cu/12-8 Al | 10kA | THQL2120 |
| 2 | 25 | (1) 14-8 Cu/12-8 Al | 10kA | THQL2125 |
| 2 | 30 | (1) 14-8 Cu/12-8 Al | 10kA | THQL2130 |
| 2 | 35 | (1) 8-3 Cu/8-3 Al | 10kA | THQL2135 |
| 2 | 40 | (1) 8-3 Cu/8-3 Al | 10kA | THQL2140 |
| 2 | 45 | (1) 8-3 Cu/8-3 Al | 10kA | THQL2145 |
| 2 | 50 | (1) 8-3 Cu/8-3 Al | 10kA | THQL2150 |
| 2 | 60 | (1) 8-3 Cu/8-3 Al | 10kA | THQL2160 |
| 2 | 70 | (1) 6-1/0 Cu/4-1/0 Al | 10kA | THQL2170 |
| 2 | 80 | (1) 6-1/0 Cu/4-1/0 Al | 10kA | THQL2180 |
| 2 | 90 | (1) 6-1/0 Cu/4-1/0 Al | 10kA | THQL2190 |
| 2 | 100 | (1) 6-1/0 Cu/4-1/0 Al | 10kA | THQL21100 |
| 2 | 110 | (1) 2-2/0 Cu/2-2/0 Al | 10kA | THQL21110 |
| 2 | 125 | (1) 2-2/0 Cu/2-2/0 Al | 10kA | THQL21125 ³ |



THQL1130ST1

THQP 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQP115 |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQP120 |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQP125 |
| 1 | 30 | 8-4 Cu/8-4 Al | 10kA | THQP130 |
| 1 | 35 | 8-4 Cu/8-4 Al | 10kA | THQP135 |
| 1 | 40 | 8-4 Cu/8-4 Al | 10kA | THQP140 |
| 1 | 45 | 8-4 Cu/8-4 Al | 10kA | THQP145 |
| 1 | 50 | 8-4 Cu/8-4 Al | 10kA | THQP150 |



THQP130

THQP 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQP215 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQP220 |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQP225 |
| 2 | 30 | 8-4 Cu/8-4 Al | 10kA | THQP230 |
| 2 | 35 | 8-4 Cu/8-4 Al | 10kA | THQP235 |
| 2 | 40 | 8-4 Cu/8-4 Al | 10kA | THQP240 |
| 2 | 45 | 8-4 Cu/8-4 Al | 10kA | THQP245 |
| 2 | 50 | 8-4 Cu/8-4 Al | 10kA | THQP250 |



THQP230

¹Solid or stranded for 14-10 AWG.

²UL listed as SWD (Switching Duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

³Recommended for use as main or submain breaker only.

⁴Not UL listed.

UL listed as HACR (heating, air conditioning and refrigeration).



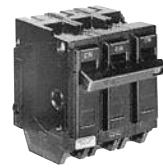
Molded Case Circuit Breakers

Q-Line Circuit Breakers

Plug-in Circuit Breakers
120/240V Class

TQL and THQL 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 2 | 10 | | 5kA | TQL22010 |
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL22015 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL22020 |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQL22025 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL22030 |
| 2 | 35 | 8-3 Cu/8-3 Al | 10kA | THQL22035 |
| 2 | 40 | 8-3 Cu/8-3 Al | 10kA | THQL22040 |
| 2 | 45 | 8-3 Cu/8-3 Al | 10kA | THQL22045 |
| 2 | 50 | 8-3 Cu/8-3 Al | 10kA | THQL22050 |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | THQL22060 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL22070 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL22080 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL22090 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL22100 |
| 3 | 10 | | 5kA | TQL32010 |
| 3 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL32015 |
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL32020 |
| 3 | 25 | 14-8 Cu/12-8 Al | 10kA | THQL32025 |
| 3 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL32030 |
| 3 | 35 | 8-3 Cu/8-3 Al | 10kA | THQL32035 |
| 3 | 40 | 8-3 Cu/8-3 Al | 10kA | THQL32040 |
| 3 | 45 | 8-3 Cu/8-3 Al | 10kA | THQL32045 |
| 3 | 50 | 8-3 Cu/8-3 Al | 10kA | THQL32050 |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | THQL32060 |
| 3 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32070 |
| 3 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32080 |
| 3 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32090 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32100 |



THQL32015



THQL2120ST1

15-100 ampere UL Listed as HACR (heating, air conditioning and refrigeration).

THQL 120/240 Vac, Internal Common Trip with Factory Installed Shunt

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL2115ST1 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL2120ST1 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL2130ST1 |
| 2 | 35 | 8-3 Cu/8-3 Al | 10kA | THQL2135ST1 |
| 2 | 40 | 8-3 Cu/8-3 Al | 10kA | THQL2140ST1 |
| 2 | 45 | 8-3 Cu/8-3 Al | 10kA | THQL2145ST1 |
| 2 | 50 | 8-3 Cu/8-3 Al | 10kA | THQL2150ST1 |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | THQL2160ST1 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL2170ST1 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL2180ST1 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL2190ST1 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL21100ST1 |
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL32020ST1 |
| 3 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL32030ST1 |
| 3 | 40 | 8-3 Cu/8-3 Al | 10kA | THQL32040ST1 |
| 3 | 50 | 8-3 Cu/8-3 Al | 10kA | THQL32050ST1 |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | THQL32060ST1 |
| 3 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32070ST1 |
| 3 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32080ST1 |
| 3 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32090ST1 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQL32100ST1 |



THQL32020ST1

THQL and THHQL Vac Arc Fault

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|---------------------------|
| 1 | 15 | 14-10 Cu/14-10 Al | 10kA | THQL1115AF2 ² |
| 1 | 20 | 14-10 Cu/14-10 Al | 10kA | THQL1120AF2 ² |
| 1 | 15 | 14-10 Cu/14-10 Al | 22kA | THHQL1115AF2 ² |
| 1 | 20 | 14-10 Cu/14-10 Al | 22kA | THHQL1120AF2 ² |



THQL1115AF2

Dual Function GFCI/AFCI Ground Fault & Combination Arc Fault Circuit Breaker

(Available December 2014)

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL1115DF |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL1120DF |
| 1 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL1115DF |
| 1 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL1120DF |

¹Solid or stranded for 14-10 AWG.

²Combination AFCI compliant with NEC 2008 and later.



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Plug-in Circuit Breakers
240V Class

Section 6

THQL and THHQL 120 Vac, Ground Fault Circuit Interrupters

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL1115GF |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL1120GF |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL1130GF |
| 1 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL1115GF |
| 1 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL1120GF |
| 1 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQL1130GF |

THQL and THHQL 120/240 Vac or 208Y/120 Vac, Ground Fault Circuit Interrupters Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL2115GF1 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL2120GF1 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL2130GF1 |
| 2 | 40 | 8-3 Cu/8-3 Al | 10kA | THQL2140GF1 |
| 2 | 50 | 8-3 Cu/8-3 Al | 10kA | THQL2150GF1 |

THQL and THHQL 120 Vac, Equipment Protection Ground Fault Circuit Breakers Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL1115GFEP |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL1120GFEP |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL1130GFEP |

THQL and THHQL 120/240 Vac or 208Y/120 Vac, Equipment Protection Ground Fault Circuit Breakers

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac or 208Y/120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL2115GFEP |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL2120GFEP |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL2130GFEP |

THQL and THHQL 120/240 Vac, High Intensity Discharge Lighting Loads

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|---------------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL1115HID ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL1120HID ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQL1125HID |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL1130HID |
| 1 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL1115HID ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL1120HID ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQL1125HID |
| 1 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQL1130HID |

UL listed as HID.

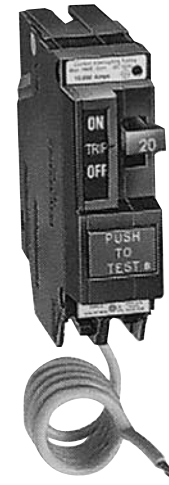
THQL and THHQL 120/240 Vac, Internal Common Trip For High Intensity Discharge Lighting Loads

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL2115HID |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL2120HID |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQL2125HID |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL2130HID |
| 2 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL2115HID |
| 2 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL2120HID |
| 2 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQL2125HID |
| 2 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQL2130HID |

UL listed as HID.

¹Solid or stranded for 14-10 AWG.

²UL listed as SWD (switching duty). Suitable for 120 Vac fluorescent lighting loads.



THQL1120GF



THQL2120HID



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Plug-in Circuit Breakers
240V Class

THQL 120/240 Vac, High In-Rush Loads

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL1115HM |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL1120HM |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQL1125HM |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL1130HM |
| 1 | 40 | 8-3 Cu/8-3 Al | 10kA | THQL1140HM |
| 1 | 50 | 8-3 Cu/8-3 Al | 10kA | THQL1150HM |



THQL1120HM

THQL 120 Vac, For Factory Installed Shunt Trip^{2,3} Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL32020ST1 |

THQL 120/240 Vac, Thermal Magnetic Pole plus Nonautomatic Pole For Switching Neutral

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL21WY15 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL21WY20 |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQL21WY25 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL21WY30 |
| 3 | 15 | 14-8 Cu/12-8 Al | 10kA | THQL31WY15 |
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQL31WY20 |
| 3 | 25 | 14-8 Cu/12-8 Al | 10kA | THQL31WY25 |
| 3 | 30 | 14-8 Cu/12-8 Al | 10kA | THQL31WY30 |



THLK2125

¹Solid or stranded for 14-10 AWG.

²For additional shunt trip offerings see page 6-41.

³UL listed as HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Plug-in Circuit Breakers
240V Class

Section 6

THHQL 120 Vac

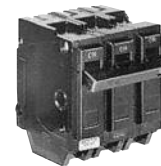
| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|------------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL1115 ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL1120 ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQL1125 |
| 1 | 30 | 8-3 Cu/8-3 Al | 22kA | THHQL1130 |
| 1 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQL1135 |
| 1 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQL1140 |
| 1 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQL1145 |
| 1 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQL1150 |
| 1 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQL1160 |
| 1 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL1170 |



THHQL1120

THHQL 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL2115 |
| 2 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL2120 |
| 2 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQL2125 |
| 2 | 30 | 8-3 Cu/8-3 Al | 22kA | THHQL2130 |
| 2 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQL2135 |
| 2 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQL2140 |
| 2 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQL2145 |
| 2 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQL2150 |
| 2 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQL2160 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL2170 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL2180 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL2190 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL21100 |
| 2 | 110 | 2-2/0 Cu/2-2/0 Al | 22kA | THHQL21110 |
| 2 | 125 | 2-2/0 Cu/2-2/0 Al | 22kA | THHQL21125 |



THHQL32015

THHQL 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL22015 |
| 2 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL22020 |
| 2 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQL22025 |
| 2 | 30 | 8-3 Cu/8-3 Al | 22kA | THHQL22030 |
| 2 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQL22035 |
| 2 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQL22040 |
| 2 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQL22045 |
| 2 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQL22050 |
| 2 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQL22060 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL22070 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL22080 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL22090 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL22100 |
| 3 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQL32015 |
| 3 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQL32020 |
| 3 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQL32025 |
| 3 | 30 | 8-3 Cu/8-3 Al | 22kA | THHQL32030 |
| 3 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQL32035 |
| 3 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQL32040 |
| 3 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQL32045 |
| 3 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQL32050 |
| 3 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQL32060 |
| 3 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL32070 |
| 3 | 80 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL32080 |
| 3 | 90 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL32090 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQL32100 |

¹Solid or stranded for 14-10 AWG.

²UL listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

UL listed HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Plug-in Circuit Breakers
240V Class

TXQL 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|-----------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQL1115 ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQL1120 ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQL1125 |
| 1 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQL1130 |

TXQL 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQL2115 |
| 2 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQL2120 |
| 2 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQL2125 |
| 2 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQL2130 |
| 3 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQL32015 |
| 3 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQL32020 |
| 3 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQL32025 |
| 3 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQL32030 |

¹Solid or stranded for 14-10 AWG.

²UL listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

³Limited availability. Obsolete when inventory depleted.

UL listed HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Bolt-on Circuit Breakers
240V Class

Section 6

TQB, THQB 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|-----------------------|
| 1 | 10 | 14-8 Cu/12-8 Al | 5kA | TQB1110 ³ |
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB1115 ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB1120 ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB1125 |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB1130 |
| 1 | 35 | 8-3 Cu/8-3 Al | 10kA | THQB1135 |
| 1 | 40 | 8-3 Cu/8-3 Al | 10kA | THQB1140 |
| 1 | 45 | 8-3 Cu/8-3 Al | 10kA | THQB1145 |
| 1 | 50 | 8-3 Cu/8-3 Al | 10kA | THQB1150 |
| 1 | 60 | 8-3 Cu/8-3 Al | 10kA | THQB1160 |
| 1 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB1170 |



THQB2115

TQB, THQB 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------------|
| 2 | 10 | 14-8 Cu/12-8 Al | 5kA | TQB2110 ³ |
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB2115 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB2120 |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB2125 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB2130 |
| 2 | 35 | 8-3 Cu/8-3 Al | 10kA | THQB2135 |
| 2 | 40 | 8-3 Cu/8-3 Al | 10kA | THQB2140 |
| 2 | 45 | 8-3 Cu/8-3 Al | 10kA | THQB2145 |
| 2 | 50 | 8-3 Cu/8-3 Al | 10kA | THQB2150 |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | THQB2160 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB2170 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB2180 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB2190 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB21100 |

TQB, THQB 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|-----------------------|
| 2 | 10 | 14-8 Cu/12-8 Al | 5kA | TQB22010 ³ |
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB22015 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB22020 |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB22025 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB22030 |
| 2 | 35 | 8-3 Cu/8-3 Al | 10kA | THQB22035 |
| 2 | 40 | 8-3 Cu/8-3 Al | 10kA | THQB22040 |
| 2 | 45 | 8-3 Cu/8-3 Al | 10kA | THQB22045 |
| 2 | 50 | 8-3 Cu/8-3 Al | 10kA | THQB22050 |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | THQB22060 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB22070 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB22080 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB22090 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB22100 |
| 3 | 10 | 14-8 Cu/12-8 Al | 5kA | TQB32010 ³ |
| 3 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB32015 |
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB32020 |
| 3 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB32025 |
| 3 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB32030 |
| 3 | 35 | 8-3 Cu/8-3 Al | 10kA | THQB32035 |
| 3 | 40 | 8-3 Cu/8-3 Al | 10kA | THQB32040 |
| 3 | 45 | 8-3 Cu/8-3 Al | 10kA | THQB32045 |
| 3 | 50 | 8-3 Cu/8-3 Al | 10kA | THQB32050 |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | THQB32060 |
| 3 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32070 |
| 3 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32080 |
| 3 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32090 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32100 |

¹Solid or stranded for 14-10 AWG.

²UL listed as SWD (Switching Duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

³Not UL listed.

UL listed HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Bolt-on Circuit Breakers
240V Class

THQB and THHQB 120/240 Vac Arc Fault (Single pole)

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|---------------------------|
| 1 | 15 | 14-10 Cu/14-10 Al | 10kA | THQB1115AF2 ² |
| 1 | 20 | 14-10 Cu/14-10 Al | 10kA | THQB1120AF2 ² |
| 1 | 15 | 14-10 Cu/14-10 Al | 22kA | THHQB1115AF2 ² |
| 1 | 20 | 14-10 Cu/14-10 Al | 22kA | THHQB1120AF2 ² |

THQB, THHQB 120 Vac, Ground Fault Circuit Interrupters (5 ma)

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB1115GF |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB1120GF |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB1125GF |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB1130GF |
| 1 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQB1115GF |
| 1 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQB1120GF |
| 1 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB1125GF |
| 1 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQB1130GF |

THQB, THHQB 120/240 Vac, Ground Fault Circuit Interrupters, Self Testing, cULus

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|--------------------------|
| 1 | 15 | 14-8Cu/12-8 Al | 10kA | THQB1115GFT |
| 1 | 20 | 14-8Cu/12-8 Al | 10kA | THQB1120GFT |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB1125GFT |
| 1 | 30 | 14-8Cu/12-8 Al | 10kA | THQB1130GFT |
| 1 | 15 | 14-8Cu/12-8 Al | 22kA | THHQB1115GFT |
| 1 | 20 | 14-8Cu/12-8 Al | 22kA | THHQB1120GFT |
| 1 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB1125GFT |
| 1 | 30 | 14-8Cu/12-8 Al | 22kA | THHQB1130GFT |
| 2 | 15 | 14-8Cu/12-8 Al | 10kA | THQB2115GFT |
| 2 | 20 | 14-8Cu/12-8 Al | 10kA | THQB2120GFT |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB2125GFT |
| 2 | 30 | 14-8Cu/12-8 Al | 10kA | THQB2130GFT |
| 2 | 40 | 14AWG-8AWG | 10kA | THQB2140GFT ³ |
| 2 | 50 | 14AWG-8AWG | 10kA | THQB2150GFT ³ |

THQB 120/240 or 208Y/120 Vac, Ground Fault Circuit Interrupters (5 ma), Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 or 208Y/120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB2115GF |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB2120GF |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB2125GF |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB2130GF |

THQB 120 Vac, Ground Fault Circuit Interrupters (30 ma); cULus

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB1115GFEP |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB1120GFEP |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB1130GFEP |

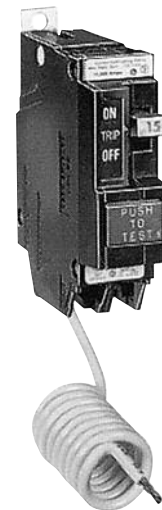
THQB 120/240 or 208Y/120 Vac, Ground Fault Circuit Interrupters (30 ma); cULus Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 or 208Y/120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB2115GFEP |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB2120GFEP |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB2130GFEP |
| 2 | 40 | 14-8 Cu/12-8 Al | 10kA | THQB2140GFEP |

¹Solid or stranded for 14-10 AWG.

²Combination AFCI compliant with NEC 2008 and later.

³UL & CSA



THQB1115GF



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Bolt-on Circuit Breakers
240V Class

Section 6

THQB, THHQB 120/240 Vac, High Intensity Discharge Lighting Loads¹

| # of Poles | Ampere Rating | Wire Range ² | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|---------------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB1115HID ³ |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB1120HID ³ |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB1125HID |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB1130HID |
| 1 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQB1115HID ³ |
| 1 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQB1120HID ³ |
| 1 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB1125HID |
| 1 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQB1130HID |
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB2115HID |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB2120HID |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB2125HID |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB2130HID |

THHQB 120/240 Vac, Internal Common Trip, High Intensity Discharge Lighting Loads¹

| # of Poles | Ampere Rating | Wire Range ² | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQB2115HID |
| 2 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQB2120HID |
| 2 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB2125HID |
| 2 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQB2130HID |

THQB 120 Vac with Factory Installed 120 Vac Shunt Trip^{4,5}

| # of Poles | Ampere Rating | Wire Range ² | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB1120ST1 |

THQB 120 Vac, Internal Common Trip with Factory Installed 120 Vac Shunt Trip^{4,5}

| # of Poles | Ampere Rating | Wire Range ² | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB2120ST1 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB2130ST1 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB21100ST1 |
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB32020ST1 |
| 3 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB32030ST1 |
| 3 | 35 | 8-3 Cu/8-3 Al | 10kA | THQB32035ST1 |
| 3 | 40 | 8-3 Cu/8-3 Al | 10kA | THQB32040ST1 |
| 3 | 50 | 8-3 Cu/8-3 Al | 10kA | THQB32050ST1 |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | THQB32060ST1 |
| 3 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32070ST1 |
| 3 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32080ST1 |
| 3 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32090ST1 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQB32100ST1 |

THQB 120 Vac with Switching Neutral Single Thermal Magnetic Pole; Single Nonautomatic Pole

| # of Poles | Ampere Rating | Wire Range ² | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB21WY15 |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB21WY20 |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB21WY25 |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB21WY30 |

THQB 120 Vac with Switching Neutral Two Thermal Magnetic Pole; Single Nonautomatic Pole

| # of Poles | Ampere Rating | Wire Range ² | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 3 | 15 | 14-8 Cu/12-8 Al | 10kA | THQB31WY15 |
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQB31WY20 |
| 3 | 25 | 14-8 Cu/12-8 Al | 10kA | THQB31WY25 |
| 3 | 30 | 14-8 Cu/12-8 Al | 10kA | THQB31WY30 |

¹UL listed as HID (high intensity discharge).

²Solid or stranded for 14-10 AWG.

³UL listed as SWD (switching duty). Suitable for switching 120 Vac fluorescent lighting loads.

⁴For additional shunt trip offerings see page 6-41.

⁵20-60 ampere are UL listed as HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Bolt-on Circuit Breakers
240V Class

THHQB 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|------------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQB1115 ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQB1120 ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB1125 |
| 1 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQB1130 |
| 1 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQB1135 |
| 1 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQB1140 |
| 1 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQB1145 |
| 1 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQB1150 |
| 1 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQB1160 |
| 1 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB1170 |

THQB/THHQB 120/240 Vac, Low Magnetic Pickup

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|-------------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10 kA | THQB1115LM ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 10 kA | THQB1120LM ² |
| 1 | 15 | 14-8 Cu/12-8 Al | 22 kA | THHQB1115LM |
| 1 | 20 | 14-8 Cu/12-8 Al | 22 kA | THHQB1120LM |
| 2 | 15 | 14-8 Cu/12-8 Al | 10 kA | THQB2115LM |
| 2 | 20 | 14-8 Cu/12-8 Al | 10 kA | THQB2120LM |
| 2 | 15 | 14-8 Cu/12-8 Al | 22 kA | THHQB2115LM |
| 2 | 20 | 14-8 Cu/12-8 Al | 22 kA | THHQB2120LM |

THHQB 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQB2115 |
| 2 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQB2120 |
| 2 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB2125 |
| 2 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQB2130 |
| 2 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQB2135 |
| 2 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQB2140 |
| 2 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQB2145 |
| 2 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQB2150 |
| 2 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQB2160 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB2170 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB2180 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB2190 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB21100 |



THHQB2115

THHQB 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQB22015 |
| 2 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQB22020 |
| 2 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB22025 |
| 2 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQB22030 |
| 2 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQB22035 |
| 2 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQB22040 |
| 2 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQB22045 |
| 2 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQB22050 |
| 2 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQB22060 |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB22070 |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB22080 |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB22090 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB22100 |
| 3 | 15 | 14-8 Cu/12-8 Al | 22kA | THHQB32015 |
| 3 | 20 | 14-8 Cu/12-8 Al | 22kA | THHQB32020 |
| 3 | 25 | 14-8 Cu/12-8 Al | 22kA | THHQB32025 |
| 3 | 30 | 14-8 Cu/12-8 Al | 22kA | THHQB32030 |
| 3 | 35 | 8-3 Cu/8-3 Al | 22kA | THHQB32035 |
| 3 | 40 | 8-3 Cu/8-3 Al | 22kA | THHQB32040 |
| 3 | 45 | 8-3 Cu/8-3 Al | 22kA | THHQB32045 |
| 3 | 50 | 8-3 Cu/8-3 Al | 22kA | THHQB32050 |
| 3 | 60 | 8-3 Cu/8-3 Al | 22kA | THHQB32060 |
| 3 | 70 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB32070 |
| 3 | 80 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB32080 |
| 3 | 90 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB32090 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 22kA | THHQB32100 |

¹Solid or stranded for 14-10 AWG.

²UL listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

UL listed HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Section 6

Bolt-on Circuit Breakers
240V Class

TXQB 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|-----------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQB1115 ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQB1120 ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQB1125 |
| 1 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQB1130 |

TXQB 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQB2115 |
| 2 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQB2120 |
| 2 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQB2125 |
| 2 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQB2130 |

TXQB 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 3 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQB32015 |
| 3 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQB32020 |
| 3 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQB32025 |
| 3 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQB32030 |

¹Solid or stranded for 14-10 AWG.

²UL listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

UL listed HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Cable-in Cable-out (lug-lug)
240V Class

Section 6

TQC, THQC, THHQC 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number ² | 120/240 Vac Interrupting Rating | Product Number ² |
|------------|---------------|-------------------------|---------------------------------|-----------------------------|---------------------------------|-----------------------------|
| 1 | 10 | 14-4 Cu/12-2 Al | 5kA | TQC1110WL | | |
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQC1115WL ^{3,4} | 22kA | THHQC1115WL ³ |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQC1120WL ^{3,4} | 22kA | THHQC1120WL ³ |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQC1125WL ³ | 22kA | THHQC1125WL ³ |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQC1130WL ³ | 22kA | THHQC1130WL ³ |
| 1 | 35 | 8-3 Cu/8-3 Al | 10kA | THQC1135WL ³ | 22kA | THHQC1135WL ³ |
| 1 | 40 | 8-3 Cu/8-3 Al | 10kA | THQC1140WL ³ | 22kA | THHQC1140WL ³ |
| 1 | 45 | 8-3 Cu/8-3 Al | 10kA | THQC1145WL ³ | 22kA | THHQC1145WL ³ |
| 1 | 50 | 8-3 Cu/8-3 Al | 10kA | THQC1150WL ³ | 22kA | THHQC1150WL ³ |
| 1 | 60 | 8-3 Cu/8-3 Al | 10kA | THQC1160WL ³ | 22kA | THHQC1160WL ³ |
| 1 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC1170WL | 22kA | THHQC1170WL |

TQC, THQC, THHQC 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number ² | 120/240 Vac Interrupting Rating | Product Number ² |
|------------|---------------|-------------------------|---------------------------------|-----------------------------|---------------------------------|-----------------------------|
| 2 | 10 | 14-4 Cu/12-2 Al | 5kA | TQC2110WL | | |
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQC2115WL ³ | 22kA | THHQC2115WL ³ |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQC2120WL ³ | 22kA | THHQC2120WL ³ |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQC2125WL ³ | | |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQC2130WL ³ | 22kA | THHQC2130WL ³ |
| 2 | 35 | 8-3 Cu/8-3 Al | 10kA | THQC2135WL ³ | 22kA | THHQC2135WL ³ |
| 2 | 40 | 8-3 Cu/8-3 Al | 10kA | THQC2140WL ³ | 22kA | THHQC2140WL ³ |
| 2 | 45 | 8-3 Cu/8-3 Al | 10kA | THQC2145WL ³ | 22kA | THHQC2145WL ³ |
| 2 | 50 | 8-3 Cu/8-3 Al | 10kA | THQC2150WL ³ | 22kA | THHQC2150WL ³ |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | THQC2160WL ³ | 22kA | THHQC2160WL ³ |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC2170WL | 22kA | THHQC2170WL |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC2180WL | 22kA | THHQC2180WL |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC2190WL | 22kA | THHQC2190WL |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC21100WL | 22kA | THHQC21100WL |

TQC, THQC, THHQC 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac Interrupting Rating | Product Number ² | 240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|
| 2 | 10 | 14-4 Cu/12-2 Al | 5kA | TQC22010WL | | |
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQC22015WL | 22kA | THHQC22015WL |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQC22020WL | 22kA | THHQC22020WL |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQC22025WL | 22kA | THHQC22025WL |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQC22030WL | 22kA | THHQC22030WL |
| 2 | 35 | 8-3 Cu/8-3 Al | 10kA | THQC22035WL | 22kA | THHQC22035WL |
| 2 | 40 | 8-3 Cu/8-3 Al | 10kA | THQC22040WL | 22kA | THHQC22040WL |
| 2 | 45 | 8-3 Cu/8-3 Al | 10kA | THQC22045WL | 22kA | THHQC22045WL |
| 2 | 50 | 8-3 Cu/8-3 Al | 10kA | THQC22050WL | 22kA | THHQC22050WL |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | THQC22060WL | 22kA | THHQC22060WL |
| 2 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC22070WL | 22kA | THHQC22070WL |
| 2 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC22080WL | 22kA | THHQC22080WL |
| 2 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC22090WL | 22kA | THHQC22090WL |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC22100WL | 22kA | THHQC22100WL |
| 3 | 10 | 14-4 Cu/12-2 Al | 5kA | TQC32010WL | | |
| 3 | 15 | 14-8 Cu/12-8 Al | 10kA | THQC32015WL | 22kA | THHQC32015WL |
| 3 | 20 | 14-8 Cu/12-8 Al | 10kA | THQC32020WL | 22kA | THHQC32020WL |
| 3 | 25 | 14-8 Cu/12-8 Al | 10kA | THQC32025WL | 22kA | THHQC32025WL |
| 3 | 30 | 14-8 Cu/12-8 Al | 10kA | THQC32030WL | 22kA | THHQC32030WL |
| 3 | 35 | 8-3 Cu/8-3 Al | 10kA | THQC32035WL | 22kA | THHQC32035WL |
| 3 | 40 | 8-3 Cu/8-3 Al | 10kA | THQC32040WL | 22kA | THHQC32040WL |
| 3 | 45 | 8-3 Cu/8-3 Al | 10kA | THQC32045WL | 22kA | THHQC32045WL |
| 3 | 50 | 8-3 Cu/8-3 Al | 10kA | THQC32050WL | 22kA | THHQC32050WL |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | THQC32060WL | 22kA | THHQC32060WL |
| 3 | 70 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC32070WL | 22kA | THHQC32070WL |
| 3 | 80 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC32080WL | 22kA | THHQC32080WL |
| 3 | 90 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC32090WL | 22kA | THHQC32090WL |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | THQC32100WL | 22kA | THHQC32100WL |

¹Solid or stranded for 14-10 AWG.

²Use additional suffix "BP" (THQC32020WLBP) for bulk pack of 48 poles. Carton weight 20 lbs. 15-60 ampere breakers only.

³Suitable for mounting on standard 35mm DIN Rail. Refer to table on page 6-27 for termination options.

⁴UL listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

UL listed HACR (heating, air conditioning and refrigeration). Refer to Q-Line accessories listed on pages 6-30 to 6-31.



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Cable-in Cable-out (lug-lug)
240V Class

Section 6

THQC 120 Vac, Ground Fault Circuit Interrupters

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|-------------------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 10kA | THQC1115GF ² |
| 1 | 20 | 14-8 Cu/12-8 Al | 10kA | THQC1120GF ² |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQC1125GF ² |
| 1 | 30 | 14-8 Cu/12-8 Al | 10kA | THQC1130GF ² |

THQC 120/240 Vac Ground Fault Circuit Interrupters, Self-Testing

| # of Poles | Ampere Rating | Wire Range ¹ | 120 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|-----------------------------|----------------|
| 1 | 15 | 14-8Cu/12-8 Al | 10kA | THQC1115GFT |
| 1 | 20 | 14-8Cu/12-8 Al | 10kA | THQC1120GFT |
| 1 | 25 | 14-8 Cu/12-8 Al | 10kA | THQC1125GFT |
| 1 | 30 | 14-8Cu/12-8 Al | 10kA | THQC1130GFT |
| 2 | 15 | 14-8 Cu/12-8 Al | 10kA | THQC2115GFT |
| 2 | 20 | 14-8 Cu/12-8 Al | 10kA | THQC2120GFT |
| 2 | 25 | 14-8 Cu/12-8 Al | 10kA | THQC2125GFT |
| 2 | 30 | 14-8 Cu/12-8 Al | 10kA | THQC2130GFT |



THQC1120GF

TXQC 120/240 Vac

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 1 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQC1115WL |
| 1 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQC1120WL |
| 1 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQC1125WL |
| 1 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQC1130WL |

TXQC 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 2 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQC2115WL |
| 2 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQC2120WL |
| 2 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQC2125WL |
| 2 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQC2130WL |

TXQC 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac Interrupting Rating | Product Number |
|------------|---------------|-------------------------|---------------------------------|----------------|
| 3 | 15 | 14-8 Cu/12-8 Al | 65kA | TXQC32015WL |
| 3 | 20 | 14-8 Cu/12-8 Al | 65kA | TXQC32020WL |
| 3 | 25 | 14-8 Cu/12-8 Al | 65kA | TXQC32025WL |
| 3 | 30 | 14-8 Cu/12-8 Al | 65kA | TXQC32030WL |

¹Solid or stranded for 14-10 AWG.

²Requires mounting plate. See page 6-30. Not suitable for use in GE column panels.

UL listed HACR (heating, air conditioning and refrigeration).

Use Q-Line mounting accessories listed on pages 6-30 to 6-31.



Molded Case Circuit Breakers

Q-Line Circuit Breakers

DIN-Rail Mount
240V Class

Product Features

Multi-terminal Configuration Breakers

- 35 mm DIN rail mounting
- Optional front/rear panel mounting kits—THQCFMK, page 6-30.
- Optional load end terminal for up to (4) 0.25-inch quick connects.

Contact local GE sales office for ring terminal configurations—not DIN rail compatible.

THQC, THHC 120/240 Vac

| # of Poles | Ampere Rating | 120/240 Vac Interrupting Rating | Product Number No Lugs | Product Number Line TQAL3A and Load THQECC | Product Number Line TQAL3A, Load N/A |
|------------|---------------|---------------------------------|-------------------------|--|--------------------------------------|
| 1 | 15 | 10kA | THQC1115LL ¹ | THQC1115CC ¹ | THQC1115X2 ¹ |
| 1 | 20 | 10kA | THQC1120LL ¹ | THQC1120CC ¹ | THQC1120X2 ¹ |
| 1 | 25 | 10kA | THQC1125LL | THQC1125CC | THQC1125X2 |
| 1 | 30 | 10kA | THQC1130LL | THQC1130CC | THQC1130X2 |
| 1 | 35 | 10kA | THQC1135LL | THQC1135CC | THQC1135X2 |
| 1 | 40 | 10kA | THQC1140LL | THQC1140CC | THQC1140X2 |
| 1 | 45 | 10kA | THQC1145LL | THQC1145CC | THQC1145X2 |
| 1 | 50 | 10kA | THQC1150LL | THQC1150CC | THQC1150X2 |
| 1 | 60 | 10kA | THQC1160LL | THQC1160CC | THQC1160X2 |
| 1 | 15 | 22kA | THHC1115LL | THHC1115CC | THHC1115X2 |
| 1 | 20 | 22kA | THHC1120LL | THHC1120CC | THHC1120X2 |
| 1 | 25 | 22kA | THHC1125LL | THHC1125CC | THHC1125X2 |
| 1 | 30 | 22kA | THHC1130LL | THHC1130CC | THHC1130X2 |
| 1 | 35 | 22kA | THHC1135LL | THHC1135CC | THHC1135X2 |
| 1 | 40 | 22kA | THHC1140LL | THHC1140CC | THHC1140X2 |
| 1 | 45 | 22kA | THHC1145LL | THHC1145CC | THHC1145X2 |
| 1 | 50 | 22kA | THHC1150LL | THHC1150CC | THHC1150X2 |
| 1 | 60 | 22kA | THHC1160LL | THHC1160CC | THHC1160X2 |

15-60A UL Listed HACR (heating, air conditioning and refrigeration)

THQC, THHC 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | 120/240 Vac Interrupting Rating | Product Number No Lugs | Product Number Line TQAL3A and Load THQECC | Product Number Line TQAL3A, Load N/A |
|------------|---------------|---------------------------------|-------------------------|--|--------------------------------------|
| 2 | 15 | 10kA | THQC2115LL ¹ | THQC2115CC ¹ | THQC2115X2 ¹ |
| 2 | 20 | 10kA | THQC2120LL ¹ | THQC2120CC ¹ | THQC2120X2 ¹ |
| 2 | 25 | 10kA | THQC2125LL | THQC2125CC | THQC2125X2 |
| 2 | 30 | 10kA | THQC2130LL | THQC2130CC | THQC2130X2 |
| 2 | 35 | 10kA | THQC2135LL | THQC2135CC | THQC2135X2 |
| 2 | 40 | 10kA | THQC2140LL | THQC2140CC | THQC2140X2 |
| 2 | 45 | 10kA | THQC2145LL | THQC2145CC | THQC2145X2 |
| 2 | 50 | 10kA | THQC2150LL | THQC2150CC | THQC2150X2 |
| 2 | 60 | 10kA | THQC2160LL | THQC2160CC | THQC2160X2 |
| 2 | 15 | 22kA | THHC2115LL | THHC2115CC | THHC2115X2 |
| 2 | 20 | 22kA | THHC2120LL | THHC2120CC | THHC2120X2 |
| 2 | 25 | 22kA | THHC2125LL | THHC2125CC | THHC2125X2 |
| 2 | 30 | 22kA | THHC2130LL | THHC2130CC | THHC2130X2 |
| 2 | 35 | 22kA | THHC2135LL | THHC2135CC | THHC2135X2 |
| 2 | 40 | 22kA | THHC2140LL | THHC2140CC | THHC2140X2 |
| 2 | 45 | 22kA | THHC2145LL | THHC2145CC | THHC2145X2 |
| 2 | 50 | 22kA | THHC2150LL | THHC2150CC | THHC2150X2 |
| 2 | 60 | 22kA | THHC2160LL | THHC2160CC | THHC2160X2 |

15-60A UL Listed HACR (heating, air conditioning and refrigeration)

Terminal Configuration

| Suffix ² | Line Terminal | Load Terminal |
|---------------------|---------------|---------------|
| WL | TQAL3A | THQEL3 |
| X2 | TQAL3A | N/A |
| LL | N/A | N/A |
| CC | TQAL3A | THQECC |
| None | N/A | THQEL3 |

Terminal Selection

| Type | Wire Range | Product Number |
|---------------------------|------------------------|----------------|
| Lug-Line only | 14-6 Cu/12-2 Al | TQAL3A |
| Lug-Load only | 14-2 Cu/12-2 Al | THQEL3 |
| Quick Connector-Load only | (4) 14 Cu or (4) 12 Al | THQECC |

¹15 and 20 ampere breakers UL listed as SWD (Switching Duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

²Use additional suffix "BP" (THQC1120CCBP) for bulk pack of 48 poles. Must be ordered in multiples of 48 poles.

Additional Q-Line mounting accessories listed on pages 6-30 to 6-31.



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Cable-in Cable-out (lug-lug)
240V Class

Section 6

TQD 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | 240 Vac Interrupting Rating | Product Number ^{1,2} |
|------------|---------------|-----------------------------|-------------------------------|
| 2 | 100 | 10kA | TQD22100WL |
| 2 | 125 | 10kA | TQD22125WL |
| 2 | 150 | 10kA | TQD22150WL |
| 2 | 175 | 10kA | TQD22175WL |
| 2 | 200 | 10kA | TQD22200WL |
| 2 | 225 | 10kA | TQD22225WL |
| 3 | 100 | 10kA | TQD32100WL |
| 3 | 125 | 10kA | TQD32125WL |
| 3 | 150 | 10kA | TQD32150WL |
| 3 | 175 | 10kA | TQD32175WL |
| 3 | 200 | 10kA | TQD32200WL |
| 3 | 225 | 10kA | TQD32225WL |



TJD432400WL

TQD 240 Vac, Internal Common Trip with Factory Installed 120 Vac Shunt Trip³

| # of Poles | Ampere Rating | 240 Vac Interrupting Rating | Product Number ^{1,2} |
|------------|---------------|-----------------------------|-------------------------------|
| 3 | 125 | 10kA | TQD32125ST1 |
| 3 | 150 | 10kA | TQD32150ST1 |
| 3 | 175 | 10kA | TQD32175ST1 |
| 3 | 200 | 10kA | TQD32200ST1 |
| 3 | 225 | 10kA | TQD32225ST1 |

THQD 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | 240 Vac Interrupting Rating | Product Number ^{1,2} |
|------------|---------------|-----------------------------|-------------------------------|
| 2 | 100 | 22kA | THQD22100WL |
| 2 | 125 | 22kA | THQD22125WL |
| 2 | 150 | 22kA | THQD22150WL |
| 2 | 175 | 22kA | THQD22175WL |
| 2 | 200 | 22kA | THQD22200WL |
| 2 | 225 | 22kA | THQD22225WL |
| 3 | 100 | 22kA | THQD32100WL |
| 3 | 125 | 22kA | THQD32125WL |
| 3 | 150 | 22kA | THQD32150WL |
| 3 | 175 | 22kA | THQD32175WL |
| 3 | 200 | 22kA | THQD32200WL |
| 3 | 225 | 22kA | THQD32225WL |

TJD 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | 240 Vac Interrupting Rating | Product Number ^{1,2} |
|------------|------------------------|-----------------------------|-------------------------------|
| 2 | 250 | 22kA | TJD422250WL |
| 2 | 300 | 22kA | TJD422300WL |
| 2 | 350 | 22kA | TJD422350WL |
| 2 | 400 | 22kA | TJD422400WL |
| 2 | 400 Molded Case Switch | 22kA | TJD422Y400 |
| 3 | 250 | 22kA | TJD432250WL ⁴ |
| 3 | 300 | 22kA | TJD432300WL ⁴ |
| 3 | 350 | 22kA | TJD432350WL ⁴ |
| 3 | 400 | 22kA | TJD432400WL ⁴ |
| 3 | 400 Molded Case Switch | 22kA | TJD432Y400 ⁴ |

¹Refer to table on page 6-103 for lug and wire range data.

²Includes line and load lugs. For optional configurations see page 6-3.

³For additional shunt trip options see page 6-41.

⁴TJD uses same accessories as J600 line. TJD not listed HACR.

UL listed HACR (heating, air conditioning and refrigeration).



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Molded Case Switches 240V Class

Note: Molded case switches may be used as main devices in panelboards and switchboards but cannot be used as subfeeds or branch breakers because they do not provide wire protection. Q-Line and TEB molded case switches have a 10,000 ampere symmetrical short circuit withstand rating when protected by a fuse or circuit breaker rated 10,000 amperes IC or greater and whose ampere rating does not exceed the ampere rating of the switch.

Plug-in TQL 120/240, Vac Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac | |
|------------|---------------|-------------------------|--------------------------------|----------------|
| | | | Short Circuit Withstand Rating | Product Number |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | TQL21Y60 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQL21Y100 |

Plug-in TQL 240, Vac Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac | |
|------------|---------------|-------------------------|--------------------------------|----------------|
| | | | Short Circuit Withstand Rating | Product Number |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | TQL22Y60 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQL22Y100 |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | TQL32Y60 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQL32Y100 |

Bolt-on TQB 120/240, Vac Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac | |
|------------|---------------|-------------------------|--------------------------------|----------------|
| | | | Short Circuit Withstand Rating | Product Number |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | TQB21Y60 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQB21Y100 |

Bolt-on TQB 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac | |
|------------|---------------|-------------------------|--------------------------------|----------------|
| | | | Short Circuit Withstand Rating | Product Number |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | TQB22Y60 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQB22Y100 |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | TQB32Y60 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQB32Y100 |

Cable In-Cable Out (Lug-Lug) TQC 120/240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 120/240 Vac | |
|------------|---------------|-------------------------|--------------------------------|----------------|
| | | | Short Circuit Withstand Rating | Product Number |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | TQC21Y60 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQC21Y100 |

Cable In-Cable Out (Lug-Lug) TQC 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | Wire Range ¹ | 240 Vac | |
|------------|---------------|-------------------------|--------------------------------|----------------|
| | | | Short Circuit Withstand Rating | Product Number |
| 2 | 60 | 8-3 Cu/8-3 Al | 10kA | TQC22Y60 |
| 2 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQC22Y100 |
| 3 | 60 | 8-3 Cu/8-3 Al | 10kA | TQB32Y60 |
| 3 | 100 | 6-1/0 Cu/4-1/0 Al | 10kA | TQB32Y100 |

Cable In-Cable Out (Lug-Lug) TQD, TJD 240 Vac, Internal Common Trip

| # of Poles | Ampere Rating | 240 Vac | | Product Number ⁴ |
|------------|---------------|--------------------------------|--|-----------------------------|
| | | Short Circuit Withstand Rating | | |
| 2 | 225 | 14kA | | TQD22Y225 |
| 3 | 225 | 14kA | | TQD32Y225 ² |
| 2 | 400 | 22kA | | TJD422Y400 |
| 3 | 400 | 22kA | | TJD432Y400 ³ |

¹Solid or stranded for 14-10 AWG.

²TQD32YT225 with dummy trip used for accessorized applications.

³TJD uses same accessories as J600 line.

⁴Refer to table on page 6-106 for lug and wire range data. Line and load lugs included in basic switch product number.



Molded Case Circuit Breakers

Q-Line Circuit Breakers

Accessories
240V Class

Section 6

Terminals (Lugs) for Q-Line Circuit Breakers

| Ampere Rating | Termination Type | Wire Range (Cu/Al) | Product Number |
|---------------|-----------------------------|--------------------|----------------|
| 15-60 | Lug (line only) | 14-6/12-2 | TQAL3A |
| 15-60 | Lug (load only) | 14-2/12-2 | THQEL3 |
| 15-60 | Quick connector (load only) | (4) 14/(4) 12 | THQECC |

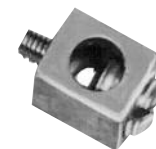


Quick Connector THQECC

Mounting Accessories for THQB, THQC

| Product Type | Ampere Rating | # of Poles | Used With Frame | Product Number |
|--------------------------------------|---------------|----------------------|-----------------|----------------------|
| Bolt-on Mounting Base | | 3 | THQB/TEY | TEY3B |
| Back Mounting Plates | | 1 | THQC | TQCBMPA1 |
| Screw Type | | | | |
| Back Mounting Plates | | 2 | THQC | TQCBMPA2 |
| Screw Type | | | | |
| Back Mounting Plates | | 3 | THQC | TQCBMPA3 |
| Screw Type | | | | |
| Back Mounting Plates | | 10 | THQC | TQCBMPA10 |
| Screw Type | | | | |
| Front-mounting Plates | | 1 | THQC | TQCFMP1 ¹ |
| Front-mounting Plates | | 2 | THQC | TQCFMP2 ¹ |
| Front-mounting Plates | | 3 | THQC | TQCFMP3 ¹ |
| Front-mounting Plates | | 4 | THQC | TQCFMP4 ¹ |
| Pack of 48 Front/Rear Mounting Clips | | 1 & 2-pole 15-60A | THQC | THQCFMK |
| Pack of 24 DIN rail clips | | | THQC | THQCDIN |

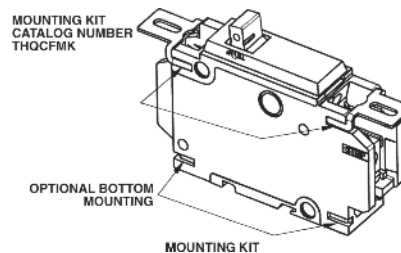
¹Not UL listed.



Load Lug THQEL3

Mounting Accessories for THQC, THQC-GF, GFEP

| Product Type | # of Poles | Used With Frame | Product Number |
|------------------------------|------------|-----------------|----------------|
| Snap In Back Mounting Plates | 1 | THQC, THQC-GF | TQCGFBMPA1 |
| Snap In Back Mounting Plates | 2 | THQC, THQC-GF | TQCGFBMPA2 |
| Snap In Back Mounting Plates | 3 | THQC, THQC-GF | TQCGFBMPA3 |
| Snap In Back Mounting Plates | 10 | THQC, THQC-GF | TQCGFBMPA10 |



Mounting Kit THQCFMK

Mounting Accessories for TQL

| Product Type | Ampere Rating | # of Poles | Used With Frame | Product Number |
|-----------------------|---------------|------------|-----------------|----------------|
| Plug-in Mounting Base | 70 amp | 2 | TQL | 571B595DDG1 |
| Plug-in Mounting Base | 70 amp | 3 | TQL | 571B595DDG2 |
| Plug-in Mounting Base | 100 amp | 3 | TQL | 565B837G1 |
| Plug-in Mounting Base | 100 amp | 2 | TQL | 565B837G2 |



Molded Case Circuit Breakers

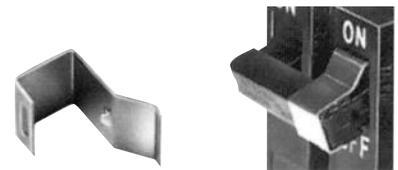
Q-Line Circuit Breakers

Accessories

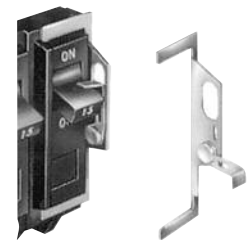
Handle Locking Devices & Handle Ties

| Description | Breaker Type | Product Number |
|--------------------------------------|--------------|--------------------------|
| Handle Locks - Non Padlocking | TQB | THL103 ⁵ |
| | TQC | |
| | TQL | |
| Handle Locks - Padlocking | TQB... GF | THQGFPLD1 ^{2,4} |
| | TQC... GF | |
| | TQL... GF | |
| Handle Locks - Non Padlocking | THQP | TQPL |
| | TQB... GF | |
| | TQC... GF | |
| | TQL... GF | |
| Handle Locks - Padlocking | TQD | TQDPLD1 ² |
| Handle Locks - Padlocking | TQD | TQDPLD2 ¹ |
| Handle Locks - Padlocking | TQB | THP100 |
| | TQL | |
| Handle Locks - Padlocking | THQP | TQPPL |
| Handle Locks - Padlocking | TQC | TQPLD1 ² |
| Snap-on Handle Tie - Trip Indicating | TQB | TQHT1 ⁶ |
| | TQC | |
| | TQL | |
| Snap-on Handle Tie - Solid | TQB | THT104 ⁶ |
| | TQC | |
| | TQL | |
| Multiwire Branch Breaker | TQB | TQ3HTK ⁷ |
| Handle Tie Kits | TQC | TQ4HTK ⁸ |
| | TQL | |

All multi-pole breakers have internal common trip
 Handle ties provide manual on-off capability only between one-pole devices



THL103

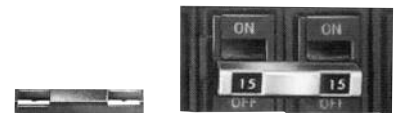


THP100

Breaker Mounting Screw Kit

| Product Type | Used With Frame | Product Number |
|----------------------------|-----------------|--------------------|
| Breaker Mounting Screw Kit | THQB | TQBS1 ³ |

- ¹EUSERC Approved—Factory Installed Only.
- ²Suitable for circuit breakers used in group mounted panelboard construction only.
- ³Price is per screw. Packaged in quantities of 24. Must be ordered in multiples of 24.
- ⁴Suitable for use on single pole GF Breakers only.
- ⁵Kit includes (1) lock for 1-pole breaker and (1) lock for 2-pole breaker
- ⁶For two single-pole breakers
- ⁷For three single-pole breakers - kit includes (10) pcs.
- ⁸For four single-pole breakers - kit includes (10) pcs.



THT104



TQHT1



Molded Case Circuit Breakers Industrial Circuit Breakers

15-100A

Thermal Magnetic Trip

Type TEY/TEYF

Noninterchangeable Trip

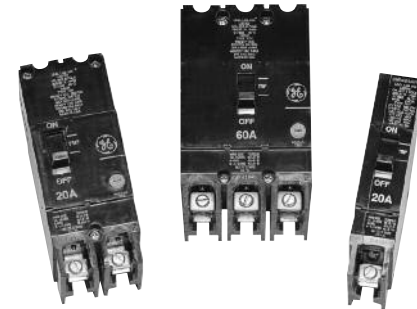
Bolt-on

480Y/277V Class

TEY and TEYF breakers are one-inch wide per pole, compact, bolt-on circuit breakers for use on grounded 480Y/277 Vac systems. Short circuit ratings at that voltage for TEY and TEYF are 14 and 18kA, respectively. TEYF also offers higher selectivity ratings with upstream devices (See DET-537 for details). The bolt-on mounting base (TEY3B) shown on page 6-102 makes TEY and TEYF suitable for various lug-applications.

TEY/TEYF (UL File E-11592; CSA LR 57114)

| Ampere Rating | Wire Range ¹ | Product Number | Product Number |
|--|-------------------------|-----------------------------|-----------------------------|
| | | Type TEY ^{3,4} | Type TEYF ^{3,4} |
| Single Pole - Includes Integral Cu/Al Load Lugs | | 14kA @ 277 Vac | 18kA @ 277 Vac |
| 15 | #14-#10 | TEY115 ² | TEYF115 ² |
| 20 | #14-#10 | TEY120 ² | TEYF120 ² |
| 25 | #14-#10 | TEY125 | TEYF125 |
| 30 | #14-#10 | TEY130 | TEYF130 |
| 35 | #10-#4 | TEY135 | TEYF135 |
| 40 | #10-#4 | TEY140 | TEYF140 |
| 45 | #10-#4 | TEY145 | TEYF145 |
| 50 | #10-#4 | TEY150 | TEYF150 |
| 60 | #10-#4 | TEY160 | TEYF160 |
| 70 | #4-1/0 | TEY170 | |
| 80 | #4-1/0 | TEY180 | |
| 90 | #4-1/0 | TEY190 | |
| 100 | #4-1/0 | TEY100 | |
| | | Type TEY ^{3,4} | Type TEYF ^{3,4} |
| Two-Pole - Includes Integral Cu/Al Load Lugs | | 14kA @ 480 / 277 Vac | 18kA @ 480 / 277 Vac |
| 15 | #14-#10 | TEY215 | TEYF215 |
| 20 | #14-#10 | TEY220 | TEYF220 |
| 25 | #14-#10 | TEY225 | TEYF225 |
| 30 | #14-#10 | TEY230 | TEYF230 |
| 35 | #10-#4 | TEY235 | TEYF235 |
| 40 | #10-#4 | TEY240 | TEYF240 |
| 45 | #10-#4 | TEY245 | TEYF245 |
| 50 | #10-#4 | TEY250 | TEYF250 |
| 60 | #10-#4 | TEY260 | TEYF260 |
| 70 | #4-1/0 | TEY270 | TEYF270 |
| 80 | #4-1/0 | TEY280 | TEYF280 |
| 90 | #4-1/0 | TEY290 | TEYF290 |
| 100 | #4-1/0 | TEY2100 | TEYF2100 |
| 110 | #4-2/0 | | TEYF2110B |
| 125 | #4-2/0 | | TEYF2125B |
| | | Type TEY ^{3,4} | Type TEYF ^{3,4} |
| Three-Pole - Includes Integral Cu/Al Load Lugs | | 14kA @ 480 / 277 Vac | 18kA @ 480 / 277 Vac |
| 15 | #14-#10 | TEY315 | TEYF315 |
| 20 | #14-#10 | TEY320 | TEYF320 |
| 25 | #14-#10 | TEY325 | TEYF325 |
| 30 | #14-#10 | TEY330 | TEYF330 |
| 35 | #10-#4 | TEY335 | TEYF335 |
| 40 | #10-#4 | TEY340 | TEYF340 |
| 45 | #10-#4 | TEY345 | TEYF345 |
| 50 | #10-#4 | TEY350 | TEYF350 |
| 60 | #10-#4 | TEY360 | TEYF360 |
| 70 | #4-1/0 | TEY370 | TEYF370 |
| 80 | #4-1/0 | TEY380 | TEYF380 |
| 90 | #4-1/0 | TEY390 | TEYF390 |
| 100 | #4-1/0 | TEY3100 | TEYF3100 |
| 110 | #4-2/0 | | TEYF3110B |
| 125 | #4-2/0 | | TEYF3125B |



1- 2- and 3-pole TEY/TEYF breakers

¹Solid or stranded for 14-10 AWG.

²Single-pole, 15 and 20 ampere breakers are also UL listed as switching duty breakers, suitable for switching 120, 240, or 277 Vac.

³UL listed HACR (Heating, Air Conditioning, Refrigeration).

⁴UL listed for HID (high intensity discharge), all 50A or less.

Internal Accessories for TEY/TEYF (2- and 3-pole breaker only) Factory Installed Only

| Auxiliary Switch, Single-Pole (5A at 120, 240, 277 Vac, 1/4 hp at 120, 240 Vdc) | Add suffix to Breaker Product Number |
|--|---|
| "A" switch (normally open) | AS1A ⁵ |
| "B" switch (normally closed) | AS1B ⁵ |
| "AB" switch (both) | ASAB ⁵ |
| Shunt Trip 120-277 Vac control voltage | ST12 ⁵ |

⁵Limited to one accessory per breaker.



Molded Case Circuit Breakers Industrial Circuit Breakers

15-125A

Thermal Magnetic Trip

Type TEYD/TEYH/TEYL

Noninterchangeable Trip

Bolt-on

480Y/277V Class

The TEY family of circuit breakers (TEY, TEYF, TEYD, TEYH, and TEYL) are one-inch wide per pole, compact, bolt-on circuit breakers for use on grounded 480Y/277 Vac systems, and are typically installed within Lighting Panelboards, including GE A-Series. Short circuit ratings at 480/277 Vac are shown in the tables that follow. Ratings at other voltages are shown in the Quick Reference Guide at the beginning of this section. Bolt-On mounting bases TEY3B (page 6-102) and TEY3B125 (page 6-34) make these frames suitable for unit mount / lug-lug connected applications. Handle tie kits, suitable for use with multiple single pole breakers used on shared neutral circuits (page 6-34) are available for TEYD/H/L circuit breakers.



1- 2- and 3-pole
TEYD/TEYH/TEYL breakers

TEYD/TEYH/TEYL (UL/cUL File E-11592)

| Ampere Rating | Wire Range ¹ | Product No. | Product No. | Product No. |
|---------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| Single Pole | | | | |
| Includes Load Lugs | | Type TEYD | Type TEYH | Type TEYL |
| | | 25kA @ 480 / 277 Vac | 35kA @ 480 / 277 Vac | 65kA @ 480 / 277 Vac |
| 15 | #14-#10 | TEYD1015B | TEYH1015B | TEYL1015B |
| 20 | #14-#10 | TEYD1020B | TEYH1020B | TEYL1020B |
| 25 | #10-#4 | TEYD1025B | TEYH1025B | TEYL1025B |
| 30 | #10-#4 | TEYD1030B | TEYH1030B | TEYL1030B |
| 35 | #10-#4 | TEYD1035B | TEYH1035B | TEYL1035B |
| 40 | #10-#4 | TEYD1040B | TEYH1040B | TEYL1040B |
| 45 | #10-#4 | TEYD1045B | TEYH1045B | TEYL1045B |
| 50 | #10-#4 | TEYD1050B | TEYH1050B | TEYL1050B |
| 60 | #10-#4 | TEYD1060B | TEYH1060B | TEYL1060B |
| 70 | #4-2/0 | TEYD1070B | TEYH1070B | TEYL1070B |
| Two-Pole | | Type TEYD | Type TEYH | Type TEYL |
| Includes Load Lugs | | 25kA @ 480 / 277 Vac | 35kA @ 480 / 277 Vac | 65kA @ 480 / 277 Vac |
| 15 | #14-10 | TEYD2015B | TEYH2015B | TEYL2015B |
| 20 | #14-10 | TEYD2020B | TEYH2020B | TEYL2020B |
| 25 | #10-#4 | TEYD2025B | TEYH2025B | TEYL2025B |
| 30 | #10-#4 | TEYD2030B | TEYH2030B | TEYL2030B |
| 35 | #10-#4 | TEYD2035B | TEYH2035B | TEYL2035B |
| 40 | #10-#4 | TEYD2040B | TEYH2040B | TEYL2040B |
| 45 | #10-#4 | TEYD2045B | TEYH2045B | TEYL2045B |
| 50 | #10-#4 | TEYD2050B | TEYH2050B | TEYL2050B |
| 60 | #10-#4 | TEYD2060B | TEYH2060B | TEYL2060B |
| 70 | #4-2/0 | TEYD2070B | TEYH2070B | TEYL2070B |
| 80 | #4-2/0 | TEYD2080B | TEYH2080B | TEYL2080B |
| 90 | #4-2/0 | TEYD2090B | TEYH2090B | TEYL2090B |
| 100 | #4-2/0 | TEYD2100B | TEYH2100B | TEYL2100B |
| 110 | #4-2/0 | TEYD2110B | TEYH2110B | TEYL2110B |
| 125 | #4-2/0 | TEYD2125B | TEYH2125B | TEYL2125B |
| Three-Pole | | Type TEYD | Type TEYH | Type TEYL |
| Includes Load Lugs | | 25kA @ 480 / 277 Vac | 35kA @ 480 / 277 Vac | 65kA @ 480 / 277 Vac |
| 15 | #14-#10 | TEYD3015B | TEYH3015B | TEYL3015B |
| 20 | #14-#10 | TEYD3020B | TEYH3020B | TEYL3020B |
| 25 | #10-#4 | TEYD3025B | TEYH3025B | TEYL3025B |
| 30 | #10-#4 | TEYD3030B | TEYH3030B | TEYL3030B |
| 35 | #10-#4 | TEYD3035B | TEYH3035B | TEYL3035B |
| 40 | #10-#4 | TEYD3040B | TEYH3040B | TEYL3040B |
| 45 | #10-#4 | TEYD3045B | TEYH3045B | TEYL3045B |
| 50 | #10-#4 | TEYD3050B | TEYH3050B | TEYL3050B |
| 60 | #10-#4 | TEYD3060B | TEYH3060B | TEYL3060B |
| 70 | #4-2/0 | TEYD3070B | TEYH3070B | TEYL3070B |
| 80 | #4-2/0 | TEYD3080B | TEYH3080B | TEYL3080B |
| 90 | #4-2/0 | TEYD3090B | TEYH3090B | TEYL3090B |
| 100 | #4-2/0 | TEYD3100B | TEYH3100B | TEYL3100B |
| 110 | #4-2/0 | TEYD3110B | TEYH3110B | TEYL3110B |
| 125 | #4-2/0 | TEYD3125B | TEYH3125B | TEYL3125B |

¹Solid or stranded for 14-10 AWG.

²Single-pole, 15 and 20 ampere breakers are also UL listed as switching duty breakers, suitable for switching 120, 240, or 277 Vac.

³UL listed HACR (Heating, Air Conditioning, Refrigeration).

⁴UL listed for HID (high intensity discharge), all 50A or less.



Molded Case Circuit Breakers

Industrial Circuit Breakers

Section 6

15-125A

Thermal Magnetic Trip

Type TEYD/TEYH/TEYL

Noninterchangeable Trip

Bolt-on

480Y/277V Class

Internal Accessories for TEYD/TEYH/TEYL - Factory Installed Only

| Description | Product Number |
|--|----------------|
| TEYD/H/L UV Release^{1,3} | |
| 24 Vac | TEYXU1 |
| 48 Vac | TEYXU2 |
| 120 Vac | TEYXU3 |
| 240 Vac | TEYXU4 |
| 24 Vdc | TEYXU6 |
| 48 Vdc | TEYXU7 |
| 125 Vdc | TEYXU8 |
| 250 Vdc | TEYXU9 |
| TEYD/H/L Shunt Trip¹ | |
| 24 Vac | TEYXS1 |
| 48 Vac | TEYXS2 |
| 120 Vac | TEYXS3 |
| 240 Vac | TEYXS4 |
| 24 Vdc | TEYXS6 |
| 48 Vdc | TEYXS7 |
| 125 Vdc | TEYXS8 |
| 250 Vdc | TEYXS9 |
| TEYD/H/L Auxiliary Switch² | |
| LT Pole | TEYXASL |
| RT Pole | TEYXASR |
| Bell Alarm | |
| TEYD/H/L Bell Alarm - Form C ¹ | TEYXBA1 |
| TEYD/H/L Mounting Base | |
| 3-P 15-100A Mounting Base | TEY3B |
| 3-P 110/125A Mounting Base | TEY3B125 |
| TEYD/H/L Handle Tie | |
| TEYD/H/L 2-Pole Handle Tie | TEYXHT2 |
| 10-Pack TEYD/H/L 2-Pole Handle Tie (10 Pack) | TEYXHT2K |
| TEYD/H/L 3-Pole Handle Tie | TEYXHT3 |
| 10-Pack TEYD/H/L 3-Pole Handle Tie (10 Pack) | TEYXHT3K |
| TEYD/TEYH/TEYL Padlocking | |
| Padlock Device | TEYXPLD1 |

¹Right hand mounting only.

²Right or left hand mounting.

³Only available in 3-pole circuit breaker.

TEYD/TEYH/TEYL Reference Publications

| | |
|---|-------------|
| Installation Instructions | DEH-41590 |
| Mounting Base Installation Instructions | DEH-41556 |
| 1-Pole Circuit Breaker Outline Drawing | 10106028SH1 |
| 3-Pole Circuit Breaker Outline Drawing | 10106029SH1 |
| 2-Pole Circuit Breaker Outline Drawing | 10106030SH1 |
| TEY3B125 Mounting Base Outline Drawing | 10110291SH1 |

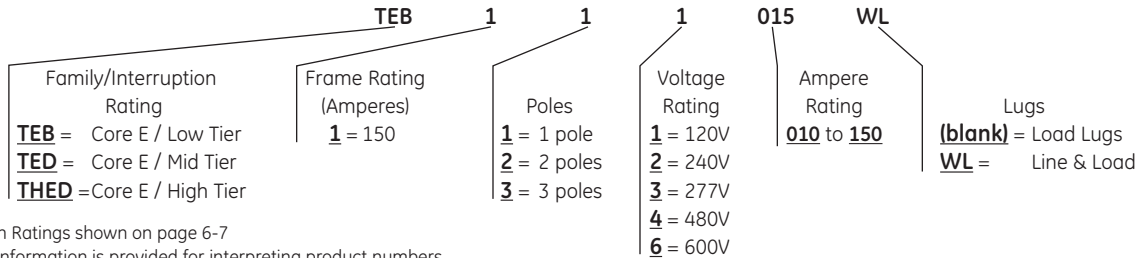


Molded Case Circuit Breakers Industrial Circuit Breakers

10-150A Circuit Breakers
Thermal-Magnetic Trip
E150 Line Circuit Breakers
Types TEB, TED, THED
Noninterchangeable Trip



Product Number Structure



Interruption Ratings shown on page 6-7
Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

Single Pole — Includes Cu/Al load lugs only. If line lugs are required, add suffix "WL" to Product Number.

| Ampere Rating | Type TEB | | Type TED | | Type THED | |
|---------------|--------------------------|--------------------------|--------------------------|-------------------------|---------------------------|--|
| | 120 Vac 125 Vdc | 277 Vac 125 Vdc | 347 Vac ¹ | 277 Vac | 347 Vac ¹ | |
| | Product Number | Product Number | Product Number | Product Number | Product Number | |
| 10 | TEB111010 ^{2,4} | TED113010 ^{2,4} | | THED113015 ⁴ | THED114015 ^{3,4} | |
| 15 | TEB111015 ^{3,4} | TED113015 ^{3,4} | TED114015 ^{3,4} | THED113020 ⁴ | THED114020 ^{3,4} | |
| 20 | TEB111020 ^{3,4} | TED113020 ^{3,4} | TED114020 ^{3,4} | THED113025 ⁴ | THED114025 ⁴ | |
| 25 | TEB111025 ⁴ | TED113025 ⁴ | TED114025 ⁴ | THED113030 ⁴ | THED114030 ⁴ | |
| 30 | TEB111030 ⁴ | TED113030 ⁴ | TED114030 ⁴ | | | |
| 35 | TEB111035 ⁴ | TED113035 ⁴ | | | | |
| 40 | TEB111040 ⁴ | TED113040 ⁴ | | | | |
| 45 | TEB111045 ⁴ | TED113045 ⁴ | | | | |
| 50 | TEB111050 ⁴ | TED113050 ⁴ | | | | |
| 60 | TEB111060 | TED113060 | | | | |
| 70 | TEB111070 | TED113070 | | | | |
| 80 | TEB111080 | TED113080 | | | | |
| 90 | TEB111090 | TED113090 | | | | |
| 100 | TEB111100 | TED113100 | | | | |

Two Pole — Includes Cu/Al line and load lugs. For optional lugs, see page 6-103 and 6-105.

| Ampere Rating | Type TEB | Type TED | Type THED, Hi-Break ⁵ |
|---------------|----------------------------|----------------------------|----------------------------------|
| | 240 Vac, 250 Vdc | 480 Vac, 250 Vdc | 480 Vac, 250 Vdc |
| | Product Number | Product Number | Product Number |
| 10 | TEB122010WL ^{2,4} | TED124010WL ^{2,4} | — |
| 15 | TEB122015WL ⁴ | TED124015WL ⁴ | THED124015WL ⁴ |
| 20 | TEB122020WL ⁴ | TED124020WL ⁴ | THED124020WL ⁴ |
| 25 | TEB122025WL ⁴ | TED124025WL ⁴ | THED124025WL ⁴ |
| 30 | TEB122030WL ⁴ | TED124030WL ⁴ | THED124030WL ⁴ |
| 35 | TEB122035WL ⁴ | TED124035WL ⁴ | THED124035WL ⁴ |
| 40 | TEB122040WL ⁴ | TED124040WL ⁴ | THED124040WL ⁴ |
| 45 | TEB122045WL ⁴ | TED124045WL ⁴ | THED124045WL ⁴ |
| 50 | TEB122050WL ⁴ | TED124050WL ⁴ | THED124050WL ⁴ |
| 60 | TEB122060WL | TED124060WL | THED124060WL |
| 70 | TEB122070WL | TED124070WL | THED124070WL |
| 80 | TEB122080WL | TED124080WL | THED124080WL |
| 90 | TEB122090WL | TED124090WL | THED124090WL |
| 100 | TEB122100WL | TED124100WL | THED124100WL |
| 110 | — | TED124110WL | — |
| 125 | — | TED124125WL | — |
| 150 | — | TED124150WL | — |

¹Suitable for 10 kAIC at 480 Vac, but not labeled or UL listed.

²Not UL listed, rated 5kA @ 120V, 240V and 480V.

³Single-pole, 15- and 20-ampere breakers are also UL listed as switching duty breakers, suitable for switching 120 Vac (TEB), 277, 347 Vac (TED, THED) fluorescent lighting loads.

⁴UL listed for HID (high intensity discharge).

⁵Two-pole breaker is furnished in three-pole case.

Notes: All TEB, TED, THED breakers UL listed as HACR type except 10 ampere.

All TEB, TED, THED breakers suitable for reverse feed.

60/75°C rating through 100 amperes, 75°C rating above 100 amperes.



Molded Case Circuit Breakers

Industrial Circuit Breakers

Section 6

10-150A Circuit Breakers
 Thermal-Magnetic Trip
 E150 Line Circuit Breakers
 Types TEB, TED, THED
 Noninterchangeable Trip

Three Pole — Includes Cu/Al line and load lugs. For optional lugs, see page 6-103 and 6-105.

| Ampere Rating | Type TEB | Type TED | | Type THED, Hi-Break |
|---------------|----------------------------|----------------------------|--------------------------|---------------------------|
| | 240 Vac | 480 Vac | 600 Vac | 600 Vac |
| | Product Number | Product Number | Product Number | Product Number |
| 10 | TEB132010WL ^{1,3} | TED134010WL ^{1,3} | — | — |
| 15 | TEB132015WL ³ | TED134015WL ³ | — | — |
| 20 | TEB132020WL ³ | TED134020WL ³ | TED136020WL ³ | THED136020WL ³ |
| 25 | TEB132025WL ³ | TED134025WL ³ | TED136025WL ³ | THED136025WL ³ |
| 30 | TEB132030WL ³ | TED134030WL ³ | TED136030WL ³ | THED136030WL ³ |
| 35 | TEB132035WL ³ | TED134035WL ³ | TED136035WL ³ | THED136035WL ³ |
| 40 | TEB132040WL ³ | TED134040WL ³ | TED136040WL ³ | THED136040WL ³ |
| 45 | TEB132045WL ³ | TED134045WL ³ | TED136045WL ³ | THED136045WL ³ |
| 50 | TEB132050WL ³ | TED134050WL ³ | TED136050WL ³ | THED136050WL ³ |
| 60 | TEB132060WL | TED134060WL | TED136060WL | — |
| 70 | TEB132070WL | TED134070WL | TED136070WL | THED136070WL |
| 80 | TEB132080WL | TED134080WL | TED136080WL | — |
| 90 | TEB132090WL | TED134090WL | TED136090WL | THED136090WL |
| 100 | TEB132100WL | TED134100WL | TED136100WL | THED136100WL |
| 110 | — | TED134110WL | TED136110WL | THED136110WL |
| 125 | — | TED134125WL | TED136125WL | THED136125WL |
| 150 | — | TED134150WL | TED136150WL | THED136150WL |
| 100NA | — | TED134YT100 ² | TED136YT100 ² | — |
| 150NA | — | TED134YT150 ² | TED136YT150 ² | — |

¹Not UL listed, rated 5kA @ 120V, 240V and 480V.

²Includes factory-installed dummy trip.

³UL listed for HID (high intensity discharge).

Notes: All TEB, TED, THED breakers UL listed as HACR type except 10 ampere.
 All TEB, TED, THED breakers suitable for reverse feed.
 60/75°C rating through 100 amperes, 75°C rating above 100 amperes.

Accessories: See pages 6-39 to 6-44 and 6-94 to 6-106.

Add-on Current Limiter — UL Listed 100 kAIC at 480 and 600 VAC⁴

| Ampere Rating | Product Number |
|---------------|----------------|
| 15 | TEDL36015 |
| 20 | TEDL36020 |
| 30 and 60 | TEDL36060 |
| 100 | TEDL36100 |

⁴For use with 3 Pole TED/THED only

E150 Reference Publications

| | |
|------------------------------|-------------------|
| TDR Operating Mechanism | GEH-2994 |
| Shunt Trip | GEH-3416 |
| Undervoltage Release | GEH-3417 |
| Auxiliary Switch | GEH-3418 |
| Three Coil Shunt Trip | GEH-3434 |
| Mechanical Interlock | GEH-4310 |
| TDM Operating Mechanism | GEH-4335 |
| Bell Alarm | GEH-4576 |
| Plug-in Mounting Base | GEH-4610 |
| STDA Flange Handle | GEH-5314 |
| STDA Operating Mechanism | GEH-5684 |
| Cable Operator Mechanism | GEH-6290 |
| Motor Operator | GEH-6500 |
| Back Connected Studs | GEJ-3609 |
| Padlocking Device - Standard | GEJ-5143 |
| E150 Outline Drawing | 139C3643SH1, 2, 4 |



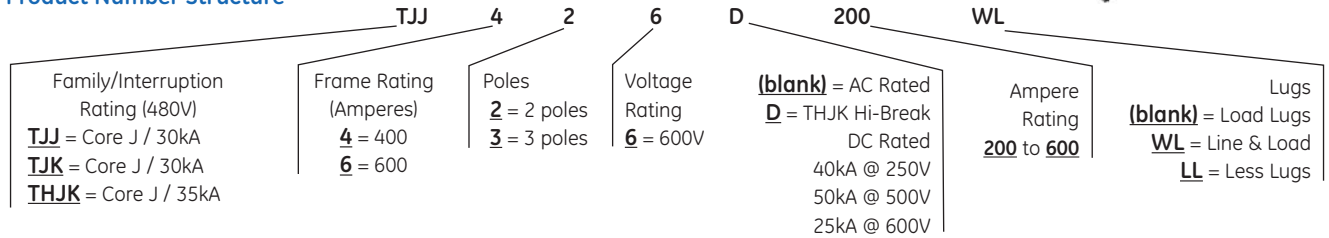
Molded Case Circuit Breakers

Industrial Circuit Breakers

200-600A Circuit Breakers
 Thermal-Magnetic Trip
 J600 Line Circuit Breakers
 Types TJJ, TJK, THJK



Product Number Structure



Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

Type TJJ Noninterchangeable Trip, includes Cu/Al Line and Load Lugs, suitable for reverse feed

| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Frame | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|--|-------------------------------------|---|--------------------------------------|
| | Low | High | 2-Pole, 400 Ampere Frame 600 Vac, 250 Vdc | 3-Pole, 400 Ampere Frame 600 Vac | Copper/ Aluminum Lugs | Wire Size |
| | | | Product Number | Product Number | | |
| 200 | 600 | 2000 | TJJ426200WL | TJJ436200WL | TCAL43 ³ Included in price of breaker | (1) 6-600 or (2) 2/0-250 Cu/Al |
| 225 | 675 | 2250 | TJJ426225WL | TJJ436225WL | | |
| 250 | 750 | 2500 | TJJ426250WL | TJJ436250WL | | |
| 300 | 900 | 3000 | TJJ426300WL | TJJ436300WL | | |
| 350 | 1050 | 3500 | TJJ426350WL | TJJ436350WL | | |
| 400 | 1200 | 4000 | TJJ426400WL | TJJ436400WL | | |

Types TJK, THJK – Interchangeable Trip, includes Cu/Al Line and Load Lugs, not suitable for reverse feed

| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | | Complete Circuit Breaker Includes Line and Load Lugs | | | Terminal Lugs for Front Connection (Cu/Al) ¹ | |
|------------------------------|--|------|-------------------------|---|---------------------------|---|---|--------------------------------------|
| | Low | High | Standard Product Number | Hi-Break Product Number | Frame Only Product Number | Trip Unit Only. Use with Standard and Hi-Break Frames | Product Number (Order 2 per pole) | Wire Size |
| | | | | | | | | |
| 400A Frame—Two-Pole | | | | | | | | |
| 200 | 600 | 2000 | TJK426200WL | THJK426200WL | TJK426F000 | TJK426T200 | TCAL43 ³ | (1) 6-600 or (2) 2/0-250 Cu/Al |
| 225 | 675 | 2250 | TJK426225WL | THJK426225WL | Standard Frame | TJK426T225 | | |
| 250 | 750 | 2500 | TJK426250WL | THJK426250WL | | TJK426T250 | | |
| 300 | 900 | 3000 | TJK426300WL | THJK426300WL | THJK426F000 | TJK426T300 | | |
| 350 | 1050 | 3500 | TJK426350WL | THJK426350WL | Hi-Break | TJK426T350 | | |
| 400 | 1200 | 4000 | TJK426400WL | THJK426400WL | | TJK426T400 | | |
| 400A Frame—Three-Pole | | | | | | | | |
| 200 | 600 | 2000 | TJK436200WL | THJK436200WL | TJK436F000 | TJK436T200 | TCAL43 ³ | (1) 6-600 or (2) 2/0-250 Cu/Al |
| 225 | 675 | 2250 | TJK436225WL | THJK436225WL | Standard Frame | TJK436T225 | | |
| 250 | 750 | 2500 | TJK436250WL | THJK436250WL | | TJK436T250 | | |
| 300 | 900 | 3000 | TJK436300WL | THJK436300WL | THJK436F000 | TJK436T300 | | |
| 350 | 1050 | 3500 | TJK436350WL | THJK436350WL | Hi-Break | TJK436T350 | | |
| 400 | 1200 | 4000 | TJK436400WL | THJK436400WL | | TJK436T400 | | |
| 400 | 600 | 2000 | — | — | — | TJK436TM1400 ² | TCAL43 ³ | (1) 6-600 or (2) 2/0-250 Cu/Al |
| Mag | 1200 | 4000 | — | — | — | TJK436TM2400 ² | | |
| Only | 350 | 1000 | — | — | — | TJK436TM3400 ² | | |

¹For optional lugs, see page 6-103.

²Not UL listed.

³Alternate lug for 750 kcmil Cu/Al cable, Product Number TCAL47.

Accessories: See pages 6-39 to 6-44 and 6-94 to 6-106.



Molded Case Circuit Breakers Industrial Circuit Breakers

Section 6

200-600A Circuit Breakers
Thermal-Magnetic Trip
J600 Line Circuit Breakers
Types TJJ, TJK, THJK

Type THJK - 600V High Break DC Circuit Breakers

| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Hi-Break Product Number | Frame Only Product Number | Trip Unit Only. Use w/ Standard and Hi-Break Frames | Product Number (Order 2 per pole) | Wire Size |
|--------------------------------|--|------|-------------------------|---------------------------|---|-----------------------------------|--------------------------------------|
| | Low | High | | | | | |
| 400A Frame — Three-Pole | | | | | | | |
| 200 | 600 | 2000 | THJK436D200WL | THJK436D000 | TJK436T200 | TCAL43 ³ | (1) 6-600 or (2) 2/0-250 Cu/Al |
| 225 | 675 | 2250 | THJK436D225WL | | TJK436T225 | | |
| 250 | 750 | 2500 | THJK436D250WL | | TJK436T250 | | |
| 300 | 900 | 3000 | THJK436D300WL | | TJK436T300 | | |
| 350 | 1050 | 3500 | THJK436D350WL | | TJK436T350 | | |
| 400 | 1200 | 4000 | THJK436D400WL | | TJK436T400 | | |
| 600A Frame — Three-Pole | | | | | | | |
| 250 | 750 | 2500 | THJK636D250WL | THJK636D000 | TJK636T250 | TCAL43 ³ | (1) 6-600 or (2) 2/0-250 Cu/Al |
| 300 | 900 | 3000 | THJK636D300WL | | TJK636T300 | | |
| 350 | 1050 | 3500 | THJK636D350WL | | TJK636T350 | | |
| 400 | 1200 | 4000 | THJK636D400WL | | TJK636T400 | | |

Types TJK, THJK — Interchangeable Trip, includes Cu/Al Line and Load Lugs, not suitable for reverse feed

| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Complete Circuit Breaker Includes Line and Load Lugs | | Frame Only Product Number | Trip Unit Only. Use w/ Standard and Hi-Break Frames | Product Number (Order 2 per pole) | Terminal Lugs for Front Connection (Cu/Al) ¹ | Wire Size |
|--------------------------------|--|------|--|-------------------------|-------------------------------|---|-----------------------------------|---|-----------|
| | Low | High | Standard Product Number | Hi-Break Product Number | | | | | |
| 600A Frame — Two-Pole | | | | | | | | | |
| 250 | 750 | 2500 | TJK626250WL | THJK626250WL | TJK626F000 Standard Frame | TJK626T250 | TCAL43 ² | (1) 6-600 or (2) 2/0-250 Cu/Al | |
| 300 | 900 | 3000 | TJK626300WL | THJK626300WL | | TJK626T300 | | | |
| 350 | 1050 | 3500 | TJK626350WL | THJK626350WL | | TJK626T350 | | | |
| 400 | 1200 | 4000 | TJK626400WL | THJK626400WL | | TJK626T400 | | | |
| 450 | 1350 | 4500 | TJK626450WL | THJK626450WL | | TJK626T450 | | | |
| 500 | 1500 | 5000 | TJK626500WL | THJK626500WL | | TJK626T500 | | | |
| 600 | 1800 | 6000 | TJK626600WL | THJK626600WL | THJK626F000 Hi-Break Frame | TJK626T600 | TCAL63 | (2) 4/0-350 Cu or (2) 300-500 Al | |
| 600A Frame — Three-Pole | | | | | | | | | |
| 250 | 750 | 2500 | TJK636250WL | THJK636250WL | TJK636F000 Standard Frame | TJK636T250 | TCAL43 ² | (1) 6-600 or (2) 2/0-250 Cu/Al | |
| 300 | 900 | 3000 | TJK636300WL | THJK636300WL | | TJK636T300 | | | |
| 350 | 1050 | 3500 | TJK636350WL | THJK636350WL | | TJK636T350 | | | |
| 400 | 1200 | 4000 | TJK636400WL | THJK636400WL | | TJK636T400 | | | |
| 450 | 1350 | 4500 | TJK636450WL | THJK636450WL | | TJK636T450 | | | |
| 500 | 1500 | 5000 | TJK636500WL | THJK636500WL | | TJK636T500 | | | |
| 600 | 1800 | 600 | TJK636600WL | THJK636600WL | THJK636F000 Hi-Break Frame | TJK636T600 | TCAL63 | (2) 4/0-350 Cu or (2) 300-500 Al | |
| Mag Only | 1800 | 6000 | — | — | | TJK636TM1600 ³ | | | |
| | | | | | | TJK636TM2600 ³ | | | |

¹For optional lugs, see page 6-103.

²Alternate lug for 750 kcmil Cu/Al cable, Product Number TCAL47

³Not UL listed.

Accessories: See pages 6-39 to 6-44 and 6-94 to 6-106.

J600 Reference Publications

| | |
|--------------------------|------------|
| Mechanical Interlock | GEH-3033 |
| Trip Unit | GEH-3035 |
| Bell Alarm | GEH-3320 |
| Auxiliary Switch | GEH-3321 |
| Three Coil Shunt Trip | GEH-3346 |
| Shunt Trip | GEH-3435 |
| TDR Operating Mechanism | GEH-3450 |
| Plug-in Mounting Base | GEH-4342 |
| Motor Operator | GEH-4676 |
| TDM Operating Mechanism | GEH-5023 |
| STDA Flange Handle | GEH-5314 |
| STDA Operating Mechanism | GEH-5318 |
| Undervoltage Release | GEH-5407 |
| J600 Outline Drawing | 455C564SH1 |



Molded Case Circuit Breakers

Internal Accessories

Molded Case Circuit Breakers

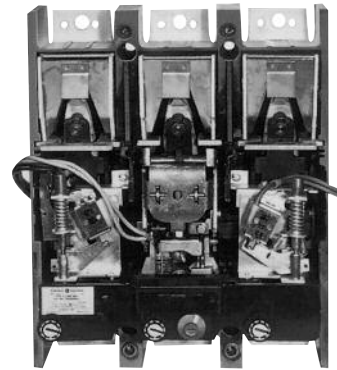
Accessory Devices and Ratings

Internally mounted accessories can be either factory or field installed, but should be factory installed when UL listing is required.

Factory installed devices with leads exiting from the side are UL listed, but when leads exit from the back the UL listing is void.

For accessory installation combinations refer to table below. "Mounting Pole" refers to left-, center- or right-hand pole as seen when facing the front of the breaker. Control leads may exit the breaker from its side (S) or back (B)¹.

Nonautomatic circuit breakers (molded case switches) require dummy trip units if internal accessories are to be field installed (refer to page 6-44).

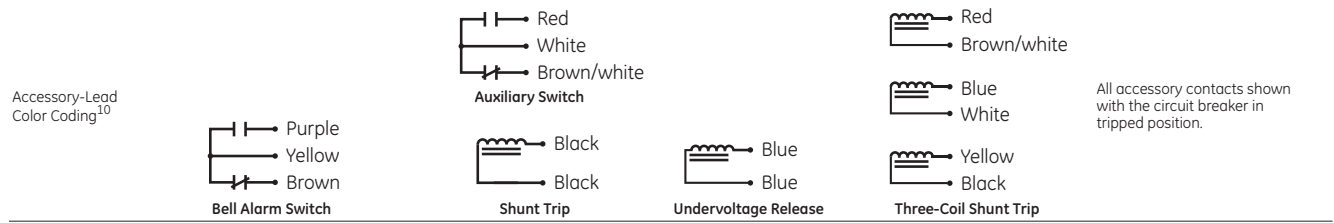


Pole Positions
 L—Left
 C—Center
 R—Right

Lead Wire Exit
 S—Side
 B—Back

J Frame Circuit Breaker with Internal Accessories Mounted in Each Pole

| Breaker Type | Bell Alarm Switch | | | Auxiliary Switch ³ or Shunt Trip | | | Undervoltage Release | | | Three Coil Shunt Trip | | | Total Number of Accessories Within any One Circuit Breaker | |
|--|-------------------|-----------------|----|---|-----------------|----|----------------------|----|----|-----------------------|-----------------|-----------------|--|---|
| | Mounting Pole | | | Mounting Pole | | | Mounting Pole | | | Mounting Pole | | | | |
| | L | C | R | Inst. Sheet GEH- | L | R | Inst. Sheet GEH- | L | R | Inst. Sheet GEH- | L | R | | Inst. Sheet GEH- |
| TOB, THQB, THHQB, TXQB, TOL, THQL, THHQL, TXQL, TQC, THQC, THHQ, TXQC | — | — | — | — | UL | — | 4 | — | — | — | — | — | — | One accessory only. Mounts in a one-inch frame and increase overall breaker size by one pole. May be applied to 1-, 2-, or 3-pole breakers. |
| TQD, THQD | — | — | — | — | — | UL | 4 | — | — | — | — | — | — | One accessory only |
| E150 TEB, TEC, TED, THED, THLC1, TB1 ^{5,6,8} | UL ⁷ | — | UL | 4576 | UL ⁷ | UL | 3418 Aux 3416 S.T. | — | UL | 3417 | — | UL ⁸ | 3434 | 2-pole circuit breaker—any one 3-pole circuit breaker—any two except UVR and 3-coil shunt trip |
| F225 ⁹ TFC, TFJ, TFK, THFK, THLC2, THLC4, TLB2, TLB4 | — | — | UL | 4620 | UL | UL | 4653 | UL | UL | 4653 | UL ⁸ | UL | 4622 | any two |
| J600 TJC, TJD, TJJ, TJK, THJK, TB4 ⁵ , TBC4 ⁵ | — | UL ⁸ | — | 3320 | UL | UL | 3321 Aux 3435 S.T. | — | UL | 5407 | UL ⁸ | — | 3346 | Any two plus bell alarm except TB4, TBC4 any one plus bell alarm. |
| K1200 TKC, TKM, THKM, TB6 ⁵ , TBC6 ⁵ , TB8, TBC8 | — | UL ⁸ | — | 4305 | UL | UL | 3321 Aux 3344 S.T. | — | UL | 5408 | UL ⁸ | — | 3346 | Any two plus bell alarm |



¹ Except TFC and TFJ, F225 line model 4 frames and trips (mfg. code date J101+ (1981 or later), and THLC2, THLC4, TLB4 are UL listed for field installation of most accessories.

² Not UL listed.

³ 600 Vac auxiliary switches are not UL listed.

⁴ Accessories are factory installed only.

⁵ UL listed at 200 AIC without internal accessories, 100 AIC with internally mounted accessories.

⁶ Accessories not available for single-pole TEB/TED frame. Use two-pole circuit breaker.

⁷ Left pole mounting not available for two-pole TEB, TED.

⁸ Not available with lead exit from the back of breaker.

⁹ UL listed interrupting capacity with accessories: 10 kAIC at 600 Vac, 22 kAIC at 480 Vac, 22 kAIC at 240 Vac.

¹⁰ Leads are #18 125°C Vulkene insulated.



Molded Case Circuit Breakers

Internal Accessories

Internally Mounted Signaling and Controlling Functions

Section 6

Auxiliary Switches

Unless otherwise noted switch is SPDT rated 6 amperes at rated ac voltage, 1/2 amperes at 125 Vdc, 1/4 amperes at 250 Vdc.

| Breaker Type | Number of SPDT Switch Elements | Control Voltage 240 Vac, 250 Vdc Maximum UL Listed When Factory Installed Suffix ¹ | | Control Voltage 600 Vac, 250 Vdc Maximum Not UL Listed Suffix ¹ | |
|---|--------------------------------|--|--|---|--|
| | | Base Number | Add to Base Product Number for Factory Installation ⁴ | Base Number | Add to Base Product Number for Factory Installation ⁴ |
| TEB, TEC, TB1 TED, THED, THLC ^{1,3} | 1 | TEDAS2AB1R,L ^{2,3} | S | TEDAS6AB1R,L ^{2,3} | S |
| | 2 | TEDAS2AB2R,L ^{2,3} | S | TEDAS6AB2R,L ^{2,3} | S |
| TJC, TJD, TJJ, TJK, THJK | 1 | TJKASA2AB1R,L | S | TJKASA6AB1R,L | S |
| | 2 | TJKASA2AB2R,L | S | TJKASA6AB2R,L | S |
| | 3 | TJKASA2AB3R,L | S | TJKASA6AB3R,L | S |
| | 4 | TJKASA2AB4R,L | S | TJKASA6AB4R,L | S |
| TB4, TBC4 | 1 | TB4ASA2AB1R,L | S | TB4ASA6AB1R,L | S |
| | 2 | TB4ASA2AB2R,L | S | TB4ASA6AB2R,L | S |
| | 3 | TB4ASA2AB3R,L | S | TB4ASA6AB3R,L | S |
| | 4 | TB4ASA2AB4R,L | S | TB4ASA6AB4R,L | S |
| TKM, THKM, TKC, TB6, TB8, TBC6, TBC8 | 1 | TKMAAS2AB1 | RS or LS | TKMAAS6AB1 | RS or LS |
| | 2 | TKMAAS2AB2 | RS or LS | TKMAAS6AB2 | RS or LS |
| | 3 | TKMAAS2AB3 | RS or LS | TKMAAS6AB3 | RS or LS |
| | 4 | TKMAAS2AB4 | RS or LS | TKMAAS6AB4 | RS or LS |

¹"S" suffix for wires out the side of breaker. For lead exit from back of breaker, replace suffix "S" with "B" and multiply list price by 1.25. "B" suffix not UL listed. Not available with leads out the back for "Q-Line", or 2 element auxiliary switches used on TFG, TFJ, TFK, THFK, THLC2, THLC4, TLB2, and TLB4.

²Auxiliary switch mounts in right pole only on two-pole TEB, TED breakers. (Factory installed only.)

³Not available with "B" suffix-leads out back.

⁴For factory installation, contact Customer Service Center.



Molded Case Circuit Breakers

Internal Accessories

Internally Mounted Signaling and Controlling Functions

How to Order

For field replacement, order base number only. For factory installation, contact Customer Service Center and order base number plus appropriate suffix. For a nonautomatic breaker (molded case switch) a dummy trip is required when installing either a shunt trip or UVR.

Shunt Trip

Remote Tripping – Trips breaker by remote control. Trip coil de-energized when breaker opens. Device meets UL requirements for service to ground fault system.

Undervoltage Release

Undervoltage release automatically trips breaker when applied coil voltage drops to 30 to 70 percent of rated value. Time-delay unit prevent nuisance tripping due to momentary loss of voltage. Separate externally mounted unit has 120 Vac input and 125 Vdc output. Used in conjunction with 125 Vdc undervoltage release which must be ordered separately. Product number SPUVTD for adjustable delay .1 to 1.0 seconds.

Shunt Trip

| Breaker Type | Accessory Voltage | | Product Number ^{1,2} — UL Listed When Factory Installed | |
|---|--|-------|--|--|
| | Vac | Vdc | Base Number for Field Replacement | Suffix Number ³ |
| | | | | Add to Base Product Number for Factory Installation |
| TQB, THQB, THHQB, TXQB, TQL, THQL, THHQL, TXQL | 120-240 | 12 | TQSTA1 ^{4,5,6,7} | 10 |
| | | 24-48 | TQSTA7 ^{4,6,7} | 10 |
| | 120 | | TQSTA8 ^{4,6,7} | 10 |
| TQD, THQD | 120 | | TQDST1 ^{8,9} | 10 |
| | | 240 | TQDST2 ⁹ | 10 |
| | 12 | | TQDST7 ⁹ | 10 |
| | | 24 | TQDST8 ⁹ | 10 |
| | | | TEDST12 | RS |
| TEB, TEC, TB1-B ¹¹ , TED, THED, THLC1 | 240 | | TEDST12 | RS |
| | 480 | | TEDST13 | RS |
| | 600 | | TEDST13 | RS |
| | 12 | | TEDST7 | RS |
| | | 24 | TEDST8 | RS |
| | | 48 | TEDST9 | RS |
| | | 125 | TEDST12 | RS |
| | 250 | | TEDST11 | RS |
| | | 120 | | TFKSTA12 ¹ |
| | TFC, TFJ, TFK, THFK, THLC2, THLC4, TLB2, TLB4 | 240 | | TFKSTA12 ¹ |
| 480 | | | TFKSTA13 ¹ | RS or LS |
| 600 | | | TFKSTA13 ¹ | RS or LS |
| 12 | | | TFKSTA7 ¹ | RS or LS |
| | | 24 | TFKSTA8 ¹ | RS or LS |
| | | 48 | TFKSTA9 ¹ | RS or LS |
| | | 125 | TFKSTA12 ¹ | RS or LS |
| 250 | | | TFKSTA11 ¹ | RS or LS |

¹UL listed for field installation on TFC, TFJ, TFK, and THFK model 4 frames and trips (mfg. Code date J101 or later) and on THLC2, THLC4, TLB4.

²For replacement voltage suppressor on 120 Vac UVRs for F225 line, order Product Number 286A8062G1. for 120 Vac UVRs on all other breaker lines, order Product Number 192A8300G1.

³"S" suffix for wires out the side of the breaker. For lead exit from back of breaker, replace suffix "S" with "B", and multiply "S" accessory List Price by 1.25. "B" suffix not UL listed. Not available with leads out the back on "Q-Line." For factory installation, contact Customer Service Center.

⁴Mounts on a one-inch frame and increases overall breaker size by one pole added to left side. May be applied to 1-, 2-, or 3-pole breakers. Maximum total breaker width is 4-pole. Must be factory installed.

⁵A selective listing of breaker product numbers that include 120 Volt ac shunt trip appears on page 6-22.

⁶Not available on GFCI (5 ma) or Equipment Ground Fault (30 ma) breakers.

⁷TQST shunt trips not available on breakers over 100 A.

⁸Not available with "B" suffix—leads out back.

⁹Must be factory installed, right pole only.

¹⁰To order, specify both the accessory and breaker product number =, e.g. THQL2130, TQST1 identifies a 30 A, 2-pole plug-in breaker with a factory installed 120 Vac shunt trip.

¹¹For TB1 with bolt-on limiters.



Molded Case Circuit Breakers

Internal Accessories

Internally Mounted Signaling and Controlling Functions

Section 6

Shunt Trip (continued)

| Breaker Type | Accessory Voltage | | Product Number — UL Listed When Factory Installed | |
|--|-------------------|-----|---|--|
| | Vac | Vdc | Base Number for Field Replacement | Suffix Number ¹ |
| | | | | Add to Base Product Number for Factory Installation |
| TJC, TJD, TJJ, TJK, THJK | 120 | | TJKSTA12R,L | S |
| | 240 | | TJKSTA12R,L | S |
| | 480 | | TJKSTA13R,L | S |
| | 600 | | TJKSTA13R,L | S |
| | | 12 | TJKSTA7R,L | S |
| | | 24 | TJKSTA8R,L | S |
| | | 48 | TJKSTA9R,L | S |
| | | 125 | TJKSTA12R,L | S |
| | | 250 | TJKSTA11R,L | S |
| | TB4, TBC4 | 120 | | TB4STA12R,L ³ |
| 240 | | | TB4STA12R,L ³ | |
| 480 | | | TB4STA13R,L ³ | |
| 600 | | | TB4STA13R,L ³ | |
| | | 12 | TB4STA7R,L ³ | |
| | | 24 | TB4STA8R,L ³ | |
| | | 48 | TB4STA9R,L ³ | |
| | | 125 | TB4STA12R,L ³ | |
| | | 250 | TB4STA11R,L ³ | |
| TKC, TKM, THKM, TB6, TB8, TBC6, TBC8 ² | | 120 | | TKMASTA12R,L |
| | 240 | | TKMASTA12R,L | S |
| | 480 | | TKMASTA13R,L | S |
| | 600 | | TKMASTA13R,L | S |
| | | 12 | TKMASTA7R,L | S |
| | | 24 | TKMASTA8R,L | S |
| | | 48 | TKMASTA9R,L | S |
| | | 125 | TKMASTA12R,L | S |
| | | 250 | TKMASTA11R,L | S |

¹"S" suffix for wires out the side of the breaker. For lead exit from back of breaker, replace suffix "S" with "B". "B" suffix not UL listed. Not available with leads out the back on "Q-Line." For factory installation, contact Customer Service Center.

²Not UL listed.

³Not available for factory installation.



Molded Case Circuit Breakers

Internal Accessories

Internally Mounted Signaling and Controlling Functions

Undervoltage Release

| Breaker Type | Accessory Voltage | | Product Number ^{1,2} – UL Listed When Factory Installed | | |
|--|--------------------------|-----|--|--|---|
| | Vac | Vdc | Base Number for Field Replacement | Suffix Number ³ | |
| | | | | Add to Base Product Number for Factory Installation | |
| TEB, TEC, TB1-B ⁴ TED, THED, THLC1 | 120 | | TEDUV1 | RS | |
| | 240 | | TEDUV2 | RS | |
| | 480 | | TEDUV4 | RS | |
| | 600 | | TEDUV6 | RS | |
| | | 12 | TEDUV7 | RS | |
| | | 24 | TEDUV8 | RS | |
| | | 48 | TEDUV9 | RS | |
| | | 125 | TEDUV10 | RS | |
| | | 250 | TEDUV11 | RS | |
| | TJC, TJD, TJJ, TJK, THJK | 120 | | TJUV1R | S |
| | | 240 | | TJUV2R | S |
| 480 | | | TJUV4R | S | |
| 600 | | | TJUV6R | S | |
| | | 12 | TJUV7R | S | |
| | | 24 | TJUV8R | S | |
| | | 48 | TJUV9R | S | |
| | | 125 | TJUV10R | S | |
| | | 250 | TJUV11R | S | |
| TKC, TKM, THKM, TB6, TB8, TBC6, TBC8 ⁵ | | 120 | | TKUV1R | S |
| | | 240 | | TKUV2R | S |
| | 480 | | TKUV4R | S | |
| | 600 | | TKUV6R | S | |
| | | 12 | TKUV7R | S | |
| | | 24 | TKUV8R | S | |
| | | 48 | TKUV9R | S | |
| | | 125 | TKUV10R | S | |
| | | 250 | TKUV11R | S | |

¹UL listed for field installation on TFC, TFJ, TFK, and THFK model 4 frames and trips (mfg. Code date J101 or later) and on THLC2, THLC4, TLB4.

²For replacement voltage suppressor on 120 Vac UVRs for F225 line, order Product Number 286A8062G1 for 120 Vac UVRs on all other breaker lines, order Product Number 192A8300G1.

³"S" suffix for wires out the side of the breaker. For lead exit from back of breaker, replace suffix "S" with "B". "B" suffix not UL listed. For factory installation, contact Customer Service Center.

⁴For TB1 with bolt-on limiters.

⁵Not UL listed.



Molded Case Circuit Breakers

Internal Accessories

Internally Mounted Signaling and Controlling Functions

Section 6

Bell Alarm Switches

| Breaker Type | Product Number ² UL Listed When Factory Installed | |
|--|---|--------|
| | Base No. | Suffix |
| TEB, TEC, TB1 TED, THED, THLC1 | TEDBAR or TEDBAL ^{3,4} | S |
| TFC, TFJ, TFK, THFK, THLC2, THLC4, TLB4 | TFKBAAR ^{5,6} | S |
| TJC, TJJ, TJK, THJK TB4, TBC4, TJD | TJKBAAL ⁷ | S |
| TKC, TKM, THKM, TB6, TBC6, TBC8, TB8 | TKMABAAL ⁷ | S |

Blown Fuse Detector-Three-Coil Shunt Trip

| Breaker Type | Product Number ² UL Listed When Factory Installed | |
|-----------------------------|---|--------|
| | Base No. | Suffix |
| TED, THED, TEC ³ | TEDST316 | RS |
| TJJ, TJK, THJK, TJD, TJC | TJKST316 | LS |

Dummy Trip¹

| Breaker Type | Product Number |
|--------------|---|
| E150 | Internal accessories for these noninterchangeable breakers require factory-installed dummy trips. |
| FJ225 | |
| JJ400 | Automatically supplied when accessories are ordered. |
| JK400 | TJKYT3 (two-pole, three-pole) |
| JK600 | TJKYT36 (two-pole, three-pole) |
| KM800 | TKMAYT3 (two-pole, three-pole) |

¹Not UL listed when field installed.

²Add "B" suffix for leads exit from back of breaker. For factory installation, contact Customer Service Center.

³Not available with "B" suffix – leads out back.

⁴Not available for two-pole TEB, TED. Order TEDBAR.

⁵Changes circuit breaker interrupting capacity to: 10kA @ 600 Vac, 22kA @ 480 Vac, 22kA @ 240 Vac, for TFC, TFJ, TFK and THFK only.

⁶UL listed for field installation.

⁷Mounts in center pole with leads out left side.



Molded Case Circuit Breakers

Spectra™ RMS

SE150 Frame

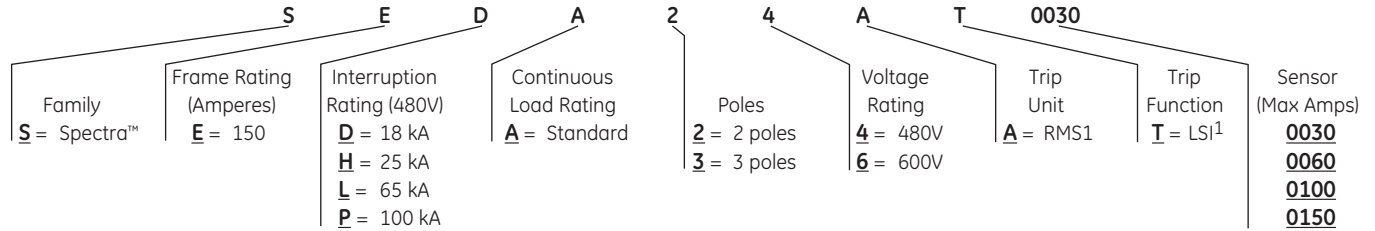
15-150A Circuit Breakers

Electronic Trip

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

Product Number Structure



¹Adjustable Instantaneous with Tracking Short Time (Long Time established via Interchangeable Rating Plugs).

Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

SED, SEH, SEL, SEP²; 2-Pole, 150A, 480 Vac Max., (IEC 947-2: 160A, 415 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|---------------------------|---------------------------|---------------------------|---------------------------|--|------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Range Amps | | Product Number | Current Sensor | UL 489 IC @ 480 Vac | | | | Product Number | Wire Range |
| | Low | High | | | 18kA Product Number | 25kA Product Number | 65kA Product Number | 100kA Product Number | | |
| 15 | 43 | 182 | SRPE30A15 | 30 | SEDA24AT0030 ³ | SEHA24AT0030 ³ | SELA24AT0030 ³ | SEPA24AT0030 ³ | TCAL18 | 12-3/0 Cu 12-3/0 Al |
| 20 | 58 | 254 | SRPE30A20 | | | | | | | |
| 25 | 73 | 332 | SRPE30A25 | | | | | | | |
| 30 | 87 | 415 | SRPE30A30 | | | | | | | |
| 35 | 104 | 453 | SRPE60A35 | | | | | | | |
| 40 | 118 | 501 | SRPE60A40 | 60 | SEDA24AT0060 ³ | SEHA24AT0060 ³ | SELA24AT0060 ³ | SEPA24AT0060 ³ | | |
| 45 | 134 | 583 | SRPE60A45 | | | | | | | |
| 50 | 148 | 637 | SRPE60A50 | | | | | | | |
| 60 | 178 | 777 | SRPE60A60 | | | | | | | |
| 70 | 206 | 863 | SRPE100A70 | | | | | | | |
| 80 | 236 | 999 | SRPE100A80 | 100 | SEDA24AT0100 | SEHA24AT0100 | SELA24AT0100 | SEPA24AT0100 | | |
| 90 | 267 | 1138 | SRPE100A90 | | | | | | | |
| 100 | 297 | 1280 | SRPE100A100 | | | | | | | |
| 110 | 328 | 1426 | SRPE150A110 | | | | | | | |
| 125 | 374 | 1640 | SRPE150A125 | | | | | | | |
| 150 | 450 | 1991 | SRPE150A150 | 150 | SEDA24AT0150 | SEHA24AT0150 | SELA24AT0150 | SEPA24AT0150 | | |

SED, SEH, SEL, SEP²; 3-Pole, UL/CSA: 150A, 600 Vac Max., (IEC 947-2: 160A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|---------------------------|---------------------------|---------------------------|---------------------------|--|------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Range Amps | | Product Number | Current Sensor | UL 489 IC @ 480 Vac | | | | Product Number | Wire Range |
| | Low | High | | | 18kA Product Number | 25kA Product Number | 65kA Product Number | 100kA Product Number | | |
| 15 | 43 | 182 | SRPE30A15 | 30 | SEDA36AT0030 ³ | SEHA36AT0030 ³ | SELA36AT0030 ³ | SEPA36AT0030 ³ | TCAL18 | 12-3/0 Cu 12-3/0 Al |
| 20 | 58 | 254 | SRPE30A20 | | | | | | | |
| 25 | 73 | 332 | SRPE30A25 | | | | | | | |
| 30 | 87 | 415 | SRPE30A30 | | | | | | | |
| 35 | 104 | 453 | SRPE60A35 | | | | | | | |
| 40 | 118 | 501 | SRPE60A40 | 60 | SEDA36AT0060 ³ | SEHA36AT0060 ³ | SELA36AT0060 ³ | SEPA36AT0060 ³ | | |
| 45 | 134 | 583 | SRPE60A45 | | | | | | | |
| 50 | 148 | 637 | SRPE60A50 | | | | | | | |
| 60 | 178 | 777 | SRPE60A60 | | | | | | | |
| 70 | 206 | 863 | SRPE100A70 | | | | | | | |
| 80 | 236 | 999 | SRPE100A80 | 100 | SEDA36AT0100 | SEHA36AT0100 | SELA36AT0100 | SEPA36AT0100 | | |
| 90 | 267 | 1138 | SRPE100A90 | | | | | | | |
| 100 | 297 | 1280 | SRPE100A100 | | | | | | | |
| 110 | 328 | 1426 | SRPE150A110 | | | | | | | |
| 125 | 374 | 1640 | SRPE150A125 | | | | | | | |
| 150 | 450 | 1991 | SRPE150A150 | 150 | SEDA36AT0150 | SEHA36AT0150 | SELA36AT0150 | SEPA36AT0150 | | |

²SEL, SEP UL current limiting.

³When used with 15-50A Rating Plug, UL listed for HID (high intensity discharge).

Note: All Spectra™ breakers UL listed as HACR type.

All Spectra™ breakers marked CE.



Molded Case Circuit Breakers

Section 6

Spectra™ RMS

SE150 Frame

15-150A Circuit Breakers

Electronic Trip

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

SE150 Add-on 3-Pole Limiters

| Maximum Ampere Rating | Product Number | kAIC @600 Vac | Use With Breaker/ MCP Frame |
|--------------------------|-------------------|------------------|--------------------------------|
| 150 | SAXSEL36150 | 65 | SEL |
| 150 | SAXSEP36150 | 100 | SEP |

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | |
|--|-------------|
| SE Breaker | |
| Installation Instructions | GEH-5591 |
| Rating Plug | GEH-5549 |
| SE Breaker Accessories | |
| Bell Alarm & Aux. Switch | GEH-5593 |
| Shunt Trip & UVR | GEH-5551 |
| Padlock Device | GEJ-3056 |
| Lug Kits | GEJ-3051 |
| Control Wire Lug Kit | GEH-5881 |
| Add-On Limiters | DEH-4671 |
| STDA Flange Handle | GEH-5314 |
| STDA Operating Mechanism | GEH-5684 |
| TDR Operating Mechanism | GEH-5609 |
| TDM Operating Mechanism | GEH-5611 |
| Motor Operator | GEH-5613 |
| Cable Operator Mechanism | GEH-6290 |
| Operator Adapter Kits | GEH-5688 |
| Mechanical Interlock | GEH-5615 |
| Warning Labels | GEH-5686 |
| SE Mounting Provisions | |
| Plug-in Mounting Base | GEH-4610 |
| Back Connected Studs | GEJ-3609 |
| Outline Drawing | 168D1109SH1 |
| Series Ratings | DET-008 |
| Spectra™ RMS Circuit Breakers in Combination with Cooper Bussman Distribution Block | |
| | DET-781 |

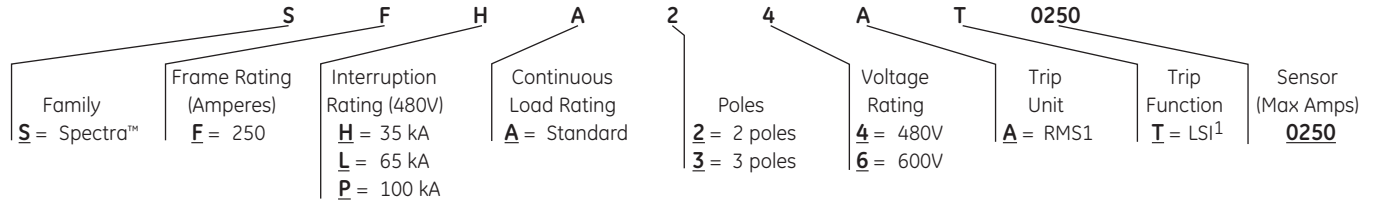


Molded Case Circuit Breakers

Spectra™ RMS

SF250 Frame
 70-250A Circuit Breakers
 Electronic Trip
 Suitable for Reverse Feed
 UL File E-11592, CSA LR 40350

Product Number Structure



¹Adjustable Instantaneous with Tracking Short Time (Long Time established via Interchangeable Rating Plugs).
 Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

SFH, SFL, SFP²; 2-Pole, UL/CSA: 250A, 480 Vac Max., (IEC 947-2: 250A, 415 Vac Max.)

| Rating Plug | | | | Frame | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|---------------------|--------------|--------------|--|----------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | UL 489 IC @ 480 Vac | | | Product Number | Wire Range |
| | Low | High | | | 35kA | 65kA | 100kA | | |
| 70 | 205 | 700 | SRPF250A70 | 250 | SFHA24AT0250 | SFLA24AT0250 | SFPA24AT0250 | TCAL29 | 8-350 Cu 8-350 Al |
| 80 | 235 | 800 | SRPF250A80 | | | | | | |
| 90 | 265 | 900 | SRPF250A90 | | | | | | |
| 100 | 295 | 1000 | SRPF250A100 | | | | | | |
| 110 | 325 | 1100 | SRPF250A110 | | | | | | |
| 125 | 370 | 1250 | SRPF250A125 | | | | | | |
| 150 | 440 | 1500 | SRPF250A150 | | | | | | |
| 175 | 515 | 1750 | SRPF250A175 | | | | | | |
| 200 | 590 | 2000 | SRPF250A200 | | | | | | |
| 225 | 665 | 2250 | SRPF250A225 | | | | | | |
| 250 | 736 | 2500 | SRPF250A250 | | | | | | |

SFH, SFL, SFP²; 3-Pole, UL/CSA: 250A, 600 Vac Max., (IEC 947-2: 250A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|---------------------|--------------|--------------|--|----------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | UL 489 IC @ 480 Vac | | | Product Number | Wire Range |
| | Low | High | | | 35kA | 65kA | 100kA | | |
| 70 | 205 | 700 | SRPF250A70 | 250 | SFHA36AT0250 | SFLA36AT0250 | SFPA36AT0250 | TCAL29 | 8-350 Cu 8-350 Al |
| 80 | 235 | 800 | SRPF250A80 | | | | | | |
| 90 | 265 | 900 | SRPF250A90 | | | | | | |
| 100 | 295 | 1000 | SRPF250A100 | | | | | | |
| 110 | 325 | 1100 | SRPF250A110 | | | | | | |
| 125 | 370 | 1250 | SRPF250A125 | | | | | | |
| 150 | 440 | 1500 | SRPF250A150 | | | | | | |
| 175 | 515 | 1750 | SRPF250A175 | | | | | | |
| 200 | 590 | 2000 | SRPF250A200 | | | | | | |
| 225 | 665 | 2250 | SRPF250A225 | | | | | | |
| 250 | 736 | 2500 | SRPF250A250 | | | | | | |

²SFL, SFP UL current limiting.

Note: All Spectra™ breakers UL listed as HACR type.
 All Spectra™ breakers marked CE.



Molded Case Circuit Breakers

Spectra™ RMS

SF250 Frame

70-250A Circuit Breakers

Electronic Trip

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

Section 6

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | |
|---|-------------|
| SF Breaker | |
| Installation Instructions | GEH-5591 |
| Rating Plug | GEH-5549 |
| SF Breaker Accessories | |
| Bell Alarm & Aux. Switch | GEH-5593 |
| Shunt Trip & UVR | GEH-5551 |
| Padlock Device | GEJ-3056 |
| Lug Kits | GEJ-3045 |
| Control Wire Lug Kit | GEH-5882 |
| STDA Flange Handle | GEH-5314 |
| STDA Operating Mechanism | GEH-5684 |
| TDR Operating Mechanism | GEH-5609 |
| TDM Operating Mechanism | GEH-5611 |
| Motor Operator | GEH-5613 |
| Cable Operator Mechanism | GEH-6290 |
| Operator Adapter Kits | GEH-5688 |
| Mechanical Interlock | GEH-5615 |
| Mounting Hardware Kits | GEH-5659 |
| SF Mounting Provisions | |
| Plug-in Mounting Base | GEH-4610 |
| Back Connected Studs | GEJ-3635 |
| Outline Drawing | 168D1103SH1 |
| Series Ratings | DET-008 |
| Spectra™ RMS Circuit Breakers in Combination with | |
| Cooper Bussman Distribution Block | DET-781 |



Molded Case Circuit Breakers

Spectra™ RMS

SG600 Frame

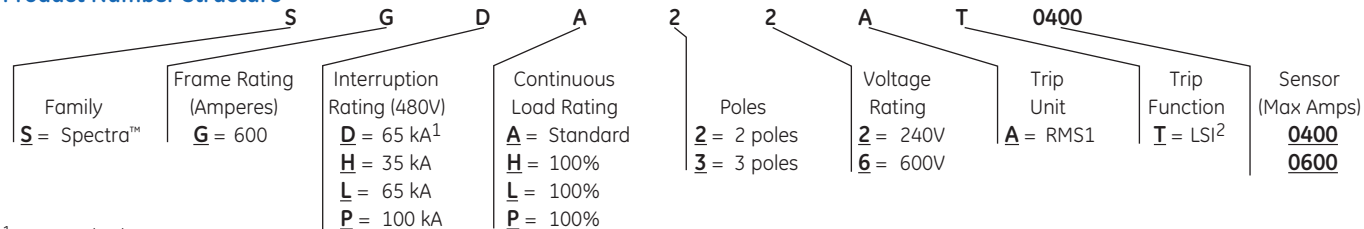
125-600A Circuit Breakers

Electronic Trip (Digital, Solid-State)

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

Product Number Structure



¹ SGD rated 65kA at 240V.

² Adjustable Instantaneous with Tracking Short Time (Long Time established via Interchangeable Rating Plugs).

Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

SGD; 400A, 240 Vac Max., (IEC 947-2: 400A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | Terminal Lugs for Front Connection (Cu/Al) | | |
|---------------|--|------|----------------|----------------|-------|---------------------------|--|--------------------------------------|------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | 240 Vac | | Product ⁴ Number | Wire Range |
| | Low | High | | | | 65kA | | | |
| 125 | 380 | 1275 | SRPG400A125 | 400 | 2 | SGDA22AT0400 ³ | 2-pole lug kit TCLK265 | (2) 2/0-500 Cu or (1) 8-600 Cu | |
| 150 | 455 | 1530 | SRPG400A150 | | | | | | |
| 175 | 530 | 1785 | SRPG400A175 | | | | | | |
| 200 | 605 | 2040 | SRPG400A200 | | | | | | |
| 225 | 680 | 2295 | SRPG400A225 | | | | | | |
| 250 | 755 | 2550 | SRPG400A250 | | 3 | SGDA32AT0400 ³ | 3-pole lug kit TCLK365 | (2) 2/0-500 Al or (1) 8-600 Al | |
| 300 | 905 | 3060 | SRPG400A300 | | | | | | |
| 350 | 1060 | 3570 | SRPG400A350 | | | | | | |
| 400 | 1210 | 4080 | SRPG400A400 | | | | | | |

SGH, SGL, SGP⁵; 400A, 600 Vac Max., (IEC 947-2: 400A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | Terminal Lugs for Front Connection (Cu/Al) | | |
|---------------|--|------|----------------|----------------|-------|---------------------|--------------|--|-----------------------------|--------------------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product ⁴ Number | Wire Range |
| | Low | High | | | | 35kA | 65kA | 100kA | | |
| 125 | 380 | 1275 | SRPG400A125 | 400 | 2 | SGHA26AT0400 | SGLA26AT0400 | SGPA26AT0400 | 2-pole lug kit TCLK265 | (2) 2/0-500 Cu or (1) 8-600 Cu |
| 150 | 455 | 1530 | SRPG400A150 | | | | | | | |
| 175 | 530 | 1785 | SRPG400A175 | | | | | | | |
| 200 | 605 | 2040 | SRPG400A200 | | | | | | | |
| 225 | 680 | 2295 | SRPG400A225 | | | | | | | |
| 250 | 755 | 2550 | SRPG400A250 | | 3 | SGHA36AT0400 | SGLA36AT0400 | SGPA36AT0400 | 3-pole lug kit TCLK365 | (2) 2/0-500 Al or (1) 8-600 Al |
| 300 | 905 | 3060 | SRPG400A300 | | | | | | | |
| 350 | 1060 | 3570 | SRPG400A350 | | | | | | | |
| 400 | 1210 | 4080 | SRPG400A400 | | | | | | | |

SGH, SGL⁵, SGP⁵; 600A, 600 Vac Max., (IEC 947-2: 630A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | Terminal Lugs for Front Connection (Cu/Al) | | |
|---------------|--|------|----------------|----------------|-------|---------------------|--------------|--|-----------------------------|--------------------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product ⁴ Number | Wire Range |
| | Low | High | | | | 35kA | 65kA | 100kA | | |
| 250 | 765 | 2530 | SRPG600A250 | 600 | 2 | SGHA26AT0600 | SGLA26AT0600 | SGPA26AT0600 | 2-pole lug kit TCLK265 | (2) 2/0-500 Cu or (1) 8-600 Cu |
| 300 | 915 | 3035 | SRPG600A300 | | | | | | | |
| 350 | 1070 | 3545 | SRPG600A350 | | | | | | | |
| 400 | 1220 | 4050 | SRPG600A400 | | | | | | | |
| 450 | 1375 | 4555 | SRPG600A450 | | | | | | | |
| 500 | 1525 | 5060 | SRPG600A500 | | 3 | SGHA36AT0600 | SGLA36AT0600 | SGPA36AT0600 | 3-pole lug kit TCLK365 | (2) 2/0-500 Al or (1) 8-600 Al |
| 600 | 1830 | 6075 | SRPG600A600 | | | | | | | |

³Rated 240 Vac max.

⁴Order one kit for either line or load end; two kits required for both.

⁵SGL, SGP UL current limiting.

Note: All Spectra™ breakers UL listed as HACR type. All Spectra™ breakers marked CE.



Molded Case Circuit Breakers

Section 6

Spectra™ RMS

SG600 Frame, 100% Rated

125-600A Circuit Breakers

Electronic Trip (Digital, Solid-State)

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

SGH, SGL², SGP²; 100% UL Rated, 3-Pole: 400A, 600 Vac Max.; (IEC 947-2: 400A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|-------|-----------------------|-----------------------|------------------------|--|--------------------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product ¹ Number | Wire Range |
| | Low | High | | | | 35kAIC Product Number | 65kAIC Product Number | 100kAIC Product Number | | |
| 125 | 380 | 1275 | SRPG400A125 | 400 | 3 | SGHH36AT0400 | SGLL36AT0400 | SGPP36AT0400 | TCLK365 | (2) 2/0-500 Cu or (1) 8-600 Cu |
| 150 | 455 | 1530 | SRPG400A150 | | | | | | | |
| 175 | 530 | 1785 | SRPG400A175 | | | | | | | |
| 200 | 605 | 2040 | SRPG400A200 | | | | | | | |
| 225 | 680 | 2295 | SRPG400A225 | | | | | | | |
| 250 | 755 | 2550 | SRPG400A250 | | | | | | | |
| 300 | 905 | 3060 | SRPG400A300 | | | | | | | |
| 350 | 1060 | 3570 | SRPG400A350 | | | | | | | |
| 400 | 1210 | 4080 | SRPG400A400 | | | | | | | |

¹Order one kit for either line or load end; two kits required for both.

²SGL, SGP UL current limiting.

Note: All Spectra™ breakers UL listed as HACR type.

All Spectra™ breakers marked CE.

SGH, SGL², SGP²; 100% UL Rated, 3-Pole: 600A, 600 Vac Max.; (IEC 947-2: 630A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|-------|-----------------------|-----------------------|------------------------|--|-----------------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product ¹ Number | Wire Range |
| | Low | High | | | | 35kAIC Product Number | 65kAIC Product Number | 100kAIC Product Number | | |
| 250 | 765 | 2530 | SRPG600A250 | 600 | 3 | SGHH36AT0600 | SGLL36AT0600 | SGPP36AT0600 | TCLK365 | (2) 2/0-500 Cu or (1) 8-600 Cu |
| 300 | 915 | 3035 | SRPG600A300 | | | | | | | |
| 350 | 1070 | 3545 | SRPG600A350 | | | | | | | |
| 400 | 1220 | 4050 | SRPG600A400 | | | | | | | |
| 450 | 1375 | 4555 | SRPG600A450 | | | | | | | |
| 500 | 1525 | 5060 | SRPG600A500 | | | | | | | |
| 500 | 1525 | 5060 | SRPG600A500 | | | | | | | |
| 600 | 1830 | 6075 | SRPG600A600 | | | | | | | |



Molded Case Circuit Breakers

Spectra™ RMS

SG600 Frame

125-600A Circuit Breakers

Electronic Trip (Digital, Solid-State)

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | |
|--------------------------------|-------------------|
| SG Breaker | |
| Installation Instructions | GEH-5663 |
| Rating Plug | GEH-5549 |
| MVT & MVT Plus PM Rating Plugs | GEH-5887 |
| SG Breaker Accessories | |
| Bell Alarm & Aux. Switch | GEH-5593 |
| Shunt Trip & UVR | GEH-5551 |
| Lug Kits | GEJ-3052 |
| Trip Unit Covers | GEH-5664 |
| Door Ring Interlock Catch Kits | GEH-5662 |
| STDA Flange Handle | GEH-5314 |
| STDA Operating Mechanism | GEH-5684 |
| TDR Operating Mechanism | GEH-5654 |
| TDM Operating Mechanism | GEH-5653 |
| Motor Operator | GEH-5657 |
| Cable Operator Mechanism | GEH-6290 |
| Cable Operators | DEH-40467 |
| Mechanical Interlock | GEH-5697 |
| SG Mounting Provisions | |
| Plug-in Mounting Base | GEH-5655 |
| Back Connected Studs | GEH-5665 |
| Outline Drawing | 208C1549SH1, 2, 3 |
| Series Ratings | DET-008 |



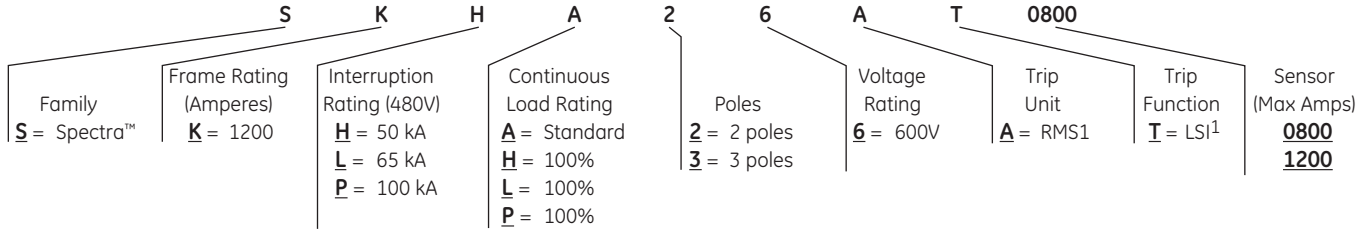
Molded Case Circuit Breakers

Spectra™ RMS

Section 6

SK 1200 Frame
 300-1200A Circuit Breakers
 Electronic Trip, Digital, Solid-State
 Suitable for Reverse Feed
 UL File E-11592, CSA LR 40350

Product Number Structure



¹Adjustable Instantaneous with Tracking Short Time (Long Time established via Interchangeable Rating Plugs).
 Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

SKH, SKL, SKP; 800A, 600 Vac Max., (IEC 947-2:800A 690 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|-------|---------------------|---------------------|----------------------|--|----------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product Number | Wire Range |
| | Low | High | | | | 50kA Product Number | 65kA Product Number | 100kA Product Number | | |
| 300 | 940 | 3015 | SRPK800A300 | 800 | 2 | SKHA26AT0800 | SKLA26AT0800 | SKPA26AT0800 | TCAL81 | (3) 3/0-500 Cu |
| 400 | 1255 | 4015 | SRPK800A400 | | | | | | | |
| 500 | 1570 | 5020 | SRPK800A500 | | | | | | | |
| 600 | 1875 | 6195 | SRPK800A600 | | | | | | | |
| 700 | 2155 | 7420 | SRPK800A700 | | | | | | | |
| 800 | 2440 | 8705 | SRPK800A800 | | 3 | SKHA36AT0800 | SKLA36AT0800 | SKPA36AT0800 | | |

SKH, SKL, SKP; 1200A, 600 Vac Max., (IEC 947-2: 1250A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|-------|----------------|----------------|-------|---------------------|---------------------|----------------------|--|----------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product Number | Wire Range |
| | Low | High | | | | 50kA Product Number | 65kA Product Number | 100kA Product Number | | |
| 600 | 1825 | 6110 | SRPK1200A600 | 1200 | 2 | SKHA26AT1200 | SKLA26AT1200 | SKPA26AT1200 | TCAL125 | (4) 250-500 Cu |
| 700 | 2125 | 7125 | SRPK1200A700 | | | | | | | |
| 800 | 2430 | 8145 | SRPK1200A800 | | | | | | | |
| 900 | 2735 | 9160 | SRPK1200A900 | | | | | | | |
| 1000 | 3040 | 10180 | SRPK1200A1000 | | | | | | | |
| 1175 | 3574 | 11961 | SRPK1200A1175 | | 3 | SKHA36AT1200 | SKLA36AT1200 | SKPA36AT1200 | | |

Note: All Spectra™ breakers UL listed as HACR type.
 All Spectra™ breakers marked CE.



Molded Case Circuit Breakers

Section 6

Spectra™ RMS

SK 1200 Frame, 100% Rated

300-1200A Circuit Breakers

Electronic Trip, Digital, Solid-State

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

SKH, SKL, SKP; 100% UL Rated, 3-Pole: 800A, 600 Vac Max.; (IEC 947-2: 800A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|-------|---------------------|---------------------|----------------------|--|----------------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product Number | Wire Range |
| | Low | High | | | | 50kA Product Number | 65kA Product Number | 100kA Product Number | | |
| 300 | 940 | 3015 | SRPK800A300 | 800 | 3 | SKHH36AT0800 | SKLL36AT0800 | SKPP36AT0800 | TCAL81 | (3) 3/0-500 Cu (3) 3/0-500 Al |
| 400 | 1255 | 4015 | SRPK800A400 | | | | | | | |
| 500 | 1570 | 5020 | SRPK800A500 | | | | | | | |
| 600 | 1875 | 6195 | SRPK800A600 | | | | | | | |
| 700 | 2155 | 7420 | SRPK800A700 | | | | | | | |
| 800 | 2440 | 8705 | SRPK800A800 | | | | | | | |

SKH, SKL, SKP; 100% UL Rated, 3-Pole: 1200A, 600 Vac Max.; (IEC 947-2: 100A, 690 Vac Max.)

| Rating Plug | | | | Frame | | | | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|-------|----------------|----------------|-------|---------------------------|---------------------------|---------------------------|--|----------------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | Poles | UL 489 IC @ 480 Vac | | | Product Number | Wire Range |
| | Low | High | | | | 50kA Product Number | 65kA Product Number | 100kA Product Number | | |
| 600 | 1825 | 6110 | SRPK1200A600 | 1200 | 3 | SKHH36AT1000 | SKLL36AT1000 | SKPP36AT1000 | TCAL125 | (4) 250-500 Cu (4) 250-500 Al |
| 700 | 2125 | 7125 | SRPK1200A700 | | | | | | | |
| 800 | 2430 | 8145 | SRPK1200A800 | | | | | | | |
| 900 | 2735 | 9160 | SRPK1200A900 | | | | | | | |
| 1000 | 3040 | 10180 | SRPK1200A1000 | | | | | | | |
| 1200 | 3650 | 12215 | SRPK1200A1200 | | 3 | SKHH36AT1200 ¹ | SKLL36AT1200 ¹ | SKPP36AT1200 ¹ | | |

¹100% UL rated SK1200 supplied with back-connected assembly which increases breaker depth. Refer to outline drawings for details. Lugs not required

Note: All Spectra™ breakers UL listed as HACR type. All Spectra™ breakers marked CE.

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | |
|-----------------------------------|-------------|
| SK Breaker | |
| Installation Instructions | GEH-5592 |
| Rating Plug | GEH-5549 |
| MVT & MVT Plus PM Rating Plugs | GEH-5887 |
| SG Breaker Accessories | |
| Bell Alarm & Aux. Switch | GEH-5593 |
| Shunt Trip & UVR | GEH-5551 |
| Lug Shields for SK1200 | GEH-5699 |
| Lug Shields for SKP | GEH-5685 |
| Trip Unit Covers | GEH-5664 |
| Mounting of Integral Handle | GEH-5610 |
| STDA Flange Handle | GEH-5314 |
| STDA Operating Mechanism | GEH-5684 |
| TDM Operating Mechanism | GEH-5612 |
| Coupling TDM Operating Mechanisms | GEH-5873 |
| Motor Operator | GEH-5614 |
| Cable Operator Mechanism | GEH-6291 |
| Handle Extension | GEH-5648 |
| Padlocking Device - Standard | GEH-5877 |
| Face Mounted Interlock | GEH-5698 |
| Mechanical Interlock | GEH-5874 |
| SK Mounting Provisions | |
| Plug-in Mounting Base | GEH-4342 |
| Back Connected Studs | GEJ-3619 |
| Outline Drawing | 208C1757SH1 |
| Outline Drawing (1200A 100%) | 168D1678SH2 |
| Series Ratings | DET-008 |



Molded Case Circuit Breakers

Industrial Circuit Breakers

Spectra™ RMS Circuit Breakers with
microEntelliGuard™ Trip Units

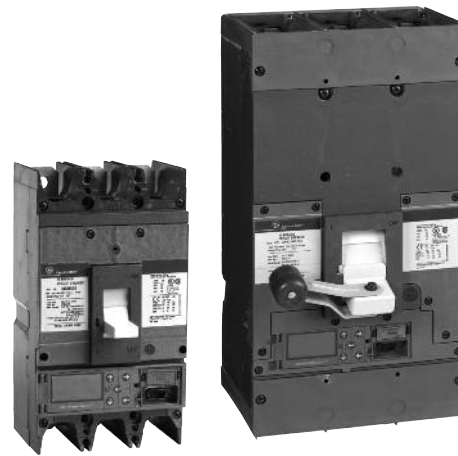
Section 6

microEntelliGuard™ Trip Unit

The *microEntelliGuard™* trip unit is the newest and most advanced trip unit available in the Spectra™ line of molded case circuit breakers. The trip unit design is based on the EntelliGuard™ TU trip unit platform. The *microEntelliGuard™* trip unit incorporates the advanced features and protective functions available on the EntelliGuard™ TU trip unit and is available in the 600-amp Spectra™ G and 1200-amp Spectra™ K frames. Spectra™ breakers with *microEntelliGuard™* trip units allow you to select the enhanced system protection, coordination, metering and communication options required for the application and allow a fully coordinated and integrated electrical system across GE's entire line of molded case, insulated case and low voltage circuit breakers. Spectra™ breakers with *microEntelliGuard™* trip units use all of the same power management system accessories as the MicroVersaTrip™ PM trip units (some new power management accessories are available for breakers that incorporate some of the new features offered with the *microEntelliGuard™* trip unit).

Standard Features

- Adjustable Long-Time pickup and delay bands with three curve shapes (MVT I^2t , CB and Fuse I^4t) for optimal system coordination (includes thermal memory for enhanced system protection)
- Adjustable Short-Time pickup with multiple delay bands, curve slopes, I^2t IN/OUT, and OFF setting
- Adjustable Instantaneous pickup
- 3-Phase ammeter
- Backlit LCD display with five-button tactile keypad for function selection and set point adjustment and sealable, clear LEXAN cover for tamper resistant settings
- LED Status Indicator to show “health” of trip unit
- Trip Target indication and local pickup warning signal
- Interchangeable/Universal rating plugs
- Test set jack for GTUTK20 test kit
- True RMS current sensing for accurate response to high harmonic content waveforms
- EMI immunity per ANSI C37.90



Spectra™ SG600 and SK1200 breakers
with *microEntelliGuard™* Trip Units

Optional Features

- Ground Fault (Trip or Alarm) pickup and delay bands with multiple slopes, I^2t IN/OUT for optimal system coordination
- Neutral Protection provides overload protection on the system neutral
- Zone Selective Interlocking (ZSI) capability on Short Time, Ground Fault and Instantaneous settings for optimal system coordination and selectivity
- Reduced Energy Let-Through (RELT) setting for enhanced equipment and personnel protection
- Advanced metering option includes the ability to monitor current, voltage, energy, frequency, power factor, power (real/reactive/apparent) and peak power demand
- Modbus communications system with user selectable address assignment for communication directly with EnerVista Viewpoint power system monitoring software
- Waveform capture for enhanced system diagnostics
- Protective Relays that are user selectable in any combination
 - Voltage Unbalance
 - Current Unbalance
 - Under Voltage
 - Over Voltage
 - Power Reversal
 - Load Alarm
- Input relay for RELT signal or remote tripping of the breaker
- Two programmable output relays for enhanced signaling and diagnostics
- Control Power option provides connection capability for +24Vdc control power via the distribution cable system

Other Features

- UL Listed for reverse feed and HACR type (standard)
- UL Listed 100% continuous current rating (optional)
- UL Listed Current Limiting (optional on SG Frame)
- Internal Accessories (Shunt Trip, Undervoltage Release, Auxiliary Contacts, Bell Alarm) – UL Listed for field installation and common across the entire line of Spectra™ RMS breakers



Molded Case Circuit Breakers Industrial Circuit Breakers

Spectra™ RMS Circuit Breakers with
microEntelliGuard™ Trip Units

Section 6

microEntelliGuard™ Trip Unit Characteristics

| | Long Time (C) | | Short Time | Instantaneous & Reduced Energy Let-Through | Ground Fault (Trip or Alarm) | | | | | | | | | | | | |
|--|---|--|--|---|--|---------------|------|--|-----|-------------|----------|------|-------------|--|------|-------------|--|
| | 0.50 to 1.00 in increments of 0.05 (X, multiples of rating plug amps) | | 1.5 to 9.0 in increments of 0.5 (multiples of current setting C) | SK-H, L, P = 2.0 to 10.0 - Instantaneous 1.5 to 10.0 - RELT in increments of 0.5 (X, multiples of current sensor amps) | 0.4 to 1.0 in increments of 0.05 (multiples of current sensor amps S) | | | | | | | | | | | | |
| Pickup Settings | | | | <table border="1"> <thead> <tr> <th>Breaker</th> <th>Sensor Ampere</th> <th>INST</th> </tr> </thead> <tbody> <tr> <td></td> <td>800</td> <td>2.0 to 25.5</td> </tr> <tr> <td>SKS, SKT</td> <td>1000</td> <td>2.0 to 20.5</td> </tr> <tr> <td></td> <td>1200</td> <td>2.0 to 17.0</td> </tr> </tbody> </table> | Breaker | Sensor Ampere | INST | | 800 | 2.0 to 25.5 | SKS, SKT | 1000 | 2.0 to 20.5 | | 1200 | 2.0 to 17.0 | |
| Breaker | Sensor Ampere | INST | | | | | | | | | | | | | | | |
| | 800 | 2.0 to 25.5 | | | | | | | | | | | | | | | |
| SKS, SKT | 1000 | 2.0 to 20.5 | | | | | | | | | | | | | | | |
| | 1200 | 2.0 to 17.0 | | | | | | | | | | | | | | | |
| Delay Bands ¹ Settings (seconds) | | | 1-12 (.07 to .49) | | 2-15 (.06 to .92) | | | | | | | | | | | | |
| Slope/Shape | MVT 1-4 (I ² t) C1-C10 (thermal) F1-F7 (I ⁴ t) | (2.4, 4.9, 9.8, 20 ²) (.2 to 9.6, 15.4 ²) (.02 to 0.9) | 0 - I ² t out 1 - low 2 - med 3 - high | | 0 - definite time 1 - I ² t 2 - selective ground fault 3 - fuse shape (I ⁴ t) | | | | | | | | | | | | |

X = Rating Plug Amperes

S = Sensor Ampere Rating

C = Long Time Current Setting Pickup = LT pickup setting x Rating Plug Amperes "X"

¹Delay Bands shown at 600% of current setting at lower limit of each band

²Maximum setting not available on SG

Note: See section 28 for microEntelliGuard™ time-current curves

Spectra™ RMS Circuit Breakers with microEntelliGuard™ Trip Units

| Last Digit of Catalog Number Equals >>> | | X | 2 | 6 | 8 | Advanced Features and Communications |
|---|---|---|---|---|---|--------------------------------------|
| | | • | • | | | Metering (Basic) |
| | | | | • | • | Metering (Advanced) |
| | | | • | • | • | Modbus |
| | | | | • | • | Waveform Capture |
| | | | | | • | Protective Relays |
| Functions | Accuracy and Description | | | | | |
| Current (A) | Amps ± 4% Phase Selectable | • | • | • | • | |
| Voltage (V) | Volts ± 2% L-L or L-N and Phase Selectable | | | • | • | |
| Real Power (kW) | kWatts ± 6% L-L or L-N | | | • | • | |
| Reactive Power (kVAR) | kVAR ± 4% L-L or L-N | | | • | • | |
| Apparent Power (kVA) | kVA ± 4% L-L or L-N | | | • | • | |
| Peak Power Demand (kW) | kWatts ± 4% | | | • | • | |
| Energy (kWh/MWh) | kWh ± 7% | | | • | • | |
| Frequency (Hz) | ± 1 Hz | | | • | • | |
| Power Factor (%) | ± 7% max | | | • | • | |
| Communications | EnerVista Viewpoint (Modbus) | | • | • | • | |
| Waveform Capture | COMTRADE file format | | | • | • | |
| Voltage Unbalance Relay | Adjustable Pickup 10 to 50% Adjustable Delay 1 to 15 sec or OFF | | | | • | |
| Current Unbalance Relay | Adjustable Pickup 10 to 50% Adjustable Delay 1 to 15 sec or OFF | | | | • | |
| Under Voltage Relay | Adjustable Pickup 50 to 90% Adjustable Delay 1 to 15 sec or OFF | | | | • | |
| Over Voltage Relay | Adjustable Pickup 110 to 150% Adjustable Delay 1 to 15 sec or OFF | | | | • | |
| Power Reversal Relay | Adjustable Pickup 10 to 990 KW Adjustable Delay 1 to 15 sec or OFF | | | | • | |
| Load Alarm Relay | ON 0.55 to 1.00 x LT OFF 0.50 to 0.95 x LT | | | | • | |



Molded Case Circuit Breakers

Industrial Circuit Breakers

Spectra™ RMS Circuit Breakers with
microEntelliGuard™ Trip Units

Section 6

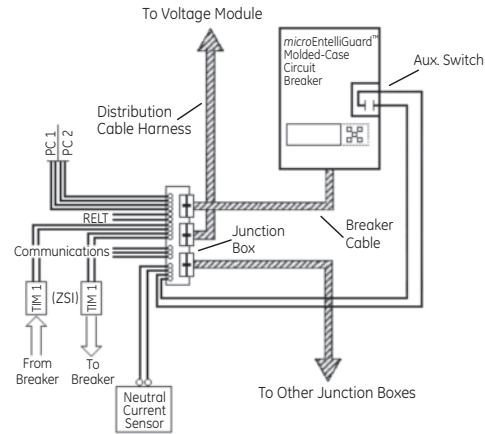
How to Order

- Select the appropriate breaker frame on the following pages taking into consideration the maximum ampere rating, the interrupt rating, whether or not a 100% rating is required, standard protection functions (LSI, LSIG, LSIA), advanced protection functions (Neut. Prot., ZSI, RELT), and advanced features and communications (basic or advanced metering, communications, waveform capture, protective relays)
- Select the rating plug and breaker lugs from the tables provided.
- Select the required power management system accessories.
- Select other accessories as required (such as an auxiliary switch or shunt trip).
- When ordering, specify separate product numbers for each item

Ordering Example

SG600 ampere frame, standard load rating and 400 maximum ampere rating, 350 amp rating plug with line and load lugs. Trip functions to include adjustable long-time (L), short-time (S), instantaneous (I), ground fault alarm (A), reduced energy let-through (RELT), and advanced metering, communications, waveform capture and protective relays. Metering and communications of voltage, current, power and breaker contact position are required. Local RELT enable is also required. The available system voltage is 480/277 Vac 3 phase/4-wire with an available fault current of 65kAIC. Power management accessories are to be mounted on plates with all of the necessary fuse protection, potential transformers, control power transformers, and required interconnect accessories. The required circuit breaker Product Number is SGLC3604L5R8.

| Description | Product Number |
|--------------------------------|----------------|
| Breaker Prefix | SGLC3604L5_ |
| Adder 1 for R (RELT) | |
| Adder 2 for g | |
| (Adv Meter/Modbus/WFC/Relay) | |
| Complete Breaker | SGLC3604L5R8 |
| Rating Plug | GTP0350U0408 |
| Lug Kits (2) | TCLK365 |
| Auxiliary Switch | SAUXGAB1 |
| RELT Switch Kit | GTURSK |
| Power Supply Plate | SPSA480 |
| Voltage Conditioner Plate | SVCA480Y |
| Advanced J-Box | SDCJBBC |
| Distribution Cable Harness (2) | SDCHA11 |
| 400A Neutral CT | TSRG204 |



Trip Unit Function Definitions

| | |
|----------------------------|---|
| Long-Time (L) | Adjustable current setting Adjustable long-time delay - three curve shapes (MVT I ² t, CB and Fuse I ⁴ t) |
| Short-Time (S) | Adjustable short-time pickup (can also be turned OFF) Adjustable short-time delay - multiple slope options I ² t IN or OUT |
| Instantaneous (I) | Adjustable instantaneous pickup |
| Ground Fault (G) | Adjustable ground fault pickup |
| Ground Fault Alarm (A) | Adjustable ground fault delay - multiple slope options with I ² t IN or OUT |
| Control Power (CP) | +24Vdc control power connection |
| Trip Indication Targets | Standard |
| Neutral Protection | Adjustable current setting on Neutral: multiple of Long-Time setting |
| ZSI (ST/GF/INST) | Adjustable Zone Selective Interlock settings for Short-Time, Ground Fault, and Instantaneous |
| RELT | Adjustable Instantaneous: Reduced Energy Let-Through mode |
| Metering (basic) | Amperes (A/kA) - Phase selectable |
| Metering (advanced) | Current (A/kA) - Phase selectable Voltage (V) - L-L or L-N and Phase selectable Real Power (kW) - L-L or L-N Reactive Power (kVAR) - L-L or L-N Apparent Power (kVA) - L-L or L-N Peak Power Demand (kW) Energy (kWh/MWh) Frequency (Hz) Power Factor (%) |
| Communications | Modbus with user selectable address assignment Compatible with EnerVista Viewpoint power system monitoring software |
| Waveform Capture | Stores 8 cycles of data on trip or signal (COMTRADE file format) |
| Protective Relay Functions | Voltage Unbalance - pickup/delay/OFF Current Unbalance - pickup/delay/OFF Under Voltage - pickup/delay/OFF Over Voltage - pickup/delay/OFF Power Reversal - pickup/delay/OFF Load Alarm - pickup (ON)/OFF |

Other Features/Functions

| | |
|--|--|
| HMI - Backlit LCD display & 5-button keypad | Ease of programming and viewing status/metering displays, tactile feel |
| LED Status Indicator | Visual display of trip unit's "health" |
| Visual pickup warning signal | For quick diagnostics and pre-trip detection |
| Sealable LEXAN cover for tamper resistant settings | Tamper resistant settings |
| Test set jack for GTURSK test kit | Fully integrated with GTURSK test kit |
| Long Time Thermal Memory | For enhanced system protection |
| Input Relay ¹ | Dedicated if RELT enabled or set to TRIP/OFF |
| Qty (2) Programmable Output Contacts ¹ | RELT (dedicated) Ground Fault Alarm Overcurrent Trip Protective Relay Trip Load Alarm Health Status |

¹Included on breakers with 20-pin output harness



Molded Case Circuit Breakers Industrial Circuit Breakers

Spectra™ RMS Circuit Breakers with
microEntelliGuard™ Trip Units

microEntelliGuard™ Trip Unit Feature and Benefit Summary

| Feature | Benefit | System/Asset Protection | Long Time and Short Time Coordination | Instantaneous Selectivity | Arc Flash | System Performance | Diagnostics/Reliability |
|--|---|-------------------------|---------------------------------------|---------------------------|-----------|--------------------|-------------------------|
| Enhanced adjustability and flexibility of time current curve shape, slope, and delay bands | Enhanced system protection via tight coordination with upstream and downstream devices including fuses | • | • | | • | | |
| Ground Fault Trip or Alarm | Enhanced system and asset protection - especially for process driven applications | • | | | | | • |
| Zone Selective Interlock (ST/GF) | System protection | • | | | • | | |
| Zone Selective Interlock (Instantaneous) | Maximum system protection, coordination, and selectivity | • | | • | • | | |
| Reduced Energy Let-Through | Enhanced system and personnel protection | • | | • | • | | |
| Protective Relay Functions | Enhanced system and asset protection via a suite of protective relays | • | | | | | |
| Neutral Protection | Protection on heavy harmonic loads | • | | | | | |
| Sealable LEXAN Trip Unit Cover | Prevents unauthorized trip unit setting changes for maximum system, personnel, and asset protection. | • | | | • | | |
| Long Time Thermal Memory | Enhanced system protection | • | | | | | |
| Input Relay ¹ | System and asset protection via remote trip (dedicated if RELT enabled) | • | | | | | |
| Programmable Output Contacts ¹ | Maximize system uptime via signaling on GF alarm, overcurrent trip, protective relay trip, load alarm or health status | • | | | | | • |
| Advanced Metering | System performance monitoring and diagnostics of critical current, voltage, and power characteristics | | | | | • | • |
| Modbus Communications | System performance monitoring, reporting and diagnostics (compatible with EnerVista Viewpoint power system monitoring software) | • | | | | • | • |
| Test Set Jack for GTUTK20 Test Kit | Maximize system uptime and enhanced diagnostics via the GTUTK20 test kit | | | | | | • |
| Trip Indication Targets | Visual Trip indication for quick diagnostic evaluation | | | | | | • |
| Event Log | Records last 10 trip events | | | | | | • |
| Waveform Capture | Enhanced diagnostic feature to maximize system uptime | | | | | | • |
| HMI - Backlit LCD Display and 5-button Keypad | Ease of programming and viewing status/metering displays | | | | | | • |
| LED Status Indicator | Enhanced diagnostic feature to maximize system uptime (visual display of trip unit's "health") | | | | | | • |
| Visual Pickup Warning Signal | For quick diagnostics and pre-trip detection | | | | | | • |

¹Included on breakers with 20-pin output harness

Spectra™ microEntelliGuard™ Reference Publications

| | |
|--|-----------|
| Molded Case Circuit Breaker Accessories - Distribution Cable Junction Box SDCJBB | DEH-006 |
| Spectra™ G Breaker w/ microEntelliGuard™ Trip Unit | GEH-700 |
| Spectra™ K Breaker w/ microEntelliGuard™ Trip Unit | GEH-701 |
| microEntelliGuard™ Trip Unit Users Manual | GEH-702 |
| Universal Rating Plug | DEH-41318 |
| Voltage Module | GEH-6250 |
| Power Supply Plate | GEH-6251 |
| Voltage Conditioner Plate | GEH-6252 |
| Power Supply Assembly | GEH-6253 |
| Voltage Conditioner Assembly | GEH-6254 |
| microEntelliGuard™ Jump Start Programming Instructions | GEH-703 |
| MET Advanced Distribution Cable Junction Box | GEH-704 |
| Distribution Cable Junction Box | DEH-006 |
| MET Distribution Cable Extension (20-pin) | GEH-705 |
| Distribution Cable Extension (12-pin) | GEH-6256 |
| Distribution Cable Harness (12-pin) | GEH-6255 |
| MET Distribution Cable Terminal Blocks (11 point & 22 point) | GEH-706 |
| Distribution Cable Terminal Block (11 point) | GEH-6257 |
| MET Sealable Cover Kits | GEH-707 |
| GTU Digital Test Kit (GTUTK20) | DEH-4568 |
| Shunt Trip and UVR Instructions | GEH-5551 |
| Aux Switch and Bell Alarm | GEH-5593 |
| Spectra™ RMS Molded Case Circuit Breaker Accessories - Door Ring Interlock Catch Kits | GEI-70594 |
| TIM-1 Zone Selective Interlock Module | GEK-64467 |



Molded Case Circuit Breakers Industrial Circuit Breakers

Section 6

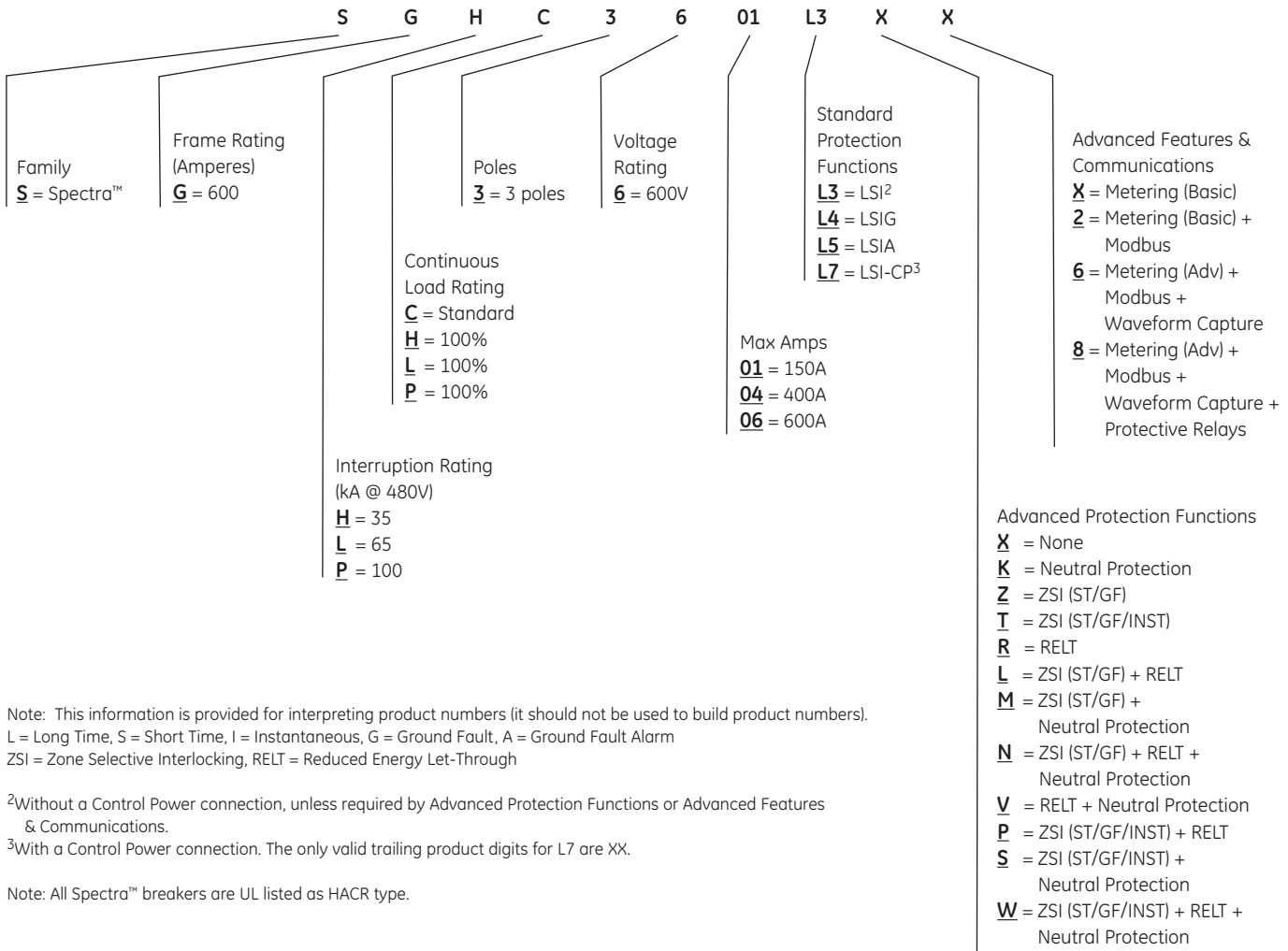
60-600A Circuit Breakers

Electronic Trip

Spectra™ RMS

SG600 with *microEntelliGuard™* Trip Units¹

Product Number Structure



Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).
L = Long Time, S = Short Time, I = Instantaneous, G = Ground Fault, A = Ground Fault Alarm
ZSI = Zone Selective Interlocking, RELT = Reduced Energy Let-Through

²Without a Control Power connection, unless required by Advanced Protection Functions or Advanced Features & Communications.

³With a Control Power connection. The only valid trailing product digits for L7 are XX.

Note: All Spectra™ breakers are UL listed as HACR type.

microEntelliGuard™ Rating Plug Selection

| Rating Plug Product Numbers | Trip Amps | SG (Max Amps) | | |
|--------------------------------|-----------|---------------|-----|-----|
| | | 150 | 400 | 600 |
| GTP0060U0101 | 60 | x | | |
| GTP0080U0101 | 80 | x | | |
| GTP0100U0103 | 100 | x | | |
| GTP0125U0103 | 125 | x | | |
| GTP0150U0104 | 150 | x | x | |
| GTP0200U0204 | 200 | | x | |
| GTP0225U0306 | 225 | | x | x |
| GTP0250U0407 | 250 | | x | x |
| GTP0300U0408 | 300 | | x | x |
| GTP0350U0408 | 350 | | x | x |
| GTP0400U0410 | 400 | | x | x |
| GTP0450U0612 | 450 | | | x |
| GTP0500U0613 | 500 | | | x |
| GTP0600U0616 | 600 | | | x |

Range of available rating plugs for each frame indicated by x.

Terminal Lugs for Front Connection (Cu/Al)

| Sensor | Product Number | Wire Range |
|------------|--|---|
| 150 to 600 | 3 Pole Lug Kit TCLK365 ⁴ | (2) 2/0 - 500 Cu/Al or (1) 8 - 600 Cu or (1) 6 - 600 Al |

¹May require 24 Vdc control power and voltage sensing signals. Refer to pages 6-62 to 6-68.

⁴Order one kit for either line or load end; two kits required for both.

Note: Reference BuyLog page 6-104 for alternate lug options.



Molded Case Circuit Breakers Industrial Circuit Breakers

60-600A Circuit Breakers

Electronic Trip

Spectra™ RMS

SG600 with *microEntelliGuard™* Trip Units¹

microEntelliGuard™, Standard UL Rated

SG600 Line, Suitable for Reverse Feed, UL File E-11592, CSA LR 40350

SGL, SGP UL Current Limiting; 3-Pole, UL/CSA: 600Vac Max., IEC 947-2: 630A, 690 Vac Max

| Max Amps | Standard Protection Function | 35kA Product Number Prefix | 65kA Product Number Prefix | 100kA Product Number Prefix | Product Number Suffix (two digits) |
|----------|------------------------------|----------------------------|----------------------------|-----------------------------|--|
| 150 | LSI | SGHC3601L3 __ | SGLC3601L3 __ | SGPC3601L3 __ | Product Number is not complete. Select one value from each suffix tables below. |
| | LSIG ² | SGHC3601L4 __ | SGLC3601L4 __ | SGPC3601L4 __ | |
| | LSIA ² | SGHC3601L5 __ | SGLC3601L5 __ | SGPC3601L5 __ | |
| | LSI-CP ³ | SGHC3601L7XX | SGLC3601L7XX | SGPC3601L7XX | |
| 400 | LSI | SGHC3604L3 __ | SGLC3604L3 __ | SGPC3604L3 __ | |
| | LSIG ² | SGHC3604L4 __ | SGLC3604L4 __ | SGPC3604L4 __ | |
| | LSIA ² | SGHC3604L5 __ | SGLC3604L5 __ | SGPC3604L5 __ | |
| | LSI-CP ³ | SGHC3604L7XX | SGLC3604L7XX | SGPC3604L7XX | |
| 600 | LSI | SGHC3606L3 __ | SGLC3606L3 __ | SGPC3606L3 __ | |
| | LSIG ² | SGHC3606L4 __ | SGLC3606L4 __ | SGPC3606L4 __ | |
| | LSIA ² | SGHC3606L5 __ | SGLC3606L5 __ | SGPC3606L5 __ | |
| | LSI-CP ³ | SGHC3606L7XX | SGLC3606L7XX | SGPC3606L7XX | |

microEntelliGuard™, 100% UL Rated

SG600 Line, Suitable for Reverse Feed, UL File E-11592, CSA LR 40350

SGL, SGP UL Current Limiting; 3-Pole, UL/CSA: 600Vac Max., IEC 947-2: 630A, 690 Vac Max

| Max Amps | Standard Protection Function | 35kA Product Number Prefix | 65kA Product Number Prefix | 100kA Product Number Prefix | Product Number Suffix (two digits) |
|----------|------------------------------|----------------------------|----------------------------|-----------------------------|--|
| 150 | LSI | SGHH3601L3 __ | SGLL3601L3 __ | SGPP3601L3 __ | Product Number is not complete. Select one value from each suffix tables below. |
| | LSIG ² | SGHH3601L4 __ | SGLL3601L4 __ | SGPP3601L4 __ | |
| | LSIA ² | SGHH3601L5 __ | SGLL3601L5 __ | SGPP3601L5 __ | |
| | LSI-CP ³ | SGHH3601L7XX | SGLL3601L7XX | SGPP3601L7XX | |
| 400 | LSI | SGHH3604L3 __ | SGLL3604L3 __ | SGPP3604L3 __ | |
| | LSIG ² | SGHH3604L4 __ | SGLL3604L4 __ | SGPP3604L4 __ | |
| | LSIA ² | SGHH3604L5 __ | SGLL3604L5 __ | SGPP3604L5 __ | |
| | LSI-CP ³ | SGHH3604L7XX | SGLL3604L7XX | SGPP3604L7XX | |
| 600 | LSI | SGHH3606L3 __ | SGLL3606L3 __ | SGPP3606L3 __ | |
| | LSIG ² | SGHH3606L4 __ | SGLL3606L4 __ | SGPP3606L4 __ | |
| | LSIA ² | SGHH3606L5 __ | SGLL3606L5 __ | SGPP3606L5 __ | |
| | LSI-CP ³ | SGHH3606L7XX | SGLL3606L7XX | SGPP3606L7XX | |

Product Suffix 1

Advanced Protection Functions

| |
|--|
| X = None |
| K = Neutral Protection |
| Z = ZSI (ST/GF) |
| T = ZSI (ST/GF/INST) |
| R = RELT |
| L = ZSI (ST/GF) + RELT |
| M = ZSI (ST/GF) + Neutral Protection |
| N = ZSI (ST/GF) + RELT + Neutral Protection |
| V = RELT + Neutral Protection |
| P = ZSI (ST/GF/INST) + RELT |
| S = ZSI (ST/GF/INST) + Neutral Protection |
| W = ZSI (ST/GF/INST) + RELT + Neutral Protection |

Product Suffix 2

Advanced Features and Communications

| |
|--|
| X = Metering (Basic) |
| 2 = Metering (Basic) + Modbus |
| 6 = Metering (Adv) + Modbus + Waveform Capture |
| 8 = Metering (Adv) + Modbus + Waveform Capture + Relays |

¹May require 24 Vdc control power and voltage sensing signals. Refer to pages 6-62 to 6-68.

²For grounded neutral systems (1 phase/3-wire or 3 phase/4-wire) a neutral current sensor is required. Refer to page 6-66.

³For +24 Vdc Control Power Accessories refer to pages 6-62 to 6-66.

Notes: All Spectra™ breakers are UL listed as HACR type.

Neutral Protection requires a neutral current sensor. Refer to page 6-66.

ZSI (Zone Selective Interlock) requires TIM1 ZSI module and 24 Vdc control power (refer to pages 6-62 to 6-66 for accessories).

RELT (Reduced Energy Let-Through), Modbus, Ground Fault Alarm and Waveform Capture options require 24 Vdc control power (refer to pages 6-62 to 6-66 for accessories).



Molded Case Circuit Breakers

Industrial Circuit Breakers

Section 6

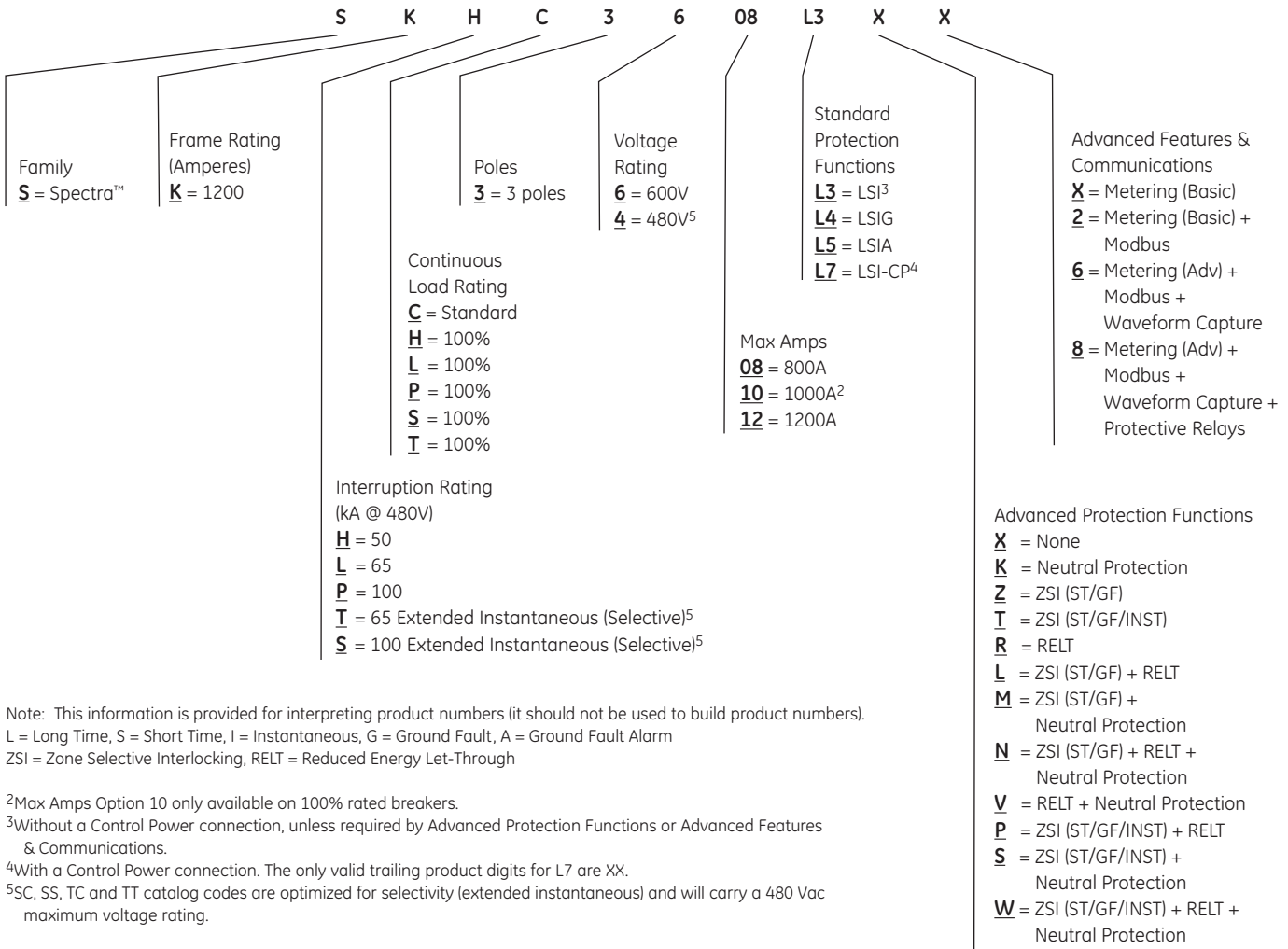
300-1200A Circuit Breakers

Electronic Trip

Spectra™ RMS

SK1200 with *microEntelliGuard™* Trip Units¹

Product Number Structure



Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

L = Long Time, S = Short Time, I = Instantaneous, G = Ground Fault, A = Ground Fault Alarm

ZSI = Zone Selective Interlocking, RELT = Reduced Energy Let-Through

²Max Amps Option 10 only available on 100% rated breakers.

³Without a Control Power connection, unless required by Advanced Protection Functions or Advanced Features & Communications.

⁴With a Control Power connection. The only valid trailing product digits for L7 are XX.

⁵SC, SS, TC and TT catalog codes are optimized for selectivity (extended instantaneous) and will carry a 480 Vac maximum voltage rating.

Note: All Spectra™ breakers are UL listed as HACR type.

microEntelliGuard™ Rating Plug Selection

| Rating Plug Product Numbers | Trip Amps | SK (Max Amps) | | |
|--------------------------------|-----------|---------------|------|------|
| | | 800 | 1000 | 1200 |
| GTP0300U0408 | 300 | x | | |
| GTP0350U0408 | 350 | x | | |
| GTP0400U0410 | 400 | x | | |
| GTP0450U0612 | 450 | x | x | x |
| GTP0500U0613 | 500 | x | x | x |
| GTP0600U0616 | 600 | x | x | x |
| GTP0700U0816 | 700 | x | x | x |
| GTP0750U0820 | 750 | x | x | x |
| GTP0800U0820 | 800 | x | x | x |
| GTP0900U1020 | 900 | | x | x |
| GTP1000U1025 | 1000 | | x | x |
| GTP1100U1225 | 1100 | | | x |
| GTP1200U1232 | 1200 | | | x |

Range of available rating plugs for each frame indicated by x.

Terminal Lugs for Front Connection (Cu/Al)

| Sensor | Product Number | Wire Range |
|-------------------|----------------|---------------------|
| 800 | TCAL81 | (3) 3/0 - 500 Cu/Al |
| 1200 ⁶ | TCAL125 | (4) 3/0 - 500 Cu/Al |

¹May require 24 Vdc control power and voltage sensing signals. Refer to pages 6-62 to 6-68.

⁶Lugs not required on 100% rated SK1200; these breakers are supplied with a back-connected assembly which increases breaker depth. Refer to outline drawing 168D1663 Sh1 for details.

Note: Reference BuyLog page 6-104 for alternate lug options.



Molded Case Circuit Breakers Industrial Circuit Breakers

300-1200A Circuit Breakers

Electronic Trip

Spectra™ RMS

SK1200 with *microEntelliGuard™* Trip Units¹

microEntelliGuard™, Standard UL Rated

SK1200 Line, Suitable for Reverse Feed, UL File E-11592, CSA LR 40350

3-Pole, UL/CSA: 600Vac Max., IEC 947-2: 1250A, 690 Vac Max (SKL, SKP only)

| Max Amps | Standard Protection Function | 50kA Product Number Prefix | 65kA Product Number Prefix | 100kA Product Number Prefix | Product Number Suffix (two digits) |
|----------|------------------------------|----------------------------|----------------------------|-----------------------------|---|
| 800 | LSI | SKHC3608L3 __ | SKLC3608L3 __ | SKPC3608L3 __ | Product Number is not complete. |
| | LSIG ² | SKHC3608L4 __ | SKLC3608L4 __ | SKPC3608L4 __ | |
| | LSIA ² | SKHC3608L5 __ | SKLC3608L5 __ | SKPC3608L5 __ | |
| | LSI-CP ³ | SKHC3608L7XX | SKLC3608L7XX | SKPC3608L7XX | |
| 1200 | LSI | SKHC3612L3 __ | SKLC3612L3 __ | SKPC3612L3 __ | Select one value from each suffix tables below. |
| | LSIG ² | SKHC3612L4 __ | SKLC3612L4 __ | SKPC3612L4 __ | |
| | LSIA ² | SKHC3612L5 __ | SKLC3612L5 __ | SKPC3612L5 __ | |
| | LSI-CP ³ | SKHC3612L7XX | SKLC3612L7XX | SKPC3612L7XX | |

microEntelliGuard™, 100% UL Rated

SK1200 Line, Suitable for Reverse Feed, UL File E-11592, CSA LR 40350

3-Pole, UL/CSA: 600Vac Max., IEC 947-2: 1250A, 690 Vac Max (SKL, SKP only)

| Max Amps | Standard Protection Function | 50kA Product Number Prefix | 65kA Product Number Prefix | 100kA Product Number Prefix | Product Number Suffix (two digits) |
|----------|------------------------------|----------------------------|----------------------------|-----------------------------|---|
| 800 | LSI | SKHH3608L3 __ | SKLL3608L3 __ | SKPP3608L3 __ | Product Number is not complete. |
| | LSIG ² | SKHH3608L4 __ | SKLL3608L4 __ | SKPP3608L4 __ | |
| | LSIA ² | SKHH3608L5 __ | SKLL3608L5 __ | SKPP3608L5 __ | |
| | LSI-CP ³ | SKHH3608L7XX | SKLL3608L7XX | SKPP3608L7XX | |
| 1000 | LSI | SKHH3610L3 __ | SKLL3610L3 __ | SKPP3610L3 __ | Select one value from each suffix tables below. |
| | LSIG ² | SKHH3610L4 __ | SKLL3610L4 __ | SKPP3610L4 __ | |
| | LSIA ² | SKHH3610L5 __ | SKLL3610L5 __ | SKPP3610L5 __ | |
| | LSI-CP ³ | SKHH3610L7XX | SKLL3610L7XX | SKPP3610L7XX | |
| 1200 | LSI | SKHH3612L3 __ | SKLL3612L3 __ | SKPP3612L3 __ | |
| | LSIG ² | SKHH3612L4 __ | SKLL3612L4 __ | SKPP3612L4 __ | |
| | LSIA ² | SKHH3612L5 __ | SKLL3612L5 __ | SKPP3612L5 __ | |
| | LSI-CP ³ | SKHH3612L7XX | SKLL3612L7XX | SKPP3612L7XX | |

microEntelliGuard™ Extended Instantaneous (Selective) Spectra K

SK1200 Line, Suitable for Reverse Feed, UL File E-11592, CSA LR 40350, 3-Pole, UL/CSA: 480 Vac Max., IEC 947-2: 1250A

| Max Amps | Standard Protection Function | Standard UL Rated | 100% UL Rated | Standard UL Rated | 100% UL Rated | Product Number Suffix (two digits) |
|----------|------------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|---|
| | | 65kA Product Number Prefix | 65kA Product Number Prefix | 100kA Product Number Prefix | 100kA Product Number Prefix | |
| 800 | LSI | SKTC3408L3 __ | SKTT3408L3 __ | SKSC3408L3 __ | SKSS3408L3 __ | Product Number is not complete. |
| | LSIG ² | SKTC3408L4 __ | SKTT3408L4 __ | SKSC3408L4 __ | SKSS3408L4 __ | |
| | LSIA ² | SKTC3408L5 __ | SKTT3408L5 __ | SKSC3408L5 __ | SKSS3408L5 __ | |
| | LSI-CP ³ | SKTC3408L7XX | SKTT3408L7XX | SKSC3408L7XX | SKSS3408L7XX | |
| 1000 | LSI | SKTT3410L3 __ | SKTT3410L3 __ | SKSS3410L3 __ | SKSS3410L3 __ | Select one value from each suffix tables below. |
| | LSIG ² | SKTT3410L4 __ | SKTT3410L4 __ | SKSS3410L4 __ | SKSS3410L4 __ | |
| | LSIA ² | SKTT3410L5 __ | SKTT3410L5 __ | SKSS3410L5 __ | SKSS3410L5 __ | |
| | LSI-CP ³ | SKTT3410L7XX | SKTT3410L7XX | SKSS3410L7XX | SKSS3410L7XX | |
| 1200 | LSI | SKTC3412L3 __ | SKTT3412L3 __ | SKSC3412L3 __ | SKSS3412L3 __ | |
| | LSIG ² | SKTC3412L4 __ | SKTT3412L4 __ | SKSC3412L4 __ | SKSS3412L4 __ | |
| | LSIA ² | SKTC3412L5 __ | SKTT3412L5 __ | SKSC3412L5 __ | SKSS3412L5 __ | |
| | LSI-CP ³ | SKTC3412L7XX | SKTT3412L7XX | SKSC3412L7XX | SKSS3412L7XX | |

Product Suffix 1

Advanced Protection Functions

X = None
K = Neutral Protection
Z = ZSI (ST/GF)
T = ZSI (ST/GF/INST)
R = RELT
L = ZSI (ST/GF) + RELT

Advanced Protection Functions

M = ZSI (ST/GF) + Neutral Protection
N = ZSI (ST/GF) + RELT + Neutral Protection
V = RELT + Neutral Protection
P = ZSI (ST/GF/INST) + RELT
S = ZSI (ST/GF/INST) + Neutral Protection
W = ZSI (ST/GF/INST) + RELT + Neutral Protection

Product Suffix 2

Advanced Features and Communications

X = Metering (Basic)
2 = Metering (Basic) + Modbus
6 = Metering (Adv) + Modbus +
Waveform Capture
8 = Metering (Adv) + Modbus +
Waveform Capture + Relays

¹May require 24 Vdc control power and voltage sensing signals. Refer to pages 6-62 to 6-68.

²For grounded neutral systems (1 phase/3-wire or 3 phase/4-wire) a neutral current sensor is required. Refer to page 6-66.

³For +24 Vdc Control Power Accessories refer to pages 6-62 to 6-66.

Notes: All Spectra™ breakers are UL listed as HACR type.

Neutral Protection requires a neutral current sensor. Refer to page 6-66.

ZSI (Zone Selective Interlock) requires TIM1 ZSI module and 24 Vdc control power (refer to pages 6-62 to 6-66 for accessories).

RELT (Reduced Energy Let-Through), Modbus, Ground Fault Alarm and Waveform Capture options require 24 Vdc control power (refer to pages 6-62 to 6-66 for accessories).



Molded Case Circuit Breakers

Power Management System Accessories

Spectra™ RMS Circuit Breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM Trip Units*
 All Devices UL Listed for Factory or Field Installation (UL File No. E-57253)

Required Accessories

| MicroVersaTrip™ Plus | MicroVersaTrip™ PM | microEntelliGuard™ | Feature | Required Accessories |
|----------------------|--------------------|--------------------|---|---|
| • | • | • | Ground Fault (3 phase/4-wire or 1 phase/3-wire) | Neutral CT and Terminal Board (or Junction Box + Distribution Cable) |
| | | • | Neutral Protection | |
| • | • | • | Ground Fault Alarm (3 phase/4-wire or 1 phase/3-wire) | Power Supply (Plate Assy) ² |
| | | • | Control Power | Voltage Module ¹ or Power Supply Plate/Assy ² |
| | • | • | Advanced Metering, Protective Relays | Power Supply (Plate or Assy ²) and Voltage Conditioner (Plate or Assy) or Voltage Module and Terminal Board (or Junction Box) and Distribution Cable(s) |
| | • | • | Communications ³ | Voltage Module ¹ or Power Supply Plate/Assy ² and Terminal Board (or Junction Box) and Distribution Cable(s) and Auxiliary Switch ⁴ |
| | | • | Zone Selective Interlock (ZSI) | Voltage Module ¹ or Power Supply Plate/Assy ² and Terminal Board with ZSI (or Advanced Junction Box) and Distribution Cable(s) and TIM-1 module |
| | | • | Reduced Energy Let-Through (RELT) | Voltage Module ¹ or Power Supply Plate/Assy ² and Terminal Board w/ RELT (or Advanced Junction Box) and Distribution Cable(s) |
| | | • | Waveform Capture | Voltage Module ¹ or Power Supply Plate/Assy ² and Terminal Board (or Advanced Junction Box) and Distribution Cable(s) |

¹For installation into GE Spectra™ Series Switchboards only

²Requires fuse protection and other components - refer to accessory instruction sheet

³MicroVersaTrip™ PM (Commnet), *microEntelliGuard™* (Modbus)

⁴Requires Auxiliary Switch with gold-plated contacts

Power Supply Plate

The Power Supply Plate is used to provide +24 Vdc control power to Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM* trip units via the Distribution Cable System. The Power Supply Plate includes the Power Supply Assembly (product number SPSAA) as an integral component and also includes fuse protection for AC source input. Supplemental +24 Vdc input terminals are provided for backup control power applications. Not suitable for 400 Hz.

| Description | Voltage Rating | Product Number |
|---|----------------|----------------|
| The Power Supply Plate is rated 24 watts (+24 Vdc at 1.0 amperes) and has the maximum capacity to power a distribution Cable System consisting of 20 breakers and has a maximum system cable length of 40 feet. | 120 Vac | SPSA120 |
| | 208 Vac | SPSA208 |
| | 240 Vac | SPSA240 |
| | 480 Vac | SPSA480 |
| | 600 Vac | SPSA600 |

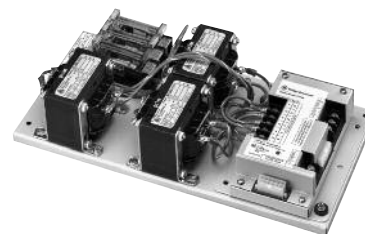


Power Supply Plate

Voltage Conditioner Plate

The Voltage Conditioner Plate is used to provide voltage sensing signals to Spectra™ RMS molded case circuit breakers with *microEntelliGuard™* and *MicroVersaTrip™ PM* trip units via the distribution cable system. The Voltage Conditioner Plate includes the Voltage Conditioner Assembly (product number SVCAA) as an integral component and also includes fuse protection for the AC source input terminals and three 1-VA high accuracy potential transformers. The Voltage Conditioner Plate requires a control power source of +24 Vdc to operate properly (the Power Supply Assembly or Power Supply Plate can provide this required input). The unit also requires AC direct voltage inputs from the AC source. A communications network connection is provided. Not suitable for 400 Hz.

| Voltage Rating and Service Type | Comments | Product Number |
|---------------------------------|----------------------------|----------------|
| 120 Vac Wye system | Phase to Neutral potential | SVCA120Y |
| 208 Vac Wye system | Phase to Phase potential | SVCA208Y |
| 240 Vac Delta system | Phase to Phase potential | SVCA240D |
| 277 Vac Wye system | Phase to Neutral potential | SVCA277Y |
| 480 Vac Wye system | Phase to Phase potential | SVCA480Y |
| 480 Vac Delta system | Phase to Phase potential | SVCA480D |
| 600 Vac Delta system | Phase to Phase potential | SVCA600D |



Voltage Conditioner Plate

Note: The Voltage Conditioner Plate has the maximum capacity to power a Distribution Cable System consisting of 20 breakers and has a maximum system cable length of 40 feet.



Molded Case Circuit Breakers

Power Management System Accessories

Spectra™ RMS Circuit Breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM Trip Units*
 All Devices UL Listed for Factory or Field Installation (UL File No. E-57253)

Distribution Cable Junction Box

The Distribution Cable Junction Box is a modular connector used to provide quick, easy and reliable attachment of Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM* trip units to the Distribution Cable System. Two different junction boxes are available depending on which trip system and functionality is selected. Each junction box contains two Distribution Cable Harness connectors, one breaker connector, and a terminal block for the connection of a neutral current sensor and an auxiliary switch. Additional terminal points are included on SDCJBBC for ground fault alarm, RELT, and ZSI. (For breakers with *microEntelliGuard™* trip units, refer to the table on page 6-64 to determine breaker harness connector configuration)



Distribution Cable Junction Box

| Description | Product Number |
|---|----------------------|
| Distribution Cable Junction Box (for breakers with 12-pin connector) | SDCJBB |
| Advanced Distribution Cable Junction Box (for breakers with 20-pin connector) | SDCJBBC ² |

Distribution Cable Harness¹

The Distribution Cable Harness is a modular connector used to carry electronic signals and/or control power between Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM* trip units and power management system accessories. The harnesses come in three lengths and have 12-pin connectors at both ends.



Distribution Cable Harness

| Description | Harness Length | Product Number |
|----------------------------|----------------|----------------|
| Distribution Cable Harness | 11 inches | SDCHA11 |
| Distribution Cable Harness | 30 inches | SDCHA30 |
| Distribution Cable Harness | 60 inches | SDCHA60 |

Distribution Cable Extension

The Distribution Cable Extension is used to provide modular expansion of the Distribution Cable System. Two different cable extensions are available depending on which trip system and functionality are selected. Spectra™ RMS molded case circuit breakers with *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM* trip units use the 12-pin connector extension cable only. Spectra™ RMS molded case circuit breakers with *microEntelliGuard™* trip units use either the 12-pin or 20-pin connector extension cable depending on the breaker's harness connector configuration. (For breakers with *microEntelliGuard™* trip units, refer to the table on page 6-64 to determine breaker harness connector configuration)



Distribution Cable Extension

| Description | Harness Length | Product Number |
|---|----------------|-----------------------|
| Distribution Cable Extension (for breakers with 12-pin connector) | 30 inches | SDCEA30 |
| Distribution Cable Extension (for breakers with 20-pin connector) | 30 inches | SDCEA30C ² |

Distribution Cable Terminal Block

The Distribution Cable Terminal Block can be used in lieu of the Distribution Cable Junction Box as an alternate means of connection to Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM* trip units. The Distribution Cable Terminal Block plugs into the breaker harness connector allowing direct connection of signals via screw terminals. This allows point-to-point wiring in lieu of using the Distribution Cable System. Three different cable extensions are available depending on which trip system and functionality are selected. (Refer to the table on page 6-64 for terminal block connection configurations)



Distribution Cable Terminal Block

| Description | Trip Unit Type | Product Number |
|--|--|------------------------|
| Distribution Cable Terminal Block (for breakers with 12-pin connector) | <i>MicroVersaTrip™</i> & <i>microEntelliGuard™</i> | SDCTBA11 |
| Distribution Cable Terminal Block (for breakers with 20-pin connector) | <i>microEntelliGuard™</i> | SDCTBA11C ² |
| | <i>microEntelliGuard™</i> | SDCTBA22C ² |

¹Cannot be connected together. Use 30 inch Distribution Cable Extension (SDCEA30) to extend.

²For use with *microEntelliGuard™* only.



Molded Case Circuit Breakers

Power Management System Accessories

Spectro™ RMS Circuit Breakers with *microEntelliGuard™*, *MicroVersaTrip™* Plus and *MicroVersaTrip™* PM Trip Units
 All Devices UL Listed for Factory or Field Installation (UL File No. E-57253)

Breakers with *microEntelliGuard™* Trip Units Breaker Harness Connector Configuration

| | | Circuit Breaker Catalog Digits 9 & 10 | | | |
|--|-----------|---------------------------------------|-----------|-----------|-----|
| | | L3 | L4 | L5 | L7 |
| Circuit Breaker Catalog Digits 11 & 12 | K2 | SDCTBA11 | SDCTBA11 | SDCTBA22C | n/a |
| | K6 | SDCTBA11 | SDCTBA11 | SDCTBA22C | n/a |
| | K8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | KX | SDCTBA11 | SDCTBA11 | SDCTBA11C | n/a |
| | L2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | L6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | L8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | LX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | M2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | M6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | M8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | MX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | N2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | N6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | N8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | NX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | P2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | P6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | P8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | PX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | R2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | R6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | R8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | RX | SDCTBA11C | SDCTBA11C | SDCTBA11C | n/a |
| | S2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | S6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | S8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | SX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | T2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | T6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | T8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | TX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | V2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | V6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | V8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | VX | SDCTBA11C | SDCTBA11C | SDCTBA11C | n/a |
| | W2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | W6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | W8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| | WX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a |
| X2 | SDCTBA11 | SDCTBA11 | SDCTBA22C | n/a | |
| X6 | SDCTBA11 | SDCTBA11 | SDCTBA22C | n/a | |
| X8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a | |
| XX | NONE | SDCTBA11 | SDCTBA11C | SDCTBA11 | |
| Z2 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a | |
| Z6 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a | |
| Z8 | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a | |
| ZX | SDCTBA22C | SDCTBA22C | SDCTBA22C | n/a | |

Distribution Cable Terminal Block Connection Configurations

| Terminal Description | SDCTBA11 | SDCTBA11C | SDCTBA22C |
|----------------------|---|--------------------------------|--------------------------------|
| | 12-pin Connector | 20-pin Connector | 20-pin Connector |
| Trip Unit Type | MicroVersaTrip™ & <i>microEntelliGuard™</i> | <i>microEntelliGuard™</i> only | <i>microEntelliGuard™</i> only |
| POWER (+24Vdc) | • | • | • |
| POWER (common) | • | • | • |
| Communications + | • | • | • |
| Communications - | • | • | • |
| Aux Switch (red) | • | • | • |
| Aux Switch (white) | • | • | • |
| Voltage - Ph A | • | • | • |
| Voltage - Ph B | • | • | • |
| Voltage - Ph C | • | • | • |
| Neutral CT (black) | • | • | • |
| Neutral CT (white) | • | • | • |
| ZSI input + | | | • |
| ZSI input - | | | • |
| ZSI output + | | | • |
| ZSI output - | | | • |
| RELT input + | | • | • |
| RELT input - | | • | • |
| RELT output + | | • | • |
| RELT/GFA output - | | • | • |
| GFA output + | | • | • |



Molded Case Circuit Breakers

Power Management System Accessories

Spectra™ RMS Circuit Breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM Trip Units*
 All Devices UL Listed for Factory or Field Installation (UL File No. E-57253)

Power Supply Assembly

The Power Supply Assembly is used to provide +24 Vdc control power to Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM Trip Units* via the Distribution Cable System. The assembly requires a minimum input voltage of 85 Vac to operate properly (the maximum voltage rating is 240 Vac). Supplemental +24 Vdc input terminals are provided for backup control power applications. The input must be fused with 1/2 ampere class CC fuses (not included). Not suitable for 400 Hz.

| Description | Voltage Rating | Product Number |
|--|----------------|----------------|
| The Power Supply Assembly is rated 24 watts (+24 Vdc @ 1.0 ampere) and has the maximum capacity to power a Distribution Cable System consisting of 20 breakers and has a maximum system cable length of 40 feet. | 85 - 240 Vac | SPSAA |



Power Supply Assembly

Voltage Conditioner Assembly

The Voltage Conditioner Assembly is used to provide voltage sensing signals to Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM Trip Units* via the Distribution Cable System. The Voltage Conditioner Assembly requires a control power source of +24 Vdc to operate properly (the Power Supply Assembly or Power Supply Plate can provide this required input). The unit also requires 120 Vac voltage inputs from the secondary of three 1-VA high accuracy potential transformers (not included). The primary side of the potential transformers must be fused with three, 1/2 ampere class CC fuses (not included). A communications network connection is provided. Not suitable for 400 Hz.

| Description | Voltage Rating | Product Number |
|---|----------------|----------------|
| Requires 120 Vac voltage inputs from the secondary of three 1.0 VA high accuracy potential transformers | 120 Vac | SVCAA |

Note: the Voltage Conditioner Assembly has the maximum capacity to power a Distribution Cable System consisting of 20 breakers and has a maximum system cable length of 40 feet.



Voltage Conditioner Assembly

Voltage Modules

The Voltage Module is used as a Spectra™ Series Switchboard component to provide +24 Vdc control power to Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™ Plus* and *MicroVersaTrip™ PM Trip Units* via the Distribution Cable System. The Voltage Module also provides voltage sensing signals to Spectra™ RMS molded case circuit breakers with *microEntelliGuard™* and *MicroVersaTrip™ PM Trip Units* on the same Distribution Cable System. The Voltage Module contains both a Power Supply Plate and a Voltage Conditioner as integral components. It also includes fuse protection for the AC source input terminals (the module's pressure connectors which connect to the switchboard bus bars). A communication network connection is provided as well as supplemental +24 Vdc input terminals for backup control power applications (*microEntelliGuard™* trip units communicate via Modbus; *MicroVersaTrip™ PM Trip Units* communicate via Commnet). Seven versions are available. Not suitable for 400 Hz.

| Voltage Rating and Service Type | Comments | Product Number |
|---------------------------------|----------------------------|----------------|
| 120 Vac Wye system | Phase to Neutral potential | ADSVMA120Y |
| 208 Vac Wye system | Phase to Phase potential | ADSVMA208Y |
| 240 Vac Delta system | Phase to Phase potential | ADSVMA240D |
| 277 Vac Wye system | Phase to Neutral potential | ADSVMA277Y |
| 480 Vac Wye system | Phase to Phase potential | ADSVMA480Y |
| 480 Vac Delta system | Phase to Phase potential | ADSVMA480D |
| 600 Vac Delta system | Phase to Phase potential | ADSVMA600D |

Note: The Voltage Module has the maximum capacity to power a Distribution Cable System consisting of 20 breakers and has a maximum system cable length of 40 feet.



Voltage Module Exterior View



Voltage Module Interior View



Molded Case Circuit Breakers

Accessories—Other

Spectra™ RMS Circuit Breakers with *microEntelliGuard™*, *MicroVersaTrip™* Plus and *MicroVersaTrip™* PM Trip Units
All Devices UL Listed for Factory or Field Installation Except Where Noted

Neutral Current Sensor

The Neutral Current Sensor is used in conjunction with Spectra™ RMS molded case circuit breakers with *microEntelliGuard™*, *MicroVersaTrip™* Plus and *MicroVersaTrip™* PM trip units that are optioned with either the ground fault or neutral protection and the breaker is connected to a grounded neutral service (3 phase/4-wire or 1 phase/3-wire). The neutral current sensor provides an input signal to the breaker trip unit. Breakers connected to a service without a neutral (3 phase/3-wire) do not require an external connection or shorting of the breaker cable connector for ground fault to function properly.



Neutral Current Sensor

| Breaker Type | Sensor Rating (S) | Product Number |
|--------------|-------------------|----------------|
| SG | 150 | TSRG201 |
| SG | 400 | TSRG204 |
| SG | 600 | TSRG206 |
| SK | 800 | TSKG408 |
| SK | 1200 | TSKG412 |

Rating Plug Removal Tool

The Rating Plug Removal Tool is suitable for use on all Spectra™ RMS molded case circuit breakers, regardless of the trip unit type.



Rating Plug Removal Tool

| Product Number |
|----------------|
| TRTOOL |

Portable Battery Pack

The hand-held Portable Battery Pack provides an independent power source for *microEntelliGuard™*, *MicroVersaTrip™* Plus and *MicroVersaTrip™* PM trip units as an alternative to a test set. The battery pack is used to power up the trip unit to set or adjust trip set points when the breaker is on the bench or otherwise not powered up. For *microEntelliGuard™* trip units, the battery pack connects to the trip unit through the 15-pin connector. A battery pack adapter cable is required. For *MicroVersaTrip™* Plus and *MicroVersaTrip™* PM trip units, the battery pack connects to the trip unit through the rating plug test jack. The battery pack requires three standard 9 Vdc alkaline batteries (not included).



Portable Battery Pack

| Description | Product Number |
|---|----------------|
| Portable Battery Pack | TVPBP |
| Battery Pack Adapter Cable (required for <i>microEntelliGuard™</i> trip units) | TVPBPACC |

Portable Test Set

The portable, battery-powered test kit provides self-tests and functional trip/no trip tests. It also provides defeat of the ground fault function and can be used in conjunction with high current test equipment. Interface is via a plug on the front of the trip unit and test can be conducted with the breaker in service. Test kits use either 120 Vac power source or internal batteries (not included).



Battery Pack Adapter Cable

| Description | Trip Unit Type | Product Number |
|-------------------|--------------------------------|---------------------|
| Portable Test Set | <i>MicroVersaTrip™</i> only | TVRMS2 ¹ |
| | <i>microEntelliGuard™</i> only | GTUTK20 |

¹Not for use with *MicroVersaTrip™* 4- or 9-Function trip units

Reduced Energy Let-Through (RELT) Switch Kit

The RELT switch kit is used to switch the trip unit into Reduced Energy Let-Through Mode. The kit contains a three position selector switch, contact blocks, a lockable switch cover, RELT warning label, and an 8-ft wiring harness.

| Description | Product Number |
|-----------------|----------------|
| RELT Switch Kit | GTURSK |



Portable Test Kit



Molded Case Circuit Breakers

Internal Accessories

Spectra™ RMS Circuit Breakers

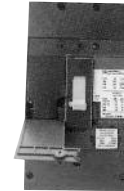
Universal Field-Installable Internal Accessories

All Spectra™ RMS circuit breakers from the SE150 through the SK1200, including instantaneous-trip Mag Break motor circuit protectors and molded case switches, use the same UL listed, field-installable internal accessories that do not require cover removal to install.

Accessory Mounting

All accessories mount in pouches accessible from a front cover. All breakers have a left-side pouch and right-side pouch. The following combinations may be installed:

Left-Side Pouch—either shunt trip or undervoltage release plus bell alarm.
Right-Side Pouch—auxiliary switch (single or double pole).



Left Side Pouch



Right Side Pouch

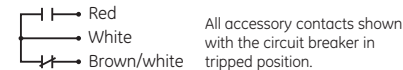
Auxiliary Switch

Auxiliary switches provide remote indication of whether the circuit breaker main contacts are opened or closed via open or closed SPDT switch elements.

| Switch Rating | Number of Switch Elements | Auxiliary Switch Product Number |
|-------------------------|---------------------------|---------------------------------|
| 5A @ 240 Vac/ | 1 form C | SAUXPAB1 |
| 0.5A @ 125 Vdc | 2 form C | SAUXPAB2 |
| Gold-Plated Contacts | 1 form C | SAUXGAB1 |
| 0.5A @ 30V | 2 form C | SAUXGAB2 |
| One each of above types | 2 form C | SAUXGPAB2 |



Auxiliary Switch



Spectra RMS Test Set

Provides basic trip-test functionality for all SPectra RMS, (SE, SF, SG, SK) Circuit Breakers not equipped with LCD Displays. Test Kit plus Test Rating Plug are required.

| Description | Product Number |
|------------------------------|----------------|
| Spectra RMS Trip Tester | SPTK1 |
| Spectra RMS Test Rating Plug | SRPT1 |



Trip Test Kit



Test Rating Plug

Shunt Trip

For remote tripping of breaker, use with momentary close contact. Not recommended for use with latching relay contact since electronics in shunt trip will pulse power to the coil if continuously energized, and breaker shunt tripping upon reclosure will be delayed 1-2 seconds at rated control voltage. (A short-circuit trip would be instantaneous.)

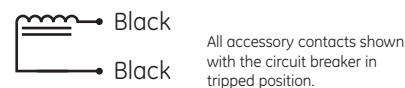
If maintained (latching relay) contact must be used and delayed shunt tripping is not acceptable, use small bell alarm in series with control power for SE150 and SF250 frames and auxiliary switch for SG600 and SK1200 breakers.

These devices are suitable for use with ground fault sensing and relaying equipment. Maximum VA is 75. AC devices are UL listed for 50-60 Hz.

| Voltage | | Current (mA) | | Product Number |
|---------|-----|--------------|------|--------------------|
| ac | dc | Inrush | Cont | |
| 120 | 125 | 500 | 6.0 | SAST1 |
| 240 | 250 | 400 | 5.0 | SAST2 |
| — | 12 | 1000 | 800 | SAST5 ¹ |
| 24 | 24 | 300 | 10.0 | SAST3 |
| 48 | 48 | 300 | 10.0 | SAST4 |

¹Not suitable for use with ground fault sensing and relaying equipment.

Note: UL listed at 200,000 AIC without internal accessories, 100,000 AIC with internally mounted accessories.



Shunt Trip



Molded Case Circuit Breakers

Internal Accessories

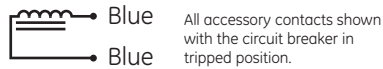
Spectra™ RMS Circuit Breakers

Section 6

Undervoltage Release

The undervoltage release provides automatic circuit breaker tripping when there is a power loss or major dip (to 35%-70% of rated voltage) in accessory control voltage. AC devices are UL listed for 50-60 Hz. Product number SAUV1 may be used with time delay unit SPUVTD (List Price \$430.00, GO-245B) (delay 0.1 to 1.0 seconds), 120 Vac input, 125 Vdc output.

| Voltage | | Peak Current (mA) | Product Number |
|---------|-----|----------------------|-------------------|
| ac | dc | | |
| 120 | 125 | 200 | SAUV1 |
| 240 | 250 | 200 | SAUV2 |
| 24 | 24 | 100 | SAUV3 |
| 48 | 48 | 100 | SAUV4 |
| 120 | 125 | | SPUVTD |



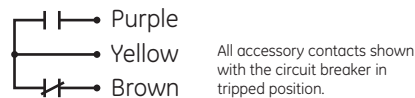
Undervoltage Release

Bell Alarm Switch

The bell alarm switch provides remote indication of whether the circuit breaker has been tripped via open or closed SPDT switch elements, but remains unchanged during "On/Off" circuit breaker operation and during operation by the "Push-to-Trip" button.

| Switch Rating | Number of Switch Elements | Product Number |
|-----------------------------------|---------------------------|----------------|
| 5A @ 240 Vac/ 0.5A @ 125 Vdc | 1 form C | SABAP1 |
| Gold-Plated Contacts 0.5A @30V | 1 form C | SABAG1 |

Note: UL listed at 200,000 AIC without internal accessories, 100,000 AIC with internally mounted accessories.



Bell Alarm Switch

Actuator

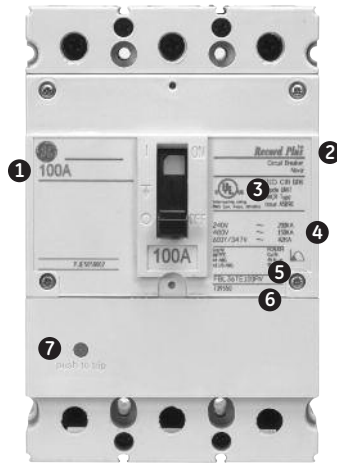
All Spectra™ circuit breakers are supplied with an actuator installed in the left-side pouch. The actuator is removed when installing either a shunt trip or undervoltage release.

| Description | Product Number |
|----------------------|----------------|
| Replacement Actuator | SACTUATOR |



Molded Case Circuit Breakers

Record Plus™ FB 100



- 1 Breaker Frame Rating
- 2 Product Description
- 3 Standards & Ratings
- 4 Interrupting Ratings
- 5 Lug Data & Torque Info
- 6 Product Number
- 7 Push to Trip

FB Breaker Markings

| cULus | UL File E-11592 | |
|------------------|-----------------|--------------|
| HACR | 15 to 100A | 1, 2, 3 Pole |
| HID | 15 to 50A | 1, 2, 3 Pole |
| NAVAL | 15 to 100A | 1, 2, 3 Pole |
| Cu/Al 60/75°C | 15 to 100A | 1, 2, 3 Pole |
| Current Limiting | 15 to 100A | 1, 2, 3 Pole |

FB breakers are NOT marked LINE/LOAD and can be reverse fed.

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | |
|---|-------------|
| FB Breaker | |
| Installation Instructions | DEH-41073 |
| Fact sheet | DET-406 |
| FB Breaker Accessories | |
| Bell Alarm & Aux. Switch | DEH-40324 |
| Shunt Trip & UVR | DEH-40363 |
| Padlock Device | DEH-40521 |
| Lug Kits | DEH-40532 |
| Panelboards | |
| A-Series™ AD Plus Catalog/Selection Guide | DEP-134 |
| A-Series™ AD Plus Fact Sheet | DET-397 |
| Spectra™ Power Panel - Plug-in Kits | DEH-41123 |
| Spectra™ Power Panel - Bolt-on Kits | DEH-41124 |
| Spectra™ Power Panel - Filler Plates | DEH-41125 |
| Outline Drawings | |
| FB 1 pole | 10091632SH1 |
| FB 2 pole | 10091636SH1 |
| FB 3 pole | 10091641SH1 |
| Series Ratings | DET-008 |

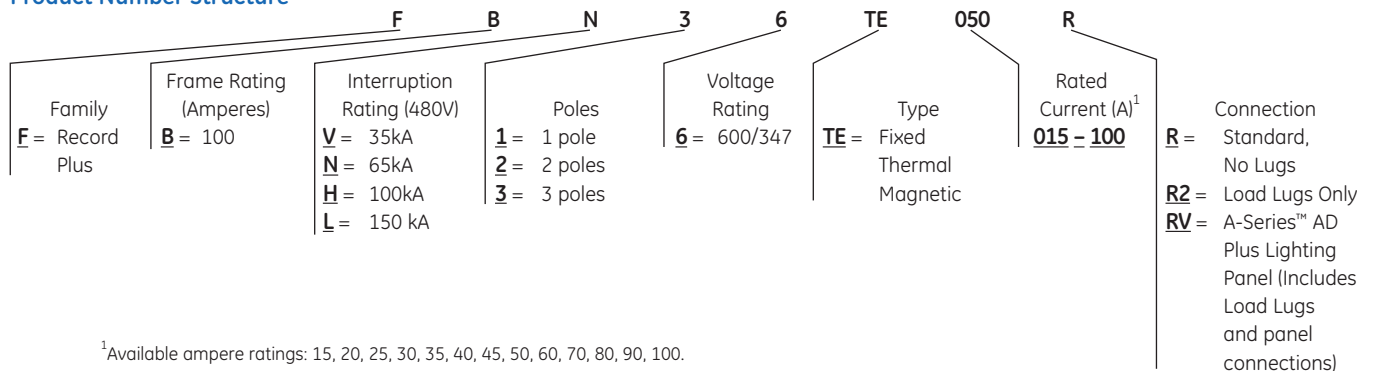
Trip Curves

| Trip Unit Rated Current (A) | Trip Curve |
|-----------------------------|------------|
| 15 | DES-013 |
| 20 | DES-014 |
| 25 | DES-015 |
| 30 | DES-016 |
| 35 | DES-017 |
| 40 | DES-018 |
| 45 | DES-019 |
| 50 | DES-020 |
| 60 | DES-021 |
| 70 | DES-022 |
| 80 | DES-023 |
| 90 | DES-024 |
| 100 | DES-025 |
| Peak Current Curves | DES-030 |
| Peak I ² t Curve | DES-031 |

Interrupting Ratings

| Type | Ampere Rating | Max AC Voltage | No. Poles | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) AC Voltage | | | | |
|------|---------------|----------------|-----------|--|-----|-----|-----|---------|
| | | | | 240 | 277 | 347 | 480 | 600/347 |
| FBV | 15-100 | 600/347VAC | 1 | 35 | 35 | 22 | - | - |
| | | | 2 | 65 | - | - | 35 | 22 |
| | | | 3 | 65 | - | - | 35 | 22 |
| FBN | 15-100 | 600/347VAC | 1 | 65 | 65 | 25 | - | - |
| | | | 2 | 150 | - | - | 65 | 25 |
| | | | 3 | 150 | - | - | 65 | 25 |
| FBH | 15-100 | 600/347VAC | 1 | 100 | 100 | 35 | - | - |
| | | | 2 | 200 | - | - | 100 | 35 |
| | | | 3 | 200 | - | - | 100 | 35 |
| FBL | 15-100 | 600/347VAC | 1 | 100 | 150 | 42 | - | - |
| | | | 2 | 200 | - | - | 150 | 42 |
| | | | 3 | 200 | - | - | 150 | 42 |

Product Number Structure



¹Available ampere ratings: 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100.



Molded Case Circuit Breakers

Record Plus™ FB 100

Section 6

1-Pole Record Plus™ FB 100 Breakers IC @ 600/347 Vac

| Rated Current (A) | 35kA Product No. | 65kA Product No. | 100kA Product No. | 150kA Product No. | Connection |
|-------------------|------------------|------------------|-------------------|-------------------|---------------------------------|
| 15 | FBV16TE015R | FBN16TE015R | FBH16TE015R | FBL16TE015R | No Lugs |
| | FBV16TE015R2 | FBN16TE015R2 | FBH16TE015R2 | FBL16TE015R2 | Load Lugs Only |
| | FBV16TE015RV | FBN16TE015RV | FBH16TE015RV | FBL16TE015RV | Load Lugs and Panel Connections |
| 20 | FBV16TE020R | FBN16TE020R | FBH16TE020R | FBL16TE020R | No Lugs |
| | FBV16TE020R2 | FBN16TE020R2 | FBH16TE020R2 | FBL16TE020R2 | Load Lugs Only |
| | FBV16TE020RV | FBN16TE020RV | FBH16TE020RV | FBL16TE020RV | Load Lugs and Panel Connections |
| 25 | FBV16TE025R | FBN16TE025R | FBH16TE025R | FBL16TE025R | No Lugs |
| | FBV16TE025R2 | FBN16TE025R2 | FBH16TE025R2 | FBL16TE025R2 | Load Lugs Only |
| | FBV16TE025RV | FBN16TE025RV | FBH16TE025RV | FBL16TE025RV | Load Lugs and Panel Connections |
| 30 | FBV16TE030R | FBN16TE030R | FBH16TE030R | FBL16TE030R | No Lugs |
| | FBV16TE030R2 | FBN16TE030R2 | FBH16TE030R2 | FBL16TE030R2 | Load Lugs Only |
| | FBV16TE030RV | FBN16TE030RV | FBH16TE030RV | FBL16TE030RV | Load Lugs and Panel Connections |
| 35 | FBV16TE035R | FBN16TE035R | FBH16TE035R | FBL16TE035R | No Lugs |
| | FBV16TE035R2 | FBN16TE035R2 | FBH16TE035R2 | FBL16TE035R2 | Load Lugs Only |
| | FBV16TE035RV | FBN16TE035RV | FBH16TE035RV | FBL16TE035RV | Load Lugs and Panel Connections |
| 40 | FBV16TE040R | FBN16TE040R | FBH16TE040R | FBL16TE040R | No Lugs |
| | FBV16TE040R2 | FBN16TE040R2 | FBH16TE040R2 | FBL16TE040R2 | Load Lugs Only |
| | FBV16TE040RV | FBN16TE040RV | FBH16TE040RV | FBL16TE040RV | Load Lugs and Panel Connections |
| 45 | FBV16TE045R | FBN16TE045R | FBH16TE045R | FBL16TE045R | No Lugs |
| | FBV16TE045R2 | FBN16TE045R2 | FBH16TE045R2 | FBL16TE045R2 | Load Lugs Only |
| | FBV16TE045RV | FBN16TE045RV | FBH16TE045RV | FBL16TE045RV | Load Lugs and Panel Connections |
| 50 | FBV16TE050R | FBN16TE050R | FBH16TE050R | FBL16TE050R | No Lugs |
| | FBV16TE050R2 | FBN16TE050R2 | FBH16TE050R2 | FBL16TE050R2 | Load Lugs Only |
| | FBV16TE050RV | FBN16TE050RV | FBH16TE050RV | FBL16TE050RV | Load Lugs and Panel Connections |
| 60 | FBV16TE060R | FBN16TE060R | FBH16TE060R | FBL16TE060R | No Lugs |
| | FBV16TE060R2 | FBN16TE060R2 | FBH16TE060R2 | FBL16TE060R2 | Load Lugs Only |
| | FBV16TE060RV | FBN16TE060RV | FBH16TE060RV | FBL16TE060RV | Load Lugs and Panel Connections |
| 70 | FBV16TE070R | FBN16TE070R | FBH16TE070R | FBL16TE070R | No Lugs |
| | FBV16TE070R2 | FBN16TE070R2 | FBH16TE070R2 | FBL16TE070R2 | Load Lugs Only |
| | FBV16TE070RV | FBN16TE070RV | FBH16TE070RV | FBL16TE070RV | Load Lugs and Panel Connections |
| 80 | FBV16TE080R | FBN16TE080R | FBH16TE080R | FBL16TE080R | No Lugs |
| | FBV16TE080R2 | FBN16TE080R2 | FBH16TE080R2 | FBL16TE080R2 | Load Lugs Only |
| | FBV16TE080RV | FBN16TE080RV | FBH16TE080RV | FBL16TE080RV | Load Lugs and Panel Connections |
| 90 | FBV16TE090R | FBN16TE090R | FBH16TE090R | FBL16TE090R | No Lugs |
| | FBV16TE090R2 | FBN16TE090R2 | FBH16TE090R2 | FBL16TE090R2 | Load Lugs Only |
| | FBV16TE090RV | FBN16TE090RV | FBH16TE090RV | FBL16TE090RV | Load Lugs and Panel Connections |
| 100 | FBV16TE100R | FBN16TE100R | FBH16TE100R | FBL16TE100R | No Lugs |
| | FBV16TE100R2 | FBN16TE100R2 | FBH16TE100R2 | FBL16TE100R2 | Load Lugs Only |
| | FBV16TE100RV | FBN16TE100RV | FBH16TE100RV | FBL16TE100RV | Load Lugs and Panel Connections |



Molded Case Circuit Breakers

Record Plus™ FB 100

Section 6

2-Pole Record Plus™ FB 100 Breakers IC @ 600/347 Vac

| Rated Current (A) | 35kA Product No. | 65kA Product No. | 100kA Product No. | 150kA Product No. | Connection |
|-------------------|------------------|------------------|-------------------|-------------------|---------------------------------|
| 15 | FBV26TE015R | FBN26TE015R | FBH26TE015R | FBL26TE015R | No Lugs |
| | FBV26TE015R2 | FBN26TE015R2 | FBH26TE015R2 | FBL26TE015R2 | Load Lugs Only |
| | FBV26TE015RV | FBN26TE015RV | FBH26TE015RV | FBL26TE015RV | Load Lugs and Panel Connections |
| 20 | FBV26TE020R | FBN26TE020R | FBH26TE020R | FBL26TE020R | No Lugs |
| | FBV26TE020R2 | FBN26TE020R2 | FBH26TE020R2 | FBL26TE020R2 | Load Lugs Only |
| | FBV26TE020RV | FBN26TE020RV | FBH26TE020RV | FBL26TE020RV | Load Lugs and Panel Connections |
| 25 | FBV26TE025R | FBN26TE025R | FBH26TE025R | FBL26TE025R | No Lugs |
| | FBV26TE025R2 | FBN26TE025R2 | FBH26TE025R2 | FBL26TE025R2 | Load Lugs Only |
| | FBV26TE025RV | FBN26TE025RV | FBH26TE025RV | FBL26TE025RV | Load Lugs and Panel Connections |
| 30 | FBV26TE030R | FBN26TE030R | FBH26TE030R | FBL26TE030R | No Lugs |
| | FBV26TE030R2 | FBN26TE030R2 | FBH26TE030R2 | FBL26TE030R2 | Load Lugs Only |
| | FBV26TE030RV | FBN26TE030RV | FBH26TE030RV | FBL26TE030RV | Load Lugs and Panel Connections |
| 35 | FBV26TE035R | FBN26TE035R | FBH26TE035R | FBL26TE035R | No Lugs |
| | FBV26TE035R2 | FBN26TE035R2 | FBH26TE035R2 | FBL26TE035R2 | Load Lugs Only |
| | FBV26TE035RV | FBN26TE035RV | FBH26TE035RV | FBL26TE035RV | Load Lugs and Panel Connections |
| 40 | FBV26TE040R | FBN26TE040R | FBH26TE040R | FBL26TE040R | No Lugs |
| | FBV26TE040R2 | FBN26TE040R2 | FBH26TE040R2 | FBL26TE040R2 | Load Lugs Only |
| | FBV26TE040RV | FBN26TE040RV | FBH26TE040RV | FBL26TE040RV | Load Lugs and Panel Connections |
| 45 | FBV26TE045R | FBN26TE045R | FBH26TE045R | FBL26TE045R | No Lugs |
| | FBV26TE045R2 | FBN26TE045R2 | FBH26TE045R2 | FBL26TE045R2 | Load Lugs Only |
| | FBV26TE045RV | FBN26TE045RV | FBH26TE045RV | FBL26TE045RV | Load Lugs and Panel Connections |
| 50 | FBV26TE050R | FBN26TE050R | FBH26TE050R | FBL26TE050R | No Lugs |
| | FBV26TE050R2 | FBN26TE050R2 | FBH26TE050R2 | FBL26TE050R2 | Load Lugs Only |
| | FBV26TE050RV | FBN26TE050RV | FBH26TE050RV | FBL26TE050RV | Load Lugs and Panel Connections |
| 60 | FBV26TE060R | FBN26TE060R | FBH26TE060R | FBL26TE060R | No Lugs |
| | FBV26TE060R2 | FBN26TE060R2 | FBH26TE060R2 | FBL26TE060R2 | Load Lugs Only |
| | FBV26TE060RV | FBN26TE060RV | FBH26TE060RV | FBL26TE060RV | Load Lugs and Panel Connections |
| 70 | FBV26TE070R | FBN26TE070R | FBH26TE070R | FBL26TE070R | No Lugs |
| | FBV26TE070R2 | FBN26TE070R2 | FBH26TE070R2 | FBL26TE070R2 | Load Lugs Only |
| | FBV26TE070RV | FBN26TE070RV | FBH26TE070RV | FBL26TE070RV | Load Lugs and Panel Connections |
| 80 | FBV26TE080R | FBN26TE080R | FBH26TE080R | FBL26TE080R | No Lugs |
| | FBV26TE080R2 | FBN26TE080R2 | FBH26TE080R2 | FBL26TE080R2 | Load Lugs Only |
| | FBV26TE080RV | FBN26TE080RV | FBH26TE080RV | FBL26TE080RV | Load Lugs and Panel Connections |
| 90 | FBV26TE090R | FBN26TE090R | FBH26TE090R | FBL26TE090R | No Lugs |
| | FBV26TE090R2 | FBN26TE090R2 | FBH26TE090R2 | FBL26TE090R2 | Load Lugs Only |
| | FBV26TE090RV | FBN26TE090RV | FBH26TE090RV | FBL26TE090RV | Load Lugs and Panel Connections |
| 100 | FBV26TE100R | FBN26TE100R | FBH26TE100R | FBL26TE100R | No Lugs |
| | FBV26TE100R2 | FBN26TE100R2 | FBH26TE100R2 | FBL26TE100R2 | Load Lugs Only |
| | FBV26TE100RV | FBN26TE100RV | FBH26TE100RV | FBL26TE100RV | Load Lugs and Panel Connections |



Molded Case Circuit Breakers

Record Plus™ FB 100

Section 6

3-Pole Record Plus™ FB 100 Breakers IC @ 600/347 Vac

| Rated Current (A) | 35kA Product No. | 65kA Product No. | 100kA Product No. | 150kA Product No. | Connection |
|-------------------|------------------|------------------|-------------------|-------------------|---------------------------------|
| 15 | FBV36TE015R | FBN36TE015R | FBH36TE015R | FBL36TE015R | No Lugs |
| | FBV36TE015R2 | FBN36TE015R2 | FBH36TE015R2 | FBL36TE015R2 | Load Lugs Only |
| | FBV36TE015RV | FBN36TE015RV | FBH36TE015RV | FBL36TE015RV | Load Lugs and Panel Connections |
| 20 | FBV36TE020R | FBN36TE020R | FBH36TE020R | FBL36TE020R | No Lugs |
| | FBV36TE020R2 | FBN36TE020R2 | FBH36TE020R2 | FBL36TE020R2 | Load Lugs Only |
| | FBV36TE020RV | FBN36TE020RV | FBH36TE020RV | FBL36TE020RV | Load Lugs and Panel Connections |
| 25 | FBV36TE025R | FBN36TE025R | FBH36TE025R | FBL36TE025R | No Lugs |
| | FBV36TE025R2 | FBN36TE025R2 | FBH36TE025R2 | FBL36TE025R2 | Load Lugs Only |
| | FBV36TE025RV | FBN36TE025RV | FBH36TE025RV | FBL36TE025RV | Load Lugs and Panel Connections |
| 30 | FBV36TE030R | FBN36TE030R | FBH36TE030R | FBL36TE030R | No Lugs |
| | FBV36TE030R2 | FBN36TE030R2 | FBH36TE030R2 | FBL36TE030R2 | Load Lugs Only |
| | FBV36TE030RV | FBN36TE030RV | FBH36TE030RV | FBL36TE030RV | Load Lugs and Panel Connections |
| 35 | FBV36TE035R | FBN36TE035R | FBH36TE035R | FBL36TE035R | No Lugs |
| | FBV36TE035R2 | FBN36TE035R2 | FBH36TE035R2 | FBL36TE035R2 | Load Lugs Only |
| | FBV36TE035RV | FBN36TE035RV | FBH36TE035RV | FBL36TE035RV | Load Lugs and Panel Connections |
| 40 | FBV36TE040R | FBN36TE040R | FBH36TE040R | FBL36TE040R | No Lugs |
| | FBV36TE040R2 | FBN36TE040R2 | FBH36TE040R2 | FBL36TE040R2 | Load Lugs Only |
| | FBV36TE040RV | FBN36TE040RV | FBH36TE040RV | FBL36TE040RV | Load Lugs and Panel Connections |
| 45 | FBV36TE045R | FBN36TE045R | FBH36TE045R | FBL36TE045R | No Lugs |
| | FBV36TE045R2 | FBN36TE045R2 | FBH36TE045R2 | FBL36TE045R2 | Load Lugs Only |
| | FBV36TE045RV | FBN36TE045RV | FBH36TE045RV | FBL36TE045RV | Load Lugs and Panel Connections |
| 50 | FBV36TE050R | FBN36TE050R | FBH36TE050R | FBL36TE050R | No Lugs |
| | FBV36TE050R2 | FBN36TE050R2 | FBH36TE050R2 | FBL36TE050R2 | Load Lugs Only |
| | FBV36TE050RV | FBN36TE050RV | FBH36TE050RV | FBL36TE050RV | Load Lugs and Panel Connections |
| 60 | FBV36TE060R | FBN36TE060R | FBH36TE060R | FBL36TE060R | No Lugs |
| | FBV36TE060R2 | FBN36TE060R2 | FBH36TE060R2 | FBL36TE060R2 | Load Lugs Only |
| | FBV36TE060RV | FBN36TE060RV | FBH36TE060RV | FBL36TE060RV | Load Lugs and Panel Connections |
| 70 | FBV36TE070R | FBN36TE070R | FBH36TE070R | FBL36TE070R | No Lugs |
| | FBV36TE070R2 | FBN36TE070R2 | FBH36TE070R2 | FBL36TE070R2 | Load Lugs Only |
| | FBV36TE070RV | FBN36TE070RV | FBH36TE070RV | FBL36TE070RV | Load Lugs and Panel Connections |
| 80 | FBV36TE080R | FBN36TE080R | FBH36TE080R | FBL36TE080R | No Lugs |
| | FBV36TE080R2 | FBN36TE080R2 | FBH36TE080R2 | FBL36TE080R2 | Load Lugs Only |
| | FBV36TE080RV | FBN36TE080RV | FBH36TE080RV | FBL36TE080RV | Load Lugs and Panel Connections |
| 90 | FBV36TE090R | FBN36TE090R | FBH36TE090R | FBL36TE090R | No Lugs |
| | FBV36TE090R2 | FBN36TE090R2 | FBH36TE090R2 | FBL36TE090R2 | Load Lugs Only |
| | FBV36TE090RV | FBN36TE090RV | FBH36TE090RV | FBL36TE090RV | Load Lugs and Panel Connections |
| 100 | FBV36TE100R | FBN36TE100R | FBH36TE100R | FBL36TE100R | No Lugs |
| | FBV36TE100R2 | FBN36TE100R2 | FBH36TE100R2 | FBL36TE100R2 | Load Lugs Only |
| | FBV36TE100RV | FBN36TE100RV | FBH36TE100RV | FBL36TE100RV | Load Lugs and Panel Connections |



Molded Case Circuit Breakers

Record Plus™ FB 100

Internal Accessories

Releases – Shunt Trip and Undervoltage

| Voltage | Shunt Trip | Undervoltage Release |
|-------------------------|-------------|----------------------|
| | Product No. | Product No. |
| 12 VDC | FASHTBW | — |
| 24 VAC/DC | FASHTDW | FAUVRDW |
| 48 VAC/DC | FASHTFW | FAUVRFW |
| 110-130 VAC/110-125 VDC | FASHTJW | FAUVRJW |
| 120 VAC | FASHTKW | — |
| 220/240 VAC, 250 VDC | FASHTNW | FAUVRNW |
| 277 VAC | FASHT7W | FAUVR7W |
| 400/480 VAC | FASHTUW | FAUVRUW |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads (#18 AWG). Shunt trip wire leads are black and UVR wire leads are blue.

Bell Alarm

| Contact Configuration | Contacts | Contact Rating | Wire leads | Product No. |
|-----------------------|----------|------------------------------|------------|-------------|
| 1 NO (Form A) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FABAM10W |
| 1 NC (Form B) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FABAM01W |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads. Reference instruction sheet DEH-40324 for wire lead colors.

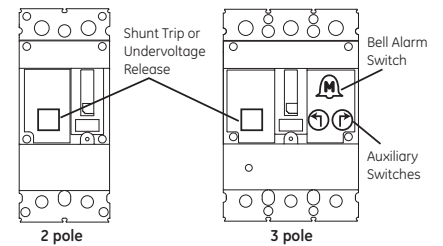
Auxiliary Switches

| Contact Configuration | Contacts | Contact Rating | Wire leads | Left Mount | Right Mount |
|-----------------------|----------|------------------------------|------------|-------------|-------------|
| | | | | Product No. | Product No. |
| 1 NO (Form A) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FAS10LW | FAS10RW |
| 1 NC (Form B) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FAS01LW | FAS01RW |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads. Reference instruction sheet DEH-40324 for wire lead colors.

Mounting Locations and Limitations

| Accessory | Mounting Pocket Location | Accessory Installation | | |
|--|--------------------------|------------------------|--------|--------|
| | | 1 Pole | 2 Pole | 3 Pole |
| Shunt Trip or Undervoltage Release | □ | 0 | 1 | 1 |
| Aux. Switch - Left Mount | Ⓛ | 0 | 0 | 1 |
| Aux. Switch - Right Mount | Ⓡ | 0 | 0 | 1 |
| Bell Alarm | 🔔 | 0 | 0 | 1 |
| Maximum Number of Internal Accessories That Can Be Installed | | 0 | 1 | 4 |



Mounting Locations



Molded Case Circuit Breakers

Record Plus™ FB 100

External Accessories

Section 6

Padlocking Devices

| Description | Product No. |
|-----------------------|-------------|
| Padlock Fixed Toggle | FB1PF |
| Padlock EUSERC Toggle | FB1PE |

Lugs and Lug Kits

| Amp Range | Wire Range | Strip Length | Single Lug Product No. | Lug Kit Product No. (Set of 3) |
|-----------|-------------|--------------|------------------------|--------------------------------|
| 15-20A | 14-10 Cu/Al | .40-.50" | FCAL12 | FCALK12 |
| 25-60A | 10-4 Cu/Al | .40-.50" | FCAL13 | FCALK13 |
| 70-100A | 4-1/0 Cu/Al | .40-.50" | FCAL14 | FCALK14 |

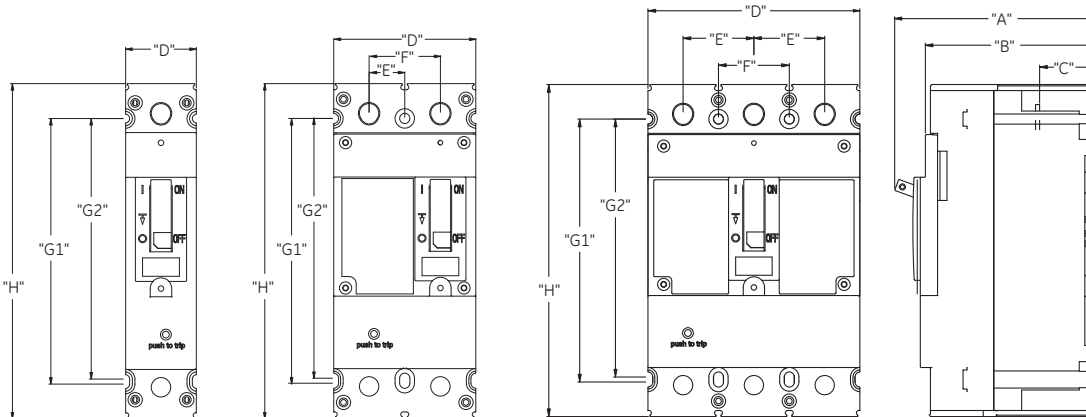
Lug Tightening Torque

| Wire Size | Torque |
|--------------|----------|
| #10 AWG | 35 in-lb |
| #8 AWG | 40 in-lb |
| #6-#4 AWG | 45 in-lb |
| #3 AWG - 1/0 | 50 in-lb |

Dimensions in. (mm)

FB 100 Dimensions

| Poles | A | B | C | D | E | F | G1 | G2 | H |
|-------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|--------------|--------------|
| 1 | 3.88 (98.6) | 3.28 (83.3) | 1.06 (26.9) | 1.36 (34.5) | N/A | N/A | 5.11 (129.8) | 5.01 (127.3) | 6.45 (163.8) |
| 2 | 3.88 (98.6) | 3.28 (83.3) | 1.06 (26.9) | 2.74 (69.6) | 0.69 (17.5) | 1.38 (35.1) | 5.11 (129.8) | 5.01 (127.3) | 6.45 (163.8) |
| 3 | 3.88 (98.6) | 3.28 (83.3) | 1.06 (26.9) | 4.11 (104.4) | 1.38 (35.1) | 1.38 (35.1) | 5.11 (129.8) | 5.01 (127.3) | 6.45 (163.8) |



Molded Case Circuit Breakers

Record Plus™ FC 100



- 1 Breaker Frame Rating
- 2 Rated Voltage
- 3 Breaker Frame
- 4 Enclosed Rating
- 5 Product Description
- 6 Standards
- 7 Interruption Capacity Product Number

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | |
|-----------------------------------|-------------|
| FC Breaker | |
| Installation Instructions | DEH-40463 |
| FC Breaker Accessories | |
| Bell Alarm & Aux. Switch | DEH-40324 |
| Shunt Trip & Undervoltage Release | DEH-40363 |
| Lug Kits | DEH-40532 |
| Outline Drawings | |
| FC 2-3 pole | 10085772SH1 |
| Series Ratings | DET-008 |

Trip Curves

| Trip Unit Rated Current (A) | Trip Curve |
|-----------------------------|------------|
| 15 | DES-013 |
| 20 | DES-014 |
| 25 | DES-015 |
| 30 | DES-016 |
| 35 | DES-017 |
| 40 | DES-018 |
| 45 | DES-019 |
| 50 | DES-020 |
| 60 | DES-021 |
| 70 | DES-022 |
| 80 | DES-023 |
| 90 | DES-024 |
| 100 | DES-025 |
| Peak Current Curves | DES-030 |
| Peak I ² t Curve | DES-031 |

Main Standards

- UL 489
- IEC 947 and associated EN Sections

FC Breaker Markings

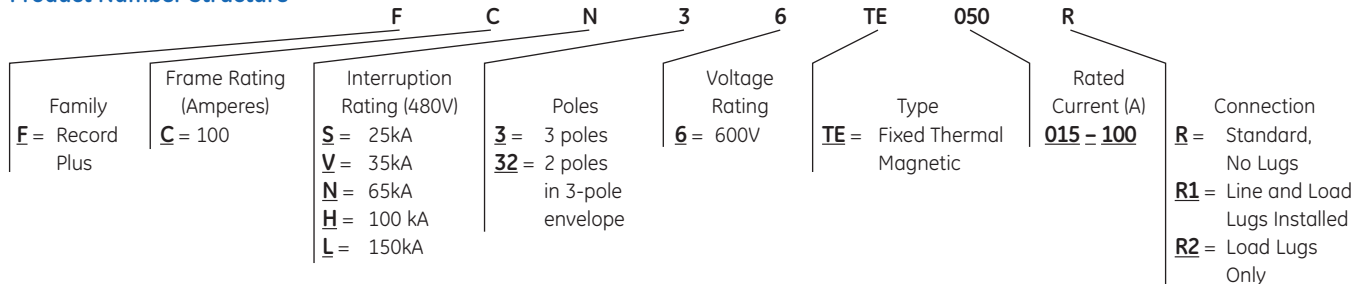
| cULus | UL File E-11592 |
|------------------|-----------------|
| HID | 15-50A |
| HACR | 15 to 100A |
| Cu/Al 60/75°C | 15 to 100A |
| Current Limiting | 15 to 100A |

FC 100 Amp Frame Overview

Interrupting Ratings — Federal Spec C/B Class WC-375B

| Type | Ampere Rating | No. Poles | Max AC/DC Voltage | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) | | | | | IEC Listed Interrupting Ratings, Icu, Amperes (in Thousands) | | | | |
|------|---------------|-----------|-------------------|---|-----|---------|------------|----------|--|---------|------------|----------|----------|
| | | | | AC Voltage | | | DC Voltage | | AC Voltage | | DC Voltage | | |
| | | | | 240 | 480 | 600/347 | 250 (2p) | 500 (3p) | 220-240 | 400-415 | 500 | 250 (2p) | 500 (3p) |
| FCS | 15-100 | 2,3 | 600VAC, 500VDC | 42 | 25 | 18 | 22 | 30 | 36 | 22 | 14 | 22 | 30 |
| FCV | 15-100 | 2,3 | 600VAC, 500VDC | 65 | 35 | 22 | 25 | 35 | 50 | 30 | 18 | 25 | 35 |
| FCN | 15-100 | 2,3 | 600VAC, 500VDC | 150 | 65 | 25 | 30 | 42 | 85 | 50 | 22 | 30 | 42 |
| FCH | 15-100 | 2,3 | 600VAC, 500VDC | 200 | 100 | 35 | 42 | 65 | 100 | 80 | 36 | 42 | 65 |
| FCL | 15-100 | 2,3 | 600VAC, 500VDC | 200 | 150 | 42 | 65 | 80 | 200 | 150 | 50 | 65 | 80 |

Product Number Structure



Selection

Record Plus™, Non-Automatic Circuit Breaker (Molded Case Switch), 600 VAC

| Ampere Rating | 2-Pole | | 3-Pole | | Lug Kit (3 per kit) |
|---------------|-------------|-------------|-------------|-------------|---------------------|
| | Product No. | Product No. | Product No. | Product No. | Product No. |
| 60 | FCY206F060R | FCY306F060R | FCY306F060R | FCY306F060R | FCALK13 |
| 100 | FCY206F100R | FCY306F100R | FCY306F100R | FCY306F100R | FCALK14 |



2-Pole Record Plus™ FC 100 Breakers IC @ 480 Vac

| Rated Current (A) | 25kA Product No. | 35kA Product No. | 65kA Product No. | 100kA Product No. | 150kA Product No. | Connection |
|-------------------|------------------|------------------|------------------|-------------------|-------------------|------------------------------|
| 15 | FCS326TE015R | FCV326TE015R | FCN326TE015R | FCH326TE015R | FCL326TE015R | No Lugs |
| | FCS326TE015R1 | FCV326TE015R1 | FCN326TE015R1 | FCH326TE015R1 | FCL326TE015R1 | Line and Load Lugs Installed |
| 20 | FCS326TE015R2 | FCV326TE015R2 | FCN326TE015R2 | FCH326TE015R2 | FCL326TE015R2 | Load Lugs Only |
| | FCS326TE020R | FCV326TE020R | FCN326TE020R | FCH326TE020R | FCL326TE020R | No Lugs |
| | FCS326TE020R1 | FCV326TE020R1 | FCN326TE020R1 | FCH326TE020R1 | FCL326TE020R1 | Line and Load Lugs Installed |
| | FCS326TE020R2 | FCV326TE020R2 | FCN326TE020R2 | FCH326TE020R2 | FCL326TE020R2 | Load Lugs Only |
| 25 | FCS326TE025R | FCV326TE025R | FCN326TE025R | FCH326TE025R | FCL326TE025R | No Lugs |
| | FCS326TE025R1 | FCV326TE025R1 | FCN326TE025R1 | FCH326TE025R1 | FCL326TE025R1 | Line and Load Lugs Installed |
| | FCS326TE025R2 | FCV326TE025R2 | FCN326TE025R2 | FCH326TE025R2 | FCL326TE025R2 | Load Lugs Only |
| | FCS326TE030R | FCV326TE030R | FCN326TE030R | FCH326TE030R | FCL326TE030R | No Lugs |
| 30 | FCS326TE030R1 | FCV326TE030R1 | FCN326TE030R1 | FCH326TE030R1 | FCL326TE030R1 | Line and Load Lugs Installed |
| | FCS326TE030R2 | FCV326TE030R2 | FCN326TE030R2 | FCH326TE030R2 | FCL326TE030R2 | Load Lugs Only |
| | FCS326TE035R | FCV326TE035R | FCN326TE035R | FCH326TE035R | FCL326TE035R | No Lugs |
| | FCS326TE035R1 | FCV326TE035R1 | FCN326TE035R1 | FCH326TE035R1 | FCL326TE035R1 | Line and Load Lugs Installed |
| 35 | FCS326TE035R2 | FCV326TE035R2 | FCN326TE035R2 | FCH326TE035R2 | FCL326TE035R2 | Load Lugs Only |
| | FCS326TE040R | FCV326TE040R | FCN326TE040R | FCH326TE040R | FCL326TE040R | No Lugs |
| | FCS326TE040R1 | FCV326TE040R1 | FCN326TE040R1 | FCH326TE040R1 | FCL326TE040R1 | Line and Load Lugs Installed |
| | FCS326TE040R2 | FCV326TE040R2 | FCN326TE040R2 | FCH326TE040R2 | FCL326TE040R2 | Load Lugs Only |
| 40 | FCS326TE045R | FCV326TE045R | FCN326TE045R | FCH326TE045R | FCL326TE045R | No Lugs |
| | FCS326TE045R1 | FCV326TE045R1 | FCN326TE045R1 | FCH326TE045R1 | FCL326TE045R1 | Line and Load Lugs Installed |
| | FCS326TE045R2 | FCV326TE045R2 | FCN326TE045R2 | FCH326TE045R2 | FCL326TE045R2 | Load Lugs Only |
| | FCS326TE050R | FCV326TE050R | FCN326TE050R | FCH326TE050R | FCL326TE050R | No Lugs |
| 45 | FCS326TE050R1 | FCV326TE050R1 | FCN326TE050R1 | FCH326TE050R1 | FCL326TE050R1 | Line and Load Lugs Installed |
| | FCS326TE050R2 | FCV326TE050R2 | FCN326TE050R2 | FCH326TE050R2 | FCL326TE050R2 | Load Lugs Only |
| | FCS326TE060R | FCV326TE060R | FCN326TE060R | FCH326TE060R | FCL326TE060R | No Lugs |
| | FCS326TE060R1 | FCV326TE060R1 | FCN326TE060R1 | FCH326TE060R1 | FCL326TE060R1 | Line and Load Lugs Installed |
| 50 | FCS326TE060R2 | FCV326TE060R2 | FCN326TE060R2 | FCH326TE060R2 | FCL326TE060R2 | Load Lugs Only |
| | FCS326TE070R | FCV326TE070R | FCN326TE070R | FCH326TE070R | FCL326TE070R | No Lugs |
| | FCS326TE070R1 | FCV326TE070R1 | FCN326TE070R1 | FCH326TE070R1 | FCL326TE070R1 | Line and Load Lugs Installed |
| | FCS326TE070R2 | FCV326TE070R2 | FCN326TE070R2 | FCH326TE070R2 | FCL326TE070R2 | Load Lugs Only |
| 60 | FCS326TE080R | FCV326TE080R | FCN326TE080R | FCH326TE080R | FCL326TE080R | No Lugs |
| | FCS326TE080R1 | FCV326TE080R1 | FCN326TE080R1 | FCH326TE080R1 | FCL326TE080R1 | Line and Load Lugs Installed |
| | FCS326TE080R2 | FCV326TE080R2 | FCN326TE080R2 | FCH326TE080R2 | FCL326TE080R2 | Load Lugs Only |
| | FCS326TE090R | FCV326TE090R | FCN326TE090R | FCH326TE090R | FCL326TE090R | No Lugs |
| 70 | FCS326TE090R1 | FCV326TE090R1 | FCN326TE090R1 | FCH326TE090R1 | FCL326TE090R1 | Line and Load Lugs Installed |
| | FCS326TE090R2 | FCV326TE090R2 | FCN326TE090R2 | FCH326TE090R2 | FCL326TE090R2 | Load Lugs Only |
| | FCS326TE100R | FCV326TE100R | FCN326TE100R | FCH326TE100R | FCL326TE100R | No Lugs |
| | FCS326TE100R1 | FCV326TE100R1 | FCN326TE100R1 | FCH326TE100R1 | FCL326TE100R1 | Line and Load Lugs Installed |
| 80 | FCS326TE100R2 | FCV326TE100R2 | FCN326TE100R2 | FCH326TE100R2 | FCL326TE100R2 | Load Lugs Only |
| | FCS326TE100R | FCV326TE100R | FCN326TE100R | FCH326TE100R | FCL326TE100R | No Lugs |
| 90 | FCS326TE100R1 | FCV326TE100R1 | FCN326TE100R1 | FCH326TE100R1 | FCL326TE100R1 | Line and Load Lugs Installed |
| | FCS326TE100R2 | FCV326TE100R2 | FCN326TE100R2 | FCH326TE100R2 | FCL326TE100R2 | Load Lugs Only |
| 100 | FCS326TE100R | FCV326TE100R | FCN326TE100R | FCH326TE100R | FCL326TE100R | No Lugs |
| | FCS326TE100R1 | FCV326TE100R1 | FCN326TE100R1 | FCH326TE100R1 | FCL326TE100R1 | Line and Load Lugs Installed |
| | FCS326TE100R2 | FCV326TE100R2 | FCN326TE100R2 | FCH326TE100R2 | FCL326TE100R2 | Load Lugs Only |



Molded Case Circuit Breakers Record Plus™ FC 100

Section 6

3-Pole Record Plus™ FC 100 Breakers IC @ 480 Vac

| Rated Current (A) | 25kA Product No. | 35kA Product No. | 65kA Product No. | 100kA Product No. | 150kA Product No. | Connection |
|-------------------|------------------|------------------|------------------|-------------------|-------------------|------------------------------|
| 15 | FCS36TE015R | FCV36TE015R | FCN36TE015R | FCH36TE015R | FCL36TE015R | No Lugs |
| | FCS36TE015R1 | FCV36TE015R1 | FCN36TE015R1 | FCH36TE015R1 | FCL36TE015R1 | Line and Load Lugs Installed |
| 20 | FCS36TE015R2 | FCV36TE015R2 | FCN36TE015R2 | FCH36TE015R2 | FCL36TE015R2 | Load Lugs Only |
| | FCS36TE020R | FCV36TE020R | FCN36TE020R | FCH36TE020R | FCL36TE020R | No Lugs |
| | FCS36TE020R1 | FCV36TE020R1 | FCN36TE020R1 | FCH36TE020R1 | FCL36TE020R1 | Line and Load Lugs Installed |
| 25 | FCS36TE020R2 | FCV36TE020R2 | FCN36TE020R2 | FCH36TE020R2 | FCL36TE020R2 | Load Lugs Only |
| | FCS36TE025R | FCV36TE025R | FCN36TE025R | FCH36TE025R | FCL36TE025R | No Lugs |
| | FCS36TE025R1 | FCV36TE025R1 | FCN36TE025R1 | FCH36TE025R1 | FCL36TE025R1 | Line and Load Lugs Installed |
| 30 | FCS36TE025R2 | FCV36TE025R2 | FCN36TE025R2 | FCH36TE025R2 | FCL36TE025R2 | Load Lugs Only |
| | FCS36TE030R | FCV36TE030R | FCN36TE030R | FCH36TE030R | FCL36TE030R | No Lugs |
| | FCS36TE030R1 | FCV36TE030R1 | FCN36TE030R1 | FCH36TE030R1 | FCL36TE030R1 | Line and Load Lugs Installed |
| 35 | FCS36TE030R2 | FCV36TE030R2 | FCN36TE030R2 | FCH36TE030R2 | FCL36TE030R2 | Load Lugs Only |
| | FCS36TE035R | FCV36TE035R | FCN36TE035R | FCH36TE035R | FCL36TE035R | No Lugs |
| | FCS36TE035R1 | FCV36TE035R1 | FCN36TE035R1 | FCH36TE035R1 | FCL36TE035R1 | Line and Load Lugs Installed |
| 40 | FCS36TE035R2 | FCV36TE035R2 | FCN36TE035R2 | FCH36TE035R2 | FCL36TE035R2 | Load Lugs Only |
| | FCS36TE040R | FCV36TE040R | FCN36TE040R | FCH36TE040R | FCL36TE040R | No Lugs |
| | FCS36TE040R1 | FCV36TE040R1 | FCN36TE040R1 | FCH36TE040R1 | FCL36TE040R1 | Line and Load Lugs Installed |
| 45 | FCS36TE040R2 | FCV36TE040R2 | FCN36TE040R2 | FCH36TE040R2 | FCL36TE040R2 | Load Lugs Only |
| | FCS36TE045R | FCV36TE045R | FCN36TE045R | FCH36TE045R | FCL36TE045R | No Lugs |
| | FCS36TE045R1 | FCV36TE045R1 | FCN36TE045R1 | FCH36TE045R1 | FCL36TE045R1 | Line and Load Lugs Installed |
| 50 | FCS36TE045R2 | FCV36TE045R2 | FCN36TE045R2 | FCH36TE045R2 | FCL36TE045R2 | Load Lugs Only |
| | FCS36TE050 | FCV36TE050R | FCN36TE050R | FCH36TE050R | FCL36TE050R | No Lugs |
| | FCS36TE050R1 | FCV36TE050R1 | FCN36TE050R1 | FCH36TE050R1 | FCL36TE050R1 | Line and Load Lugs Installed |
| 60 | FCS36TE050R2 | FCV36TE050R2 | FCN36TE050R2 | FCH36TE050R2 | FCL36TE050R2 | Load Lugs Only |
| | FCS36TE060R | FCV36TE060R | FCN36TE060R | FCH36TE060R | FCL36TE060R | No Lugs |
| | FCS36TE060R1 | FCV36TE060R1 | FCN36TE060R1 | FCH36TE060R1 | FCL36TE060R1 | Line and Load Lugs Installed |
| 70 | FCS36TE060R2 | FCV36TE060R2 | FCN36TE060R2 | FCH36TE060R2 | FCL36TE060R2 | Load Lugs Only |
| | FCS36TE070R | FCV36TE070R | FCN36TE070R | FCH36TE070R | FCL36TE070R | No Lugs |
| | FCS36TE070R1 | FCV36TE070R1 | FCN36TE070R1 | FCH36TE070R1 | FCL36TE070R1 | Line and Load Lugs Installed |
| 80 | FCS36TE070R2 | FCV36TE070R2 | FCN36TE070R2 | FCH36TE070R2 | FCL36TE070R2 | Load Lugs Only |
| | FCS36TE080R | FCV36TE080R | FCN36TE080R | FCH36TE080R | FCL36TE080R | No Lugs |
| | FCS36TE080R1 | FCV36TE080R1 | FCN36TE080R1 | FCH36TE080R1 | FCL36TE080R1 | Line and Load Lugs Installed |
| 90 | FCS36TE080R2 | FCV36TE080R2 | FCN36TE080R2 | FCH36TE080R2 | FCL36TE080R2 | Load Lugs Only |
| | FCS36TE090R | FCV36TE090R | FCN36TE090R | FCH36TE090R | FCL36TE090R | No Lugs |
| | FCS36TE090R1 | FCV36TE090R1 | FCN36TE090R1 | FCH36TE090R1 | FCL36TE090R1 | Line and Load Lugs Installed |
| 100 | FCS36TE090R2 | FCV36TE090R2 | FCN36TE090R2 | FCH36TE090R2 | FCL36TE090R2 | Load Lugs Only |
| | FCS36TE100R | FCV36TE100R | FCN36TE100R | FCH36TE100R | FCL36TE100R | No Lugs |
| | FCS36TE100R1 | FCV36TE100R1 | FCN36TE100R1 | FCH36TE100R1 | FCL36TE100R1 | Line and Load Lugs Installed |
| | FCS36TE100R2 | FCV36TE100R2 | FCN36TE100R2 | FCH36TE100R2 | FCL36TE100R2 | Load Lugs Only |

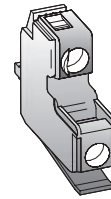


Molded Case Circuit Breakers

Record Plus™ FC 100

Internal Accessories (supplied with leads attached)

Section 6



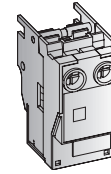
Auxiliary Switch/Bell Alarm Mechanism

Contacts – Auxiliary and Bell Alarm (Rated 5A @240VAC, 0.5A @125VDC)

| Accessory | Normally Open | Normally Closed |
|---------------------------|---------------|-----------------|
| | Product No. | Product No. |
| Aux. Switch Right Mounted | FAS10RW | FAS01RW |
| Aux. Switch Left Mounted | FAS10LW | FAS01LW |
| Bell Alarm Mechanism | FABAM10W | FABAM01W |

Releases – Shunt Trip and Undervoltage

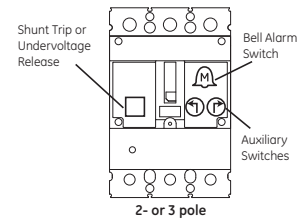
| Voltage | Shunt Trip | | Undervoltage Release | |
|----------------------|-----------------------------------|-------------|-----------------------------------|-------------|
| | Rating (Inrush Power Consumption) | Product No. | Rating (Inrush Power Consumption) | Product No. |
| 12 VDC | 200 mA / 2.4W | FASHTBW | — | — |
| 24 VAC/DC | 100 mA / 3.6W | FASHTDW | 50 mA / 1.2W | FAUVRDW |
| 48 VAC/DC | 60 mA / 2.88W | FASHTFW | 20 mA / 0.96W | FAUVRFW |
| 120 VAC | 40 mA / 4.8W | FASHTKW | — | — |
| 110/130 VAC/DC | 40 mA / 4.8W | FASHTJW | 15 mA / 1.8W | FAUVRJW |
| 220/240 VAC, 250 VDC | 20 mA / 4.6W | FASHTNW | 15 mA / 3.45W | FAUVRNW |
| 277 VAC | 11 mA / 3.0W | FASHT7W | 15 mA / 4.0W | FAUVR7W |
| 400/480 VAC | 20 mA / 8.4W | FASHTUW | 15 mA / 6.3W | FAUVRUW |



Shunt Trip/Undervoltage Release

Mounting Locations and Limitations

| Accessory | Mounting Pocket Location | Accessory Installation | |
|--|--------------------------|------------------------|--------|
| | | 2 Pole | 3 Pole |
| Shunt Trip or Undervoltage Release | | 1 | 1 |
| Aux. Switch - Left Mount | | 1 | 1 |
| Aux. Switch - Right Mount | | 1 | 1 |
| Bell Alarm | | 1 | 1 |
| Maximum Number of Internal Accessories That Can Be Installed | | 4 | 4 |



Mounting Locations

External Accessories

Electrical Operator Motor Drives, Front Mounted

| Voltage | Product No. |
|-----------------------|-------------|
| 120 VAC/125 VDC | FCEMF3 |
| 220/240 VAC, 50/60 Hz | FCEMF6 |
| 48 VDC | FCEMFF |

Padlocking Devices

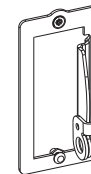
| Description | Product No. |
|-----------------------|-------------|
| Padlock Fixed Toggle | FC1PF |
| Padlock EUSERC Toggle | FC1PE |



Motor Operator

Plug-In Types

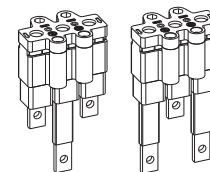
| Type | Description | Product No. |
|----------------------|-------------------------------------|-------------|
| Complete Kits | 3 Pole - LSL - Horizontal Strap | FCDDF1 |
| | 3 Pole - SLS - Horizontal Strap | FCDDF2 |
| | 3 Pole - LSL - Vertical Strap | FCDDF3 |
| | 3 Pole - SLS - Vertical Strap | FCDDF4 |
| Secondary Disconnect | Secondary Disconnect Kit | FCDSD |
| | Secondary Disconnect - Base Part | FCSDP |
| | Secondary Disconnect - Breaker Part | FCSDB |
| Mounting Plate | Mounting Plate | FCDMP |



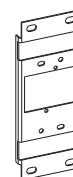
Padlock

Hardware Kits

| Description | Product No. |
|--|-------------|
| Mounting screws for mounting plates with tapped holes, quantity 4 (#8-32 x 2 7/8" screws with lockwashers) | FCMSK3 |
| Mounting screws for mounting plates with clearance holes, quantity 4 (#8-32 x 3" screws with nuts lockwashers) | FCMSK4 |
| Nut plates (quantity 3) | FCNP3 |
| Nut plates (quantity 36) | FCNPB |



Plug-In Bases



Plug-In Plate



Molded Case Circuit Breakers

Record Plus™ FC 100

External Accessories

Lugs and Lug Kits

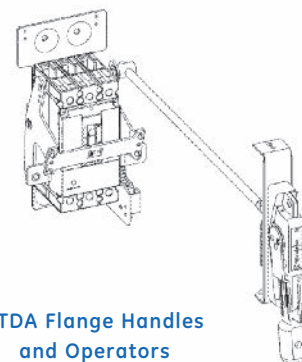
| Amp Range | Wire Range | Strip Length | Single Lug Product No. | Lug Kit Product No. (Set of 3) |
|-----------|-------------|--------------|------------------------|--------------------------------|
| 15-20A | 14-10 Cu/Al | .40-.50" | FCAL12 | FCALK12 |
| 25-60A | 10-4 Cu/Al | .40-.50" | FCAL13 | FCALK13 |
| 70-100A | 4-1/0 Cu/Al | .40-.50" | FCAL14 | FCALK14 |

Lug Tightening Torque

| Wire Size | Torque |
|--------------|----------|
| #10 AWG | 35 in-lb |
| #8 AWG | 40 in-lb |
| #6-#4 AWG | 45 in-lb |
| #3 AWG - 1/0 | 50 in-lb |

Handles and Handle Accessories

| Type | Description | Product No. |
|---------------------------------------|-------------------------------|--|
| STDA Flange | Flange Handle for Variable | Same as Spectra™: 6-inch for NEMA 12/13 |
| Handles, Operators, and Hardware Kits | Depth Operating Mechanism | Same as Spectra™: 10-inch for NEMA 12/13 |
| | | Same as Spectra™: 6-inch for NEMA 4/4X |
| | | Same as Spectra™: 10-inch for NEMA 4/4X |
| | Flange Operating Mechanism | Operating Mechanism Only |
| | Flange Stiffener Kit | Use with FCNFM |
| | Extender Kit | Use with FCNFM |
| | Extended Drive Stud | Use with FCNFM |
| | Door Hardware Kit NEMA12/13 | Door Hinged on Left, NEMA 12/13, 2-point Kit |
| | Door Hardware Kit NEMA 4/4X | Door Hinged on Left, NEMA 4/4X, 2-point Kit |
| | Third Point Latch Kit | For Use With TDV1/TDV1X Above |
| | Door Hardware Kit NEMA12/13 | Door Hinged on Right, NEMA 12/13 2-point Kit |
| | Third Point Latch Kit | For Use with TDV1L, TDC1LX Above |
| Auxiliary Contact Kits | DPDT for STDA Handle on Right | TDAS1L2 |
| | DPDT for STDA Handle on Left | TDAS1R2 |

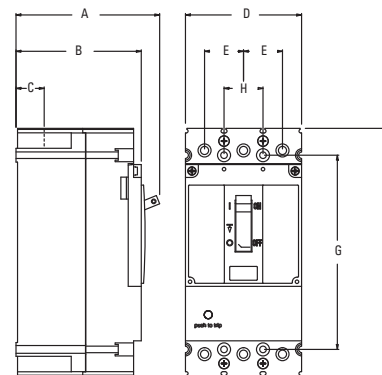


STDA Flange Handles and Operators

Dimensions in. (mm)

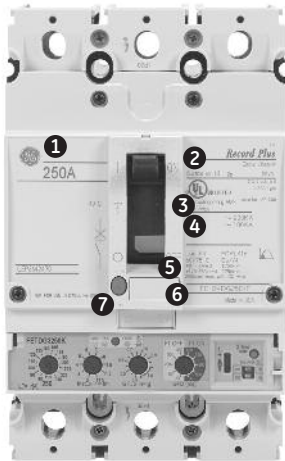
FC 100 Dimensions

| Frame | A | B | C | D | E | F | G | H |
|-------|------------|------------|------------|------------|------------|-------------|-------------|------------|
| FC | 3.7 (29.1) | 3.2 (81.3) | .96 (24.4) | 3.0 (76.2) | 1.0 (25.4) | 6.4 (162.6) | 5.0 (127.0) | 1.0 (25.4) |



FC 100 Amp Dimensions





- 1 Breaker Frame Rating
- 2 Product Description
- 3 Standards & Markings
- 4 Interrupting Ratings
- 5 Lug Data & Torque Info
- 6 Product Number
- 7 Push to Trip

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | | |
|-------------------------------------|--|-------------|
| FE Breaker | | |
| Installation Instructions | | DEH-41640 |
| Outline Drawing | | 10101247PV1 |
| FE Breaker Accessories | | |
| Bell Alarm & Aux Switch | | DEH-40324 |
| Shunt Trip & UVR | | DEH-40259 |
| Padlock Device | | DEH-41059 |
| Lug Kits | | DEH-41054 |
| Auxiliary Contacts | | DEH-40261 |
| Panelboards | | |
| Spectra™ Power Panel - Plug-in Kits | | DEH-40402 |
| Spectra™ Power Panel - Bolt-on Kits | | DEH-40425 |
| Series Ratings | | |
| | | DET-008 |
| External Operators | | |
| STDA Style | | DEH-41014 |
| TDM Style | | DEH-41025 |

Trip Curves

| | |
|---|---------|
| Record Plus FE with PremEon S Trip - LSI Protections | DES-115 |
| Record Plus FE with PremEon S Trip - GF Protection | DES-116 |
| Record Plus FE with PremEon S Trip - Mag only Motor Circuit Protector | DES-117 |
| Peak Current Curves | DES-205 |
| Peak I ² Curve | DES-206 |

Main Standards

- UL/cUL 489
- HACR (heating, air conditioning, and refrigeration)
- Naval

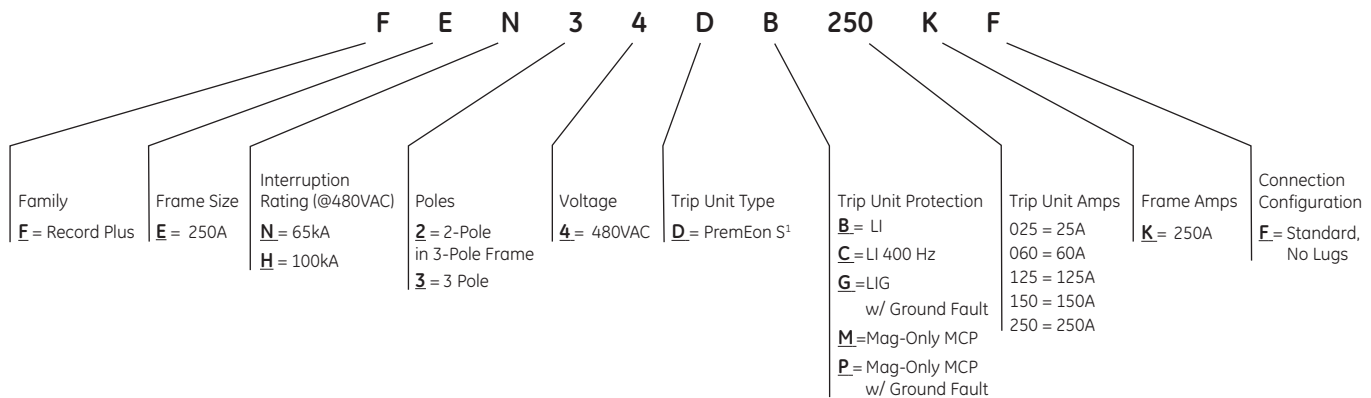
Interrupting Ratings

| Type | Ampere Rating | Max Voltage | No. Poles | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) AC Voltage | |
|------|---------------|-------------|-----------|--|-----|
| | | | | 240 | 480 |
| FEN | 25-250A | 480VAC | 2 | 150 | 65 |
| | | | 3 | 150 | 65 |
| FEH | 25-250A | 480VAC | 2 | 200 | 100 |
| | | | 3 | 200 | 100 |

Cross Reference

| SMR1 Equipped FE MCCB | Rating Plug Amps | PremEon Equipped MCCB |
|-----------------------|--|-----------------------|
| FE(N/H)I(2/3)4AA0025R | 20, 25 | FE(N/H)I(2/3)4DB025KF |
| FE(N/H)I(2/3)4AA0060R | 25, 30, 40, 50, 60 | FE(N/H)I(2/3)4DB060KF |
| FE(N/H)I(2/3)4AA0125R | 50, 60, 70, 80, 90, 100, 110, 125 | FE(N/H)I(2/3)4DB125KF |
| FE(N/H)I(2/3)4AA0150R | 70, 80, 90, 100, 110, 125, 150 | FE(N/H)I(2/3)4DB150KF |
| FE(N/H)I(2/3)4AA0250R | 100, 110, 125, 150, 175, 200, 225, 250 | FE(N/H)I(2/3)4DB250KF |

Product Number Structure



¹Requires tamper-resistant Torx T15 tool for adjustment.



Molded Case Circuit Breakers

Record Plus™ FE 250

Breaker Frames

FE Breakers and MCP's equipped with the PremEon trip unit do not use Rating Plugs to determine Amp rating. The trip unit features an adjustment knob to set the Amp rating (Long-Time Pickup). The knob is located behind a sealable cover and requires a tamper-resistant Torx T15 tool. The tool is available through many industrial supply companies. The maximum Amp rating of the breaker frame is shown in the "Current Sensor" column below. The available Amp rating settings (LT Pickup values), by sensor, are as follows:

| Current Sensor (A) | Amp Settings (LT Pickup) |
|--------------------|---|
| 25 | 8, 9, 10, 11, 13, 14, 15, 16, 18, 19, 20, 21, 23, 24, 25 |
| 60 | 18, 20, 25, 27, 30, 33, 35, 40, 42, 45, 48, 50, 54, 57, 60 |
| 125 | 40, 45, 50, 60, 65, 70, 75, 80, 90, 95, 100, 105, 110, 120, 125 |
| 150 | 45, 50, 60, 70, 75, 80, 90, 100, 105, 110, 120, 125, 135, 145, 150 |
| 250 | 80, 90, 100, 110, 125, 135, 150, 165, 175, 190, 200, 215, 225, 240, 250 |

LI Trip Unit (With Tracking Short-Time)

2-Pole Record Plus FE Breakers

| Current Sensor (A) | 65kAIC @ 480 Vac | | 100kAIC @ 480 VAC | |
|--------------------|------------------|----------------|-------------------|----------------|
| | Product Number | Product Number | Product Number | Product Number |
| 25 | FEN24DB025KF | FEH24DB025KF | FEN24DB060KF | FEH24DB060KF |
| 60 | FEN24DB125KF | FEH24DB125KF | FEN24DB150KF | FEH24DB150KF |
| 125 | FEN24DB250KF | FEH24DB250KF | | |

3-Pole Record Plus FE Breakers

| Current Sensor (A) | 65kAIC @ 480 Vac | | 100kAIC @ 480 VAC | |
|--------------------|------------------|----------------|-------------------|----------------|
| | Product Number | Product Number | Product Number | Product Number |
| 25 | FEN34DB025KF | FEH34DB025KF | FEN34DB060KF | FEH34DB060KF |
| 60 | FEN34DB125KF | FEH34DB125KF | FEN34DB150KF | FEH34DB150KF |
| 125 | FEN34DB250KF | FEH34DB250KF | | |

LIG Trip Unit (With Tracking Short-Time)

2-Pole Record Plus FE Breakers

| Current Sensor (A) | 65kAIC @ 480 Vac | | 100kAIC @ 480 VAC | |
|--------------------|------------------|----------------|-------------------|----------------|
| | Product Number | Product Number | Product Number | Product Number |
| 25 | FEN24DG025KF | FEH24DG025KF | FEN24DG060KF | FEH24DG060KF |
| 60 | FEN24DG125KF | FEH24DG125KF | FEN24DG150KF | FEH24DG150KF |
| 125 | FEN24DG250KF | FEH24DG250KF | | |

3-Pole Record Plus FE Breakers

| Current Sensor (A) | 65kAIC @ 480 Vac | | 100kAIC @ 480 VAC | |
|--------------------|------------------|----------------|-------------------|----------------|
| | Product Number | Product Number | Product Number | Product Number |
| 25 | FEN34DG025KF | FEH34DG025KF | FEN34DG060KF | FEH34DG060KF |
| 60 | FEN34DG125KF | FEH34DG125KF | FEN34DG150KF | FEH34DG150KF |
| 125 | FEN34DG250KF | FEH34DG250KF | | |

400 Hz LI Trip Unit (With Tracking Short-Time)¹

2-Pole Record Plus FE Breakers

| Current Sensor (A) | 65kAIC @ 480 Vac | | 100kAIC @ 480 VAC | |
|--------------------|------------------|----------------|-------------------|----------------|
| | Product Number | Product Number | Product Number | Product Number |
| 25 | FEN24DB025KF | FEH24DB025KF | FEN24DB060KF | FEH24DB060KF |
| 60 | FEN24DB125KF | FEH24DB125KF | FEN24DB150KF | FEH24DB150KF |
| 125 | FEN24DB250KF | FEH24DB250KF | | |

3-Pole Record Plus FE Breakers

| Current Sensor (A) | 65kAIC @ 480 Vac | | 100kAIC @ 480 VAC | |
|--------------------|------------------|----------------|-------------------|----------------|
| | Product Number | Product Number | Product Number | Product Number |
| 25 | FEN34DB025KF | FEH34DB025KF | FEN34DB060KF | FEH34DB060KF |
| 60 | FEN34DB125KF | FEH34DB125KF | FEN34DB150KF | FEH34DB150KF |
| 125 | FEN34DB250KF | FEH34DB250KF | | |

¹400 Hz FE breakers require de-rating and are not UL listed.



Molded Case Circuit Breakers

Record Plus™ FE 250

Internal and External Accessories

Section 6

PremEon S External Ground Fault CTs

| Description | Product Number |
|--|----------------|
| 25A External Neutral CT for FE with PremEon S | FEGS0025 |
| 60A External Neutral CT for FE with PremEon S | FEGS0060 |
| 125A External Neutral CT for FE with PremEon S | FEGS0125 |
| 150A External Neutral CT for FE with PremEon S | FEGS0150 |
| 250A External Neutral CT for FE with PremEon S | FEGS0250 |

Releases – Shunt Trip and Undervoltage

| Voltage | Shunt Trip | Undervoltage Release |
|-------------------------|-------------|----------------------|
| | Product No. | Product No. |
| 12 VDC | FASHTBW | — |
| 24 VAC/DC | FASHTDW | FAUVRDW |
| 48 VAC/DC | FASHTFW | FAUVRFW |
| 110-130 VAC/110-125 VDC | FASHTJW | FAUVRJW |
| 120 VAC | FASHTKW | — |
| 220/240 VAC, 250 VDC | FASHTNW | FAUVRNW |
| 277 VAC | FASHT7W | FAUVR7W |
| 400/480 VAC | FASHTUW | FAUVRUW |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads (#18 AWG). Shunt trip wire leads are black and UVR wire leads are blue.

Bell Alarm

| Contact Configuration | Contact Rating | Wire leads | Product No. |
|-----------------------|---------------------------------|------------|-------------|
| 1 NO (Form A) | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FABAM10W |
| 1 NC (Form B) | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FABAM01W |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads. Reference instruction sheet DEH-40324 for wire lead colors.

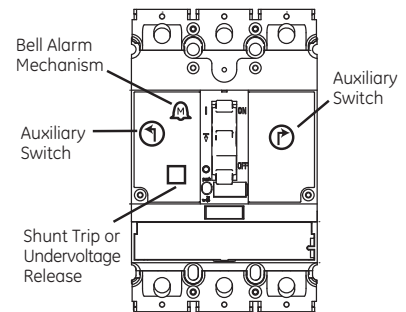
Auxiliary Switches

| Contact Configuration | Contact Rating | Wire leads | Left Mount | Right Mount |
|-----------------------|---------------------------------|------------|-------------|-------------|
| | | | Product No. | Product No. |
| 1 NO (Form A) | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FAS10LW | FAS10RW |
| 1 NC (Form B) | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FAS01LW | FAS01RW |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads. Reference instruction sheet DEH-40324 for wire lead colors.

Mounting Locations and Limitations

| Accessory | Mounting Pocket Location | Maximum Quantity |
|------------------------------------|--------------------------|------------------|
| Shunt Trip or Undervoltage Release | □ | 1 |
| Aux. Switch - Left Mount | Ⓘ | 2 |
| Aux. Switch - Right Mount | Ⓡ | 2 |
| Bell Alarm Mechanism | Ⓜ | 1 |



Mounting Locations

Lug Kits

| Ampere Rating | Conductor Size | Lug Torque (Max) | Single Lug Product No. | Lug Kit | Lug Kit w/ |
|---------------|---------------------------------|------------------|------------------------|----------------------------------|-----------------------------------|
| | | | | (3 Lugs + Lug Cover) Product No. | Control Wire Terminal Product No. |
| 150A | #14 - 3/0 Cu / Al | 150 in-lb | FCAL15 | FCALK15 | FCALK15LV |
| 250A | #8 - 250MCM Cu / #8 - 350MCM Al | 275 in-lb | FCAL16 | FCALK16 | FCALK16LV |



Molded Case Circuit Breakers

Record Plus™ FE 250

Internal and External Accessories

Section 6

Mounting Screw Kits

| Description | Product Number |
|---|----------------|
| Mounting Screw Kit (#10) for Tapped Holes | FEMSK1 |

Padlocking Device

| Description | Product Number |
|--------------------------|----------------|
| EUSERC Compliant Padlock | FE1PE |

Other Accessories

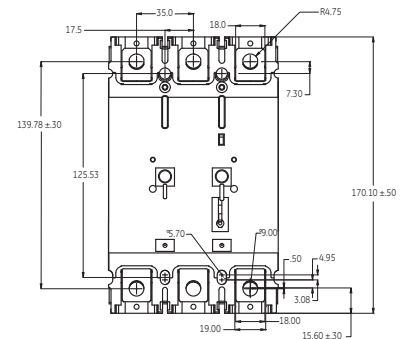
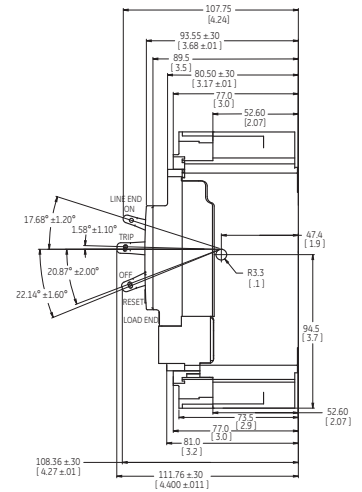
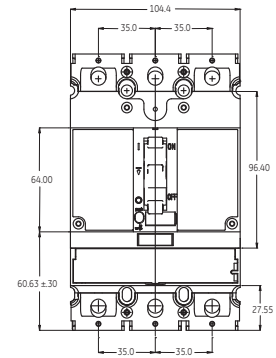
| Description | Product Number |
|---------------------------|----------------|
| Fin Cover | FEUA3 |
| Terminal Shield Fin Cover | FEJS3 |
| Nut Plate / Terminal Shoe | FEJN3 |

External Operators

| Type | Description | Product Number | |
|---------------------------------------|---|---|-------|
| STDA Flange Handles and Hardware Kits | Same as Spectra 6 inch for NEMA 12/13 | STDA1 | |
| | STDA Flange Handle for Variable Depth Operating Mechanism | STDA2 | |
| | Same as Spectra 10 inch for NEMA 12/13 | STDA1X | |
| | Same as Spectra 6 inch for NEMA 4/4X | STDA2X | |
| | Same as Spectra 10 inch for NEMA 4/4X | STDA2X | |
| | Flange Stiffener Kit | TDSR | |
| | Extender Kit | TDSR | |
| | Extended Drive Stud | TDS1 | |
| | Door Hardware Kit NEMA 12/13 | Door Hinged on Left, NEMA 12/13 2-point Kit | TDV1 |
| | Door Hardware Kit NEMA 4/4X | Door Hinged on Left, NEMA 4/4X 2-point Kit | TDV1X |
| Third Point Latch Kit | For Use with TDV1L, TDC1LX Above | TDV3 | |
| Door hardware Kit NEMA 12/13 | Door Hinged on Right, NEMA 12/13 2-point Kit | TDV1L | |
| Third Point Latch Kit | For Use with TDV1L, TDC1LX Above | TDV3L | |
| TDM Style Handle Operators | Handle for FENRM2 / FENRM4 | THCH45 | |

Dimensions in. (mm)

FE 250 Dimensions



Features

Record Plus™ FG Molded Case Circuit Breakers are available with either PremEon S or advanced (SMR2) trip units.

FG600 breakers and MCPs equipped with the PremEon trip unit do not use rating plugs to determine Amp rating. The trip unit features an adjustment knob to set the Amp rating (Long-Time Pickup). The knob is located behind a sealable cover and requires a tamper-resistant Torx T15 tool. The tool is available through many industrial supply companies. The maximum Amp rating of the breaker frame and the available Amp rating settings (Long-Time Pickup values) by sensor, are shown on page 6-85. FG600 breakers equipped with SMR2 trip units require rating plugs to determine the breaker's current rating, but also allow individual adjustment of Long-Time delay, Short-Time pickup and Delay, and Ground Fault Pickup and Delay (if so equipped). Zone Selective Interlocking (ZSI), Ground Fault Alarm, and Modbus Communications are also available via the SMR2's interface.

PremEon S Standard

- Adjustable INST Pickup
- Adjustable LT Pickup¹

Optional

- Adjustable GF Pickup and Delay



- 1 Breaker Frame Rating
- 2 Product Description
- 3 Standards & Markings
- 4 Interrupting Ratings
- 5 Lug Data & Torque Info
- 6 Product Number
- 7 Push to Trip

Main Standards

- UL489/cUL489
- IEC 947 and associated EN Sections

Other Global Standards

BS, CE, CEI, JIS, UNE, VDE

FG Breaker Markings

| cULus | UL File E-11592 |
|------------------|-----------------|
| HACR | 250 to 600A |
| Cu/Al 60/75°C | 250 to 600A |
| Current Limiting | 250 to 600A |

¹Available via adjustment with special Torx T15 tool

²Available via Adjustable Rating Plug

³Must be ordered on the breaker frame

SMR2

Standard

- Fixed LT Pickup, set by Rating Plug Characteristic
- Adjustable LT Delay
- Adjustable ST Pickup and Delay
- Adjustable INST Pickup

Optional

- Adjustable LT Pickup²
- Zone Selective Interlocking Capability³
- Adjustable GF (Alarm or Trip) Pickup and Delay
- Trip Unit Flag for Trip Reason Indication
- Ammeter
- Load Shedding Contact
- Communications via Modbus

Standard features of SMR2 trip units are supplied installed on the breaker frame. Zone Selective Interlocking must be ordered on the breaker frame, and cannot be user-defeated. Adjustable Long-Time pickup functionality is achieved through the use of adjustable rating plugs, which must be ordered separately from the breaker frame, and sized to match the CT/Sensor rating of the frame.

Optional features of the SMR2 (except ZSI) are available via user-installed expansion modules, which, like rating plugs, must be ordered separately.

Reference Publications

Available for download from www.geindustrial.com/publibrary

| | |
|--|-------------|
| FG Breaker | |
| Installation Instructions | DEH-41639 |
| FG Breaker Accessories | |
| Bell Alarm & Aux. Switch | DEH-40324 |
| Shunt Trip & UVR | DEH-40259 |
| Padlock Device | DEH-41031 |
| Lug Kits | DEH-40404 |
| Auxiliary Contacts | DEH-40261 |
| Trip Unit Test Kit (FAT) | DEH-40358 |
| SMR2 Expansion Modules | DEH-40408 |
| SMR2 Modbus User Manual | DEH-41181 |
| SMR2 External Contact Module | DEH-40409 |
| Panelboards | |
| Spectra™ Power Panel - Plug-in Kits - Single | DEH-40420 |
| Spectra™ Power Panel - Plug-in Kits - Double | DEH-40419 |
| Spectra™ Power Panel - Bolt-on Kits - Single | DEH-40426 |
| Spectra™ Power Panel - Bolt-on Kits - Double | DEH-41047 |
| Series Ratings | DET-008 |
| Outline Drawing | 10085108SHI |

Trip Curves

| | |
|--|---------|
| Peak Current Curve | DES-040 |
| Peak I ² t Curve | DES-041 |
| Record Plus FG with PremEon Trip - LSI Protections | DES-118 |
| Record Plus FG with PremEon Trip - GF Protection | DES-119 |
| Record Plus FG with PremEon Trip - Mag-only | |
| Motor Circuit Protector | DES-120 |
| SMR2 Trip Unit | |
| Phase Protection | DES-201 |
| Ground Fault Protection and Alarm | DES-202 |

Cross Reference

| SMR1 Equipped FG MCCB | Rating Plug Amps | PremEon Equipped MCCB |
|------------------------------|---|---------------------------|
| FG(N/H/L/P)I(2/3)6AA0250R_ _ | 100, 110, 125, 150, 175, 200, 225, 250 | FG(N/H/L/P)I(2/3)6DB250LF |
| FG(N/H/L/P)I(2/3)6AA0400R_ _ | 175, 200, 225, 250, 300, 350, 400 | FG(N/H/L/P)I(2/3)6DB400LF |
| FG(N/H/L/P)I(2/3)6AA0600R_ _ | 300, 350, 400, 450, 500, 600 | FG(N/H/L/P)I(2/3)6DB600MF |

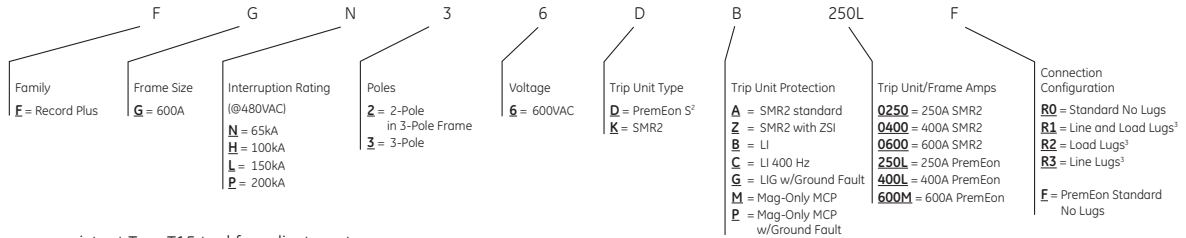


Interrupting Ratings

| Type | Ampere Rating | Max Voltage | No. Poles | UL Listed Interrupting Ratings - rms Symmetrical Amperes (in Thousands) AC Voltage | | | EN 60947-2 Interrupting Ratings - rms Symmetrical Amperes (in Thousands) | | |
|------------------|---------------|-------------|-----------|--|-----|-----|--|---------|-----|
| | | | | 240 | 480 | 600 | 240 | 400-415 | 690 |
| FGN | 250-600A | 600VAC | 2 | 150 | 65 | 25 | - | - | - |
| | | | 3 | 150 | 65 | 25 | 85 | 50 | 10 |
| FGH | 250-600A | 600VAC | 2 | 200 | 100 | 35 | - | - | - |
| | | | 3 | 200 | 100 | 35 | 100 | 80 | 22 |
| FGL ¹ | 250-600A | 600VAC | 2 | 200 | 150 | 42 | - | - | - |
| | | | 3 | 200 | 150 | 42 | 200 | 150 | 40 |
| FGP ¹ | 250-600A | 600VAC | 2 | 200 | 200 | 65 | - | - | - |
| | | | 3 | 200 | 200 | 65 | - | - | - |

¹Not suitable for reverse feed.

Product Number Structure



²Requires tamper-resistant Torx T15 tool for adjustment

³Lugs included but not installed

PremEon S

FG Breakers and MCP's equipped with the PremEon S trip unit use an adjustment knob to set the Amp rating (LT Pickup). The maximum Amp rating of the breaker frame is shown in the "Current Sensor" column below. The available Amp rating settings (LT Pickup values), by sensor, are as follows:

| Current Sensor (A) | Amp Settings (LT Pickup) |
|--------------------|---|
| 250 | 80, 90, 100, 110, 125, 135, 150, 165, 175, 190, 200, 215, 225, 240, 250 |
| 400 | 125, 150, 175, 180, 200, 225, 240, 250, 275, 300, 325, 340, 350, 375, 400 |
| 600 | 175, 200, 225, 250, 300, 325, 350, 400, 425, 450, 475, 500, 550, 575, 600 |

LI Trip Unit (With Tracking Short-Time)

2-Pole Record Plus FG Breakers

| Current Sensor (A) | 65kAIC @480 Vac | 100kAIC @480 Vac | 150kAIC @480 Vac | 200kAIC @480 Vac |
|--------------------|-----------------|------------------|------------------|------------------|
| | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN26DB250LF | FGH26DB250LF | FGL26DB250LF | FGP26DB250LF |
| 400 | FGN26DB400LF | FGH26DB400LF | FGL26DB400LF | FGP26DB400LF |
| 600 | FGN26DB600MF | FGH26DB600MF | FGL26DB600MF | FGP26DB600MF |

3-Pole Record Plus FG Breakers

| Current Sensor (A) | 65kAIC @480 Vac | 100kAIC @480 Vac | 150kAIC @480 Vac | 200kAIC @480 Vac |
|--------------------|-----------------|------------------|------------------|------------------|
| | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN36DB250LF | FGH36DB250LF | FGL36DB250LF | FGP36DB250LF |
| 400 | FGN36DB400LF | FGH36DB400LF | FGL36DB400LF | FGP36DB400LF |
| 600 | FGN36DB600MF | FGH36DB600MF | FGL36DB600MF | FGP36DB600MF |

LIg Trip Unit (With Tracking Short-Time)

2-Pole Record Plus FG Breakers

| Current Sensor (A) | 65kAIC @480 Vac | 100kAIC @480 Vac | 150kAIC @480 Vac | 200kAIC @480 Vac |
|--------------------|-----------------|------------------|------------------|------------------|
| | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN26DG250LF | FGH26DG250LF | FGL26DG250LF | FGP26DG250LF |
| 400 | FGN26DG400LF | FGH26DG400LF | FGL26DG400LF | FGP26DG400LF |
| 600 | FGN26DG600MF | FGH26DG600MF | FGL26DG600MF | FGP26DG600MF |

3-Pole Record Plus FG Breakers

| Current Sensor (A) | 65kAIC @480 Vac | 100kAIC @480 Vac | 150kAIC @480 Vac | 200kAIC @480 Vac |
|--------------------|-----------------|------------------|------------------|------------------|
| | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN36DG250LF | FGH36DG250LF | FGL36DG250LF | FGP36DG250LF |
| 400 | FGN36DG400LF | FGH36DG400LF | FGL36DG400LF | FGP36DG400LF |
| 600 | FGN36DG600MF | FGH36DG600MF | FGL36DG600MF | FGP36DG600MF |

400 Hz LI Trip Unit (With Tracking Short-Time)⁴

2-Pole Record Plus FG Breakers

| Current Sensor (A) | 65kAIC @480 Vac | 100kAIC @480 Vac | 150kAIC @480 Vac | 200kAIC @480 Vac |
|--------------------|-----------------|------------------|------------------|------------------|
| | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN26DC250LF | FGH26DC250LF | FGL26DC250LF | FGP26DC250LF |
| 400 | FGN26DC400LF | FGH26DC400LF | FGL26DC400LF | FGP26DC400LF |
| 600 | FGN26DC600MF | FGH26DC600MF | FGL26DC600MF | FGP26DC600MF |

3-Pole Record Plus FG Breakers

| Current Sensor (A) | 65kAIC @480 Vac | 100kAIC @480 Vac | 150kAIC @480 Vac | 200kAIC @480 Vac |
|--------------------|-----------------|------------------|------------------|------------------|
| | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN36DC250LF | FGH36DC250LF | FGL36DC250LF | FGP36DC250LF |
| 400 | FGN36DC400LF | FGH36DC400LF | FGL36DC400LF | FGP36DC400LF |
| 600 | FGN36DC600MF | FGH36DC600MF | FGL36DC600MF | FGP36DC600MF |

⁴400 Hz FG breakers require de-rating and are not UL listed.



Molded Case Circuit Breakers Record Plus™ FG 600

Section 6

Record Plus™ FG with SMR2 Trip Unit, Breaker Frames without ZSI and Fixed Rating Plugs

2-Pole

| Fixed Rating Plug | | Breaker Frame | | | | | | | | |
|-------------------|-------------|----------------|--------------------------|---------------------------|---------------------------|---------------------------|----|----|----|----|
| Ampere Rating | Product No. | Current Sensor | UL 489 65kA IC @ 480 Vac | UL 489 100kA IC @ 480 Vac | UL 489 150kA IC @ 480 Vac | UL 489 200kA IC @ 480 Vac | | | | |
| | | | Product No. | Product No. | Product No. | Product No. | | | | |
| 100A | FGRM2K0100 | 250 | FGN26KA0250__ | FGH26KA0250__ | FGL26KA0250__ | FGP26KA0250__ | | | | |
| 110A | FGRM2K0110 | | | | | | | | | |
| 125A | FGRM2K0125 | | | | | | | | | |
| 150A | FGRM2K0150 | | | | | | R0 | R0 | R0 | R0 |
| 175A | FGRM2K0175 | | | | | | R1 | R1 | R1 | R1 |
| 200A | FGRM2K0200 | | | | | | R2 | R2 | R2 | R2 |
| 225A | FGRM2K0225 | | | | | | R3 | R3 | R3 | R3 |
| 250A | FGRM2K0250 | | | | | | R3 | R3 | R3 | R3 |
| 175A | FGRM2L0175 | 400 | FGN26KA0400__ | FGH26KA0400__ | FGL26KA0400__ | FGP26KA0400__ | | | | |
| 200A | FGRM2L0200 | | | | | | | | | |
| 225A | FGRM2L0225 | | | | | | | | | |
| 250A | FGRM2L0250 | | | | | | R0 | R0 | R0 | R0 |
| 300A | FGRM2L0300 | | | | | | R1 | R1 | R1 | R1 |
| 350A | FGRM2L0350 | | | | | | R2 | R2 | R2 | R2 |
| 400A | FGRM2L0400 | | | | | | R3 | R3 | R3 | R3 |
| 400A | FGRM2L0400 | | | | | | R3 | R3 | R3 | R3 |
| 300A | FGRM2M0300 | 600 | FGN26KA0600__ | FGH26KA0600__ | FGL26KA0600__ | FGP26KA0600__ | | | | |
| 350A | FGRM2M0350 | | | | | | | | | |
| 400A | FGRM2M0400 | | | | | | | | | |
| 450A | FGRM2M0450 | | | | | | R0 | R0 | R0 | R0 |
| 500A | FGRM2M0500 | | | | | | R1 | R1 | R1 | R1 |
| 600A | FGRM2M0600 | | | | | | R2 | R2 | R2 | R2 |
| 600A | FGRM2M0600 | | | | | | R3 | R3 | R3 | R3 |
| 600A | FGRM2M0600 | | | | | | R3 | R3 | R3 | R3 |

3-Pole

| Fixed Rating Plug | | Breaker Frame | | | | | | | | |
|-------------------|-------------|----------------|--------------------------|---------------------------|---------------------------|---------------------------|----|----|----|----|
| Ampere Rating | Product No. | Current Sensor | UL 489 65kA IC @ 480 Vac | UL 489 100kA IC @ 480 Vac | UL 489 150kA IC @ 480 Vac | UL 489 200kA IC @ 480 Vac | | | | |
| | | | Product No. | Product No. | Product No. | Product No. | | | | |
| 100A | FGRM3K0100 | 250 | FGN36KA0250__ | FGH36KA0250__ | FGL36KA0250__ | FGP36KA0250__ | | | | |
| 110A | FGRM3K0110 | | | | | | | | | |
| 125A | FGRM3K0125 | | | | | | | | | |
| 150A | FGRM3K0150 | | | | | | R0 | R0 | R0 | R0 |
| 175A | FGRM3K0175 | | | | | | R1 | R1 | R1 | R1 |
| 200A | FGRM3K0200 | | | | | | R2 | R2 | R2 | R2 |
| 225A | FGRM3K0225 | | | | | | R3 | R3 | R3 | R3 |
| 250A | FGRM3K0250 | | | | | | R3 | R3 | R3 | R3 |
| 175A | FGRM3L0175 | 400 | FGN36KA0400__ | FGH36KA0400__ | FGL36KA0400__ | FGP36KA0400__ | | | | |
| 200A | FGRM3L0200 | | | | | | | | | |
| 225A | FGRM3L0225 | | | | | | | | | |
| 250A | FGRM3L0250 | | | | | | R0 | R0 | R0 | R0 |
| 300A | FGRM3L0300 | | | | | | R1 | R1 | R1 | R1 |
| 350A | FGRM3L0350 | | | | | | R2 | R2 | R2 | R2 |
| 400A | FGRM3L0400 | | | | | | R3 | R3 | R3 | R3 |
| 400A | FGRM3L0400 | | | | | | R3 | R3 | R3 | R3 |
| 300A | FGRM3M0300 | 600 | FGN36KA0600__ | FGH36KA0600__ | FGL36KA0600__ | FGP36KA0600__ | | | | |
| 350A | FGRM3M0350 | | | | | | | | | |
| 400A | FGRM3M0400 | | | | | | | | | |
| 450A | FGRM3M0450 | | | | | | R0 | R0 | R0 | R0 |
| 500A | FGRM3M0500 | | | | | | R1 | R1 | R1 | R1 |
| 600A | FGRM3M0600 | | | | | | R2 | R2 | R2 | R2 |
| 600A | FGRM3M0600 | | | | | | R3 | R3 | R3 | R3 |
| 600A | FGRM3M0600 | | | | | | R3 | R3 | R3 | R3 |

Adjustable Rating Plugs for Record Plus™ FG with SMR2 Trip Unit

| Poles | Ampere Rating | Product No. | Current Sensor Rating |
|--------|---------------|-------------|-----------------------|
| 2-Pole | 160A | FGRN2K0160 | 250 |
| | 250A | FGRN2K0250 | 250 |
| | 250A | FGRN2L0250 | 400 |
| | 400A | FGRN2L0400 | 400 |
| | 600A | FGRN2M0600 | 600 |
| 3-Pole | 160A | FGRN3K0160 | 250 |
| | 250A | FGRN3K0250 | 250 |
| | 250A | FGRN3L0250 | 400 |
| | 400A | FGRN3L0400 | 400 |
| | 600A | FGRN3M0600 | 600 |



Molded Case Circuit Breakers Record Plus™ FG 600

Section 6

Record Plus™ FG with SMR2 Trip Unit, Breaker Frames with ZSI and Fixed Rating Plugs

2-Pole

| Fixed Rating Plug | | Breaker Frame | | | | | | | | | |
|-------------------|-------------|----------------|--------------------------|---------------------------|---------------------------|---------------------------|-----|---------------|---------------|---------------|---------------|
| Ampere Rating | Product No. | Current Sensor | UL 489 65kA IC @ 480 Vac | UL 489 100kA IC @ 480 Vac | UL 489 150kA IC @ 480 Vac | UL 489 200kA IC @ 480 Vac | | | | | |
| | | | Product No. | Product No. | Product No. | Product No. | | | | | |
| 100A | FGRM2K0100 | 250 | FGN26KZ0250__ | FGH26KZ0250__ | FGL26KZ0250__ | FGP26KZ0250__ | | | | | |
| 110A | FGRM2K0110 | | | | | | | | | | |
| 125A | FGRM2K0125 | | | | | | | | | | |
| 150A | FGRM2K0150 | | | | | | | | | | |
| 175A | FGRM2K0175 | | | | | | | | | | |
| 200A | FGRM2K0200 | | | | | | | | | | |
| 225A | FGRM2K0225 | | | | | | | | | | |
| 250A | FGRM2K0250 | | | | | | | | | | |
| 175A | FGRM2L0175 | | | | | | 400 | FGN26KZ0400__ | FGH26KZ0400__ | FGL26KZ0400__ | FGP26KZ0400__ |
| 200A | FGRM2L0200 | | | | | | | | | | |
| 225A | FGRM2L0225 | | | | | | | | | | |
| 250A | FGRM2L0250 | | | | | | | | | | |
| 300A | FGRM2L0300 | | | | | | | | | | |
| 350A | FGRM2L0350 | | | | | | | | | | |
| 400A | FGRM2L0400 | | | | | | | | | | |
| 300A | FGRM2M0300 | 600 | FGN26KZ0600__ | FGH26KZ0600__ | FGL26KZ0600__ | FGP26KZ0600__ | | | | | |
| 350A | FGRM2M0350 | | | | | | | | | | |
| 400A | FGRM2M0400 | | | | | | | | | | |
| 450A | FGRM2M0450 | | | | | | | | | | |
| 500A | FGRM2M0500 | | | | | | | | | | |
| 600A | FGRM2M0600 | | | | | | | | | | |

3-Pole

| Fixed Rating Plug | | Breaker Frame | | | | | | | | | |
|-------------------|-------------|----------------|--------------------------|---------------------------|---------------------------|---------------------------|-----|---------------|---------------|---------------|---------------|
| Ampere Rating | Product No. | Current Sensor | UL 489 65kA IC @ 480 Vac | UL 489 100kA IC @ 480 Vac | UL 489 150kA IC @ 480 Vac | UL 489 200kA IC @ 480 Vac | | | | | |
| | | | Product No. | Product No. | Product No. | Product No. | | | | | |
| 100A | FGRM3K0100 | 250 | FGN36KZ0250__ | FGH36KZ0250__ | FGL36KZ0250__ | FGP36KZ0250__ | | | | | |
| 110A | FGRM3K0110 | | | | | | | | | | |
| 125A | FGRM3K0125 | | | | | | | | | | |
| 150A | FGRM3K0150 | | | | | | | | | | |
| 175A | FGRM3K0175 | | | | | | | | | | |
| 200A | FGRM3K0200 | | | | | | | | | | |
| 225A | FGRM3K0225 | | | | | | | | | | |
| 250A | FGRM3K0250 | | | | | | | | | | |
| 175A | FGRM3L0175 | | | | | | 400 | FGN36KZ0400__ | FGH36KZ0400__ | FGL36KZ0400__ | FGP36KZ0400__ |
| 200A | FGRM3L0200 | | | | | | | | | | |
| 225A | FGRM3L0225 | | | | | | | | | | |
| 250A | FGRM3L0250 | | | | | | | | | | |
| 300A | FGRM3L0300 | | | | | | | | | | |
| 350A | FGRM3L0350 | | | | | | | | | | |
| 400A | FGRM3L0400 | | | | | | | | | | |
| 300A | FGRM3M0300 | 600 | FGN36KZ0600__ | FGH36KZ0600__ | FGL36KZ0600__ | FGP36KZ0600__ | | | | | |
| 350A | FGRM3M0350 | | | | | | | | | | |
| 400A | FGRM3M0400 | | | | | | | | | | |
| 450A | FGRM3M0450 | | | | | | | | | | |
| 500A | FGRM3M0500 | | | | | | | | | | |
| 600A | FGRM3M0600 | | | | | | | | | | |

Adjustable Rating Plugs for Record Plus™ FG with SMR2 Trip Unit

| Poles | Ampere Rating | Product No. | Current Sensor Rating |
|--------|---------------|-------------|-----------------------|
| 2-Pole | 160A | FGRN2K0160 | 250 |
| | 250A | FGRN2K0250 | 250 |
| | 250A | FGRN2L0250 | 400 |
| | 400A | FGRN2L0400 | 400 |
| | 600A | FGRN2M0600 | 600 |
| 3-Pole | 160A | FGRN3K0160 | 250 |
| | 250A | FGRN3K0250 | 250 |
| | 250A | FGRN3L0250 | 400 |
| | 400A | FGRN3L0400 | 400 |
| | 600A | FGRN3M0600 | 600 |



Molded Case Circuit Breakers

Record Plus™ FG 600

Internal Accessories

Section 6

SMR2 Expansion Modules

| Description | Product Number |
|--|---------------------|
| Blank Filler | FAMB2 |
| Ground Fault Protection and Trip Reason Indication | FAMGFT2 |
| Load Shedding and Communications | FAMSM2 ¹ |
| Spare/Replacement Battery | FAMBAT |
| External, DIN-rail Mounted, Communications Module | FAMECM ² |

¹Requires FAMECM Communications Module.

²Required for Communications, also serves as contact module for load shedding function.

PremEon S/SMR2 External Ground Fault CTs

| Description | Product Number |
|---|----------------|
| 250A External Neutral CT for FG with SRM2 | FGGS0250 |
| 400A External Neutral CT for FG with SRM2 | FGGS0400 |
| 600A External Neutral CT for FG with SRM2 | FGGS0600 |

Releases – Shunt Trip and Undervoltage

| Voltage | Shunt Trip | Undervoltage Release |
|-------------------------|-------------|----------------------|
| | Product No. | Product No. |
| 12 VDC | FASHTBW | — |
| 24 VAC/DC | FASHTDW | FAUVRDW |
| 48 VAC/DC | FASHTFW | FAUVRFW |
| 110-130 VAC/110-125 VDC | FASHTJW | FAUVRJW |
| 120 VAC ³ | FASHTKW | — |
| 220/240 VAC, 250 VDC | FASHTNW | FAUVRNW |
| 277 VAC | FASHT7W | FAUVR7W |
| 400/480 VAC | FASHTUW | FAUVRUW |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads (#18 AWG). Shunt trip wire leads are black and UVR wire leads are blue.

³55% pickup as required for use with External Ground Fault Protection.

Bell Alarm

| Contact Configuration | Contacts | Contact Rating | Wire leads | Mechanisms | Trip Units |
|-----------------------|----------|---------------------------------|------------|-------------|-------------|
| | | | | Product No. | Product No. |
| 1 NO (Form A) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FABAM10W | FABAT10W |
| 1 NC (Form B) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FABAM01W | FABAT01W |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads. Reference instruction sheet DEH-40324 for wire lead colors.

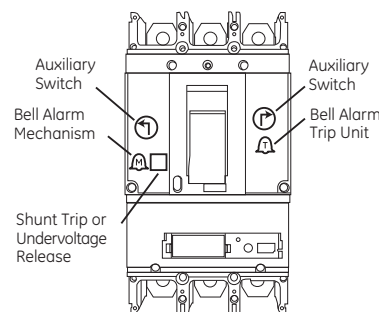
Auxiliary Switches

| Contact Configuration | Contacts | Contact Rating | Wire leads | Left Mount | Right Mount |
|-----------------------|----------|---------------------------------|------------|-------------|-------------|
| | | | | Product No. | Product No. |
| 1 NO (Form A) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FAS10LW | FAS10RW |
| 1 NC (Form B) | Standard | 5A @ 277 VAC, 0.3A @ 125 VDC | #16 AWG | FAS01LW | FAS01RW |

UL Listed for field installation. Accessories are prewired from the factory with 36 inch long leads. Reference instruction sheet DEH-40324 for wire lead colors.

Mounting Locations and Limitations

| Accessory | Mounting Pocket Location | Maximum Quantity |
|------------------------------------|--------------------------|------------------|
| Shunt Trip or Undervoltage Release | □ | 1 |
| Aux. Switch - Left Mount | ⌚ | 3 |
| Aux. Switch - Right Mount | ⌚ | 2 |
| Bell Alarm Mechanism | ⌚ | 1 |
| Bell Alarm Trip Unit | ⌚ | 1 |



Mounting Locations



Molded Case Circuit Breakers

Record Plus™ FG 600

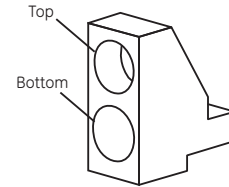
External Accessories

Padlocking Device

| Description | Product No. |
|--------------------------|-------------|
| Padlocking EUSERC Toggle | FG1PE |

Lug Kits

| Pole/Lugs | Location | Wire Type | Torque | | Strip Length | | Product No. |
|-----------|----------|-----------------------------------|-----------------------|-----------------------|--------------|--------|-------------|
| | | | Wire-Lug | Lug-Strap | Top | Bottom | |
| 2 | Top | #8-400kcmil Cu, #6-500kcmil Al | #8-#4 AWG Cu/Al | 200 lb-in (23 N-m) | 7/8" | 1 5/8" | FCALK218H |
| | Bottom | #2/0-600kcmil Cu/Al | #3 AWG-600kcmil Cu/Al | 200 lb-in (23 N-m) | | | |
| 3 | Top | #8-400kcmil Cu, #6-500kcmil Al | #8-#4 AWG Cu/Al | 200 lb-in (23 N-m) | 7/8" | 1 5/8" | FCALK318H |
| | Bottom | #2/0-600kcmil Cu/Al | #3 AWG-600kcmil Cu/Al | 200 lb-in (23 N-m) | | | |



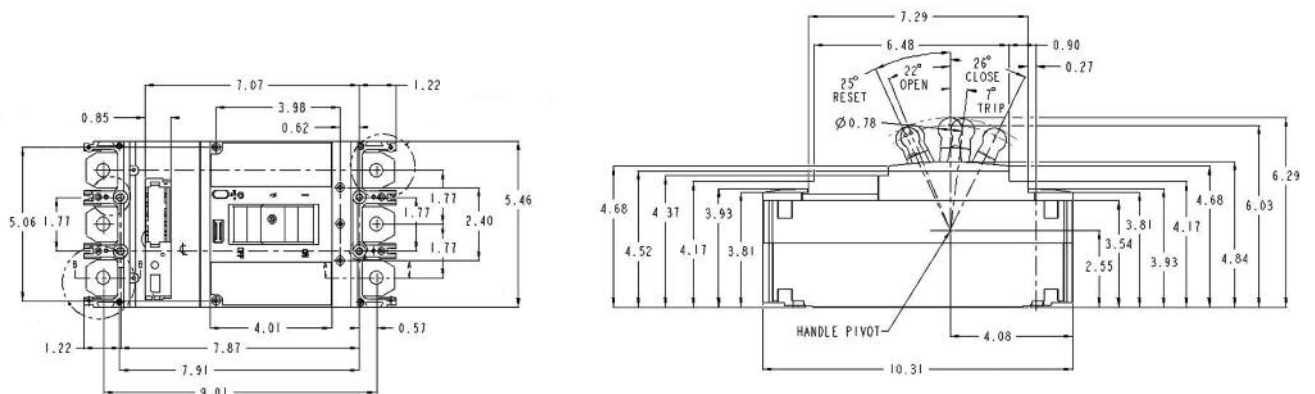
FCALK218H/FCALK318H

Other Accessories

| | Product No. |
|--|-------------|
| Rating Plug Removal Tool (SMR1 and SMR2 only) | FAR |
| Breaker External Test Kit (SMR1 and SMR2 only) | FAT |
| Lug Cover Kit | FGH1LCK |
| Hardware Kit (Tapped Holes) | FGMSK1 |
| Hardware Kit (Through Holes) | FGMSK2 |
| Terminal Shield Fin Cover | FGJS3 |
| Nut Plate / Terminal Shoe | FGJN3 |

Dimensions (in.)

FG 600 Dimensions



Molded Case Circuit Breakers

Molded Case Switches

100-1200A

Section 6

Molded Case Switches Spectra™ RMS

UL File E-57546, CSA LR 91464, Includes fixed, high-set Instantaneous trip suitable for reverse feed.

| Frame Type | Ampere Rating | Switch ¹ Product Number | Terminal Lugs for Front Connection (Cu/Al) | | Maximum Short Circuit Withstand Rating ² (kA rms symmetrical) | | |
|------------|---------------|---------------------------------------|--|--|---|---------|---------|
| | | | Product Number | Wire Range | 240 Vac | 480 Vac | 600 Vac |
| SE150 | 100 | SEDA36AN0100 | TCAL18 | Aluminum: #12-3/0 Copper: #14-3/0 | 200 | 100 | 25 |
| | 150 | SEDA36AN0150 | | | | | |
| SF250 | 250 | SFDA36AN0250 | TCAL29 | Aluminum: #8-350 kcmil Copper: #8-350 kcmil | 200 | 100 | 25 |
| SG600 | 400 | SGDA36AN0400 | 3-pole lug kit TCLK365 ³ | Aluminum: (2) 2/0-500 kcmil or (1) #8-600 kcmil Copper: (2) 2/0-500 kcmil or (1) #8-600 kcmil | 200 | 100 | 65 |
| | 600 | SGDA36AN0600 | | | | | |
| SK1200 | 800 | SKDA36AN0800 | TCAL81 | Aluminum: (3) 3/0-500 kcmil Copper: (3) 3/0-500 kcmil | 100 | 65 | 42 |
| | 1000 | SKDA36AN1000 | TCAL125 | Aluminum: (4) 250-500 kcmil Copper: (4) 250-500 kcmil | | | |
| | 1200 | SKDA36AN1200 | | | | | |

Molded Case Switches Nonautomatic Trip, Includes Cu/Al line and load lugs. For optional lugs, see page 6-103 and 6-104.

| Type | Ampere Rating | Number of Poles | Voltage Rating | Product Number |
|------|---------------|-----------------|------------------|------------------------------|
| TEB | 100 | 1 | 120 Vac, 125 Vdc | TEB111V100 ⁴ |
| TEB | 100 | 2 | 240 Vac, 250 Vdc | TEB122V100 ⁴ |
| TEB | 100 | 3 | 240 Vac | TEB132V100 ⁴ |
| TEB | 100 | 3 | 240Vac | TEB132VT100 ⁹ |
| TED | 100 | 1 | 277 Vac, 125 Vdc | TED113V100 ⁴ |
| TED | 100 | 2 | 480 Vac, 250 Vdc | TED124V100 ⁴ |
| TED | 100 | 3 | 480Vac, 250Vdc | TED134VT100 ⁹ |
| TED | 100 | 3 | 600Vac | TED136VT100 ⁹ |
| TED | 100 | 3 | 600Vac | TED136VT100A ¹⁰ |
| TED | 150 | 2 | 480 Vac, 250 Vdc | TED124Y150 ^{4,5} |
| TED | 150 | 3 | 480Vac, 250Vdc | TED134VT150 ⁹ |
| TED | 150 | 3 | 600Vac | TED136VT150 ⁹ |
| TFJ | 225 | 2 | 600 Vac | TFJ226Y225 ^{4,6,11} |
| TFJ | 225 | 3 | 600 Vac | TFJ236Y225 ^{6,11} |
| TJJ | 400 | 2 | 600 Vac, 250 Vdc | TJJ426Y400 ⁷ |
| TJJ | 400 | 3 | 600 Vac | TJJ436Y400 ⁷ |

| Type | Ampere Rating | Number of Poles | Voltage Rating | Product Number |
|------|---------------|-----------------|------------------|--------------------------------|
| TFK | 225 | 2 | 600 Vac, 250 Vdc | TFK226Y225 ^{6,7,8,11} |
| TFK | 225 | 3 | 600 Vac, 250 Vdc | TFK236Y225 ^{7,8,11} |
| TJK | 400 | 2 | 600 Vac, 250 Vdc | TJK426Y400 ⁷ |
| TJK | 400 | 3 | 600 Vac, 250 Vdc | TJK436Y400 ⁷ |
| TJK | 600 | 2 | 600 Vac, 250 Vdc | TJK626Y600 ⁷ |
| TJK | 600 | 3 | 600 Vac, 250 Vdc | TJK636Y600 ⁷ |
| TKM | 800 | 2 | 600 Vac, 250 Vdc | TKMA826Y800 ^{7,11} |
| TKM | 800 | 3 | 600 Vac, 250 Vdc | TKMA836Y800 ^{7,11} |
| TKM | 1000 | 2 | 600 Vac, 250 Vdc | TKMA2Y1000 ^{7,11} |
| TKM | 1000 | 3 | 600 Vac, 250 Vdc | TKMA3Y1000 ^{7,11} |
| TKM | 1200 | 2 | 600 Vac, 250 Vdc | TKMA2Y1200 ^{7,11} |
| TKM | 1200 | 3 | 600 Vac, 250 Vdc | TKMA3Y1200 ^{7,11} |

¹No rating plug required.

²The maximum withstand rating is limited by the application to the value set forth in this table or the short circuit rating of the upstream fuse or circuit breaker, whichever is less. The upstream protective device must have an instantaneous trip function or element and its rated ampacity may not exceed the ampere rating of the switch.

³Order one kit for either line or load end; two kits required for both.

⁴Internal accessory requires factory installed dummy trip. Specify on order. Accessories not available for one-pole TEB, TED.

⁵Not UL listed.

⁶600 Volts max.

⁷Internal accessory requires factory installed dummy trip unit. See page 6-44 for additional details. Nonautomatic trip unit and dummy trip not UL listed for field installation.

⁸UL listed only when ordered as a complete switch.

⁹Includes factory installed dummy trip for accessory installation.

¹⁰Includes factory installed dummy trip and TCAL12A lugs.

¹¹Limited availability. Obsolete when inventory is depleted.



Molded Case Circuit Breakers Motor Circuit Protectors

3-250A

Mag-Break Motor Circuit Protectors

Current Limiting, UL Component Recognized¹

Features

- Suitable for Reverse Feed
- UL Recognized File E-11592
- CSA Certified LR 40350
- IEC 947-2 690 Vac Max.
 - SE 150 160 Ampere Max.
 - SF250 250 Ampere Max.
 - SG600 630 Ampere Max.
 - SK1200 1250 Ampere Max.
- UL Current Limiting

High Interrupting Capacity Spectra™ RMS Motor Circuit Protectors—SE150 Line 3-Pole

| Ampere Rating | Rating Plug | | Product Number | Current Sensor | Frame | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|-----------------|------------------|--|------------|
| | Adjustable Instantaneous Trip Ampere Range | | | | 65kAIC @480 Vac | 100kAIC @480 Vac | Product Number | Wire Range |
| | Low | High | | | Product Number | Product Number | | |
| 3 | 11 | 39 | SRPE7A3 | 7 | SELA36AI0007 | SEPA36AI0007 | TCAL18 | 14-3/0 Cu |
| 7 | 22 | 90 | SRPE7A7 | | | | | |
| 15 | 43 | 182 | SRPE30A15 | 30 | SELA36AI0030 | SEPA36AI0030 | TCAL18 | |
| 20 | 58 | 254 | SRPE30A20 | | | | | |
| 25 | 73 | 332 | SRPE30A25 | | | | | |
| 30 | 87 | 415 | SRPE30A30 | | | | | |
| 40 | 118 | 501 | SRPE60A40 | | | | | |
| 50 | 148 | 637 | SRPE60A50 | 60 | SELA36AI0060 | SEPA36AI0060 | TCAL18 | |
| 60 | 178 | 777 | SRPE60A60 | | | | | |
| 70 | 206 | 863 | SRPE100A70 | | | | | |
| 80 | 236 | 999 | SRPE100A80 | 100 | SELA36AI0100 | SEPA36AI0100 | TCAL18 | |
| 90 | 267 | 1138 | SRPE100A90 | | | | | |
| 100 | 297 | 1280 | SRPE100A100 | | | | | |
| 110 | 328 | 1426 | SRPE150A110 | | | | | |
| 125 | 374 | 1640 | SRPE150A125 | 150 | SELA36AI0150 | SEPA36AI0150 | TCAL18 | |
| 150 | 450 | 1991 | SRPE150A150 | | | | | |

SE150 Add-on 3-Pole Limiters

| Maximum Ampere Rating | Product Number | kAIC @600 Vac | Use With Breaker/MCP Frame |
|-----------------------|----------------|---------------|----------------------------|
| 150 | SAXSEL36150 | 65 | SEL |
| 150 | SAXSEP36150 | 100 | SEP |

High Interrupting Capacity Motor Circuit Protectors—SF250 Line 3-Pole

| Ampere Rating | Rating Plug | | Product Number | Current Sensor | Frame | | Terminal Lugs for Front Connection (Cu/Al) | |
|---------------|--|------|----------------|----------------|-----------------|------------------|--|----------------------|
| | Adjustable Instantaneous Trip Ampere Range | | | | 65kAIC @480 Vac | 100kAIC @480 Vac | Product Number | Wire Range |
| | Low | High | | | Product Number | Product Number | | |
| 70 | 205 | 700 | SRPF250A70 | 250 | SFLA36AI0250 | SFPA36AI0250 | TCAL29 | 8-350 Cu 8-350 Al |
| 90 | 265 | 900 | SRPF250A90 | | | | | |
| 100 | 295 | 1000 | SRPF250A100 | | | | | |
| 110 | 325 | 1100 | SRPF250A110 | | | | | |
| 125 | 370 | 1250 | SRPF250A125 | | | | | |
| 150 | 440 | 1500 | SRPF250A150 | | | | | |
| 175 | 515 | 1750 | SRPF250A175 | | | | | |
| 200 | 590 | 2000 | SRPF250A200 | | | | | |
| 225 | 665 | 2250 | SRPF250A225 | | | | | |
| 250 | 736 | 2500 | SRPF250A250 | | | | | |

¹Per UL 489, interruption ratings are not printed on the product label (interruption ratings are established based on a tested combination of the motor circuit protector and a properly sized overload relay and contactor).



Molded Case Circuit Breakers Motor Circuit Protectors

Section 6

125-1200A

Mag-Break Motor Circuit Protectors

Current Limiting, UL Component Recognized¹

SG 600 Line 3-Pole

| Rating Plug | | | Frame | | | Terminal Lugs for Front Connection (Cu/Al) | | |
|------------------------|--|------|----------------|----------------|-----------------|--|----------------------|-----------------------------------|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | 65kAIC @480 Vac | 100kAIC @480 Vac | Product Number | Wire Range |
| | Low | High | | | Product Number | Product Number | | |
| 400 Ampere Max. | | | | | | | | |
| 125 | 380 | 1275 | SRPG400A125 | 400 | SGLA36AI0400 | SGPA36AI0400 | TCLK365 ² | (2) 2/0-500 Cu or (1) 8-600 Cu |
| 150 | 455 | 1530 | SRPG400A150 | | | | | |
| 175 | 530 | 1785 | SRPG400A175 | | | | | |
| 200 | 605 | 2040 | SRPG400A200 | | | | | |
| 225 | 680 | 2295 | SRPG400A225 | | | | | |
| 250 | 755 | 2550 | SRPG400A250 | | | | | |
| 300 | 905 | 3060 | SRPG400A300 | | | | | |
| 350 | 1060 | 3570 | SRPG400A350 | | | | | |
| 400 | 1210 | 4080 | SRPG400A400 | | | | | |
| 600 Ampere Max. | | | | | | | | |
| 250 | 765 | 2530 | SRPG600A250 | 600 | SGLA36AI0600 | SGPA36AI0600 | TCLK365 ² | (2) 2/0-500 Cu or (1) 8-600 Cu |
| 300 | 915 | 3035 | SRPG600A300 | | | | | |
| 350 | 1070 | 3545 | SRPG600A350 | | | | | |
| 400 | 1220 | 4050 | SRPG600A400 | | | | | |
| 450 | 1375 | 4555 | SRPG600A450 | | | | | |
| 500 | 1525 | 5060 | SRPG600A500 | | | | | |
| 600 | 1830 | 6075 | SRPG600A600 | | | | | |

¹Per UL 489, interruption ratings are not printed on the product label (interruption ratings are established based on a tested combination of the motor circuit protector and a properly sized overload relay and contactor).

²Order one kit for either the line or load end; two kits required for both.

SK1200 Line (Not Current Limiting) 3-Pole

| Rating Plug | | | Frame | | | Terminal Lugs for Front Connection (Cu/Al) | | |
|-------------------------|--|-------|----------------|----------------|-----------------|--|----------------|--|
| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | Product Number | Current Sensor | 65kAIC @480 Vac | Product Number | Wire Range | |
| | Low | High | | | Product Number | | | |
| 800 Ampere Max. | | | | | | | | |
| 300 | 940 | 3015 | SRPK800A300 | 800 | SKLA36AI0800 | TCAL81 | (3) 3/0-500 Cu | |
| 400 | 1250 | 4015 | SRPK800A400 | | | | | |
| 500 | 1570 | 5020 | SRPK800A500 | | | | | |
| 600 | 1875 | 6195 | SRPK800A600 | | | | | |
| 700 | 2155 | 7420 | SRPK800A700 | | | | | |
| 800 | 2440 | 8705 | SRPK800A800 | | | | | |
| 1200 Ampere Max. | | | | | | | | |
| 600 | 1825 | 6110 | SRPK1200A600 | 1200 | SKLA36AI1200 | TCAL125 | (4) 250-500 Cu | |
| 700 | 2125 | 7125 | SRPK1200A700 | | | | | |
| 800 | 2430 | 8145 | SRPK1200A800 | | | | | |
| 100 | 3040 | 10180 | SRPK1200A1000 | | | | | |
| 1200 | 3650 | 12215 | SRPK1200A1200 | | | | | |

Accessories: See pages 6-39 to 6-44, 6-67 to 6-69 and 6-94 to 6-106.

Standard Capacity Mag Break Motor Circuit Protectors—Type TJC 3-Pole

| Ampere Rating | Adjustable Instantaneous Trip Ampere Range | | 30kAIC @480 Vac Complete Breaker (includes line and load lugs) | |
|---------------|--|------|--|--|
| | Low | High | Product Number | |
| 400 | 330 | 1100 | TJC36400E | |
| | 550 | 1670 | TJC36400F | |
| | 1000 | 3300 | TJC36400G | |
| | 1200 | 4000 | TJC36400B | |
| 600 | 1000 | 3300 | TJC36600G | |
| | 1800 | 6000 | TJC36600H | |



Molded Case Circuit Breakers Motor Circuit Protectors

25-600A

Record Plus™

Record Plus™ Mag-Break Motor Circuit Protectors

Current Limiting, UL Component Recognized¹

High Interrupting Record Plus FE Motor Circuit Protectors - FE 250 Line with PremEon S

Mag-Only Motor Circuit Protector (With Tracking Short-Time)

| 2-Pole Record Plus FE MCPs | | |
|----------------------------|-----------------|------------------|
| | 65kAIC @480 Vac | 100kAIC @480 Vac |
| Current Sensor (A) | Product Number | Product Number |
| 25 | FEN24DM025KF | FEH24DM025KF |
| 60 | FEN24DM060KF | FEH24DM060KF |
| 125 | FEN24DM125KF | FEH24DM125KF |
| 150 | FEN24DM150KF | FEH24DM150KF |
| 250 | FEN24DM250KF | FEH24DM250KF |

Mag-Only Motor Circuit Protector Plus Ground Fault (With Tracking Short-Time)

| 2-Pole Record Plus FE MCPs | | |
|----------------------------|-----------------|------------------|
| | 65kAIC @480 Vac | 100kAIC @480 Vac |
| Current Sensor (A) | Product Number | Product Number |
| 25 | FEN24DP025KF | FEH24DP025KF |
| 60 | FEN24DP060KF | FEH24DP060KF |
| 125 | FEN24DP125KF | FEH24DP125KF |
| 150 | FEN24DP150KF | FEH24DP150KF |
| 250 | FEN24DP250KF | FEH24DP250KF |

3-Pole Record Plus FE MCPs

| | 65kAIC @480 Vac | 100kAIC @480 Vac |
|--------------------|-----------------|------------------|
| Current Sensor (A) | Product Number | Product Number |
| 25 | FEN34DM025KF | FEH34DM025KF |
| 60 | FEN34DM060KF | FEH34DM060KF |
| 125 | FEN34DM125KF | FEH34DM125KF |
| 150 | FEN34DM150KF | FEH34DM150KF |
| 250 | FEN34DM250KF | FEH34DM250KF |

3-Pole Record Plus FE MCPs

| | 65kAIC @480 Vac | 100kAIC @480 Vac |
|--------------------|-----------------|------------------|
| Current Sensor (A) | Product Number | Product Number |
| 25 | FEN34DP025KF | FEH34DP025KF |
| 60 | FEN34DP060KF | FEH34DP060KF |
| 125 | FEN34DP125KF | FEH34DP125KF |
| 150 | FEN34DP150KF | FEH34DP150KF |
| 250 | FEN34DP250KF | FEH34DP250KF |

High Interrupting Record Plus FG Motor Circuit Protectors - FG 600 Line with PremEon S

Mag-Only Motor Circuit Protector (With Tracking Short-Time)

| 2-Pole Record Plus FG Breakers | | | | |
|--------------------------------|------------------|-------------------|-------------------|-------------------|
| | 65kAIC @ 480 Vac | 100kAIC @ 480 Vac | 150kAIC @ 480 Vac | 200kAIC @ 480 Vac |
| Current Sensor (A) | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN26DM250LF | FGH26DM250LF | FGL26DM250LF | FGP26DM250LF |
| 400 | FGN26DM400LF | FGH26DM400LF | FGL26DM400LF | FGP26DM400LF |
| 600 | FGN26DM600MF | FGH26DM600MF | FGL26DM600MF | FGP26DM600MF |

3-Pole Record Plus FG Breakers

| | 65kAIC @ 480 Vac | 100kAIC @ 480 Vac | 150kAIC @ 480 Vac | 200kAIC @ 480 Vac |
|--------------------|------------------|-------------------|-------------------|-------------------|
| Current Sensor (A) | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN36DM250LF | FGH36DM250LF | FGL36DM250LF | FGP36DM250LF |
| 400 | FGN36DM400LF | FGH36DM400LF | FGL36DM400LF | FGP36DM400LF |
| 600 | FGN36DM600MF | FGH36DM600MF | FGL36DM600MF | FGP36DM600MF |

Mag-Only Motor Circuit Protector Plus Ground Fault (With Tracking Short-Time)

| 2-Pole Record Plus FG Breakers | | | | |
|--------------------------------|------------------|-------------------|-------------------|-------------------|
| | 65kAIC @ 480 Vac | 100kAIC @ 480 Vac | 150kAIC @ 480 Vac | 200kAIC @ 480 Vac |
| Current Sensor (A) | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN26DP250LF | FGH26DP250LF | FGL26DP250LF | FGP26DP250LF |
| 400 | FGN26DP400LF | FGH26DP400LF | FGL26DP400LF | FGP26DP400LF |
| 600 | FGN26DP600MF | FGH26DP600MF | FGL26DP600MF | FGP26DP600MF |

3-Pole Record Plus FG Breakers

| | 65kAIC @ 480 Vac | 100kAIC @ 480 Vac | 150kAIC @ 480 Vac | 200kAIC @ 480 Vac |
|--------------------|------------------|-------------------|-------------------|-------------------|
| Current Sensor (A) | Product Number | Product Number | Product Number | Product Number |
| 250 | FGN36DP250LF | FGH36DP250LF | FGL36DP250LF | FGP36DP250LF |
| 400 | FGN36DP400LF | FGH36DP400LF | FGL36DP400LF | FGP36DP400LF |
| 600 | FGN36DP600MF | FGH36DP600MF | FGL36DP600MF | FGP36DP600MF |

¹Per UL 489, interruption ratings are not printed on the product label (interruption ratings are established based on a tested combination of the motor circuit protector and a properly sized overload relay and contactor).



Molded Case Circuit Breakers

External Accessories

Cable Operators

Section 6

Spectra™ Flex Cable Operators

- UL Listed—File E-57253
- Reduced installation costs:
 - Simpler, faster installation
 - No special alignment required
- Optimized panel layout:
 - Breaker mounting position is independent of flange-mounted handle location
- Covers a full spectrum of enclosure types and sizes:
 - Flange-mounted handle for NEMA Types 1, 3R, 12 and 13 enclosures
 - Flange-mounted handle for NEMA 4/4X enclosures—optional
 - Broad range of enclosure sizes and breaker mounting configurations
 - 8 different operating cable lengths available from 3 to 10 feet
 - For circuit breaker types E150, SE150, SF250, SG600 and SK1200
 - Force and motion transmitted independently of breaker mounting plane or position relative to handle location
 - Common breaker mounted operator for SE150 and SF250 frames

Spectra™ Flex cable operating mechanisms are suitable for application with GE circuit breakers mounted in a wide variety of flanged enclosure types and sizes.

Flange-mounted handle mechanisms are available for NEMA Types 1, 12 or 13 enclosures in either 6 inch (Model SCH1) or 10 inch (Model SCH2) handle lengths. Corresponding mechanisms, SCH1X and SCH2X, are available for NEMA Type 4/4X enclosures. Handle mechanisms are suitable for either left or right flange operation.

The handle mechanism is combined with one of eight operating cables, with lengths from 3 to 10 feet, to cover a broad range of possible breaker mounting locations in the enclosure. The cable links the handle mechanism to the breaker-mounted operating mechanism and transmits the mechanical force and motion of the handle mechanism to the breaker mounted mechanism. The force and motion is transmitted independently of the breaker mounting plane or location relative to the location of the handle mechanism, provided only that the bending radius of the cable is not less than 3 inches. No mounting reinforcement of the breaker or enclosure flange is required.

The breaker-operating mechanism mounts directly to the face of the breaker and does not involve any mounting interface with the enclosure. A standard breaker mounting screw kit for tapped holes is furnished with each mechanism to mount the breaker in the enclosure.

See page 6-95 for ordering information.



How to Order

Use the circuit breaker mounting zone dimension table to determine the correct cable length for the application and ensure that the 3-inch minimum bending radius is not violated. Select the breaker mounted mechanism, operating cable and handle mechanism below. Order as separate components.

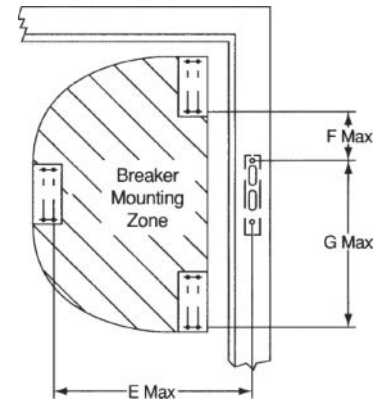
Publication References

| | |
|---|----------|
| Breaker types E150, SE150, SF250, SG600 | GEH-6290 |
| Breaker type SK1200 | GEH-6291 |

See Section 27 for publication ordering information.

Maximum Dimensions in Inches

To determine the maximum mounting dimensions for 60-through 120-inch-long operating cables, add the respective additional lengths to the 48-inch cable maximum dimensions. (Example: Add 12 inches to E, F and G dimensions for 60-inch cable length.) When cable is installed, the minimum cable bend radius should not be less than 3 inches. The minimum cable bending requirement must be met to ensure a safe operating environment.



Circuit Breaker Mounting Zone Dimensions

Maximum Mounting Dimensions (in.)

| Box Depth | 36" Cable | | | 48" Cable | | |
|-----------|----------------|-----|------|----------------|------|------|
| | E ¹ | F | G | E ¹ | F | G |
| 8" | 13.5 | 4.0 | 15.0 | 25.5 | 16.0 | 27.0 |
| 10" | 13.0 | 5.0 | 14.8 | 25.0 | 17.0 | 26.8 |
| 12" | 12.8 | 6.0 | 14.5 | 24.8 | 17.0 | 26.5 |
| 16" | 10.5 | 4.5 | 14.2 | 22.5 | 16.5 | 26.2 |
| 18" | 8.5 | 3.5 | 12.6 | 20.5 | 15.5 | 24.6 |
| 20" | - | 0.5 | 10.0 | 22.0 | 15.0 | 24.0 |
| 24" | - | - | - | 19.5 | 14.0 | 22.0 |

¹Maximum E Dimension only if F = 4.5"

Operating Cables

| Cable Length | Circuit Breaker Type | |
|--------------|---------------------------|----------------|
| | E150, SE150, SF250, SG600 | SK1200 |
| | Product Number | Product Number |
| 3' | SC3L | SC3H |
| 4' | SC4L | SC4H |
| 5' | SC5L | SC5H |
| 6' | SC6L | SC6H |
| 8' | SC8L | SC8H |
| 10' | SC10L | SC10H |

Breaker and Handle Mechanisms

| Circuit Breaker Type | Breaker Mounted Mechanism Product Number | Flange-Mounted Handle Mechanism | | | |
|----------------------|--|-----------------------------------|--------------------|---------------------------|--------------------|
| | | NEMA Enclosure Type 1, 3R, 12, 13 | | NEMA Enclosure Type 4, 4X | |
| | | 6" Product Number | 10" Product Number | 6" Product Number | 10" Product Number |
| E150 | SCOM1A | | | | |
| SE150 | SCOM1EF | | | | |
| SF250 | SCOM1EF | SCH1 | SCH2 | SCH1X | SCH2X |
| SG600 | SCOM1G | | | | |
| SK1200 | SCOM1K | - | SCH2K | - | SCH2KX |



Molded Case Circuit Breakers

External Accessories

Flange-Mounted Operators

Section 6

Type STDA Flange Handles and Variable Depth Operating Mechanisms

- Designed to meet automotive duty specifications
- NEMA 12/13 and 4/4X UL Component Recognized components, File E-572531 CSA LR 10263
- For right or left hand flange mounting – field convertible
- Mounting dimensions to fit standard flange enclosures 8 inches – 24 inches deep
- Detailed installation instructions
- Superior strength

Flange Handle Construction

- Rugged die cast housing with provisions for locking in OFF position with up to three 3/16-inch to 5/16-inch padlocks
- O-ring seals for dirt-tight/oil-tight duty
- Gusseted, 3/32-inch thick double-sided steel handle with large, red-black self-extinguishing grade plastic grip.

Flange Handle Selection

Product Number STDA1 (6 inch) and STDA2 (10 inch) flange series handles are interchangeable. While the SE150 through SG600 operating mechanisms can be easily operated with the 6-inch STDA1 handle, the 10-inch STDA2 may be used to obtain lower operating force and/or to provide a proportionally larger handle on large enclosures. STDA3 and STDA3X can be used only with SDOM6 (for SK1200) operating mechanism.

| NEMA 12/13 Flange Handle Product Number | NEMA 4/4X Flange Handle Product Number | Nominal Length Inches | Installation Instruction Number | Drilling Template Number |
|---|--|-----------------------|---------------------------------|--------------------------|
| STDA1 | STDA1X | 6 | | |
| STDA2 | STDA2X | 10 | GEH-5314 | GEH-5314 |
| STDA3 | STDA3X | 10 | | |

Operating Mechanism Selection

| Circuit Breaker Type | Flange Handle Product Number | Operating Mechanism Product Number |
|--|---|------------------------------------|
| SE150 | STDA1, 1X (6 inch) or STDA2, 2X (10-inch) | SDOM6 ¹ |
| SF250 | | SDOM1A |
| SG600 | | SDOM1AP ⁵ |
| SK1200 ¹ | | TDOM1D |
| TEB, TED, THED, TEC, TB1 | STDA1, 1X (6 inch) or STDA2, 2X (10-inch) | TDOM4 |
| TB1 and TEC with TECL | | TDOM5 |
| THLC1 (150A) | | TDOM7 |
| J-Frames, TJC (400, 600A) ² | | |
| TB4 (400A) TJH/TJL ³ (600A Max) | | |
| TB6 (600A), TB8 (800A) | | |
| TKH/TKLD ⁴ (1200A Max) | | |

¹Requires STDA3 or STDA3X (10 inch, SK1200 only).

²Includes TJ/THJ/TJL.

³Use TDOM5 for TJH/TJL.

⁴Use TDOM7 for TKH/TKL.

⁵Adapter plate required to use SDOM1A on TB1 and TEC with TECL limiter.

Flange Stiffener Kit or Extended Length Drive Rod, Product Number TDSR

Provides rigid 3/8-inch diameter rod between STDA handle mounting surface (flange or center mullion) and operating mechanism when STDA handle would otherwise not be rigidly supported.

Rod length is 22 inches and may be cut to appropriate length. Also used as extended-length drive rod for SDOM1A and SDOM3 when standard 16 inch rod is not long enough. (Operating mechanism Product Number SDOM6 for SK1200 includes two 22" unique 3/8-16x22 inch flange stiffener rods, Product Number TDSR and drive rod.)

| Operating Mechanism Product Number | Flange Stiffener Kit Product Number | Extended Drive Rod Product Number |
|-------------------------------------|--|-----------------------------------|
| SDOM1A, SDOM3, TDOM1A through TDOM3 | TDSR | TDSR |
| SDOM4, TDOM4 through TDOM7 | TDSR (16" supplied with operating mechanism) | TDSR1 |

Extended Drive Stud, Product Number TDS1, TDS2

This optional drive study permits locating the operating mechanism 1-5/16 inches farther to the left (When flange handle is on right side) or to the right (when handle is on the left side) to accommodate specific mounting restrictions. Not suitable for use with SDOM4, SDOM6, TDOM4 and TDOM5 operating mechanisms.

| Operating Mechanism Product Number | Extended Drive Stud Product Number |
|-------------------------------------|------------------------------------|
| SDOM1A, SDOM3, TDOM1A through TDOM3 | TDS1 |
| TDOM6, TDOM7 | TDS2 |

Door Hardware NEMA 12/13 and 4/4X

Type TDV door hardware provides sealing and interlocking of 3/4-inch nominal door depth hinged on left or right. Interlocking design requires use of screwdriver to release. When used with an STDA flange handle and operating mechanisms, disconnect or circuit breaker cannot be turned on unless door and door hardware have been closed. For noninterlocking type, one bracket in kit is not used. Use of third point latch recommended for doors 40 inches or longer.

| Description | Door Hinged on Left Product Number | Door Hinged on Right Product Number |
|---|------------------------------------|-------------------------------------|
| NEMA 12/13 two point interlocking door hardware kit | TDV1 | TDV1L |
| NEMA 4/4X two point interlocking door hardware kit | TDV1X | |
| Third point latch kit for above | TDV3 | TDV3L |



Molded Case Circuit Breakers

External Accessories

Flange-Mounted Operators

Auxiliary Contact Kits

Available SPDT and DPDT and actuated by operating mechanism yoke.

| Used With Operating Mechanism Product Number | When STDA handle is on | | Auxiliary Contact Kit | |
|--|---------------------------|----------------|-----------------------|-------------------|
| | Right Flange | Left Flange | SPDT | DPDT |
| | | | Product Number | Product Number |
| SDOM1A, SDOM3 SDOM4 | • | | TDAS1L1 | TDAS1L2 |
| TDOM1A, JA TDOM1B, JB | | | | |
| TDOM1C TDOM1D TDOM3 | | • | TDAS1R1 | TDAS1R2 |
| SDOM6 TDOM4 TDOM5 | • | | TDAS2L1 | |
| TDOM6 TDOM7 | | • | TDAS1R1 | TDAS1R2 |

Publication References

Instructions:

| | |
|---|----------|
| Door Hardware | GEH-5322 |
| Auxiliary Contact Kit | GEH-5323 |
| Flange Stiffener Kit or Extended Length Drive Rod | GEH-5324 |
| Extended Drive Stud | GEH-5325 |

Operating Mechanism:

| | |
|-----------------------------|----------|
| SDOM1A through SDOM4, SDOM6 | GEH-5684 |
| TDOM1A through TDOM1D | GEH-5315 |
| TDOM3 | GEH-5317 |
| TDOM4 and TDOM5 | GEH-5318 |
| TDOM6 and TDOM7 | GEH-5319 |

See Section 27 for publication ordering information.





TDM Operating Handle, Fixed or Adjustable Shaft

TDM Handle Operating Mechanisms, Door Mounted

Complete mechanism with handle UL listed, E-57253

Operating mechanism only, UL Component Recognized, E-57253

| Breaker Type | Box Depth in Inches | Complete Mechanism ¹ with NEMA 1, 3R, 12 Handle | | Handle Only | |
|--|------------------------------------|---|---|-------------------------------|--------------------------|
| | | Product Number | Operating Mechanism Only Product Number | NEMA 1, 3R, 12 Product Number | NEMA 4/4X Product Number |
| TQD, THQD | Extended Shaft 4 5/16 - 14 5/16 | TQDHM2 | TQDOM2 ² | | |
| | Shallow Mount 4 3/16 | TEFHM1 | TEFOM1 | | |
| TEB, TEC, TB1, TED, THED | Extended Shaft 5-1/8 - 5 7/32 | TEFHM3 | TEFOM3 | TH1 | |
| | 5 1/8 - 5 13/16 | TEFHM4 | TEFOM4 | | |
| | 5 1/8 - 15 | TEFHM2 | TEFOM2 | | |
| TFC, TFJ, TFK, THFK | Shallow Mount 5 7/8 | TFKHM1 | TFKOM1 | | THCH45 ^{3,4} |
| | Extended Shaft 6 7/8 - 15 1/2 | TFKHM2 | TFKOM2 ² | | |
| TJC, TJD, TJJ, TJK, THJK, TB4, TBC4 | Shallow Mount 5 7/8 | TJKHM1 | TJKOM1 | TH2 | |
| | Extended Shaft 5 5/8 - 15 5/8 | TJKHM2 | TJKOM2 ⁴ | | |
| TKC, TKM, THKM, TB6, TBC6, TB8, TBC8 | Shallow Mount 7 7/16 | TKMHM1 | TKMOM1 | | |
| | Extended Shaft 7 1/32 - 17 5/16 | TKMHM2 | TKMOM2 ⁴ | | |
| SE150 (GEH-5611) ⁵ | 4 3/16 | SEFHM1 | SEFOM1 | TH1 | |
| | 6 1/8 - 15 | SEFHM2 | SEFOM2 ² | | |
| SF250 (GEH-5611) ⁵ | 5 7/8 | SEFHM1 | SEFOM1 | | THCH45 ^{3,4} |
| | 7 3/4 - 15 1/2 | SEFHM2 | SEFOM2 ² | | |
| SG600 (GEH-5653) ⁵ | 5 7/8 | SGHM1 | SGOM1 | TH2 | |
| | 5 5/8 - 15 5/8 | SGHM2 | SGOM2 ⁴ | | |
| SK1200 (GEH-5612) ⁵ | 6 | SKHM1 | SKOM1 | | |
| | 7 | SKHM2 | SKOM2 ⁴ | | |

¹Handle assembly and operating mechanism separately packaged.

²For 15-inch long shaft order Product Number 788A831G10. For 20-inch long shaft order Product Number 788A831G20.

³Provides interlocking for J600, SG600 SK1200, and K1200 breakers when used with the extended shaft operating mechanism. For interlocking with E150/SE150, F225 and SF250 order special shaft Product Number 788A832G1.

⁴For 15-inch long shaft order Product Number 788A832G2. For 20-inch long shaft order Product Number 788A832G5.

⁵Installation instructions publication number.

⁶MOD 1 is 7 7/16; MOD 2 is 8 3/32.

⁷MOD 1 is 7 3/16 - 17 3/16; MOD 2 is 7 15/16 - 17 15/16.

Handle Accessories for TDM Operating Mechanisms

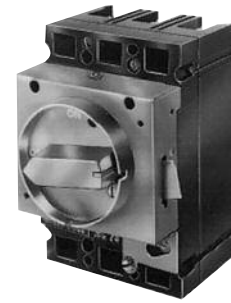
| Device | Product Number |
|--|----------------|
| Replacement neoprene gaskets for NEMA 1, 3R and 12 enclosures | |
| Use with TH1 | 788A742P3 |
| Use with TH2 | 788A742P4 |



Molded Case Circuit Breakers

External Accessories

Door-Mounted Operators



TDR Handle on TED Circuit Breaker

TDR Integral Handle Mechanism¹ Suitable for NEMA 12 Applications²

| Breaker Type | Handle | | Ship Weight | Door Ring - Interlock Catch Kit | NEMA 12 Gasket Kit |
|--------------------------------------|----------------------------------|------------------------------------|-----------------|---------------------------------|--------------------|
| | Vertical Mounting Product Number | Horizontal Mounting Product Number | | Product Number | Product Number |
| TEB, TEC, TB1-B, TED, THED | TEFR1B | TEFR1HB | 17 ³ | SEFRDRCK | SEFRGSK |
| TFC, TFJ, TFK, THFK | TFKR1B | TFKR1HB | 22 ³ | 343L483G5 | |
| TJD, TJC, TJJ, TJK, THJK, TB4, TBC4 | TJR1B | TJR1HB | 5 | 343L483G2 | SGRGSK |
| TKC, TKM, THKM, TB6, TB8, TBC6, TBC8 | TKMR1B | TKMR1HB | 5 | SKRDRCK | SKRGSK |
| SE150, SF250 (GEH-5609) ⁵ | SEFR1 ⁴ | SEFR1H ⁴ | 17 ³ | SEFRDRCK | SEFRGSK |
| SG600 (GEH-5654) ⁵ | SGR1 | SGR1H | 5 | SGRDRCK | SGRGSK |
| SK1200 (GEH-5610) ⁵ | SKR1 | SKR1H | 5 | SKRDRCK | SKRGSK |

¹Not suitable for use with mine duty or heavy duty UVR breakers.

²Requires Gasket kit.

³Shipped 12 per pack.

⁴For F250 Frame also order adapter bracket, Product Number SFRAK, no charge when ordered with handle.

⁵Installation instructions publication number. See Section 27 for publication ordering information.



Molded Case Circuit Breakers

External Accessories

Motor Operators and Plug-in Hardware

Motor Mounted Mechanism

UL Listed

| Breaker Type | Voltage | | Product Number | Installation Instructions |
|---|--------------------|-----|----------------|---------------------------|
| | Vac 50/60 Hz | Vdc | | |
| TEB, ¹ TEC, TED, ¹ THED, TB1, THLC1 ² | - | 24 | TEDMOMA8 | - |
| | 120 ³ | - | TEDMOMA1 | |
| | 240 ^{4,5} | - | TEDMOMA2 | |
| TJC, TJJ, TJD, TJK, THJK, TB4, TBC4 | - | 24 | TJKMOMA8 | - |
| | 120 | 125 | TJKMOMA1 | |
| | 240 ^{4,5} | 250 | TJKMOMA2 | |
| SE150 | 120 | 125 | SEMOM1 | GEH-5613 |
| | 240 ⁴ | - | SEMOM2 | |
| | - | 24 | SEMOM8 | |
| SF250 | 120 | 125 | SFMOM1 | GEH-5613 |
| | 240 ⁴ | - | SFMOM2 | |
| | - | 24 | SFMOM8 | |
| SG600 | 120 | 125 | SGMOM1 | GEH-5657 |
| | 240 ⁴ | 250 | SGMOM2 | |
| | - | 24 | SGMOM8 | |
| SK1200 | 120 | 125 | SKMOM1 | GEH-5614 |
| | 240 ⁴ | 250 | SKMOM2 | |
| | - | 24 | SKMOM8 | |



Motor Operated Mechanism
on SF-Frame breaker

Mounting Screw Kit for Motor-Operated Mechanism⁶

| Breaker Type | Mounting Screw Kit Product Number |
|-------------------|-----------------------------------|
| TED, TB1 | 343L564G7 |
| TFJ, TFK | 343L564G1 |
| TJJ, TJK, TB4 | 343L564G2 |
| SG600 | SGMSKMOM |
| TKM, TB6, TB8, SK | 343L564G3 |

¹For use on 3-pole breaker only.

²Motor-operated mechanisms must have Code Date 506 + or later for use with THLC1.

³TEDMOMA1 not rated at 50 hertz.

⁴Suitable for use at 208 Vac.

⁵Not UL listed.

⁶Required with plug-in mounting base assembly when used with motor-operating mechanisms or TDR integral-handle kits. Furnished no charge when ordered with mounting base.



Molded Case Circuit Breakers

External Accessories

Mechanical Interlocks and Locking Devices

Mechanical Interlocks

These face-mounted interlocks prevent two adjacent breakers from being in the ON position at the same time.

| Spectra™ RMS Breaker Type | Face-mounted Interlock Product Number | Adapter Kit Required when using handle operator (TDM) or motor operator. Order separately. |
|---------------------------|---------------------------------------|--|
| SE150, SF250 | SEFFMI | SEFFMIAK ¹ |
| SG600 | SGFMI | SGFMIAK ² |
| SK1200 | SKFMI | SKFMIAK |

Handle-Locking, Handle-Extension Devices

| Breaker Type | Device | Product Number |
|---------------------|--------------------------------|----------------|
| TEY | Handle locking | TEYLD1 |
| E150 Line | Handle locking | TLD3 |
| F225 Line, THLC2, 4 | Handle locking | TFKLD1 |
| SE150, SF250 | Handle locking | SBD1 |
| SK1200 | Handle extension - replacement | SKHDLEXT |

Standard Padlocking Devices³

| Breaker Type | Device Product Number |
|--------------|-----------------------|
| TEY | TEYPLD1 |
| E150, TB1 | TEFPLD1 |
| F225 | TFKPLD1 |
| J600 Line | TJKPLD1 |
| K1200 Line | TKMPLD1 |
| SE150, SF250 | SEPLD ⁵ |
| SG600 | SGPLD ⁵ |
| SK1200 | SKPLD ⁵ |

EUSERC Approved—Factory Installed Only

| Breaker Type | Product Number |
|---------------------------|----------------|
| E150 | TEDPLD2 |
| SE150, SF250 ⁴ | SEFPLD2 |
| SG600 | SGPLD2 |
| J600 | TJKPLD2 |
| SK1200 | SKPLD2 |

¹Not suitable with THCH45 handle.

²Compatible with motor operator only. Product Number SGFMI cannot be used with the handle operator.

³Suitable for circuit breakers used in group mounted panelboard construction only except for J600, K1200, SE150/SF250, SG600 and SK1200 which screw down to face of breaker.

⁴Field installable.

⁵Suitable for padlocking in either "ON" or "OFF" position.



Breaker Mounting Screw Kits

| Application | Spectra™ RMS Breaker Type | Kit Product Number | Screw Size (inches) |
|--|---------------------------|--------------------|---------------------|
| For use on mounting plates with tapped holes (4 screws and lockwashers) | SE150 | SEMSK1 | 10-32x2 7/8 (std.) |
| | | SEMSK3 | 8-32x2 7/8 (opt.) |
| | SF250 | SFGMSK1 | 12-24x3 3/4 (std.) |
| | | SFMSK1 | 10-32x3 3/4 (opt.) |
| | SG600 | SFGMSK1 | 12-24x3 3/4 |
| For use on mounting plates with clearance holes (4 screws, lockwashers and nuts) | SK1200 | SKMSK1 | 5/16-18x1 1/4 |
| | SE150 | SEMSK2 | 10-32x3 (std.) |
| | | SEMSK4 | 8-32x3 (opt.) |
| | SF250 | SFGMSK2 | 12-24x4 (std.) |
| | | SFMSK2 | 10-32x4 (opt.) |
| | SG600 | SFGMSK2 | 12-24x4 |
| | SK1200 | SKMSK2 | 5/16-18x1 3/4 |

Breaker Mounting Screw Kits and Accessories

| Application | Breaker Type | Product Number |
|---|------------------------|------------------------------------|
| Bolt-on Mounting Base | TEY | TEY3B ¹ |
| For use on mounting plates with clearance holes | 1-pole E150 | 343L162G1 |
| | 2- and 3-pole E150 | SEMSK4 |
| | F225 | SFGMSK2 |
| | K1200 | SKMSK2 |
| For use on mounting plates with tapped holes | 1-pole TE, E150 | 343L162G7 |
| | 2- and 3-pole E150 | SEMSK3 |
| | 2- and 3-pole TQD/THQD | 343L184G18 |
| | F225 | SFGMSK1 |
| | J600 | 343L162G11 |
| | K1200 | SKMSK1 |
| Cup washer (for mounting 1-pole breakers) | E150 | 254V644P1 (2 req'd per breaker) |

Back-Connected Line and Load Studs

| Breaker Type | Amperes | Length, Back of Breaker in Inches | Std Pkg | Product Number |
|---|---------|-----------------------------------|---------|----------------|
| E150 ² , TB1 ² , THLC1 ² | 50 | 2 25/32 (short) | 1 | TEF1 |
| | | 4 13/32 (long) | 1 | TEF2 |
| | 150 | 3 13/32 (short) | 1 | TEF3 |
| | | 5 25/32 (long) | 1 | TEF4 |
| TFJ ² , TFK ² , THFK ² | 225 | 2 23/32 (short) | 1 | TFK1 |
| | | 5 31/32 (long) | 1 | TFK2 |
| K1200, TB6, TB8 | 1200 | 5 1/2 | 1 | TKM11 |
| | | 8 | 1 | TKM12 |
| SE150 | 50 | 2 25/32 (short) | 1 | TEF1 |
| | | 4 13/32 (long) | 1 | TEF2 |
| | 150 | 3 13/32 (short) | 1 | TEF3 |
| | | 5 25/32 (long) | 1 | TEF4 |
| SF250 | 250 | 2 23/32 (short) | 1 | TFK1 |
| | | 5 31/32 (long) | 1 | TFK2 |
| SG600 | 600 | 2 13/16 (short) | 1 | SGBCS1 |
| | | 6 1/16 (long) | 1 | SGBCS2 |
| SK1200 | 1200 | 5 1/2 | 1 | TKM11 |
| | | 8 | 1 | TKM12 |

¹Accepts up to 3 poles (any combination).

²For proper clearance between poles, a short and long stud must be assembled adjacent to each other.

³Contains 24 mounting screws.

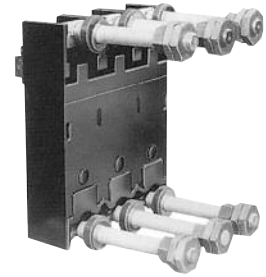


Molded Case Circuit Breakers

External Accessories

Lugs and Associated Hardware

Section 6



Breaker with Line and Load Studs

Lugs, Line Shields, Covers and Bus Connectors

| Accessory | Wire Range | For Use With | Product Number | Description |
|---|--|----------------------------------|------------------------|---------------------|
| Copper-Aluminum Lugs | (1) #14-6 Cu, #12-2 Al | TQC (15-60A) (Non DIN Rail) | TQAL3 | Single Lug |
| | (1) #4-1/0 Cu-Al | TQC (70-100A) | TQAL4 | Single Lug |
| | (1) #4-300 kcmil Cu-Al | TQD | TCAL25 | Single Lug |
| | (1) #14-8 | E150, THLC1, TB1, (15-30A) | TCAL14 | Single Lug |
| | (1) #14-3 Cu, #12-1 Al | E150, THLC1, TB1, (15-60A) | TCAL12 | Single Lug |
| | (1) #6-2/0 Cu, #4-2/0 Al | E150, THLC1, TB1, (70-90A) | TCAL12A | Single Lug |
| | (1) #3-3/0 Cu, #1-3/0 Al | E150, THLC1, TB1, (100-150A) | TCAL15 | Single Lug |
| | (1) #4-300 kcmil Cu-Al | F225 | TCAL24 | Single Lug |
| | (1) #4-300 kcmil Cu-Al | F225 | TCALK324 | 3-Lug Kit |
| | (1) 6-600 kcmil or (2) 2/0-250 kcmil Cu-Al | J400, TB4, J600 (Thru 400A), TJD | TCAL43 | Single Lug |
| | (2) 4/0-350 kcmil Cu or (2) 300-500 kcmil Al | J600 (450-600A) | TCAL63 | Single Lug |
| | (1) 750 kcmil Cu-Al | J400 TJD | TCALK363 | 3-Lug Kit |
| | (1) 750 kcmil Cu-Al | J400 TJD | TCAL47 | Single Lug |
| | (1) 3/0-500 kcmil or (2) 3/0-250 kcmil Cu-Al | TLB4, THLC4 | TCLK43 | Single Lug |
| | (2) 1/0-250 kcmil or (1) #4-600 kcmil Cu-Al | K1200, TB6 (300-400A) | TCAL41 | Single Lug |
| | (2) 2/0-500 kcmil Cu-A | K1200, TB6 (300-600A) | TCAL61 | Single Lug |
| | (2) 2/0-500 kcmil Cu-A | K1200, TB6 (300-600A) | TCALK261 | 2-Lug Kit w/ Wrench |
| | (2) 2/0-500 kcmil Cu-A | K1200, TB6 (300-600A) | TCALK361 | 3-Lug Kit w/ Wrench |
| | (3) 3/0-500 kcmil Cu-Al | K1200, TB8 (600-800A) | TCAL81 ¹ | Single Lug |
| | (3) 3/0-500 kcmil Cu-Al | K1200, TB8 (600-800A) | TCALK281 ¹ | 2-Lug Kit w/ Wrench |
| | (3) 3/0-500 kcmil Cu-Al | K1200, TB8 (600-800A) | TCALK381 ¹ | 3-Lug Kit w/ Wrench |
| | (3) 3/0-500 kcmil Cu-Al | TK4V - Load end | TCAL91 ¹ | Single Lug |
| | (3) 3/0-500 kcmil Cu-Al | TK4V - Load end | TCALK291 ¹ | 2-Lug Kit w/ Wrench |
| | (3) 3/0-500 kcmil Cu-Al | TK4V - Load end | TCALK391 ¹ | 3-Lug Kit w/ Wrench |
| | (4) 250-350 kcmil Cu or (4) 250-500 kcmil Al | K1200 (1000-1200A) | TCAL121 ² | Single Lug |
| | (4) 250-350 kcmil Cu or (4) 250-500 kcmil Al | K1200 (1000-1200A) | TCALK2121 ² | 2-Lug Kit w/ Wrench |
| | (4) 250-350 kcmil Cu or (4) 250-500 kcmil Al | K1200 (1000-1200A) | TCALK3121 ² | 3-Lug Kit w/ Wrench |
| | (3) 750 kcmil Cu-Al | K1200 (1200A) | TCAL122 ³ | Single Lug |
| | (3) 750 kcmil Cu-Al | K1200 (1200A) | TCALK2122 ³ | 2-Lug Kit w/ Wrench |
| | (3) 750 kcmil Cu-Al | K1200 (1200A) | TCALK3122 ³ | 3-Lug Kit w/ Wrench |
| (4) 250-350 kcmil Cu or (4) 250-500 kcmil Al | TK4V - Load end | TCAL131 ² | Single Lug | |
| Copper Only Lugs With Follower and Extra Plating | #14-2/0 | E150, TB1 (thru 150A) | TCO12 | Single Lug |
| | #4-300 kcmil Cu | TFJ (250A) | TCO24 | Single Lug |
| | (1) 6-600 kcmil or (2) 1/0-250 kcmil Cu | J400, TB4 | TCO43 | Single Lug |
| | (2) 250-350 kcmil Cu | J600 | TCO63 | Single Lug |
| | (1) 1/0-600 kcmil or (2) 1/0-250 kcmil Cu | K1200, TB6 (300-400A) | TCO41 ⁴ | Single Lug |
| | (2) 2/0-500 kcmil Cu | K1200, TB6, (300-600A) | TCO61 | Single Lug |
| | (3) 3/0-500 kcmil Cu | K1200, TB8 (600-800A) | TCO81A | Single Lug |
| | (3) 3/0-500 kcmil Cu | TK4V - Load end | TCO91 | Single Lug |
| | (4) 250-400 kcmil Cu | K1200 (1000-1200A) | TCO121 | Single Lug |
| | (4) 250-400 kcmil Cu | TK4V - Load end | TCO131 | Single Lug |
| Line Shield | TEB, TEC, TED, THED | | TEDLS | |
| | TFJ, TFK, TFC | | TFKLS | |
| | TJJ, TJK, TJC | | TJKLS | |
| Lug Cover, TKM Breaker (two per breaker) | TCO61, TCAL61, TCAL81 Lugs, TC081A | | 789A448G1 | |
| | TCO121, TCAL121 Lugs | | 789A448G2 | |
| Connector (back strap) | TKM | | TKMC1 | |
| Line voltage control wire kit for terminating control wire at breaker lugs | K1200 | | SKLVK ⁶ | |

¹Not suitable for 100 A aluminum conductor.

²Suitable for 500 kcmil copper for voltage drop considerations.

³Not UL listed, requires user supplied lug cover.

⁴Not UL listed.

⁵End cover supplied with 800A frame is used as lug cover.

⁶3-pole kit.



Molded Case Circuit Breakers

External Accessories

Lugs and Associated Hardware

Section 6

Spectra™ RMS Lugs, Lug Covers, and Bus Lugs

| Accessory | For Use With | Wire Range (Qty.) | | Product Number | Description | Ampacity Range ¹ |
|--|---|--|--|----------------------|--|-----------------------------|
| | | Copper | Aluminum | | | |
| Plated extruded aluminum lugs for terminating copper or aluminum cables | SE150 | (1) #12-3/0 | (1) #12-3/0 | TCAL18 | Single lug | 15-150 |
| | | | | TCALK318 | 3-lug kit | 15-150 |
| | SF250 | (1) #8-350 kcmil | (1) #8-350 kcmil | TCAL29 | Single lug | 70-250 |
| | | | | TCALK329 | 3-lug kit | 70-250 |
| | SG600 | (2) 2/0-500 kcmil or (1) #8-600 kcmil | (2) 2/0-500 kcmil or (1) #8-600 kcmil | TCLK265 ² | 2-pole lug kit ² | 125-600 |
| | | | | TCLK365 ² | 3-pole lug kit ² | 125-600 |
| | Plated extruded aluminum lugs for terminating copper or aluminum cables | (3) 350-750 kcmil | (3) 350-750 kcmil | TCAL124 | Single lug | Cu 275-1200 Al 225-1100 |
| | | | | TCALK2124 | 2-lug kit w/wrench | Cu 275-1200 Al 225-1100 |
| | | | | TCALK3124 | 3-lug kit w/wrench | Cu 275-1200 Al 225-1100 |
| | | | | TCAL81 | Single lug | 300-800 |
| | SK1200 | (3) 3/0-500 kcmil | (3) 3/0-500 kcmil | TCALK281 | 2-lug kit w/wrench | 300-800 |
| | | | | TCALK381 | 3-lug kit w/wrench | 300-800 |
| | | | | TCAL125 | Single lug | 600-1200 |
| | | | | TCALK2125 | 2-lug kit w/wrench | 600-1200 |
| | | | | TCALK3125 | 3-lug kit w/wrench | 600-1200 |
| Replacement Lug Covers and End Covers | SE150 | - | - | SE3LCK | Three lug covers for upper (line) end | - |
| | SE150 | - | - | SE3LCKL | SE150 Lug Cover Kit (Mod For SEFR1 Handle) | - |
| | SF250 | - | - | SF3LCK | Three lug covers for upper (line) end | - |
| | SG600 | - | - | SG1LCK | 3-pole lug cover for upper (line) or lower (load) end | - |
| | | | | SG1BCK ⁴ | 3-pole lug cover for upper (line) or lower (load) end ⁴ | - |
| | SK1200 | - | - | SK1LCK ³ | Lug cover for upper (line) or lower (load) end ³ | - |
| Plated Copper Lugs | SE150 | (1) #12-3/0 | - | TCO18 | Single lug | 15-150 |
| | SF250 | (1) #8-350 kcmil | - | TCO29 | Single lug | 70-250 |
| | SG600 | (2) 2/0-500 kcmil or (1) #8-600 kcmil | - | TCOK265 | 2-pole lug kit | 125-600 |
| | | | | TCOK365 | 3-pole lug kit | 125-600 |
| | SK1200 | (3) 250-500 kcmil (4) 250-400 kcmil (3) 350-750 kcmil (4) 250-500 kcmil | - | TCO81A | Single lug | 300-800 |
| | | | | TCO121 | Single lug | 600-1200 |
| | | | | TCO124 | Single lug | 600-1200 |
| | | | | TCO125 | Single lug | 600-1200 |
| Line voltage control wire kit for terminating control wire at breaker lugs | SE150 | (1) #12-3/0 | (1) #12-3/0 | TCAL18LV | Single lug with .25 Quick Connect | 15-150 |
| | SF250 | (1) #8-350 kcmil | (1) #8-350 kcmil | TCAL29LV | Single lug with .25 Quick Connect for Control Voltage | 70-250 |
| | SG600 | - | - | SGLVK | Single .25 Quick Connect | - |
| | SK1200 | - | - | SKLVK | Single .25 Quick Connect | - |
| Clear rating plug cover with provision for wire seal | SG600 / SK1200 | - | - | SPCOV1 | For MicroVersaTrip™ Plus and PM trip units Replacement cover | - |
| | | | | SPCOV2 | Cover with access to instantaneous set point | - |
| | | | | SPCOV3 | Cover with no access to instantaneous set point | - |
| | | | | SPCOV1C | For microEntelliGuard™ Trip Units Replacement cover | - |
| | | | | SPCOV3C | Cover with no access | - |

¹Both copper and aluminum cables may not cover full ampacity range.

²With lug cover for line or load end.

³100kA, 480 Vac (SKPA) uses longer lug cover/arc shield on upper end. Use Product Number SKPSHLD for replacement. May be used on other SK1200 devices.

⁴Required for line end bus connection.



Molded Case Circuit Breakers

External Accessories

Neutral Grounds and Sensors

Power Distribution Lugs

| Breaker Type | Max Amperes | Wire Range | Product Number | Description |
|--------------|-------------|----------------------------------|----------------|----------------------------------|
| SE, TED | 125 | (2) 4-14 or (1) 2/0-4 Cu only | TCAL19PD1 | Power Distribution Lug |
| | | | TCAL19PD3 | 3-Lug Power Distribution Lug Kit |
| SF | 250 | (6) 4-14 Cu only | TCAL28PD1 | Power Distribution Lug |
| | | | TCAL28PD3 | 3-Lug Power Distribution Lug Kit |
| SG | 400 | (12) 4-14 Cu only | TCAL40PD1 | Power Distribution Lug |
| | | | TCAL40PD3 | 3-Lug Power Distribution Lug Kit |



Power Distribution Lugs

Neutral Current Sensors

For grounded neutral system ground fault applications

| Breaker Type | Ampere Rating | Product Number |
|--------------|---------------|----------------|
| J | 150 | TSRG201 |
| | 200 | TSRG202 |
| | 300 | TSRG203 |
| | 400 | TSRG204 |
| | 500 | TSRG205 |
| | 600 | TSRG206 |
| K | 800 | TSKG408 |
| | 1000 | TSKG410 |
| | 1200 | TSKG412 |



Neutral Current Sensor

Rating Plug Removal Tool

| Product Number |
|----------------|
| TRTOOL |

"Naval Use" Molded Case Circuit Breakers

The following molded case circuit breaker types are optionally available as UL listed per Standard 489, Supplement SB for naval use:

- THQB
- THQC
- SE150
- SF250
- SG600
- SK1200

Contact GE sales office for price and delivery.

Special Calibration

Contact GE sales office for availability. May void UL listing status.



Molded Case Circuit Breakers

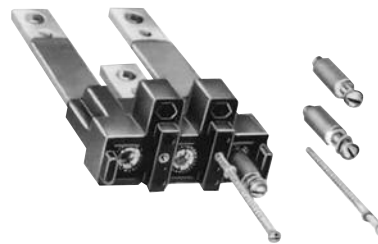
External Accessories

Plug-in Hardware

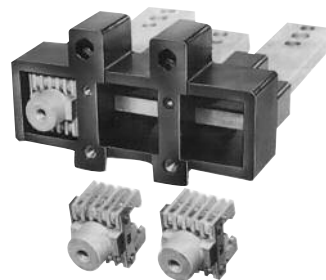
Each plug-in mounting base assembly includes all mounting hardware, studs, and male or female connectors for attachment to one end of breaker. Studs are of different length so by using proper combinations of PD1 and PD2 units, adequate electrical spacing will be assured between adjacent breakers, i.e., a short-long-short (SLS) unit must be used adjacent to a long-short-long (LSL) unit. Two-pole breakers of the E150 line require an open-long-short (OLS) unit on one end of the breaker and a short-long-open (SLO) on the other since these breakers are built with the normal left pole missing while the mounting bases are built from standard three-pole molded supports.

Spectra™ RMS and all other two-pole breakers are basically three-pole devices with the center pole omitted. When these breakers are to be mounted side by side, a short-open-short (SOS) unit must be used on one end and a long-open-long (LOL) on the other. Horizontal studs are normally supplied with the flat surface of studs at right angles to the long axis of the breaker. If vertical studs are desired, substitute "C" for "D" in the product number, e.g., TE13PC1 (vertical) or TE13PD1 (horizontal).

The optional mounting plate (TMP1, etc.) accurately locates and supports the pair of line and load plug-in mounting-base assemblies and provides a convenient means to attach the entire unit to a metal structure, and serves as a dead front barrier. New drawings are available for customers who prefer to fabricate their own mounting plates.



Plug-in Mounting Base with Hardware
Product Number TF23PD2 shown



Plug-in Mounting Base
Product Number TK123PD2A shown

Plug-In Mounting Base Assembly

| Ampere Rating | Breaker Type | No. Poles | Stud Configuration | | Product Number | Optional Mounting Base |
|---------------|-------------------|-----------|--------------------|------------------|----------------|------------------------|
| | | | PD1 | PD2 | | Product Number |
| | | | | | | |
| 150 | E150 ¹ | 2 | OLS | SLO | TE12PD1,2 | TMP1 |
| | SE150 | 3 | SLS | LSL | TE13PD1,2 | TMP1 |
| 250 | SF250 | 2 | SOS | LOL | TF22PD1,2 | TMP2 |
| | | 3 | SLS | LSL | TF23PD1,2 | TMP2 |
| | | 3 | SLS | LSL | TF23PC1 | TMP2 |
| | | 2 | SOS | LOL | TJ42PD1A,2A | TMP3 |
| 400 | J400 | 3 | SLS | LSL | TJ43PD1A,2A | TMP3 |
| | | 3 | SLS | LSL | TJ43PC1A | TMP3 |
| | SG400 | 3 | SLS ² | LSL ² | SGPC1, SGPC2 | SMP3 |
| | | 2 | SOS | LOL | TJ62PD1A,2A | TMP3 |
| 600 | J600 | 3 | SLS | LSL | TJ63PD1A,2A | TMP3 |
| | | 3 | SLS | LSL | TJ63PC1A | TMP3 |
| | SG600 | 3 | SLS ² | LSL ² | SGPC7 | SMP78 |
| | | 3 | SLS | LSL | TK83PD1A,2A | TMP4 |
| 800 | SK800 | 3 | SLS | LSL | TK83PC1A,2A | TMP4 |
| | | 3 | SLS | LSL | TK103PD1A,2A | TMP4 |
| 1000 | SK1200 | 3 | SLS | LSL | TK103PC1A,2A | TMP4 |
| | | 3 | SLS | LSL | TK123PD1A,2A | TMP4 |
| 1200 | SK1200 | 3 | SLS | LSL | TK123PC1A,2A | TMP4 |
| | | 3 | SLS | LSL | TK123PC1A,2A | TMP4 |

¹Order 3-pole base for use with 2-pole Hi Break and 600 Vac breakers.

²Vertical studs only for SG600 frame.

