



## Industrial Circuit Breakers

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### 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.

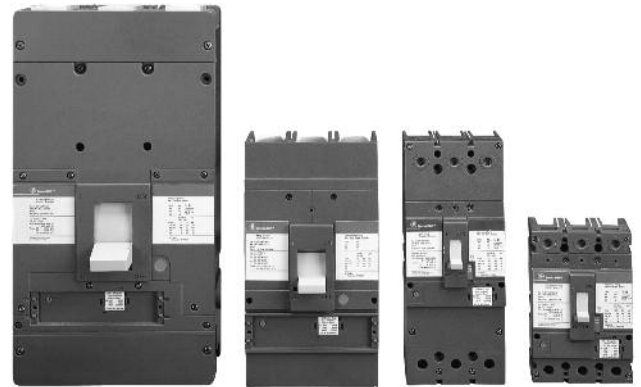
Unless otherwise noted, all circuit breakers are UL listed in File E-11592. Molded case switches are UL listed in File E-57546. Field-Installable Internal Accessories are UL listed in File E-57253. Distribution Cable Accessories for *microEntelliGuard™* Trip Units are UL listed in File E-57253.

### Accessories

Order accessories from the appropriate table:

- Thermal Magnetic Circuit Breakers, Magnetic Circuit Breakers, and Molded Case Switches<sup>1</sup>—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.

<sup>1</sup>Installation 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	—	—	—	—



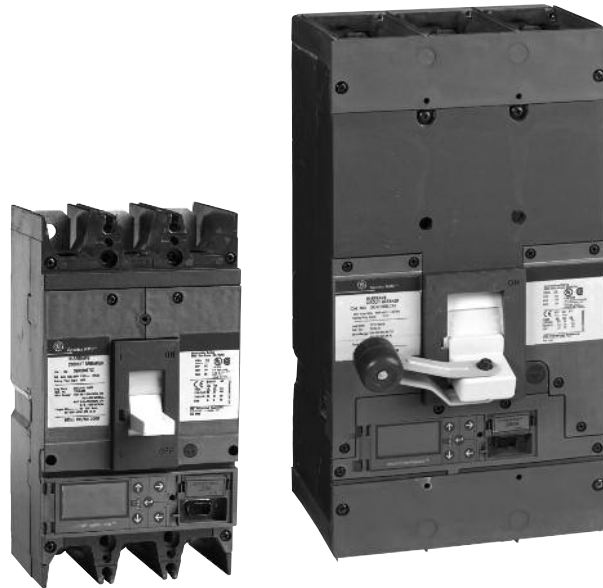
## Features

### 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.

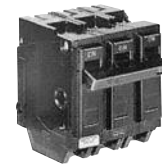
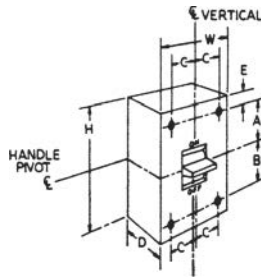
For more information on these products, order publications listed in Sections 27 and 28.



## 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 <sup>1</sup>	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 <sup>2</sup>	—	—	—	—	—	—	—	3 9/32	1	2 3/8	—	—	—	—	—	50	
		2													2								25
		3													3								15
THQL <sup>1</sup> THQB <sup>1</sup> THQC <sup>1</sup>	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 <sup>1</sup> THHQC <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup> TXQB <sup>1</sup> TXQC <sup>1</sup>	15-30	1	120/240	—	—	65	—	—	—	—	—	—	3 9/32	1	2 3/8	—	—	—	—	—	50		
		2												2								25	
		3												3								15	
TQD <sup>1</sup>	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							—							11/16	1	
THQD <sup>1</sup>	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							—							11/16	1	
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														—	1	

### 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										—							
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

<sup>1</sup> UL listed as HACR (heating, air conditioning and refrigeration).

<sup>2</sup> Not UL listed.

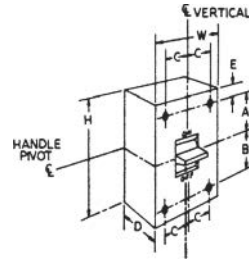


# Molded Case Circuit Breakers

## 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 <sup>2,3</sup>	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 <sup>2,3</sup>	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	—	—	—	—		
	15-125	2	480/277	—	—	65	65	—	25	—	—	—	—	—		2							
		3		—	—	—	—	—	—	—	—	—	—	—		3							
TEYH	15-70	1	277	—	65	65	—	35	—	—	—	—	—	—	5 1/4	1	3 1/16	—	—	—	—		
	15-125	2	480/277	—	—	65	65	—	35	—	—	—	—	—		2							
		3		—	—	—	—	—	—	—	—	—	—	—		3							
TEYL	15-70	1	277	125	100	100	—	65	—	—	—	15	—	—	5 1/4	1	3 1/16	—	—	—	—		
	15-125	2	480/277	250	—	100	100	—	65	—	—	42	20	—		2							
		3		—	—	—	—	—	—	—	—	—	42	35		—						3	

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

TEB <sup>2,3</sup>	10-100 <sup>4</sup>	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 <sup>2,3</sup>	10-100 <sup>4</sup>	1	277, 347 <sup>5</sup>	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 <sup>4</sup>	2	480	250	—	—	18	—	—	18	—	—	10	—		2 3/4				24 lb/12		
		3	480, 600	500	—	—	18	—	—	18	14	—	—	10 <sup>1</sup>		4 1/8				28 lb/8		
THED <sup>2,3</sup>	15-30	1	277, 347 <sup>5</sup>	125	—	—	—	65	—	—	—	10 <sup>6</sup>	—	—	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 <sup>6</sup>	—		4 1/8				24 lb/12		
		3	600	500	—	—	65	—	—	25	18	—	—	10 <sup>1</sup>		4 1/8				28 lb/8		
	110-150	3	600	500	—	—	42	—	—	—	—	—	—	—		4 1/8				28 lb/8		

<sup>1</sup>UL listed with poles in series for 500 Vdc ungrounded battery applications.

<sup>2</sup>UL listed as HACR (heating, air conditioning, and refrigeration).

<sup>3</sup>15-50A UL listed as HID (high intensity discharge).

<sup>4</sup>10 amp not UL listed, rated 5kA @ 120V, 240V and 480V

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

<sup>6</sup>UL listed 10kA, GE tested to 20kA.

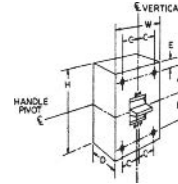


# Molded Case Circuit Breakers Industrial Circuit Breakers

## 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 <sup>2,9</sup>	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 <sup>1</sup>	—								12 lb/1	
TFK <sup>2,9</sup>	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 <sup>1</sup>	—								12 lb/1	
THFK <sup>2,9</sup>	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 <sup>1</sup>	—								12 lb/1	
TFL <sup>8,9</sup>	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 <sup>9</sup>	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 <sup>9</sup>	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 <sup>9</sup>	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 <sup>9</sup>	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 <sup>9</sup>	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 <sup>9</sup>	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		—								—	—	—								—

<sup>1</sup>UL listed with poles in series for 500 Vdc ungrounded battery applications.

<sup>2</sup>UL listed as HACR (heating, air conditioning, and refrigeration).

<sup>3</sup>15-50A UL listed as HID (high intensity discharge).

<sup>4</sup>10 amp not UL listed, rated 5kA @ 120V, 240V and 480V

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

<sup>6</sup>480V/277 Vac.

<sup>7</sup>UL listed 10kA, GE tested to 20kA.

<sup>8</sup>Not CSA listed

<sup>9</sup>Obsolete 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

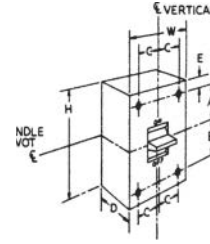
## Section 6

### 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	
<b>SE150 Current Limiting (UL File No. E-11592; CSA LR 40350)<sup>1</sup></b>														
SED <sup>2,3</sup>	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 <sup>2</sup>		2	480	65	25	—								
		3	600			18								
SEL	15-150	2	480	100	65	—								
		3	600			25								
SEP		2	480	200	100	—								
		3	600			25								
<b>SF-250 Current Limiting (UL File No. E-11592; CSA LR 40350)<sup>1</sup></b>														
SFH <sup>2</sup>	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		2	480	200	100	—								
		3	600			25								
<b>SG600 Current Limiting (UL File No. E-11592; CSA LR 40350)<sup>1,4</sup></b>														
SGH1 <sup>2,5</sup>	6-150	3	600	65	35	25	10.09 <sup>6</sup> (256)	5.50 (140)	3.81 (97)	4.45 (113)	3.30 (84)	.91 (23)	1.18 <sup>6</sup> (30)	15.85 lb/1
SGD <sup>2</sup>	125-400	2	240	65	—	—								
		3	—	—	—	—								
SGH4 <sup>2</sup>		2	600	65	35	25								
		3	—	—	—	—								
SGH6 <sup>2</sup>	250-600	2	600	65	35	25								
		3	—	—	—	—								
SGL1 <sup>5</sup>	60-150	3	600	100	65	65								
		3	600	200	100	65								
SGP1 <sup>5</sup>		2	600	100	65	65								
		3	600	200	100	65								
SGL4	125-400	2	600	100	65	65								
		3	600	200	100	65								
SGP4		2	600	200	100	65								
		3	600	200	100	65								
SGL6	250-600	2	600	100	65	65								
		3	600	200	100	65								
SGP6		2	600	200	100	65								
		3	600	200	100	65								
<b>SK1200 (UL File No. E-11592; CSA LR 40350)<sup>1,4</sup></b>														
SKH8	300-800	2	600	65	50	25	15.50 <sup>7</sup> (394)	8.25 (210)	5.50 (140)	8.56 (217)	5.69 (145)	1.38 (35)	.62 <sup>7</sup> (16)	47.6 lb/1
		3	600	100	65	42								
SKL8		2	600	100	65	42								
		3	600	200	100	65								
SKP8		2	600	200	100	65								
		3	600	200	100	65								
SKH12	600-1200	2	600	65	50	25								
		3	600	100	65	42								
SKL12		2	600	100	65	42								
		3	600	200	100	65								
SKP12		2	600	200	100	65								
		3	600	200	100	65								
SKS8	800-1200	3	480	200	100	—								
		3	480	100	65	—								
SKT8		3	480	100	65	—								
		3	480	200	100	—								
SKS12	800-1200	3	480	200	100	—								
		3	480	100	65	—								
SKT12		3	480	100	65	—								
		3	480	200	100	—								

<sup>1</sup>UL listed as HACR (heating, air conditioning and refrigeration).

<sup>2</sup>Not current-limiting circuit breaker.

<sup>3</sup>UL listed as HID (high intensity discharge).

<sup>4</sup>Includes microEntelliGuard™ Trip Units.

<sup>5</sup>microEntelliGuard™, MicroVersaTrip™ Plus and MicroVersaTrip™ PM Trip Units only.

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

<sup>7</sup>Add 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 <sub>cu</sub>	I <sub>cs</sub>	I <sub>cu</sub>	I <sub>cs</sub>	I <sub>cu</sub>	I <sub>cs</sub>	I <sub>cu</sub>	I <sub>cs</sub>	220-240	380-415	500	690
<b>SE150 Current Limiting, 15-32A</b>														
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
<b>SE150 Current Limiting, 40-160A</b>														
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
<b>SF250 Current Limiting</b>														
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
<b>SG600 Current Limiting</b>														
SGH1 <sup>1</sup>	60-150	3	65	33	25	13	18	9	—	—	65	25	18	—
SGL1 <sup>1</sup>			100	50	65	33	35	18	14	7	100	65	35	22
SGP1 <sup>1</sup>			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
<b>SK1200</b>														
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												

<sup>1</sup> microEntelliGuard™, MicroVersaTrip™ Plus, and MicroVersaTrip™ PM Trip Units only.



SE



SF



SG



SK

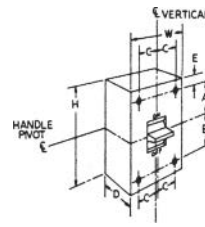


# Molded Case Circuit Breakers Industrial Circuit Breakers

## 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) <sup>1</sup>																					
TFC <sup>5</sup>	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 <sup>5</sup>	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 <sup>2,3,4</sup>	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 <sup>2,3,4</sup>							65	65	—	35	25										
TJL4V <sup>2</sup>							100	100	—	65	30										
TK4V <sup>2,4</sup>	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 <sup>2,4</sup>	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 <sup>4</sup> , 12S <sup>4</sup>	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 <sup>4</sup> , 12S <sup>4</sup>	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	—

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

<sup>2</sup> With Power+ 4 trip unit.

<sup>3</sup> Suitable for single-phase, use outer two poles.

<sup>4</sup> Obsolete as of 12/13.



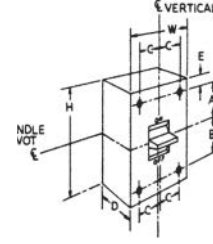
# Molded Case Circuit Breakers Industrial Circuit Breakers

## Quick Reference Guide

### 15-600A Record Plus™ Circuit Breakers

# Section 6

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

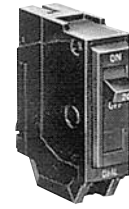
## Q-Line Circuit Breakers

# Section 6

Plug-in Circuit Breakers  
120/240V Class

### TQL and THQL 120/240 Vac

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	10 <sup>4</sup>		5kA	TQL1110
1	15 <sup>2</sup>	(1) 14-8 Cu/12-8 Al	10kA	THQL1115
1	20 <sup>2</sup>	(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 <sup>1</sup>	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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
2	10 <sup>4</sup>		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 <sup>3</sup>



THQL1130ST1

### THQP 120/240 Vac

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	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 <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

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

<sup>3</sup>Recommended for use as main or submain breaker only.

<sup>4</sup>Not UL listed.

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



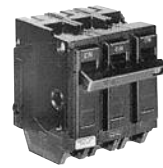
# Molded Case Circuit Breakers

## 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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-10 Cu/14-10 Al	10kA	THQL1115AF2 <sup>2</sup>
1	20	14-10 Cu/14-10 Al	10kA	THQL1120AF2 <sup>2</sup>
1	15	14-10 Cu/14-10 Al	22kA	THHQL1115AF2 <sup>2</sup>
1	20	14-10 Cu/14-10 Al	22kA	THHQL1120AF2 <sup>2</sup>



THQL1115AF2

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

(Available December 2014)

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>Combination 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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	10kA	THQL1115HID <sup>2</sup>
1	20	14-8 Cu/12-8 Al	10kA	THQL1120HID <sup>2</sup>
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 <sup>2</sup>
1	20	14-8 Cu/12-8 Al	22kA	THHQL1120HID <sup>2</sup>
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 <sup>1</sup>	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.

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>UL 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 <sup>1</sup>	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



### THQL 120 Vac, For Factory Installed Shunt Trip<sup>2,3</sup> Internal Common Trip

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

THQL1120HM

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

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>For additional shunt trip offerings see page 6-41.

<sup>3</sup>UL 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

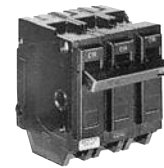
# of Poles	Ampere Rating	Wire Range <sup>1</sup>	120 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	22kA	THHQL1115 <sup>2</sup>
1	20	14-8 Cu/12-8 Al	22kA	THHQL1120 <sup>2</sup>
1	25	14-8 Cu/12-8 Al	22kA	THHQL1125
1	30	8-3 Cu/8-3 Al	22kA	THHQL1130
1	35	8-3 Cu/8-3 Al	22kA	THHQL1135
1	40	8-3 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 <sup>1</sup>	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 <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>UL 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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	65kA	TXQL1115 <sup>2</sup>
1	20	14-8 Cu/12-8 Al	65kA	TXQL1120 <sup>2</sup>
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 <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

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

<sup>3</sup>Limited 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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	10	14-8 Cu/12-8 Al	5kA	TQB1110 <sup>3</sup>
1	15	14-8 Cu/12-8 Al	10kA	THQB1115 <sup>2</sup>
1	20	14-8 Cu/12-8 Al	10kA	THQB1120 <sup>2</sup>
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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
2	10	14-8 Cu/12-8 Al	5kA	TQB2110 <sup>3</sup>
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 <sup>1</sup>	240 Vac Interrupting Rating	Product Number
2	10	14-8 Cu/12-8 Al	5kA	TQB22010 <sup>3</sup>
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 <sup>3</sup>
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

<sup>1</sup>Solid or stranded for 14-10 AWG.

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

<sup>3</sup>Not 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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-10 Cu/14-10 Al	10kA	THQB1115AF2 <sup>2</sup>
1	20	14-10 Cu/14-10 Al	10kA	THQB1120AF2 <sup>2</sup>
1	15	14-10 Cu/14-10 Al	22kA	THHQB1115AF2 <sup>2</sup>
1	20	14-10 Cu/14-10 Al	22kA	THHQB1120AF2 <sup>2</sup>

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

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	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

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-8Cu/12-8 Al	10kA	THQB1115GF3
1	20	14-8Cu/12-8 Al	10kA	THQB1120GF3
1	30	14-8Cu/12-8 Al	10kA	THQB1130GF3
1	15	14-8Cu/12-8 Al	22kA	THHQB1115GF3
1	20	14-8Cu/12-8 Al	22kA	THHQB1120GF3
1	30	14-8Cu/12-8 Al	22kA	THHQB1130GF3
2	15	14-8Cu/12-8 Al	10kA	THQB2115GF3
2	20	14-8Cu/12-8 Al	10kA	THQB2120GF3
2	30	14-8Cu/12-8 Al	10kA	THQB2130GF3

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

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	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 Circuit Interrupters (30 ma)

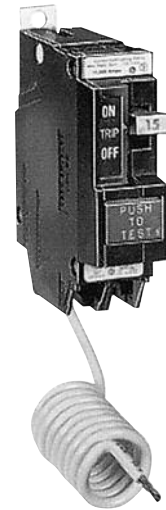
# of Poles	Ampere Rating	Wire Range <sup>1</sup>	120 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	10kA	THQB1115GFEP
1	20	14-8 Cu/12-8 Al	10kA	THQB1120GFEP
1	30	14-8 Cu/12-8 Al	10kA	THQB1130GFEP

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

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>Combination AFCI compliant with NEC 2008 and later.



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 Loads<sup>1</sup>

# of Poles	Ampere Rating	Wire Range <sup>2</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	10kA	THQB1115HID <sup>3</sup>
1	20	14-8 Cu/12-8 Al	10kA	THQB1120HID <sup>3</sup>
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 <sup>3</sup>
1	20	14-8 Cu/12-8 Al	22kA	THHQB1120HID <sup>3</sup>
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 Loads<sup>1</sup>

# of Poles	Ampere Rating	Wire Range <sup>2</sup>	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<sup>4,5</sup>

# of Poles	Ampere Rating	Wire Range <sup>2</sup>	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<sup>4,5</sup>

# of Poles	Ampere Rating	Wire Range <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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

<sup>1</sup>UL listed as HID (high intensity discharge).

<sup>2</sup>Solid or stranded for 14-10 AWG.

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

<sup>4</sup>For additional shunt trip offerings see page 6-41.

<sup>5</sup>20-60 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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	22kA	THHQB1115 <sup>2</sup>
1	20	14-8 Cu/12-8 Al	22kA	THHQB1120 <sup>2</sup>
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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	10 kA	THQB1115LM <sup>2</sup>
1	20	14-8 Cu/12-8 Al	10 kA	THQB1120LM <sup>2</sup>
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 <sup>1</sup>	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 <sup>1</sup>	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	THQB32015
3	20	14-8 Cu/12-8 Al	22kA	THQB32020
3	25	14-8 Cu/12-8 Al	22kA	THQB32025
3	30	14-8 Cu/12-8 Al	22kA	THQB32030
3	35	8-3 Cu/8-3 Al	22kA	THQB32035
3	40	8-3 Cu/8-3 Al	22kA	THQB32040
3	45	8-3 Cu/8-3 Al	22kA	THQB32045
3	50	8-3 Cu/8-3 Al	22kA	THQB32050
3	60	8-3 Cu/8-3 Al	22kA	THQB32060
3	70	6-1/0 Cu/4-1/0 Al	22kA	THQB32070
3	80	6-1/0 Cu/4-1/0 Al	22kA	THQB32080
3	90	6-1/0 Cu/4-1/0 Al	22kA	THQB32090
3	100	6-1/0 Cu/4-1/0 Al	22kA	THQB32100

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>UL 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

Bolt-on Circuit Breakers  
240V Class

## Section 6

### TXQB 120/240 Vac

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	65kA	TXQB1115 <sup>2</sup>
1	20	14-8 Cu/12-8 Al	65kA	TXQB1120 <sup>2</sup>
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 <sup>1</sup>	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 <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>UL 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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number <sup>2</sup>	120/240 Vac Interrupting Rating	Product Number <sup>2</sup>
1	10	14-4 Cu/12-2 Al	5kA	TQC1110WL		
1	15	14-8 Cu/12-8 Al	10kA	THQC1115WL <sup>3,4</sup>	22kA	THHQC1115WL <sup>3</sup>
1	20	14-8 Cu/12-8 Al	10kA	THQC1120WL <sup>3,4</sup>	22kA	THHQC1120WL <sup>3</sup>
1	25	14-8 Cu/12-8 Al	10kA	THQC1125WL <sup>3</sup>	22kA	THHQC1125WL <sup>3</sup>
1	30	14-8 Cu/12-8 Al	10kA	THQC1130WL <sup>3</sup>	22kA	THHQC1130WL <sup>3</sup>
1	35	8-3 Cu/8-3 Al	10kA	THQC1135WL <sup>3</sup>	22kA	THHQC1135WL <sup>3</sup>
1	40	8-3 Cu/8-3 Al	10kA	THQC1140WL <sup>3</sup>	22kA	THHQC1140WL <sup>3</sup>
1	45	8-3 Cu/8-3 Al	10kA	THQC1145WL <sup>3</sup>	22kA	THHQC1145WL <sup>3</sup>
1	50	8-3 Cu/8-3 Al	10kA	THQC1150WL <sup>3</sup>	22kA	THHQC1150WL <sup>3</sup>
1	60	8-3 Cu/8-3 Al	10kA	THQC1160WL <sup>3</sup>	22kA	THHQC1160WL <sup>3</sup>
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 <sup>1</sup>	120/240 Vac Interrupting Rating	Product Number <sup>2</sup>	120/240 Vac Interrupting Rating	Product Number <sup>2</sup>
2	10	14-4 Cu/12-2 Al	5kA	TQC2110WL		
2	15	14-8 Cu/12-8 Al	10kA	THQC2115WL <sup>3</sup>	22kA	THHQC2115WL <sup>3</sup>
2	20	14-8 Cu/12-8 Al	10kA	THQC2120WL <sup>3</sup>	22kA	THHQC2120WL <sup>3</sup>
2	25	14-8 Cu/12-8 Al	10kA	THQC2125WL <sup>3</sup>		
2	30	14-8 Cu/12-8 Al	10kA	THQC2130WL <sup>3</sup>	22kA	THHQC2130WL <sup>3</sup>
2	35	8-3 Cu/8-3 Al	10kA	THQC2135WL <sup>3</sup>	22kA	THHQC2135WL <sup>3</sup>
2	40	8-3 Cu/8-3 Al	10kA	THQC2140WL <sup>3</sup>	22kA	THHQC2140WL <sup>3</sup>
2	45	8-3 Cu/8-3 Al	10kA	THQC2145WL <sup>3</sup>	22kA	THHQC2145WL <sup>3</sup>
2	50	8-3 Cu/8-3 Al	10kA	THQC2150WL <sup>3</sup>	22kA	THHQC2150WL <sup>3</sup>
2	60	8-3 Cu/8-3 Al	10kA	THQC2160WL <sup>3</sup>	22kA	THHQC2160WL <sup>3</sup>
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 <sup>1</sup>	240 Vac Interrupting Rating	Product Number <sup>2</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

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

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

<sup>4</sup>UL 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 <sup>1</sup>	120 Vac Interrupting Rating	Product Number
1	15	14-8 Cu/12-8 Al	10kA	THQC1115GF <sup>2</sup>
1	20	14-8 Cu/12-8 Al	10kA	THQC1120GF <sup>2</sup>
1	25	14-8 Cu/12-8 Al	10kA	THQC1125GF <sup>2</sup>
1	30	14-8 Cu/12-8 Al	10kA	THQC1130GF <sup>2</sup>

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

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	120 Vac Interrupting Rating	Product Number
1	15	14-8Cu/12-8 Al	10kA	THQC1115GF3
1	20	14-8Cu/12-8 Al	10kA	THQC1120GF3
1	30	14-8Cu/12-8 Al	10kA	THQC1130GF3

### TXQC 120/240 Vac

# of Poles	Ampere Rating	Wire Range <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>Requires 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.



THQC1120GF



# 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 <sup>1</sup>	THQC1115CC <sup>1</sup>	THQC1115X2 <sup>1</sup>
1	20	10kA	THQC1120LL <sup>1</sup>	THQC1120CC <sup>1</sup>	THQC1120X2 <sup>1</sup>
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 <sup>1</sup>	THQC2115CC <sup>1</sup>	THQC2115X2 <sup>1</sup>
2	20	10kA	THQC2120LL <sup>1</sup>	THQC2120CC <sup>1</sup>	THQC2120X2 <sup>1</sup>
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 <sup>2</sup>	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

<sup>1</sup>15 and 20 ampere breakers UL listed as SWD (Switching Duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

<sup>2</sup>Use 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 <sup>1,2</sup>
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 Trip<sup>3</sup>

# of Poles	Ampere Rating	240 Vac Interrupting Rating	Product Number <sup>1,2</sup>
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 <sup>1,2</sup>
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 <sup>1,2</sup>
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 <sup>4</sup>
3	300	22kA	TJD432300WL <sup>4</sup>
3	350	22kA	TJD432350WL <sup>4</sup>
3	400	22kA	TJD432400WL <sup>4</sup>
3	400 Molded Case Switch	22kA	TJD432Y400 <sup>4</sup>

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

<sup>2</sup>Includes line and load lugs. For optional configurations see page 6-3.

<sup>3</sup>For additional shunt trip options see page 6-41.

<sup>4</sup>TJD 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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>4</sup>
		Short Circuit Withstand Rating		
2	225	14kA		TQD22Y225
3	225	14kA		TQD32Y225 <sup>2</sup>
2	400	22kA		TJD422Y400
3	400	22kA		TJD432Y400 <sup>3</sup>

<sup>1</sup>Solid or stranded for 14-10 AWG.

<sup>2</sup>TQD32Y225 with dummy trip used for accessorized applications.

<sup>3</sup>TJD uses same accessories as J600 line.

<sup>4</sup>Refer 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

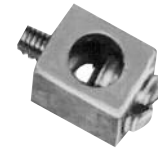
Ampere Rating	Termination Type	Wire Range (Cu/Al)	Product Number
15-60	Lug (line only)	14-6/12-2	TQAL3A
15-60	Lug (load only)	14-2/12-2	THQEL3
15-60	Quick connector (load only)	(4) 14/(4) 12	THQECC



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 <sup>1</sup>
Front-mounting Plates		2	THQC	TQCFMP2 <sup>1</sup>
Front-mounting Plates		3	THQC	TQCFMP3 <sup>1</sup>
Front-mounting Plates		4	THQC	TQCFMP4 <sup>1</sup>
Pack of 48 Front/Rear Mounting Clips		1 & 2-pole 15-60A	THQC	THQCFMK
Pack of 24 DIN rail clips			THQC	THQCDIN

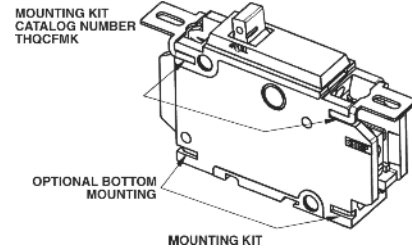


Load Lug THQEL3

<sup>1</sup>Not UL listed.

### 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

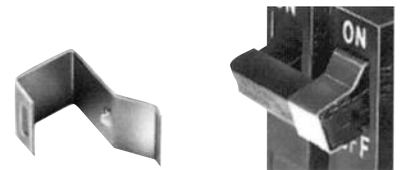
## Q-Line Circuit Breakers

### Accessories

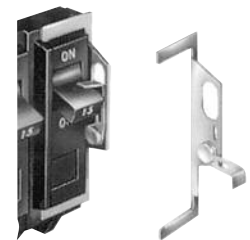
### Handle Locking Devices & Handle Ties

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

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



THL103

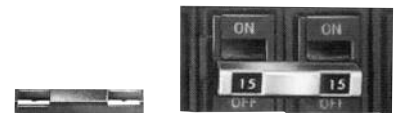


THP100

### Breaker Mounting Screw Kit

Product Type	Used With Frame	Product Number
Breaker Mounting Screw Kit	THQB	TQBS1 <sup>3</sup>

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

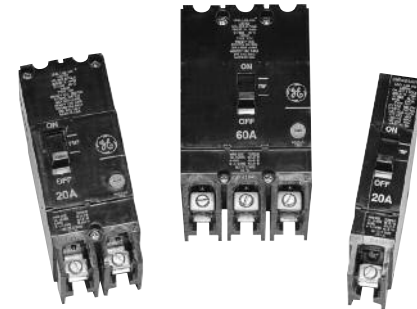
Bolt-on

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 <sup>1</sup>	Product Number	Product Number
		Type TEY <sup>3,4</sup>	Type TEYF <sup>3,4</sup>
<b>Single Pole - Includes Integral Cu/Al Load Lugs</b>		<b>14kA @ 277 Vac</b>	<b>18kA @ 277 Vac</b>
15	#14-#10	TEY115 <sup>2</sup>	TEYF115 <sup>2</sup>
20	#14-#10	TEY120 <sup>2</sup>	TEYF120 <sup>2</sup>
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	TEY1100	
		Type TEY <sup>3,4</sup>	Type TEYF <sup>3,4</sup>
<b>Two-Pole - Includes Integral Cu/Al Load Lugs</b>		<b>14kA @ 480 / 277 Vac</b>	<b>18kA @ 480 / 277 Vac</b>
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 <sup>3,4</sup>	Type TEYF <sup>3,4</sup>
<b>Three-Pole - Includes Integral Cu/Al Load Lugs</b>		<b>14kA @ 480 / 277 Vac</b>	<b>18kA @ 480 / 277 Vac</b>
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

<sup>1</sup>Solid or stranded for 14-10 AWG.

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

<sup>3</sup>UL listed HACR (Heating, Air Conditioning, Refrigeration).

<sup>4</sup>UL 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 <sup>5</sup>
"B" switch (normally closed)	AS1B <sup>5</sup>
"AB" switch (both)	ASAB <sup>5</sup>
Shunt Trip 120-277 Vac control voltage	ST12 <sup>5</sup>

<sup>5</sup>Limited 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 <sup>1</sup>	Product No.	Product No.	Product No.
<b>Single Pole</b>				
<b>Includes Load Lugs</b>		<b>Type TEYD</b>	<b>Type TEYH</b>	<b>Type TEYL</b>
		<b>25kA @ 480 / 277 Vac</b>	<b>35kA @ 480 / 277 Vac</b>	<b>65kA @ 480 / 277 Vac</b>
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
<b>Two-Pole</b>				
<b>Includes Load Lugs</b>		<b>Type TEYD</b>	<b>Type TEYH</b>	<b>Type TEYL</b>
		<b>25kA @ 480 / 277 Vac</b>	<b>35kA @ 480 / 277 Vac</b>	<b>65kA @ 480 / 277 Vac</b>
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
<b>Three-Pole</b>				
<b>Includes Load Lugs</b>		<b>Type TEYD</b>	<b>Type TEYH</b>	<b>Type TEYL</b>
		<b>25kA @ 480 / 277 Vac</b>	<b>35kA @ 480 / 277 Vac</b>	<b>65kA @ 480 / 277 Vac</b>
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

<sup>1</sup>Solid or stranded for 14-10 AWG.

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

<sup>3</sup>UL listed HACR (Heating, Air Conditioning, Refrigeration).

<sup>4</sup>UL 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
<b>TEYD/H/L UV Release<sup>1,3</sup></b>	
24 Vac	TEYXU1
48 Vac	TEYXU2
120 Vac	TEYXU3
240 Vac	TEYXU4
24 Vdc	TEYXU6
48 Vdc	TEYXU7
125 Vdc	TEYXU8
250 Vdc	TEYXU9
<b>TEYD/H/L Shunt Trip<sup>1</sup></b>	
24 Vac	TEYXS1
48 Vac	TEYXS2
120 Vac	TEYXS3
240 Vac	TEYXS4
24 Vdc	TEYXS6
48 Vdc	TEYXS7
125 Vdc	TEYXS8
250 Vdc	TEYXS9
<b>TEYD/H/L Auxiliary Switch<sup>2</sup></b>	
LT Pole	TEYXASL
RT Pole	TEYXASR
<b>Bell Alarm</b>	
TEYD/H/L Bell Alarm - Form C <sup>1</sup>	TEYXBA1
<b>TEYD/H/L Mounting Base</b>	
3-P 15-100A Mounting Base	TEY3B
3-P 110/125A Mounting Base	TEY3B125
<b>TEYD/H/L Handle Tie</b>	
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
<b>TEYD/TEYH/TEYL Padlocking</b>	
Padlock Device	TEYXPLD1

<sup>1</sup>Right hand mounting only.

<sup>2</sup>Right or left hand mounting.

<sup>3</sup>Only 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



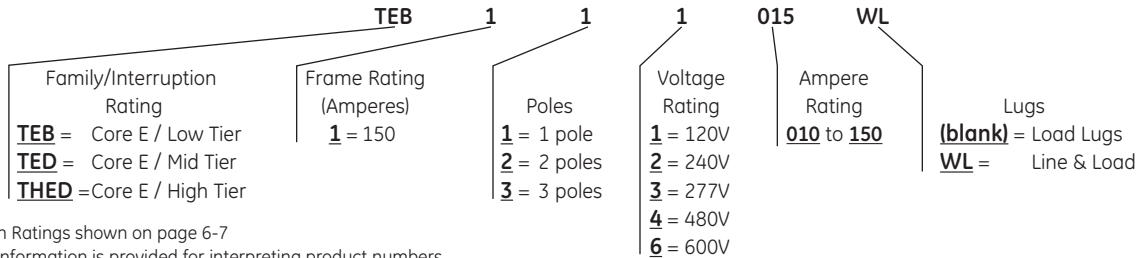
# Molded Case Circuit Breakers Industrial Circuit Breakers

## Section 6

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 <sup>1</sup>	277 Vac	347 Vac <sup>1</sup>
	Product Number	Product Number	Product Number	Product Number	Product Number
10	TEB111010 <sup>2,4</sup>	TED113010 <sup>2,4</sup>		THED113015 <sup>4</sup>	THED114015 <sup>3,4</sup>
15	TEB111015 <sup>3,4</sup>	TED113015 <sup>3,4</sup>	TED114015 <sup>3,4</sup>	THED113020 <sup>4</sup>	THED114020 <sup>3,4</sup>
20	TEB111020 <sup>3,4</sup>	TED113020 <sup>3,4</sup>	TED114020 <sup>3,4</sup>	THED113025 <sup>4</sup>	THED114025 <sup>4</sup>
25	TEB111025 <sup>4</sup>	TED113025 <sup>4</sup>	TED114025 <sup>4</sup>	THED113030 <sup>4</sup>	THED114030 <sup>4</sup>
30	TEB111030 <sup>4</sup>	TED113030 <sup>4</sup>	TED114030 <sup>4</sup>		
35	TEB111035 <sup>4</sup>	TED113035 <sup>4</sup>	—	—	—
40	TEB111040 <sup>4</sup>	TED113040 <sup>4</sup>	—	—	—
45	TEB111045 <sup>4</sup>	TED113045 <sup>4</sup>	—	—	—
50	TEB111050 <sup>4</sup>	TED113050 <sup>4</sup>	—	—	—
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 <sup>5</sup>
	240 Vac, 250 Vdc	480 Vac, 250 Vdc	480 Vac, 250 Vdc
	Product Number	Product Number	Product Number
10	TEB122010WL <sup>2,4</sup>	TED124010WL <sup>2,4</sup>	—
15	TEB122015WL <sup>4</sup>	TED124015WL <sup>4</sup>	THED124015WL <sup>4</sup>
20	TEB122020WL <sup>4</sup>	TED124020WL <sup>4</sup>	THED124020WL <sup>4</sup>
25	TEB122025WL <sup>4</sup>	TED124025WL <sup>4</sup>	THED124025WL <sup>4</sup>
30	TEB122030WL <sup>4</sup>	TED124030WL <sup>4</sup>	THED124030WL <sup>4</sup>
35	TEB122035WL <sup>4</sup>	TED124035WL <sup>4</sup>	THED124035WL <sup>4</sup>
40	TEB122040WL <sup>4</sup>	TED124040WL <sup>4</sup>	THED124040WL <sup>4</sup>
45	TEB122045WL <sup>4</sup>	TED124045WL <sup>4</sup>	THED124045WL <sup>4</sup>
50	TEB122050WL <sup>4</sup>	TED124050WL <sup>4</sup>	THED124050WL <sup>4</sup>
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	—

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

<sup>2</sup>Not UL listed, rated 5kA @ 120V, 240V and 480V.

<sup>3</sup>Single-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.

<sup>4</sup>UL listed for HID (high intensity discharge).

<sup>5</sup>Two-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 <sup>1,3</sup>	TED134010WL <sup>1,3</sup>	—	—
15	TEB132015WL <sup>3</sup>	TED134015WL <sup>3</sup>	—	—
20	TEB132020WL <sup>3</sup>	TED134020WL <sup>3</sup>	TED136020WL <sup>3</sup>	THED136020WL <sup>3</sup>
25	TEB132025WL <sup>3</sup>	TED134025WL <sup>3</sup>	TED136025WL <sup>3</sup>	THED136025WL <sup>3</sup>
30	TEB132030WL <sup>3</sup>	TED134030WL <sup>3</sup>	TED136030WL <sup>3</sup>	THED136030WL <sup>3</sup>
35	TEB132035WL <sup>3</sup>	TED134035WL <sup>3</sup>	TED136035WL <sup>3</sup>	THED136035WL <sup>3</sup>
40	TEB132040WL <sup>3</sup>	TED134040WL <sup>3</sup>	TED136040WL <sup>3</sup>	THED136040WL <sup>3</sup>
45	TEB132045WL <sup>3</sup>	TED134045WL <sup>3</sup>	TED136045WL <sup>3</sup>	THED136045WL <sup>3</sup>
50	TEB132050WL <sup>3</sup>	TED134050WL <sup>3</sup>	TED136050WL <sup>3</sup>	THED136050WL <sup>3</sup>
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 <sup>2</sup>	TED136YT100 <sup>2</sup>	—
150NA	—	TED134YT150 <sup>2</sup>	TED136YT150 <sup>2</sup>	—

<sup>1</sup>Not UL listed, rated 5kA @ 120V, 240V and 480V.

<sup>2</sup>Includes factory-installed dummy trip.

<sup>3</sup>UL 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 VAC<sup>4</sup>

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

<sup>4</sup>For 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



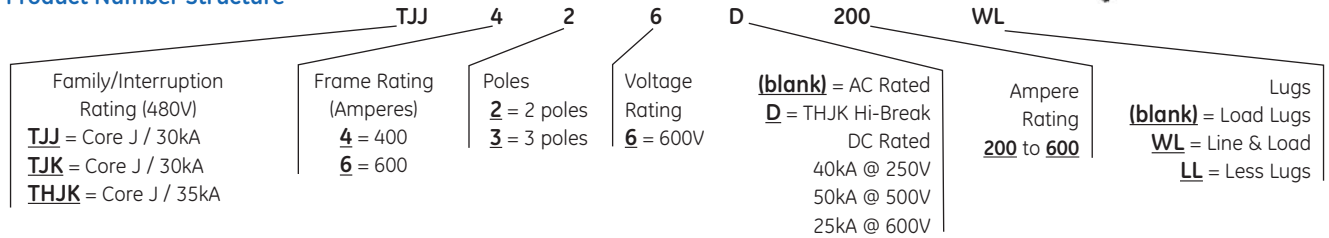
# Molded Case Circuit Breakers

## 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 <sup>3</sup> 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) <sup>1</sup>	
	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
<b>400A Frame—Two-Pole</b>								
200	600	2000	TJK426200WL	THJK426200WL	TJK426F000	TJK426T200	TCAL43 <sup>3</sup>	(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		
<b>400A Frame—Three-Pole</b>								
200	600	2000	TJK436200WL	THJK436200WL	TJK436F000	TJK436T200	TCAL43 <sup>3</sup>	(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 <sup>2</sup>	TCAL43 <sup>3</sup>	(1) 6-600 or (2) 2/0-250 Cu/Al
Mag	1200	4000	—	—	—	TJK436TM2400 <sup>2</sup>		
Only	350	1000	—	—	—	TJK436TM3400 <sup>2</sup>		

<sup>1</sup>For optional lugs, see page 6-103.

<sup>2</sup>Not UL listed.

<sup>3</sup>Alternate 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					
<b>400A Frame — Three-Pole</b>							
200	600	2000	THJK436D200WL	THJK436D000	TJK436T200	TCAL43 <sup>3</sup>	(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		
<b>600A Frame — Three-Pole</b>							
250	750	2500	THJK636D250WL	THJK636D000	TJK636T250	TCAL43 <sup>3</sup>	(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) <sup>1</sup>	Wire Size
	Low	High	Standard Product Number	Hi-Break Product Number					
<b>600A Frame — Two-Pole</b>									
250	750	2500	TJK626250WL	THJK626250WL	TJK626F000 Standard Frame	TJK626T250	TCAL43 <sup>2</sup>	(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	
<b>600A Frame — Three-Pole</b>									
250	750	2500	TJK636250WL	THJK636250WL	TJK636F000 Standard Frame	TJK636T250	TCAL43 <sup>2</sup>	(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 <sup>3</sup>			
						TJK636TM2600 <sup>3</sup>			

<sup>1</sup>For optional lugs, see page 6-103.

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

<sup>3</sup>Not 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

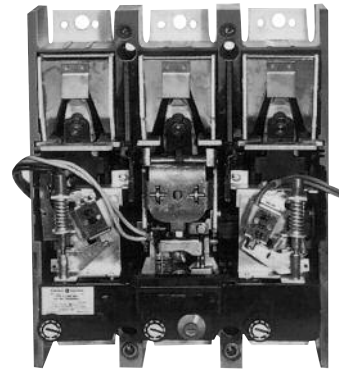
#### Accessory Devices and Ratings

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)<sup>1</sup>.

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

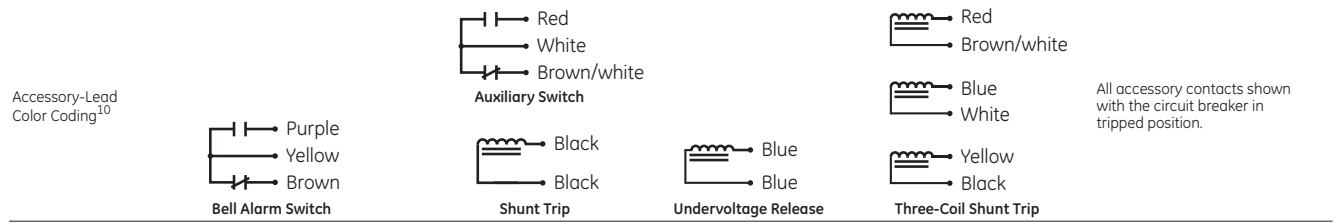


**Pole Positions**  
 L—Left  
 C—Center  
 R—Right

**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 <sup>3</sup> 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 <sup>5,6,8</sup>	UL <sup>7</sup>	—	UL	4576	UL <sup>7</sup>	UL	3418 Aux 3416 S.T.	—	UL	3417	—	UL <sup>8</sup>	3434	2-pole circuit breaker—any one 3-pole circuit breaker—any two except UVR and 3-coil shunt trip
F225 <sup>9</sup> TFC, TFJ, TFK, THFK, THLC2, THLC4, TLB2, TLB4	—	—	UL	4620	UL	UL	4653	UL	UL	4653	UL <sup>8</sup>	UL	4622	any two
J600 TJC, TJD, TJJ, TJK, THJK, TB4 <sup>5</sup> , TBC4 <sup>5</sup>	—	UL <sup>8</sup>	—	3320	UL	UL	3321 Aux 3435 S.T.	—	UL	5407	UL <sup>8</sup>	—	3346	Any two plus bell alarm except TB4, TBC4 any one plus bell alarm.
K1200 TKC, TKM, THKM, TB6 <sup>5</sup> , TBC6 <sup>5</sup> , TB8, TBC8	—	UL <sup>8</sup>	—	4305	UL	UL	3321 Aux 3344 S.T.	—	UL	5408	UL <sup>8</sup>	—	3346	Any two plus bell alarm



<sup>1</sup> 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.

<sup>2</sup> Not UL listed.

<sup>3</sup> 600 Vac auxiliary switches are not UL listed.

<sup>4</sup> Accessories are factory installed only.

<sup>5</sup> UL listed at 200 AIC without internal accessories, 100 AIC with internally mounted accessories.

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

<sup>7</sup> Left pole mounting not available for two-pole TEB, TED.

<sup>8</sup> Not available with lead exit from the back of breaker.

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

<sup>10</sup> 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 <sup>1</sup>		Control Voltage 600 Vac, 250 Vdc Maximum Not UL Listed Suffix <sup>1</sup>	
		Base Number	Add to Base Product Number for Factory Installation <sup>4</sup>	Base Number	Add to Base Product Number for Factory Installation <sup>4</sup>
TEB, TEC, TB1 TED, THED, THLC <sup>1,3</sup>	1	TEDAS2AB1R,L <sup>2,3</sup>	S	TEDAS6AB1R,L <sup>2,3</sup>	S
	2	TEDAS2AB2R,L <sup>2,3</sup>	S	TEDAS6AB2R,L <sup>2,3</sup>	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

<sup>1</sup>"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.

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

<sup>3</sup>Not available with "B" suffix-leads out back.

<sup>4</sup>For 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 <sup>1,2</sup> – UL Listed When Factory Installed		
	Vac	Vdc	Base Number for Field Replacement	Suffix Number <sup>3</sup>	
				Add to Base Product Number for Factory Installation	
TQB, THQB, THHQB, TXQB, TQL, THQL, THHQL, TXQL	120-240	12	TQSTA1 <sup>4,5,6,7</sup>	10	
		24-48	TQSTA7 <sup>4,6,7</sup>	10	
	120		TQSTA8 <sup>4,6,7</sup>	10	
TQD, THQD	120		TQDST1 <sup>8,9</sup>	10	
		240	TQDST2 <sup>9</sup>	10	
	12		TQDST7 <sup>9</sup>	10	
		24	TQDST8 <sup>9</sup>	10	
			TEDST12	RS	
TEB, TEC, TB1-B <sup>11</sup> , 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	
	TFC, TFJ, TFK, THFK, THLC2, THLC4, TLB2, TLB4	120		TFKSTA12 <sup>1</sup>	RS or LS
		240		TFKSTA12 <sup>1</sup>	RS or LS
480			TFKSTA13 <sup>1</sup>	RS or LS	
600			TFKSTA13 <sup>1</sup>	RS or LS	
12			TFKSTA7 <sup>1</sup>	RS or LS	
		24	TFKSTA8 <sup>1</sup>	RS or LS	
		48	TFKSTA9 <sup>1</sup>	RS or LS	
125		TFKSTA12 <sup>1</sup>	RS or LS		
	250	TFKSTA11 <sup>1</sup>	RS or LS		

<sup>1</sup>UL 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.

<sup>2</sup>For 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.

<sup>3</sup>"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.

<sup>4</sup>Mounts 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.

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

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

<sup>7</sup>TQST shunt trips not available on breakers over 100 A.

<sup>8</sup>Not available with "B" suffix-leads out back.

<sup>9</sup>Must be factory installed, right pole only.

<sup>10</sup>To 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.

<sup>11</sup>For 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 <sup>1</sup>
				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 <sup>3</sup>
240			TB4STA12R,L <sup>3</sup>	
480			TB4STA13R,L <sup>3</sup>	
600			TB4STA13R,L <sup>3</sup>	
		12	TB4STA7R,L <sup>3</sup>	
		24	TB4STA8R,L <sup>3</sup>	
		48	TB4STA9R,L <sup>3</sup>	
		125	TB4STA12R,L <sup>3</sup>	
		250	TB4STA11R,L <sup>3</sup>	
TKC, TKM, THKM, TB6, TB8, TBC6, TBC8 <sup>2</sup>		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

<sup>1</sup>"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.

<sup>2</sup>Not UL listed.

<sup>3</sup>Not available for factory installation.



# Molded Case Circuit Breakers

## Internal Accessories

Internally Mounted Signaling and Controlling Functions

### Undervoltage Release

Breaker Type	Accessory Voltage		Product Number <sup>1,2</sup> – UL Listed When Factory Installed		
	Vac	Vdc	Base Number for Field Replacement	Suffix Number <sup>3</sup>	
				Add to Base Product Number for Factory Installation	
TEB, TEC, TB1-B <sup>4</sup> 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 <sup>5</sup>		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	

<sup>1</sup>UL 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.

<sup>2</sup>For 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.

<sup>3</sup>"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.

<sup>4</sup>For TB1 with bolt-on limiters.

<sup>5</sup>Not UL listed.



# Molded Case Circuit Breakers

## Internal Accessories

Internally Mounted Signaling and Controlling Functions

## Section 6

### Bell Alarm Switches

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

### Blown Fuse Detector-Three-Coil Shunt Trip

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

### Dummy Trip<sup>1</sup>

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)

<sup>1</sup>Not UL listed when field installed.

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

<sup>3</sup>Not available with "B" suffix – leads out back.

<sup>4</sup>Not available for two-pole TEB, TED. Order TEDBAR.

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

<sup>6</sup>UL listed for field installation.

<sup>7</sup>Mounts in center pole with leads out left side.



# Molded Case Circuit Breakers

## Spectra™ RMS

SE150 Frame

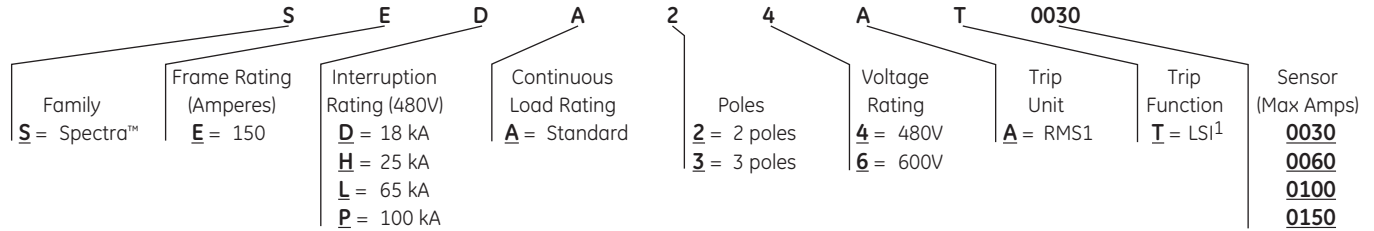
15-150A Circuit Breakers

Electronic Trip

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

### Product Number Structure



<sup>1</sup>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).

### SED, SEH, SEL, SEP<sup>2</sup>; 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 <sup>3</sup>	SEHA24AT0030 <sup>3</sup>	SELA24AT0030 <sup>3</sup>	SEPA24AT0030 <sup>3</sup>	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 <sup>3</sup>	SEHA24AT0060 <sup>3</sup>	SELA24AT0060 <sup>3</sup>	SEPA24AT0060 <sup>3</sup>		
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, SEP<sup>2</sup>; 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 <sup>3</sup>	SEHA36AT0030 <sup>3</sup>	SELA36AT0030 <sup>3</sup>	SEPA36AT0030 <sup>3</sup>	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 <sup>3</sup>	SEHA36AT0060 <sup>3</sup>	SELA36AT0060 <sup>3</sup>	SEPA36AT0060 <sup>3</sup>		
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		

<sup>2</sup>SEL, SEP UL current limiting.

<sup>3</sup>When 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](http://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

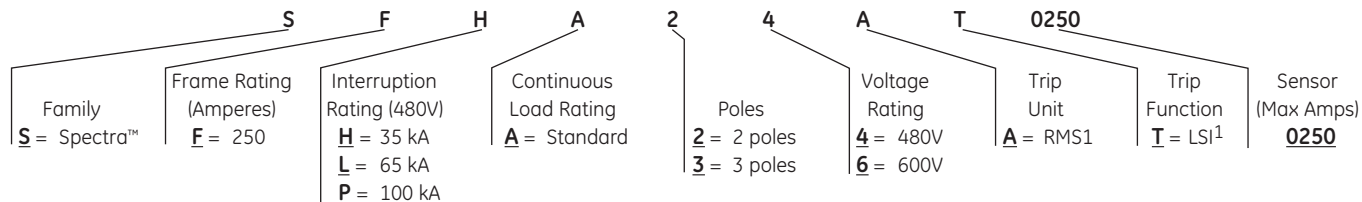


# Molded Case Circuit Breakers

## Spectra™ RMS

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

### Product Number Structure



<sup>1</sup>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).

### SFH, SFL, SFP<sup>2</sup>; 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, SFP<sup>2</sup>; 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						

<sup>2</sup>SFL, 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](http://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

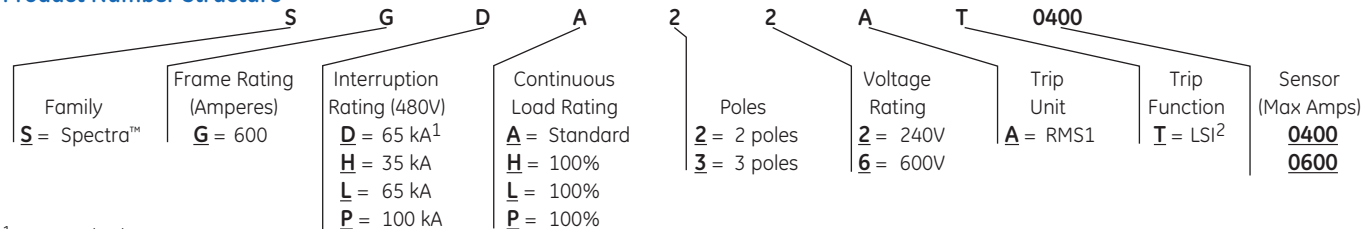
125-600A Circuit Breakers

Electronic Trip (Digital, Solid-State)

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

### Product Number Structure



<sup>1</sup> SGD rated 65kA at 240V.

<sup>2</sup> 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 <sup>4</sup> Number	Wire Range
	Low	High				65kA			
125	380	1275	SRPG400A125	400	2	SGDA22AT0400 <sup>3</sup>	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 <sup>3</sup>	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, SGP<sup>5</sup>; 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 <sup>4</sup> 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, SGL<sup>5</sup>, SGP<sup>5</sup>; 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 <sup>4</sup> 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							

<sup>3</sup>Rated 240 Vac max.

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

<sup>5</sup>SGL, 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, SGL<sup>2</sup>, SGP<sup>2</sup>; 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 <sup>1</sup> 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							

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

<sup>2</sup>SGL, SGP UL current limiting.

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

All Spectra™ breakers marked CE.

**SGH, SGL<sup>2</sup>, SGP<sup>2</sup>; 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 <sup>1</sup> 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](http://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



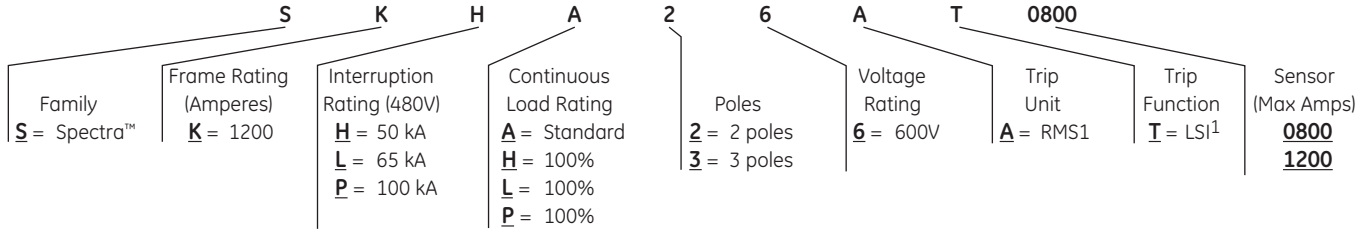
# Molded Case Circuit Breakers

## 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



<sup>1</sup>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).

### 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		
1200	3650	12215	SRPK1200A1200							

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							

<sup>1</sup>100% 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](http://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

### 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 <sup>1</sup> Settings (seconds)	MVT 1-4 (I <sup>2</sup> t) C1-C10 (thermal) F1-F7 (I <sup>4</sup> t)	1-12 (.07 to .49) 0 - I <sup>2</sup> t out 1 - low 2 - med 3 - high		2-15 (.06 to .92) 0 - definite time 1 - I <sup>2</sup> t 2 - selective ground fault 3 - fuse shape (I <sup>4</sup> t)												

X = Rating Plug Amperes

S = Sensor Ampere Rating

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

<sup>1</sup>Delay Bands shown at 600% of current setting at lower limit of each band

<sup>2</sup>Maximum 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

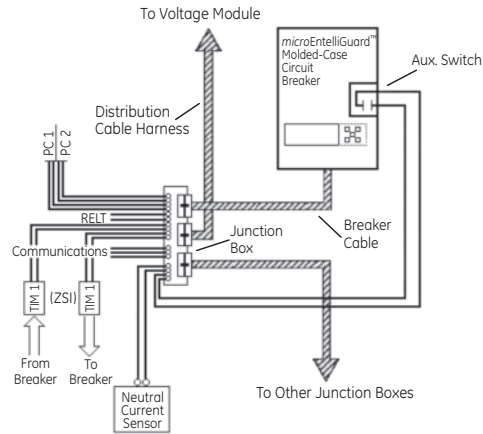
### How to Order

- 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 <sup>2</sup> t, CB and Fuse I <sup>4</sup> t)
Short-Time (S)	Adjustable short-time pickup (can also be turned OFF) Adjustable short-time delay - multiple slope options I <sup>2</sup> 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 <sup>2</sup> 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 <sup>1</sup>	Dedicated if RELT enabled or set to TRIP/OFF
Qty (2) Programmable Output Contacts <sup>1</sup>	RELT (dedicated) Ground Fault Alarm Overcurrent Trip Protective Relay Trip Load Alarm Health Status

<sup>1</sup>Included 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 <sup>1</sup>	System and asset protection via remote trip (dedicated if RELT enabled)	•					
Programmable Output Contacts <sup>1</sup>	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						•

<sup>1</sup>Included 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

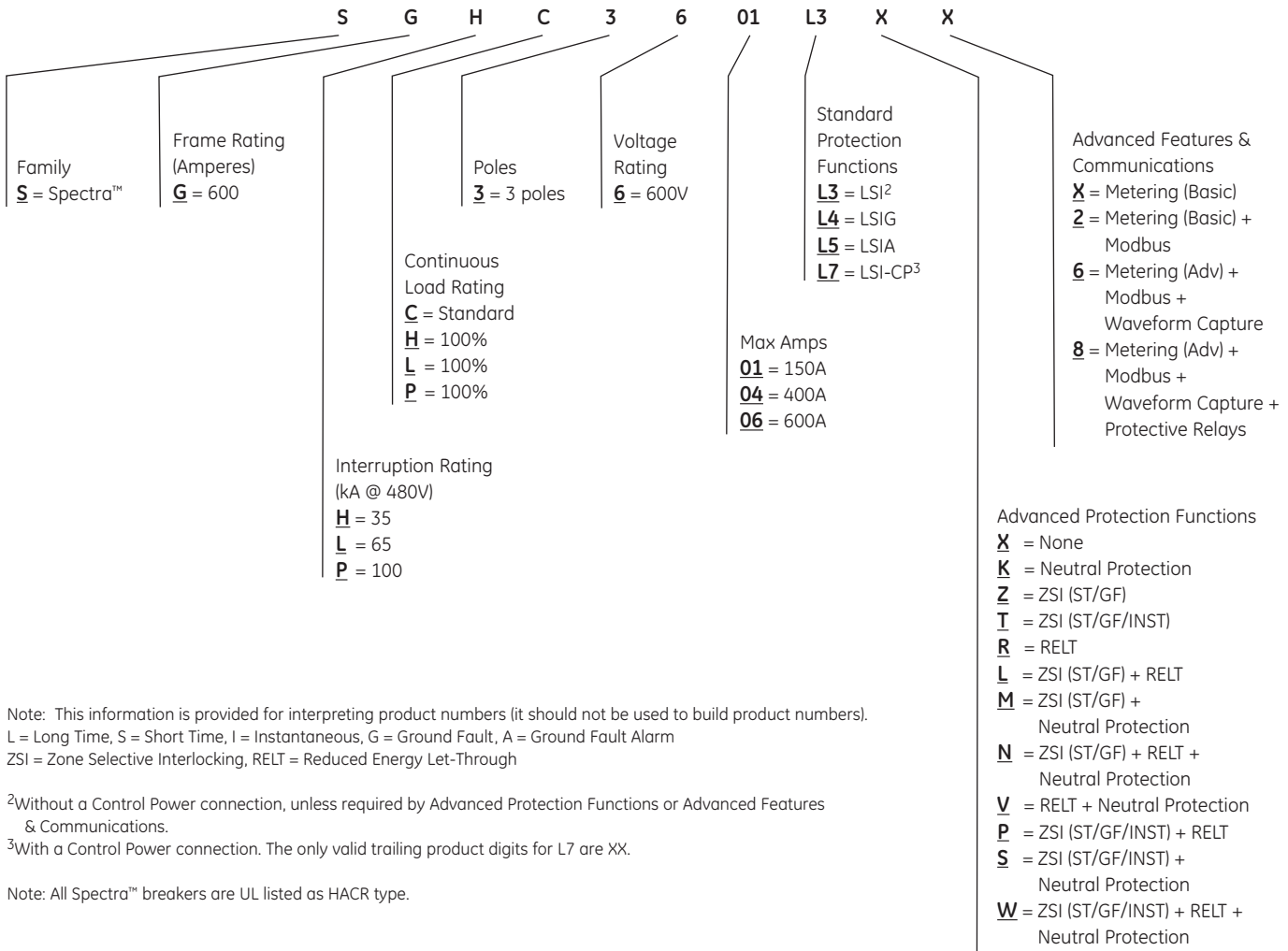
60-600A Circuit Breakers

Electronic Trip

Spectra™ RMS

SG600 with *microEntelliGuard™* Trip Units<sup>1</sup>

### 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

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

<sup>3</sup>With 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 <sup>4</sup>	(2) 2/0 - 500 Cu/Al or (1) 8 - 600 Cu or (1) 6 - 600 Al

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

<sup>4</sup>Order 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 Units<sup>1</sup>

*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 <sup>2</sup>	SGHC3601L4 __	SGLC3601L4 __	SGPC3601L4 __	
	LSIA <sup>2</sup>	SGHC3601L5 __	SGLC3601L5 __	SGPC3601L5 __	
	LSI-CP <sup>3</sup>	SGHC3601L7XX	SGLC3601L7XX	SGPC3601L7XX	
400	LSI	SGHC3604L3 __	SGLC3604L3 __	SGPC3604L3 __	
	LSIG <sup>2</sup>	SGHC3604L4 __	SGLC3604L4 __	SGPC3604L4 __	
	LSIA <sup>2</sup>	SGHC3604L5 __	SGLC3604L5 __	SGPC3604L5 __	
	LSI-CP <sup>3</sup>	SGHC3604L7XX	SGLC3604L7XX	SGPC3604L7XX	
600	LSI	SGHC3606L3 __	SGLC3606L3 __	SGPC3606L3 __	
	LSIG <sup>2</sup>	SGHC3606L4 __	SGLC3606L4 __	SGPC3606L4 __	
	LSIA <sup>2</sup>	SGHC3606L5 __	SGLC3606L5 __	SGPC3606L5 __	
	LSI-CP <sup>3</sup>	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 <sup>2</sup>	SGHH3601L4 __	SGLL3601L4 __	SGPP3601L4 __	
	LSIA <sup>2</sup>	SGHH3601L5 __	SGLL3601L5 __	SGPP3601L5 __	
	LSI-CP <sup>3</sup>	SGHH3601L7XX	SGLL3601L7XX	SGPP3601L7XX	
400	LSI	SGHH3604L3 __	SGLL3604L3 __	SGPP3604L3 __	
	LSIG <sup>2</sup>	SGHH3604L4 __	SGLL3604L4 __	SGPP3604L4 __	
	LSIA <sup>2</sup>	SGHH3604L5 __	SGLL3604L5 __	SGPP3604L5 __	
	LSI-CP <sup>3</sup>	SGHH3604L7XX	SGLL3604L7XX	SGPP3604L7XX	
600	LSI	SGHH3606L3 __	SGLL3606L3 __	SGPP3606L3 __	
	LSIG <sup>2</sup>	SGHH3606L4 __	SGLL3606L4 __	SGPP3606L4 __	
	LSIA <sup>2</sup>	SGHH3606L5 __	SGLL3606L5 __	SGPP3606L5 __	
	LSI-CP <sup>3</sup>	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

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

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

<sup>3</sup>For +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

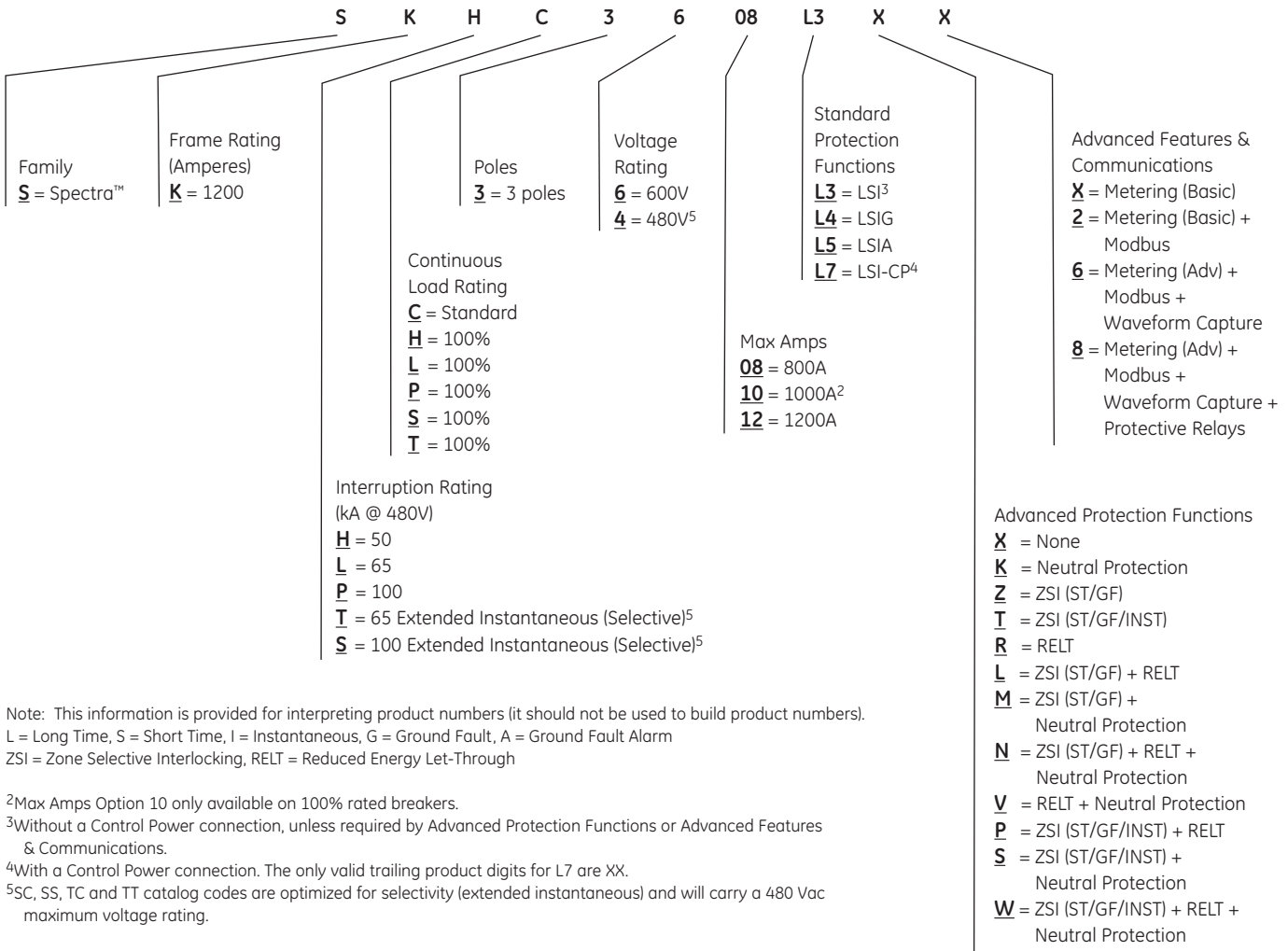
300-1200A Circuit Breakers

Electronic Trip

Spectra™ RMS

SK1200 with *microEntelliGuard™* Trip Units<sup>1</sup>

### 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

<sup>2</sup>Max Amps Option 10 only available on 100% rated breakers.

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

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

<sup>5</sup>SC, 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 <sup>6</sup>	TCAL125	(4) 3/0 - 500 Cu/Al

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

<sup>6</sup>Lugs 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 Units<sup>1</sup>

*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 <sup>2</sup>	SKHC3608L4 __	SKLC3608L4 __	SKPC3608L4 __	
	LSIA <sup>2</sup>	SKHC3608L5 __	SKLC3608L5 __	SKPC3608L5 __	
	LSI-CP <sup>3</sup>	SKHC3608L7XX	SKLC3608L7XX	SKPC3608L7XX	
1200	LSI	SKHC3612L3 __	SKLC3612L3 __	SKPC3612L3 __	Select one value from each suffix tables below.
	LSIG <sup>2</sup>	SKHC3612L4 __	SKLC3612L4 __	SKPC3612L4 __	
	LSIA <sup>2</sup>	SKHC3612L5 __	SKLC3612L5 __	SKPC3612L5 __	
	LSI-CP <sup>3</sup>	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 <sup>2</sup>	SKHH3608L4 __	SKLL3608L4 __	SKPP3608L4 __	
	LSIA <sup>2</sup>	SKHH3608L5 __	SKLL3608L5 __	SKPP3608L5 __	
	LSI-CP <sup>3</sup>	SKHH3608L7XX	SKLL3608L7XX	SKPP3608L7XX	
1000	LSI	SKHH3610L3 __	SKLL3610L3 __	SKPP3610L3 __	Select one value from each suffix tables below.
	LSIG <sup>2</sup>	SKHH3610L4 __	SKLL3610L4 __	SKPP3610L4 __	
	LSIA <sup>2</sup>	SKHH3610L5 __	SKLL3610L5 __	SKPP3610L5 __	
	LSI-CP <sup>3</sup>	SKHH3610L7XX	SKLL3610L7XX	SKPP3610L7XX	
1200	LSI	SKHH3612L3 __	SKLL3612L3 __	SKPP3612L3 __	
	LSIG <sup>2</sup>	SKHH3612L4 __	SKLL3612L4 __	SKPP3612L4 __	
	LSIA <sup>2</sup>	SKHH3612L5 __	SKLL3612L5 __	SKPP3612L5 __	
	LSI-CP <sup>3</sup>	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 <sup>2</sup>	SKTC3408L4 __	SKTT3408L4 __	SKSC3408L4 __	SKSS3408L4 __	
	LSIA <sup>2</sup>	SKTC3408L5 __	SKTT3408L5 __	SKSC3408L5 __	SKSS3408L5 __	
	LSI-CP <sup>3</sup>	SKTC3408L7XX	SKTT3408L7XX	SKSC3408L7XX	SKSS3408L7XX	
1000	LSI	SKTT3410L3 __	SKTT3410L3 __	SKSS3410L3 __	SKSS3410L3 __	Select one value from each suffix tables below.
	LSIG <sup>2</sup>	SKTT3410L4 __	SKTT3410L4 __	SKSS3410L4 __	SKSS3410L4 __	
	LSIA <sup>2</sup>	SKTT3410L5 __	SKTT3410L5 __	SKSS3410L5 __	SKSS3410L5 __	
	LSI-CP <sup>3</sup>	SKTT3410L7XX	SKTT3410L7XX	SKSS3410L7XX	SKSS3410L7XX	
1200	LSI	SKTC3412L3 __	SKTT3412L3 __	SKSC3412L3 __	SKSS3412L3 __	
	LSIG <sup>2</sup>	SKTC3412L4 __	SKTT3412L4 __	SKSC3412L4 __	SKSS3412L4 __	
	LSIA <sup>2</sup>	SKTC3412L5 __	SKTT3412L5 __	SKSC3412L5 __	SKSS3412L5 __	
	LSI-CP <sup>3</sup>	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

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

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

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

<sup>1</sup>For installation into GE Spectra™ Series Switchboards only

<sup>2</sup>Requires fuse protection and other components - refer to accessory instruction sheet

<sup>3</sup>MicroVersaTrip™ PM (Commnet), *microEntelliGuard™* (Modbus)

<sup>4</sup>Requires 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

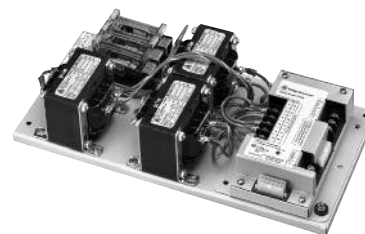


Power Supply Plate

### 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 <sup>2</sup>

### Distribution Cable Harness<sup>1</sup>

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 <sup>2</sup>

### 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 <sup>2</sup>
	<i>microEntelliGuard™</i>	SDCTBA22C <sup>2</sup>

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

<sup>2</sup>For use with *microEntelliGuard™* only.



# Molded Case Circuit Breakers

## Power Management System Accessories

# Section 6

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 12-pin Connector	SDCTBA11C 20-pin Connector	SDCTBA22C 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



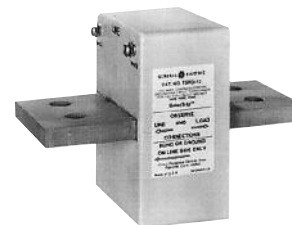
# Molded Case Circuit Breakers

## 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 <sup>1</sup>
	<i>microEntelliGuard™</i> only	GTUTK20

<sup>1</sup>Not 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

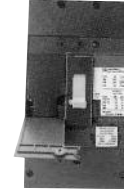
### Universal Field-Installable Internal Accessories

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

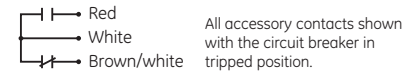
### Auxiliary Switch

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.)

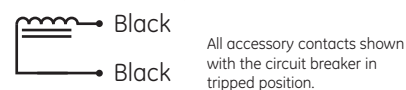
If maintained (latching relay) contact must be used and delayed shunt tripping is not acceptable, use small bell alarm in series with control power for SE150 and SF250 frames and auxiliary switch for SG600 and SK1200 breakers.

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 <sup>1</sup>
24	24	300	10.0	SAST3
48	48	300	10.0	SAST4

<sup>1</sup>Not 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

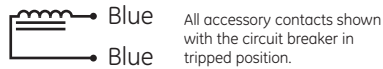
Spectra™ RMS Circuit Breakers

## 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



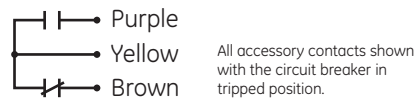
Undervoltage Release

### 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

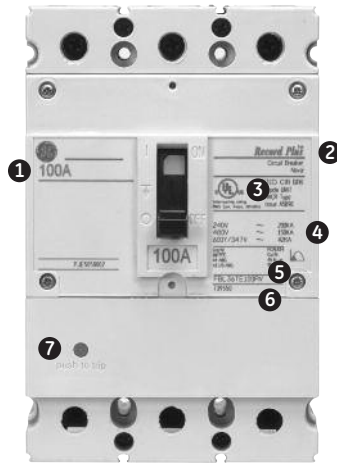
### Actuator

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](http://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

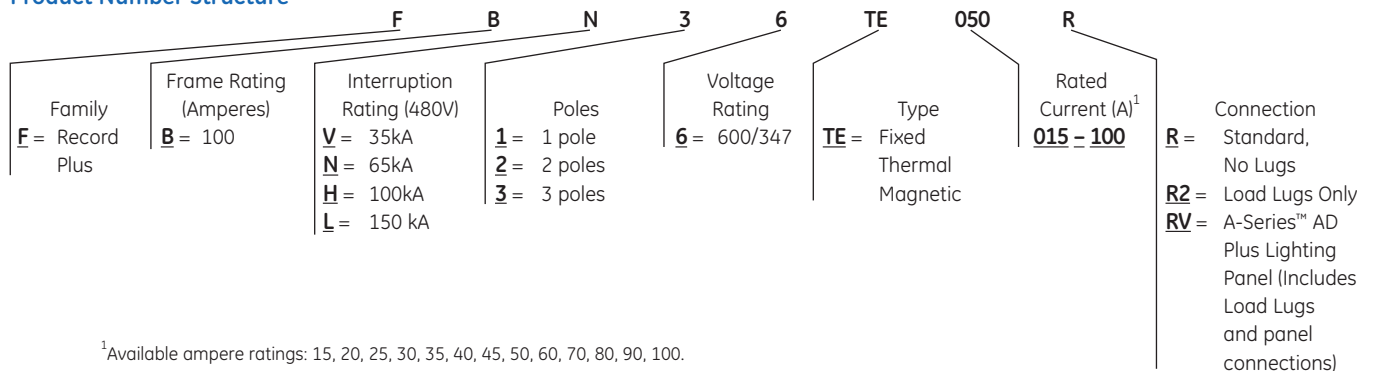
### Trip Curves

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 <sup>2</sup> 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



<sup>1</sup>Available 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.

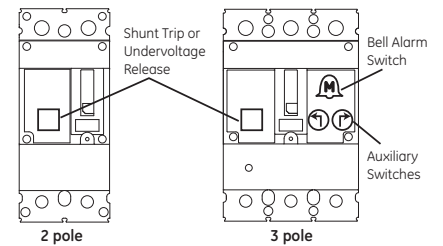
### Auxiliary Switches

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

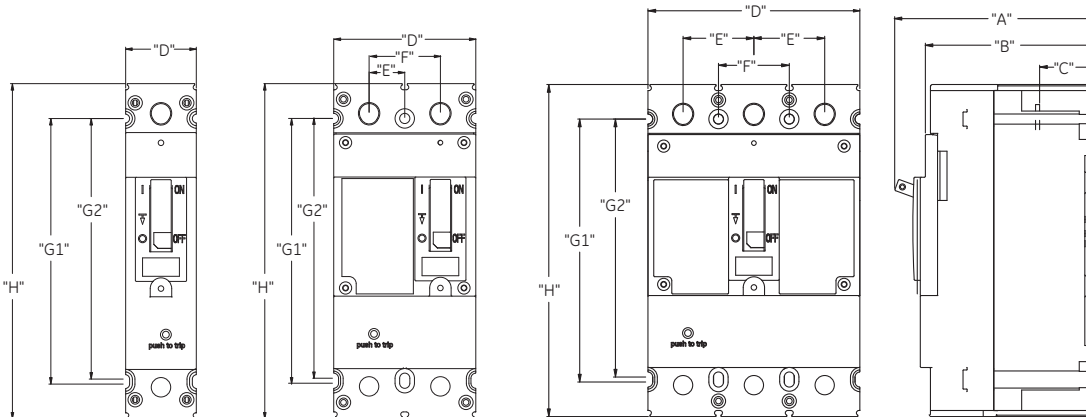
### Lug Tightening Torque

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](http://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 <sup>2</sup> t Curve	DES-031

### Main Standards

- UL 489
- IEC 947 and associated EN Sections

### FC Breaker Markings

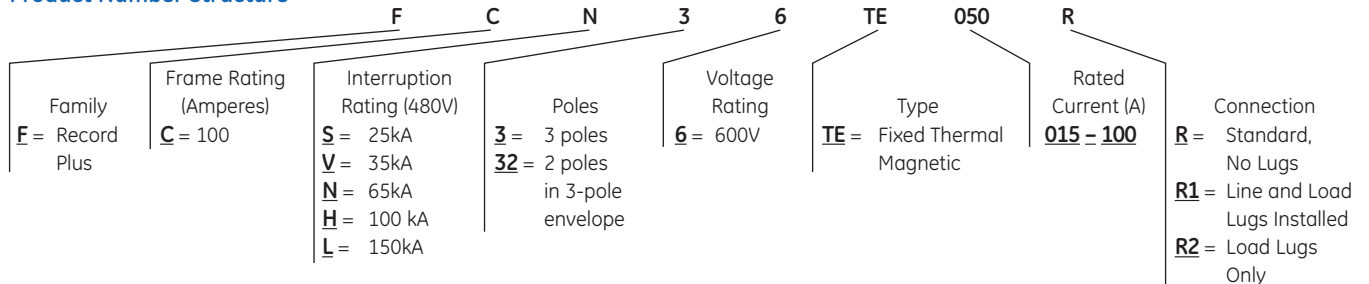
cULus	UL File E-11592
HID	15-50A
HACR	15 to 100A
Cu/Al 60/75°C	15 to 100A
Current Limiting	15 to 100A

### 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	FCALK13	
100	FCY206F100R	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	FCL326TE020R	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
	FCS36TE020R2	FCV36TE020R2	FCN36TE020R2	FCH36TE020R2	FCL36TE020R2	Load Lugs Only
25	FCS36TE025R	FCV36TE025R	FCN36TE025R	FCH36TE025R	FCL36TE025R	No Lugs
	FCS36TE025R1	FCV36TE025R1	FCN36TE025R1	FCH36TE025R1	FCL36TE025R1	Line and Load Lugs Installed
	FCS36TE025R2	FCV36TE025R2	FCN36TE025R2	FCH36TE025R2	FCL36TE025R2	Load Lugs Only
	FCS36TE030R	FCV36TE030R	FCN36TE030R	FCH36TE030R	FCL36TE030R	No Lugs
30	FCS36TE030R1	FCV36TE030R1	FCN36TE030R1	FCH36TE030R1	FCL36TE030R1	Line and Load Lugs Installed
	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
35	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
	FCS36TE040R2	FCV36TE040R2	FCN36TE040R2	FCH36TE040R2	FCL36TE040R2	Load Lugs Only
45	FCS36TE045R	FCV36TE045R	FCN36TE045R	FCH36TE045R	FCL36TE045R	No Lugs
	FCS36TE045R1	FCV36TE045R1	FCN36TE045R1	FCH36TE045R1	FCL36TE045R1	Line and Load Lugs Installed
	FCS36TE045R2	FCV36TE045R2	FCN36TE045R2	FCH36TE045R2	FCL36TE045R2	Load Lugs Only
	FCS36TE050	FCV36TE050R	FCN36TE050R	FCH36TE050R	FCL36TE050R	No Lugs
50	FCS36TE050R1	FCV36TE050R1	FCN36TE050R1	FCH36TE050R1	FCL36TE050R1	Line and Load Lugs Installed
	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
60	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
	FCS36TE070R2	FCV36TE070R2	FCN36TE070R2	FCH36TE070R2	FCL36TE070R2	Load Lugs Only
70	FCS36TE080R	FCV36TE080R	FCN36TE080R	FCH36TE080R	FCL36TE080R	No Lugs
	FCS36TE080R1	FCV36TE080R1	FCN36TE080R1	FCH36TE080R1	FCL36TE080R1	Line and Load Lugs Installed
	FCS36TE080R2	FCV36TE080R2	FCN36TE080R2	FCH36TE080R2	FCL36TE080R2	Load Lugs Only
	FCS36TE090R	FCV36TE090R	FCN36TE090R	FCH36TE090R	FCL36TE090R	No Lugs
90	FCS36TE090R1	FCV36TE090R1	FCN36TE090R1	FCH36TE090R1	FCL36TE090R1	Line and Load Lugs Installed
	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
100	FCS36TE100R2	FCV36TE100R2	FCN36TE100R2	FCH36TE100R2	FCL36TE100R2	Load Lugs Only

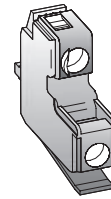


# Molded Case Circuit Breakers

## Record Plus™ FC 100

Internal Accessories (supplied with leads attached)

## Section 6



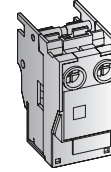
Auxiliary Switch/Bell Alarm Mechanism

### 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

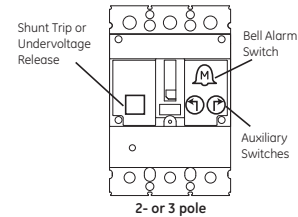
Voltage	Shunt Trip		Undervoltage Release	
	Rating (Inrush Power Consumption)	Product No.	Rating (Inrush Power Consumption)	Product No.
12 VDC	200 mA / 2.4W	FASHTBW	—	—
24 VAC/DC	100 mA / 3.6W	FASHTDW	50 mA / 1.2W	FAUVRDW
48 VAC/DC	60 mA / 2.88W	FASHTFW	20 mA / 0.96W	FAUVRFW
120 VAC	40 mA / 4.8W	FASHTKW	—	—
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



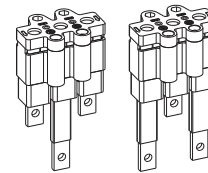
Motor Operator



Padlock

### Plug-In Types

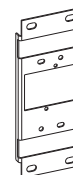
Type	Description	Product No.
Complete Kits	3 Pole - LSL - Horizontal Strap	FCDDF1
	3 Pole - SLS - Horizontal Strap	FCDDF2
	3 Pole - LSL - Vertical Strap	FCDDF3
	3 Pole - SLS - Vertical Strap	FCDDF4
Secondary Disconnect	Secondary Disconnect Kit	FCDSD
	Secondary Disconnect - Base Part	FCSDP
	Secondary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



Plug-In Bases

### 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 Plate



# Molded Case Circuit Breakers

## Record Plus™ FC 100

### External Accessories

#### Lugs and Lug Kits

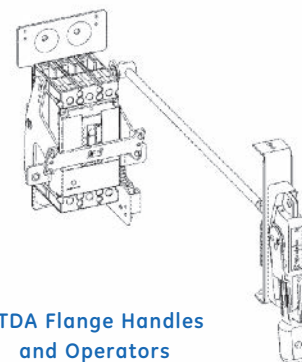
Amp Range	Wire Range	Strip Length	Single Lug Product No.	Lug Kit Product No. (Set of 3)
15-20A	14-10 Cu/Al	.40-.50"	FCAL12	FCALK12
25-60A	10-4 Cu/Al	.40-.50"	FCAL13	FCALK13
70-100A	4-1/0 Cu/Al	.40-.50"	FCAL14	FCALK14

#### 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

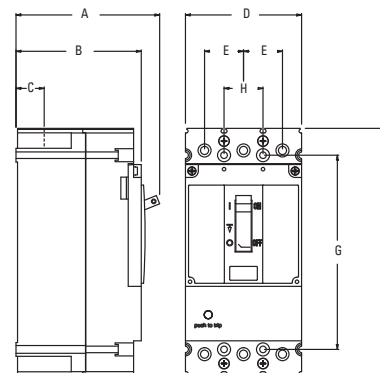


STDA Flange Handles and Operators

#### 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)



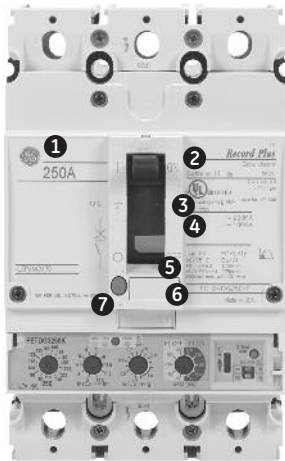
FC 100 Amp Dimensions



# Molded Case Circuit Breakers

## Record Plus™ FE 250

# Section 6



- 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](http://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 <sup>2</sup> Curve	DES-206

### Main Standards

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

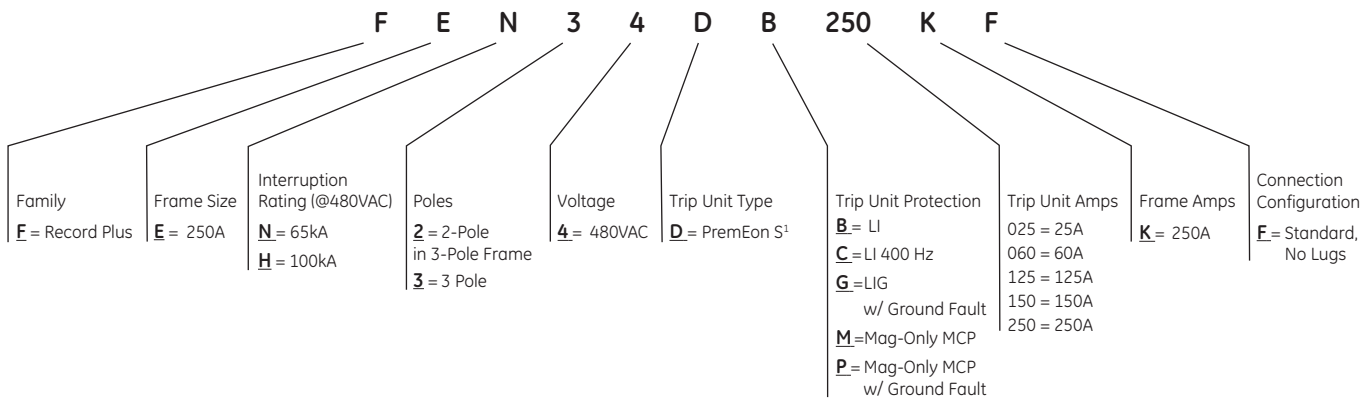
### Interrupting Ratings

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



<sup>1</sup>Requires 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)<sup>1</sup>

#### 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		

<sup>1</sup>400 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.

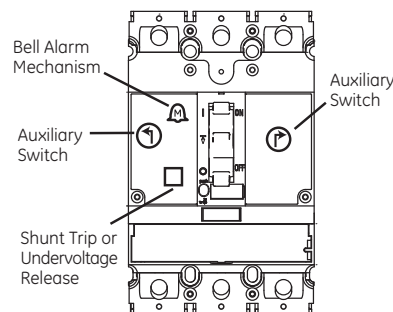
### Auxiliary Switches

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

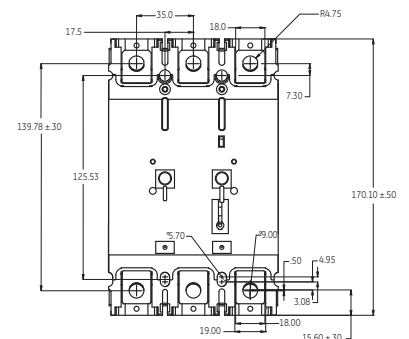
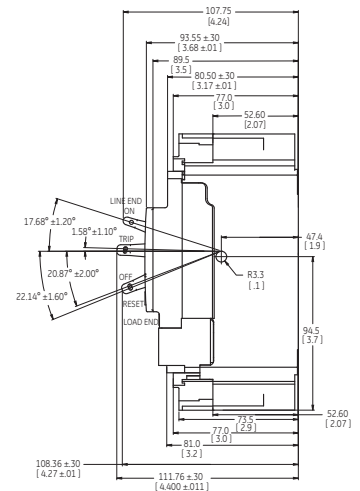
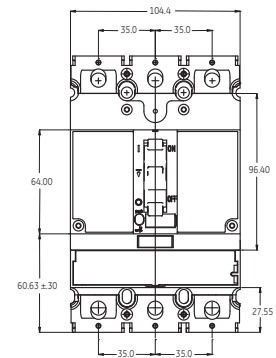
Description	Product Number
Fin Cover	FEUA3
Terminal Shield Fin Cover	FEJS3
Nut Plate / Terminal Shoe	FEJN3

### 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	Same as Spectra 10 inch for NEMA 12/13	STDA2
	Same as Spectra 6 inch for NEMA 4/4X	STDA1X	
	Same as Spectra 10 inch for NEMA 4/4X	STDA2X	
	Flange Stiffener Kit	Use with FENFM	TDSR
	Extender Kit	Use with FENFM	TDSR
	Extended Drive Stud	Use with FENFM	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
TDM Style Handle Operators	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
	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 Pickup<sup>1</sup>

### 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

<sup>1</sup>Available via adjustment with special Torx T15 tool

<sup>2</sup>Available via Adjustable Rating Plug

<sup>3</sup>Must 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 Pickup<sup>2</sup>
- Zone Selective Interlocking Capability<sup>3</sup>
- 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](http://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 <sup>2</sup> 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)2/3/6AA0250R_ _	100, 110, 125, 150, 175, 200, 225, 250	FG(N/H/L/P)2/3/6DB250LF
FG(N/H/L/P)2/3/6AA0400R_ _	175, 200, 225, 250, 300, 350, 400	FG(N/H/L/P)2/3/6DB400LF
FG(N/H/L/P)2/3/6AA0600R_ _	300, 350, 400, 450, 500, 600	FG(N/H/L/P)2/3/6DB600MF

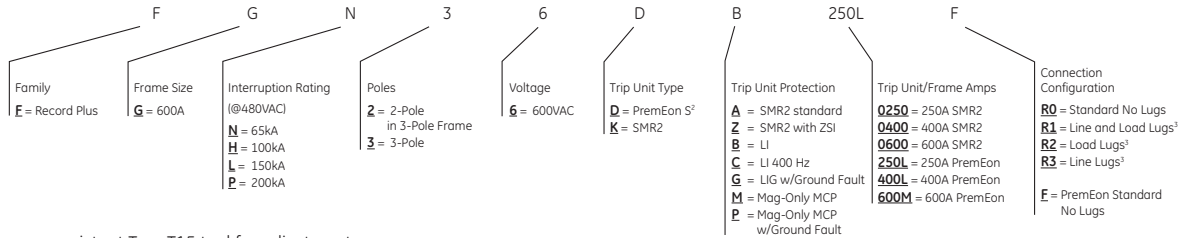


### Interrupting Ratings

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 <sup>1</sup>	250-600A	600VAC	2	200	150	42	-	-	-
			3	200	150	42	200	150	40
FGP <sup>1</sup>	250-600A	600VAC	2	200	200	65	-	-	-
			3	200	200	65	-	-	-

<sup>1</sup>Not suitable for reverse feed.

### Product Number Structure



<sup>2</sup>Requires tamper-resistant Torx T15 tool for adjustment

<sup>3</sup>Lugs 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)<sup>4</sup>

#### 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

<sup>4</sup>400 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						R0	R0	R0	R0
150A	FGRM2K0150						R1	R1	R1	R1
175A	FGRM2K0175						R2	R2	R2	R2
200A	FGRM2K0200						R3	R3	R3	R3
225A	FGRM2K0225									
250A	FGRM2K0250									
175A	FGRM2L0175	400	FGN26KA0400__	FGH26KA0400__	FGL26KA0400__	FGP26KA0400__				
200A	FGRM2L0200									
225A	FGRM2L0225						R0	R0	R0	R0
250A	FGRM2L0250						R1	R1	R1	R1
300A	FGRM2L0300						R2	R2	R2	R2
350A	FGRM2L0350						R3	R3	R3	R3
400A	FGRM2L0400									
300A	FGRM2M0300						600	FGN26KA0600__	FGH26KA0600__	FGL26KA0600__
350A	FGRM2M0350									
400A	FGRM2M0400	R0	R0	R0	R0					
450A	FGRM2M0450	R1	R1	R1	R1					
500A	FGRM2M0500	R2	R2	R2	R2					
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						R0	R0	R0	R0
150A	FGRM3K0150						R1	R1	R1	R1
175A	FGRM3K0175						R2	R2	R2	R2
200A	FGRM3K0200						R3	R3	R3	R3
225A	FGRM3K0225									
250A	FGRM3K0250									
175A	FGRM3L0175	400	FGN36KA0400__	FGH36KA0400__	FGL36KA0400__	FGP36KA0400__				
200A	FGRM3L0200									
225A	FGRM3L0225						R0	R0	R0	R0
250A	FGRM3L0250						R1	R1	R1	R1
300A	FGRM3L0300						R2	R2	R2	R2
350A	FGRM3L0350						R3	R3	R3	R3
400A	FGRM3L0400									
300A	FGRM3M0300						600	FGN36KA0600__	FGH36KA0600__	FGL36KA0600__
350A	FGRM3M0350									
400A	FGRM3M0400	R0	R0	R0	R0					
450A	FGRM3M0450	R1	R1	R1	R1					
500A	FGRM3M0500	R2	R2	R2	R2					
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	
	250A	FGRN2L0250	400
	400A	FGRN2L0400	
	600A	FGRN2M0600	600
3-Pole	160A	FGRN3K0160	250
	250A	FGRN3K0250	
	250A	FGRN3L0250	400
	400A	FGRN3L0400	
	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						R0	R0	R0	R0	
150A	FGRM2K0150						R1	R1	R1	R1	
175A	FGRM2K0175						R2	R2	R2	R2	
200A	FGRM2K0200						R3	R3	R3	R3	
225A	FGRM2K0225										
250A	FGRM2K0250										
175A	FGRM2L0175						400	FGN26KZ0400__	FGH26KZ0400__	FGL26KZ0400__	FGP26KZ0400__
200A	FGRM2L0200										
225A	FGRM2L0225	R0	R0	R0	R0						
250A	FGRM2L0250	R1	R1	R1	R1						
300A	FGRM2L0300	R2	R2	R2	R2						
350A	FGRM2L0350	R3	R3	R3	R3						
400A	FGRM2L0400										
300A	FGRM2M0300	600	FGN26KZ0600__	FGH26KZ0600__	FGL26KZ0600__	FGP26KZ0600__					
350A	FGRM2M0350										
400A	FGRM2M0400										
450A	FGRM2M0450						R1	R1	R1	R1	
500A	FGRM2M0500						R2	R2	R2	R2	
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	FGN36KZ0250__	FGH36KZ0250__	FGL36KZ0250__	FGP36KZ0250__					
110A	FGRM3K0110										
125A	FGRM3K0125						R0	R0	R0	R0	
150A	FGRM3K0150						R1	R1	R1	R1	
175A	FGRM3K0175						R2	R2	R2	R2	
200A	FGRM3K0200						R3	R3	R3	R3	
225A	FGRM3K0225										
250A	FGRM3K0250										
175A	FGRM3L0175						400	FGN36KZ0400__	FGH36KZ0400__	FGL36KZ0400__	FGP36KZ0400__
200A	FGRM3L0200										
225A	FGRM3L0225	R0	R0	R0	R0						
250A	FGRM3L0250	R1	R1	R1	R1						
300A	FGRM3L0300	R2	R2	R2	R2						
350A	FGRM3L0350	R3	R3	R3	R3						
400A	FGRM3L0400										
300A	FGRM3M0300	600	FGN36KZ0600__	FGH36KZ0600__	FGL36KZ0600__	FGP36KZ0600__					
350A	FGRM3M0350										
400A	FGRM3M0400										
450A	FGRM3M0450						R1	R1	R1	R1	
500A	FGRM3M0500						R2	R2	R2	R2	
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	
	250A	FGRN2L0250	400
	400A	FGRN2L0400	
	600A	FGRN2M0600	600
3-Pole	160A	FGRN3K0160	250
	250A	FGRN3K0250	
	250A	FGRN3L0250	400
	400A	FGRN3L0400	
	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 <sup>1</sup>
Spare/Replacement Battery	FAMBAT
External, DIN-rail Mounted, Communications Module	FAMECM <sup>2</sup>

<sup>1</sup>Requires FAMECM Communications Module.

<sup>2</sup>Required 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 <sup>3</sup>	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.

<sup>3</sup>55% 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.

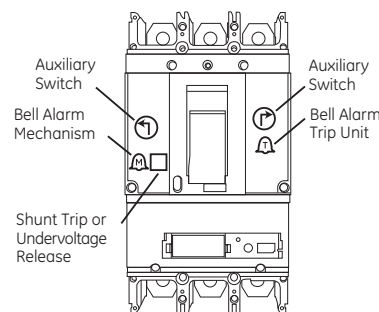
### Auxiliary Switches

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

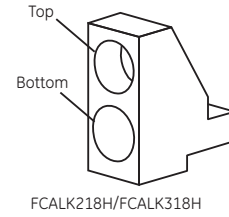
External Accessories

### 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)			

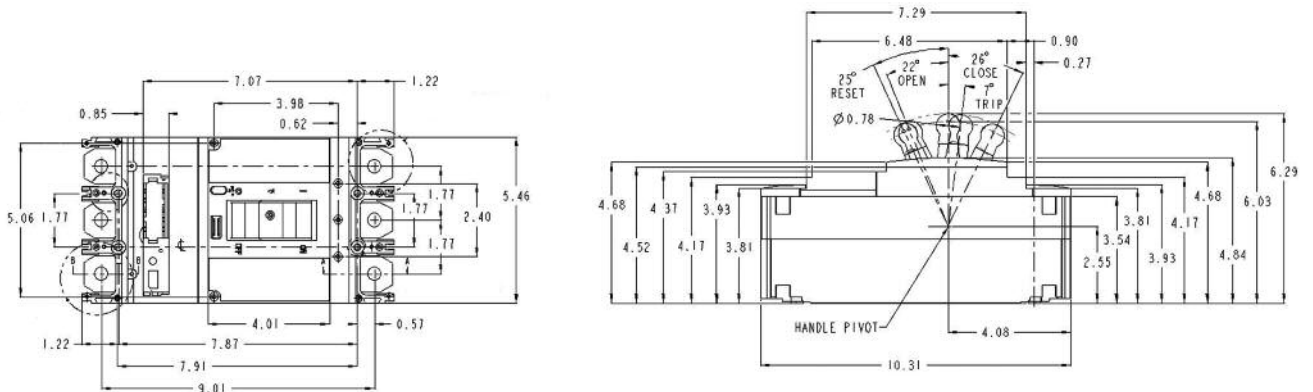


### Other Accessories

	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 <sup>1</sup> Product Number	Terminal Lugs for Front Connection (Cu/Al)		Maximum Short Circuit Withstand Rating <sup>2</sup> (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 <sup>3</sup>	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 <sup>4</sup>
TEB	100	2	240 Vac, 250 Vdc	TEB122V100 <sup>4</sup>
TEB	100	3	240 Vac	TEB132V100 <sup>4</sup>
TEB	100	3	240Vac	TEB132VT100 <sup>9</sup>
TED	100	1	277 Vac, 125 Vdc	TED113V100 <sup>4</sup>
TED	100	2	480 Vac, 250 Vdc	TED124V100 <sup>4</sup>
TED	100	3	480Vac, 250Vdc	TED134VT100 <sup>9</sup>
TED	100	3	600Vac	TED136VT100 <sup>9</sup>
TED	100	3	600Vac	TED136VT100A <sup>10</sup>
TED	150	2	480 Vac, 250 Vdc	TED124Y150 <sup>4,5</sup>
TED	150	3	480Vac, 250Vdc	TED134VT150 <sup>9</sup>
TED	150	3	600Vac	TED136VT150 <sup>9</sup>
TFJ	225	2	600 Vac	TFJ226Y225 <sup>4,6,11</sup>
TFJ	225	3	600 Vac	TFJ236Y225 <sup>6,11</sup>
TJJ	400	2	600 Vac, 250 Vdc	TJJ426Y400 <sup>7</sup>
TJJ	400	3	600 Vac	TJJ436Y400 <sup>7</sup>

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

<sup>1</sup>No rating plug required.

<sup>2</sup>The 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.

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

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

<sup>5</sup>Not UL listed.

<sup>6</sup>600 Volts max.

<sup>7</sup>Internal 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.

<sup>8</sup>UL listed only when ordered as a complete switch.

<sup>9</sup>Includes factory installed dummy trip for accessory installation.

<sup>10</sup>Includes factory installed dummy trip and TCAL12A lugs.

<sup>11</sup>Limited availability. Obsolete when inventory is depleted.



# Molded Case Circuit Breakers Motor Circuit Protectors

3-250A

Mag-Break Motor Circuit Protectors

Current Limiting, UL Component Recognized<sup>1</sup>

### 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

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		
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

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		
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					

<sup>1</sup>Per 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 Recognized<sup>1</sup>

### 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		
<b>400 Ampere Max.</b>								
125	380	1275	SRPG400A125	400	SGLA36AI0400	SGPA36AI0400	TCLK365 <sup>2</sup>	(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					
<b>600 Ampere Max.</b>								
250	765	2530	SRPG600A250	600	SGLA36AI0600	SGPA36AI0600	TCLK365 <sup>2</sup>	(2) 2/0-500 Cu or (1) 8-600 Al
300	915	3035	SRPG600A300					
350	1070	3545	SRPG600A350					
400	1220	4050	SRPG600A400					
450	1375	4555	SRPG600A450					
500	1525	5060	SRPG600A500					
600	1830	6075	SRPG600A600					

<sup>1</sup>Per 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).

<sup>2</sup>Order 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			
<b>800 Ampere Max.</b>								
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					
<b>1200 Ampere Max.</b>								
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 Recognized<sup>1</sup>

### 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

<sup>1</sup>Per 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.

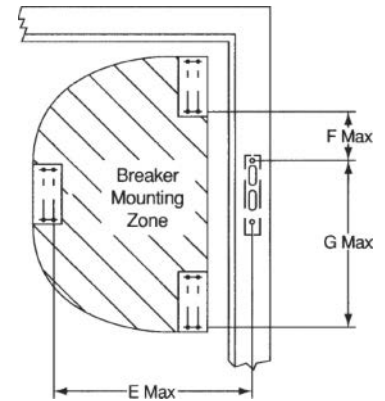
### Publication References

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 <sup>1</sup>	F	G	E <sup>1</sup>	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

<sup>1</sup>Maximum 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 <sup>1</sup>
SF250		SDOM1A
SG600		SDOM1AP <sup>5</sup>
SK1200 <sup>1</sup>		TDOM1D
TEB, TED, THED, TEC, TB1 TB1 and TEC with TECL	STDA1, 1X (6 inch) or STDA2, 2X (10-inch)	TDOM4
THLC1 (150A)		TDOM5
J-Frames, TJC (400, 600A) <sup>2</sup>		TDOM7
TB4 (400A) TJH/TJL <sup>3</sup> (600A Max)		
TB6 (600A), TB8 (800A)		
TKH/TKLD <sup>4</sup> (1200A Max)		

<sup>1</sup>Requires STDA3 or STDA3X (10 inch, SK1200 only).

<sup>2</sup>Includes TJ/THJ/TJL.

<sup>3</sup>Use TDOM5 for TJH/TJL.

<sup>4</sup>Use TDOM7 for TKH/TKL.

<sup>5</sup>Adapter 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 TDOM6, TDOM7	TDS1 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.

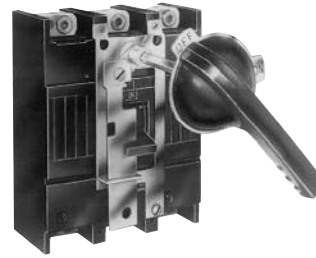


# Molded Case Circuit Breakers

## External Accessories

Door-Mounted Operators

## Section 6



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 <sup>1</sup> 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 <sup>2</sup>		
	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 <sup>3,4</sup>
	Extended Shaft 6 7/8 - 15 1/2	TFKHM2	TFKOM2 <sup>2</sup>		
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 <sup>4</sup>		
TKC, TKM, THKM, TB6, TBC6, TB8, TBC8	Shallow Mount 7 7/16	TKMHM1	TKMOM1		
	Extended Shaft 7 1/32 - 17 5/16	TKMHM2	TKMOM2 <sup>4</sup>		
SE150 (GEH-5611) <sup>5</sup>	4 3/16	SEFHM1	SEFOM1	TH1	
	6 1/8 - 15	SEFHM2	SEFOM2 <sup>2</sup>		
SF250 (GEH-5611) <sup>5</sup>	5 7/8	SEFHM1	SEFOM1		THCH45 <sup>3,4</sup>
	7 3/4 - 15 1/2	SEFHM2	SEFOM2 <sup>2</sup>		
SG600 (GEH-5653) <sup>5</sup>	5 7/8	SGHM1	SGOM1	TH2	
	5 5/8 - 15 5/8	SGHM2	SGOM2 <sup>4</sup>		
SK1200 (GEH-5612) <sup>5</sup>	6	SKHM1	SKOM1		
	7	SKHM2	SKOM2 <sup>4</sup>		

<sup>1</sup>Handle assembly and operating mechanism separately packaged.

<sup>2</sup>For 15-inch long shaft order Product Number 788A831G10. For 20-inch long shaft order Product Number 788A831G20.

<sup>3</sup>Provides 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.

<sup>4</sup>For 15-inch long shaft order Product Number 788A832G2. For 20-inch long shaft order Product Number 788A832G5.

<sup>5</sup>Installation instructions publication number.

<sup>6</sup>MOD 1 is 7 7/16; MOD 2 is 8 3/32.

<sup>7</sup>MOD 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 Mechanism<sup>1</sup> Suitable for NEMA 12 Applications<sup>2</sup>

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 <sup>3</sup>	SEFRDRCK	SEFRGSK
TFC, TFJ, TFK, THFK	TFKR1B	TFKR1HB	22 <sup>3</sup>	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) <sup>5</sup>	SEFR1 <sup>4</sup>	SEFR1H <sup>4</sup>	17 <sup>3</sup>	SEFRDRCK	SEFRGSK
SG600 (GEH-5654) <sup>5</sup>	SGR1	SGR1H	5	SGRDRCK	SGRGSK
SK1200 (GEH-5610) <sup>5</sup>	SKR1	SKR1H	5	SKRDRCK	SKRGSK

<sup>1</sup>Not suitable for use with mine duty or heavy duty UVR breakers.

<sup>2</sup>Requires Gasket kit.

<sup>3</sup>Shipped 12 per pack.

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

<sup>5</sup>Installation 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, <sup>1</sup> TEC, TED, <sup>1</sup> THED, TB1, THLC1 <sup>2</sup>	-	24	TEDMOMA8	-
	120 <sup>3</sup>	-	TEDMOMA1	
	240 <sup>4,5</sup>	-	TEDMOMA2	
TJC, TJJ, TJD, TJK, THJK, TB4, TBC4	-	24	TJKMOMA8	-
	120	125	TJKMOMA1	
	240 <sup>4,5</sup>	250	TJKMOMA2	
SE150	120	125	SEMOM1	GEH-5613
	240 <sup>4</sup>	-	SEMOM2	
	-	24	SEMOM8	
SF250	120	125	SFMOM1	GEH-5613
	240 <sup>4</sup>	-	SFMOM2	
	-	24	SFMOM8	
SG600	120	125	SGMOM1	GEH-5657
	240 <sup>4</sup>	250	SGMOM2	
	-	24	SGMOM8	
SK1200	120	125	SKMOM1	GEH-5614
	240 <sup>4</sup>	250	SKMOM2	
	-	24	SKMOM8	



**Motor Operated Mechanism  
on SF-Frame breaker**

#### Mounting Screw Kit for Motor-Operated Mechanism<sup>6</sup>

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

<sup>1</sup>For use on 3-pole breaker only.

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

<sup>3</sup>TEDMOMA1 not rated at 50 hertz.

<sup>4</sup>Suitable for use at 208 Vac.

<sup>5</sup>Not UL listed.

<sup>6</sup>Required 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 <sup>1</sup>
SG600	SGFMI	SGFMIAK <sup>2</sup>
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 Devices<sup>3</sup>

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

#### EUSERC Approved—Factory Installed Only

Breaker Type	Product Number
E150	TEPLD2
SE150, SF250 <sup>4</sup>	SEFPLD2
SG600	SGPLD2
J600	TJKPLD2
SK1200	SKPLD2

<sup>1</sup>Not suitable with THCH45 handle.

<sup>2</sup>Compatible with motor operator only. Product Number SGFMI cannot be used with the handle operator.

<sup>3</sup>Suitable 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.

<sup>4</sup>Field installable.

<sup>5</sup>Suitable 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 <sup>1</sup>
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 <sup>2</sup> , TB1 <sup>2</sup> , THLC1 <sup>2</sup>	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 <sup>2</sup> , TFK <sup>2</sup> , THFK <sup>2</sup>	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

<sup>1</sup>Accepts up to 3 poles (any combination).

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

<sup>3</sup>Contains 24 mounting screws.

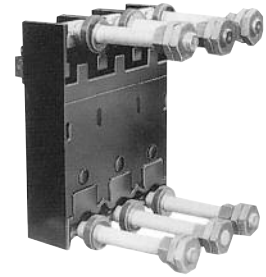


# Molded Case Circuit Breakers

## 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	TQD	TCAL25	Single Lug
				TCALK325	3-Lug Kit
	(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	F225	TCAL24	Single Lug
				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)	J600 (450-600A)	TCAL63	Single Lug
				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)	K1200, TB6 (300-400A)	TCAL41	Single Lug
				TCAL61	Single Lug
	(2) 2/0-500 kcmil Cu-A	K1200, TB6 (300-600A)	K1200, TB6 (300-600A)	TCALK261	2-Lug Kit w/ Wrench
				TCALK361	3-Lug Kit w/ Wrench
	(3) 3/0-500 kcmil Cu-Al	K1200, TB8 (600-800A)	K1200, TB8 (600-800A)	TCAL81 <sup>1</sup>	Single Lug
				TCALK281 <sup>1</sup>	2-Lug Kit w/ Wrench
	(3) 3/0-500 kcmil Cu-Al	TK4V - Load end	TK4V - Load end	TCALK381 <sup>1</sup>	3-Lug Kit w/ Wrench
				TCAL91 <sup>1</sup>	Single Lug
	(4) 250-350 kcmil Cu or (4) 250-500 kcmil Al	K1200 (1000-1200A)	K1200 (1000-1200A)	TCALK291 <sup>1</sup>	2-Lug Kit w/ Wrench
				TCALK391 <sup>1</sup>	3-Lug Kit w/ Wrench
	(3) 750 kcmil Cu-Al	K1200 (1200A)	K1200 (1200A)	TCAL121 <sup>2</sup>	Single Lug
				TCALK2121 <sup>2</sup>	2-Lug Kit w/ Wrench
	(4) 250-350 kcmil Cu or (4) 250-500 kcmil Al	TK4V - Load end	TK4V - Load end	TCALK3121 <sup>2</sup>	3-Lug Kit w/ Wrench
TCAL122 <sup>3</sup>				Single Lug	
(4) 250-350 kcmil Cu or (4) 250-500 kcmil Al	TK4V - Load end	TK4V - Load end	TCALK2122 <sup>3</sup>	2-Lug Kit w/ Wrench	
			TCALK3122 <sup>3</sup>	3-Lug Kit w/ Wrench	
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	J400, TB4	TCO43	Single Lug
				TCO63	Single Lug
	(1) 1/0-600 kcmil or (2) 1/0-250 kcmil Cu	K1200, TB6 (300-400A)	K1200, TB6 (300-400A)	TCO41 <sup>4</sup>	Single Lug
				TCO61	Single Lug
	(3) 3/0-500 kcmil Cu	K1200, TB8 (600-800A)	K1200, TB8 (600-800A)	TCO81A	Single Lug
	(3) 3/0-500 kcmil Cu	TK4V - Load end	TK4V - Load end	TCO91	Single Lug
	(4) 250-400 kcmil Cu	K1200 (1000-1200A)	K1200 (1000-1200A)	TCO121	Single Lug
	(4) 250-400 kcmil Cu	TK4V - Load end	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 <sup>6</sup>		

<sup>1</sup>Not suitable for 100 A aluminum conductor.

<sup>2</sup>Suitable for 500 kcmil copper for voltage drop considerations.

<sup>3</sup>Not UL listed, requires user supplied lug cover.

<sup>4</sup>Not UL listed.

<sup>5</sup>End cover supplied with 800A frame is used as lug cover.

<sup>6</sup>3-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 <sup>1</sup>	
		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 <sup>2</sup>	2-pole lug kit <sup>2</sup>	125-600	
				TCLK365 <sup>2</sup>	3-pole lug kit <sup>2</sup>	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	
		SK1200	(3) 3/0-500 kcmil	(3) 3/0-500 kcmil	TCALK3124	3-lug kit w/wrench	Cu 275-1200 Al 225-1100
					TCAL81	Single lug	300-800
					TCALK281	2-lug kit w/wrench	300-800
					TCALK381	3-lug kit w/wrench	300-800
	(4) 250-500 kcmil	(4) 250-500 kcmil	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 <sup>4</sup>	3-pole lug cover for upper (line) or lower (load) end <sup>4</sup>	-	
	SK1200	-	-	SK1LCK <sup>3</sup>	Lug cover for upper (line) or lower (load) end <sup>3</sup>	-	
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	-	
	SG600 / SK1200	-	-	SPCOV1C	For microEntelliGuard™ Trip Units Replacement cover	-	
				SPCOV3C	Cover with no access	-	

<sup>1</sup>Both copper and aluminum cables may not cover full ampacity range.

<sup>2</sup>With lug cover for line or load end.

<sup>3</sup>100kA, 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.

<sup>4</sup>Required 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

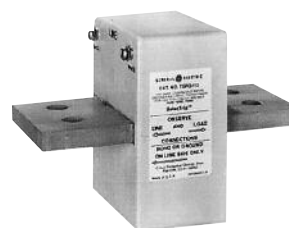


Power Distribution Lugs

#### 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

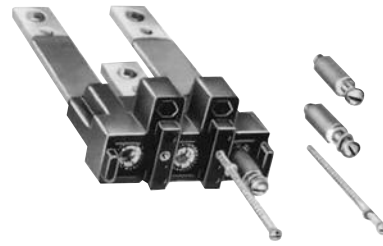
## External Accessories

### Plug-in Hardware

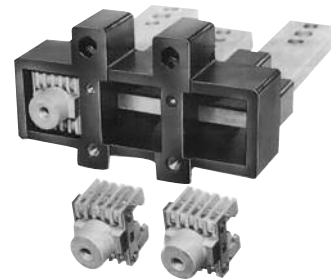
Each plug-in mounting base assembly includes all mounting hardware, studs, and male or female connectors for attachment to one end of breaker. Studs are of different length so by using proper combinations of PD1 and PD2 units, adequate electrical spacing will be assured between adjacent breakers, i.e., 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 <sup>1</sup>	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 <sup>2</sup>	LSL <sup>2</sup>	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 <sup>2</sup>	LSL <sup>2</sup>	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

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

<sup>2</sup>Vertical studs only for SG600 frame.

