

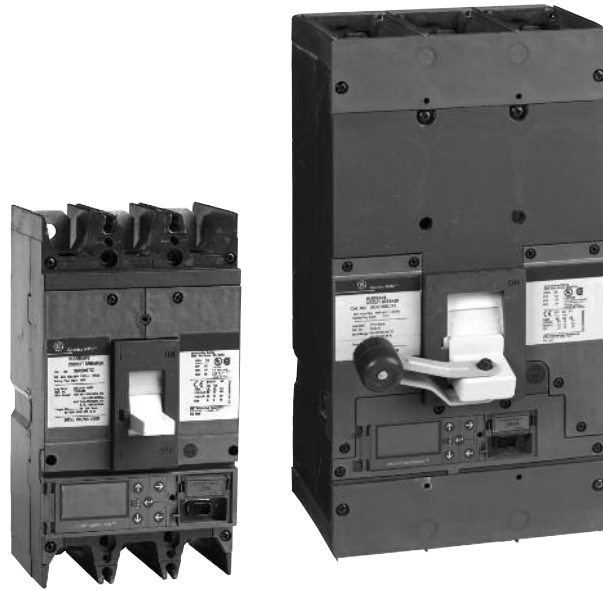
Features

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

Molded Case Circuit Breakers

Industrial Circuit Breakers

Section 6

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

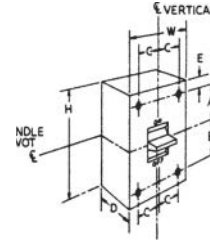
Industrial Circuit Breakers

Quick Reference Guide

15-1200A Circuit Breakers

Electronic Trip

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



SE 150

Spectra™ RMS Circuit Breakers UL/CSA Ratings

Solid-State with Interchangeable Trip Unit (Rating Plug)

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

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

²Not current-limiting circuit breaker.

³UL listed as HID (high intensity discharge).

⁴Includes microEntelliGuard™ Trip Units.

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

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

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



Molded Case Circuit Breakers

Industrial Circuit Breakers

Quick Reference Guide

15-1200A Circuit Breakers

Electronic Trip

Ratings do not apply to molded case switches

Section 6

IEC/JIS Ratings

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

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



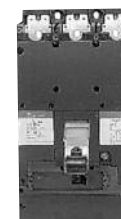
SE



SF



SG



SK



Molded Case Circuit Breakers

Section 6

Spectra™ RMS

SF250 Frame

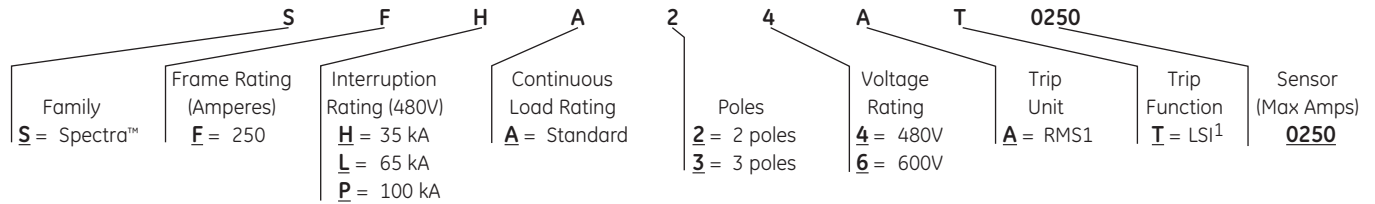
70-250A Circuit Breakers

Electronic Trip

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

Product Number Structure



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

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

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

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

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

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

²SFL, SFP UL current limiting.

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

All Spectra™ breakers marked CE.

