

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™ molded cases circuit breakers with *microEntelliGuard™* trip units can be part of an ArcWatch™ solution.

GE's ArcWatch™ system solution involves a combination of intelligent trip units and current limiting molded case circuit breakers to create a no compromise solution; safety and reliability together. Advances in zone selective interlocking (ZSI) and waveform recognition algorithms allow entire systems to be designed so that full selectivity and 100% instantaneous protection at calculated arcing current is possible. For most industrial systems, the GE ArcWatch™ solution will result in incident energy under 8 cal/cm² at 18".

Enabling ArcWatch™ means the proper coordination analysis techniques have been used to determine the necessary circuit breaker protection features and settings that allow full coordination in the given system. The circuit breaker must be set to match the results of the completed study.

For more information, check out www.geindustrial.com/ArcWatch (Publication DET-760) or contact your local sales representative.



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

Molded Case Circuit Breakers Industrial Circuit Breakers

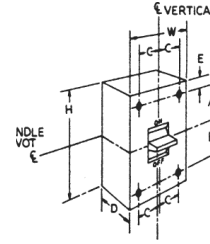
Section 6

Quick Reference Guide

15-1200A Circuit Breakers

Electronic Trip

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



SE 150

Spectra™ RMS Circuit Breakers UL/CSA Ratings

Solid-State with Interchangeable Trip Unit (Rating Plug)

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

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

²Not current-limiting circuit breaker.

³UL listed as HID (high intensity discharge).

⁴Includes microEntelliGuard™ Trip Units.

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

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

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



Molded Case Circuit Breakers

Industrial Circuit Breakers

Quick Reference Guide
 15-1200A Circuit Breakers
 Electronic Trip

Ratings do not apply to molded case switches

IEC/JIS Ratings

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

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



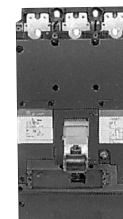
SE



SF



SG



SK



Molded Case Circuit Breakers

Section 6

Spectra™ RMS

SG600 Frame

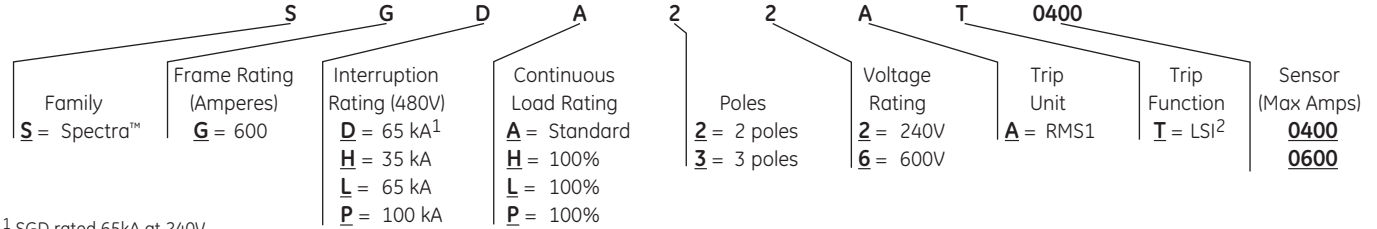
125-600A Circuit Breakers

Electronic Trip (Digital, Solid-State)

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

Product Number Structure



¹ SGD rated 65kA at 240V.

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

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

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

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

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

Rating Plug				Frame				Terminal Lugs for Front Connection (Cu/Al)		
Ampere Rating	Adjustable Instantaneous Trip Ampere Range		Product Number	Current Sensor	Poles	UL 489 IC @ 480 Vac			Product ⁴ Number	Wire Range
	Low	High				35kA	65kA	100kA		
						Product Number	Product Number	Product Number		
125	380	1275	SRPG400A125	400	2	SGHA26AT0400	SGLA26AT0400	SGPA26AT0400	2-pole lug kit	(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	(2) 2/0-500 Al or (1) 8-600 Al
300	905	3060	SRPG400A300							
350	1060	3570	SRPG400A350							
400	1210	4080	SRPG400A400							

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

Rating Plug				Frame				Terminal Lugs for Front Connection (Cu/Al)		
Ampere Rating	Adjustable Instantaneous Trip Ampere Range		Product Number	Current Sensor	Poles	UL 489 IC @ 480 Vac			Product ⁴ Number	Wire Range
	Low	High				35kA	65kA	100kA		
						Product Number	Product Number	Product Number		
250	765	2530	SRPG600A250	600	2	SGHA26AT0600	SGLA26AT0600	SGPA26AT0600	2-pole lug kit	(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	(2) 2/0-500 Al or (1) 8-600 Al
600	1830	6075	SRPG600A600							

³Rated 240 Vac max.

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

⁵SGL, SGP UL current limiting.



Molded Case Circuit Breakers

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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

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

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

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

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

²SGL, SGP UL current limiting.

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

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

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



Molded Case Circuit Breakers

Spectra™ RMS

SG600 Frame

125-600A Circuit Breakers

Electronic Trip (Digital, Solid-State)

Suitable for Reverse Feed

UL File E-11592, CSA LR 40350

Reference Publications

Available for download from www.geindustrial.com/publibrary

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

