

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 3-46 to 3-54. For Spectra® breakers with MicroVersaTrip® Plus or MicroVersaTrip® PM Trip Units refer to pages 3-57 through 3-65. Select field-mounted internal accessory product numbers, if required, on pages 3-70 and 3-71. Select field-mounted external accessory product numbers, if required, on pages 3-97 through 3-107 and pages 3-66 to 3-69 for Spectra® breakers with MicroVersaTrip® Plus or MicroVersaTrip® PM 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 3-73 through 3-75. 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 3-72. 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 MicroVersaTrip® Plus Trip Units and MicroVersaTrip® PM Trip Units are UL listed in File E-57253.

Accessories

Order accessories from the appropriate table:

- Thermal Magnetic Circuit Breakers, Magnetic Circuit Breakers, and Molded Case Switches¹—pages 3-39 to 3-45 and 3-97 to 3-107.
- Spectra® RMS Breakers—pages 3-70 to 3-71 and 3-97 to 3-107.
- Spectra® RMS Breakers with MicroVersaTrip® Plus Trip Units or MicroVersaTrip® PM Trip Units—pages 3-66 to 3-71, and 3-96 to 3-107.

¹Installation of accessories in molded case switches requires dummy trip; see page 3-45 for information. Dummy trip not required for Tri-Break® or Q-Line 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 3-101 and 3-102.

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	—	—	—	—



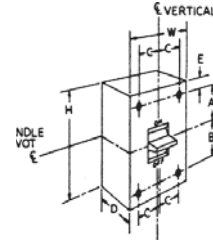
Molded Case Circuit Breakers Industrial Circuit Breakers

Quick Reference Guide

15-1200A Circuit Breakers

Electric Trip Spectra® RMS Breakers

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	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												65
SEH ²	2	480	65	25	—										
	3	600				100	65	—							
SEL	15-150	2	480	100	65				—						
		3	600			200	100	—							
SEP	15-150	2	480	200	100				—						
		3	600			25	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											100	
SFL	70-250	2	480	100	65	—									
		3	600				200	100	—						
SFP	70-250	2	480	200	100	—									
		3	600				25	25	—						
SG600 Current Limiting (UL File No. E-11592; CSA LR 40350)^{1, 3}															
SGH1 ^{2,4}	60-150	3	600	65	35	25	10.09 (256)	5.50 (140)	3.81 (97)	4.45 (113)	3.30 (84)	.91 (23)	1.18 (30)	15.85 lb/1	
SGD ²		125-400	2												
	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	100	65	65									
SGL1 ⁴	60-150	3	600				100	65	65						
SGP1 ⁴		3	600	200	100	65									
SGL4	125-400	2	600				100	65	65						
		3	600	200	100	65									
SGP4	125-400	2	600				200	100	65						
		3	600	100	65	65									
SGL6	250-600	2	600				100	65	65						
		3	600	200	100	65									
SGP6	250-600	2	600				200	100	65						
		3	600	25	25	—									
SK1200 (UL File No. E-11592; CSA LR 40350)^{1, 3}															
SKH8	300-800	2	600	65	50	25	15.50 (394)	8.25 (210)	5.50 (140)	8.56 (217)	5.69 (145)	1.38 (35)	.62 (16)	47.6 lb/1	
		3													600
SKL8	300-800	2	600	100	65	42									
		3					600	200	100	65					
SKP8	300-800	2	600	200	100	65									
		3					600	65	50	25					
SKH12	600-1200	2	600	65	50	25									
		3					600	100	65	42					
SKL12	600-1200	2	600	100	65	42									
		3					600	200	100	65					
SKP12	600-1200	2	600	200	100	65									
		3					600	25	25	—					

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

² Not current-limiting circuit breaker.

³ Includes MicroVersaTrip Plus™ Trip Units and MicroVersaTrip PM™ Trip Units.

⁴ MicroVersaTrip Plus™ Trip Units and MicroVersaTrip PM™ Trip Units only.

⁵ Add 1.76 inches (45 mm) to each end with lugs and lug cover installed.

⁶ Add 4.00 inches (101 mm) to upper end for SKP (100 KAIC-480V) lug cover.



Publications and Reference: See Section 22 for a complete list of additional product-related publications

Molded Case Circuit Breakers Industrial Circuit Breakers

Section 3

Quick Reference Guide

15-1200A Circuit Breakers

Electric Trip Spectra® RMS Breakers

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	—	—	—	—	—	—	—	—	—	—	—	—
SEH	15-32	2	65	33	15	10	—	—	—	—	65	15	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—
SEL	15-32	2	100	50	20	15	—	—	—	—	100	20	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—
SEP	15-32	2	200	100	20	20	—	—	—	—	200	20	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—

SE150 Current Limiting, 40-160A

SED	40-160	2	18	9	14	7	—	—	—	—	18	14	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—
SEH	40-160	2	65	33	35	17	—	—	—	—	65	25	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—
SEL	40-160	2	100	50	65	33	—	—	—	—	100	65	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—
SEP	40-160	2	200	100	100	50	—	—	—	—	200	100	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—

SF250 Current Limiting

SFH	70-250	2	65	33	35	17	—	—	—	—	65	25	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—
SFL	70-250	2	100	50	65	33	—	—	—	—	100	65	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—
SFP	70-250	2	200	100	100	50	—	—	—	—	200	100	—	—
		3	—	—	—	—	—	—	—	—	—	—	—	—

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	3	65	33	25	13	—	—	—	—	65	25	—	—
			—	—	—	—	—	—	—	—	—	—	—	—
SGL4	125-400	3	100	50	65	33	—	—	—	—	100	65	—	—
			—	—	—	—	—	—	—	—	—	—	—	—
SGP4	125-400	3	200	100	100	50	—	—	—	—	200	100	—	—
			—	—	—	—	—	—	—	—	—	—	—	—
SGH6	250-600	3	65	33	25	13	—	—	—	—	65	25	—	—
			—	—	—	—	—	—	—	—	—	—	—	—
SGL6	250-600	3	100	50	65	33	—	—	—	—	100	65	—	—
			—	—	—	—	—	—	—	—	—	—	—	—
SGP6	250-600	3	200	100	100	50	—	—	—	—	200	100	—	—
			—	—	—	—	—	—	—	—	—	—	—	—

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	—	—	—	—	—	—	—	—	—	—	—	—

¹MicroVersaTrip Plus™ trip system only.



SE



SF



SG



SK



Molded Case Circuit Breakers Industrial Circuit Breakers

70-250A Circuit Breakers

Electronic Trip

Spectra® RMS

SF250 Line Circuit Breakers

SF250 Line, Suitable for Reverse Feed, UL File E-11592, CSA LR 40350

SFH; 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	List Price GO-135S	UL 489 IC @480 Vac			Product Number	List Price GO-135S	Wire Range
	Low	High			Current Sensor	35kA				
						Product Number	List Price GO-135S			
70	205	700	SRPF250A70	\$106.00	250	SFHA36AT0250	\$1441.00	TCAL29	\$8.00	8-350 Cu 8-350 Al
90	265	900	SRPF250A90	\$106.00						
100	295	1000	SRPF250A100	\$106.00						
110	325	1100	SRPF250A110	\$106.00						
125	370	1250	SRPF250A125	\$106.00						
150	440	1500	SRPF250A150	\$106.00						
175	515	1750	SRPF250A175	\$106.00						
200	590	2000	SRPF250A200	\$106.00						
225	665	2250	SRPF250A225	\$106.00						
250	736	2500	SRPF250A250	\$106.00						

SF250 Line, Suitable for Reverse Feed, UL File E-11592, CSA LR 40350

SFL, SFP¹; 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	List Price GO-135S	UL 489 IC @480 Vac			UL 489 IC @480 Vac		Product Number	List Price GO-135S	Wire Range
	Low	High			Current Sensor	65kA		100kA				
						Product Number	List Price GO-135S	Product Number	List Price GO-135S			
70	205	700	SRPF250A70	\$106.00	250	SFLA36AT0250	\$2631.00	SFPA36AT0250	\$3490.00	TCAL29	\$8.00	8-350 Cu 8-350 Al
90	265	900	SRPF250A90	\$106.00								
100	295	1000	SRPF250A100	\$106.00								
110	325	1100	SRPF250A110	\$106.00								
125	370	1250	SRPF250A125	\$106.00								
150	440	1500	SRPF250A150	\$106.00								
175	515	1750	SRPF250A175	\$106.00								
200	590	2000	SRPF250A200	\$106.00								
225	665	2250	SRPF250A225	\$106.00								
250	736	2500	SRPF250A250	\$106.00								

¹SFL, SFP UL current limiting.

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

All Spectra® breakers marked CE.

SF250 Reference Publications

Plug-in Mounting Base	GEH-4610
STDA Flange Handle	GEH-5314
Rating Plug	GEH-5549
Shunt Trip and Undervoltage Release	GEH-5551
Spectra® F-Frame Installation Instruction	GEH-5591
Auxiliary Switch and Bell Alarm	GEH-5593
TDR Operating Mechanism	GEH-5609
TDM Operating Mechanism	GEH-5611
Motor Operator	GEH-5613
Mechanical Interlock	GEH-5615
STDA Operating Mechanism	GEH-5684
Cable Operator Mechanism	GEH-6290
Lug	GEJ-3045
Padlocking Device - Standard	GEJ-3056
Back Connected Studs	GEJ-3635
SF250 Outline Drawing	168D1103SH1



Publications and Reference: See Section 22 for a complete list of additional product-related publications