

# Molded Case Circuit Breakers Industrial Circuit Breakers

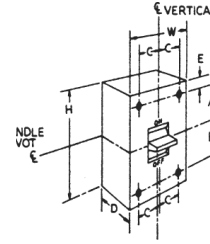
## Section 6

### 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>	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																
<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	70-250	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	600	65	35	25																
SGH4 <sup>2</sup>	125-400	2	600	65	35	25																
		3	600	65	35	25																
SGH6 <sup>2</sup>	250-600	2	600	65	35	25																
		3	600	65	35	25																
SGL1 <sup>5</sup>	60-150	3	600	100	65	65																
		3	600	200	100	65																
SGP1 <sup>5</sup>	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																
<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	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	—																

<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.



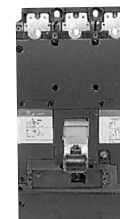
SE



SF



SG



SK



## 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	TKMA2XXX	SKHA	50kA	2	600V	SKHA26AT1200	SRPK1200AXXX	(2) TCAL125
	30kA	1200A	interchangeable	3	600V	TKMA3XXX	SKHA	50kA	3	600V	SKHA36AT1200	SRPK1200AXXX	(3) TCAL125
THKMA	35kA	1200A	interchangeable	2	600V	THKMA2XXX	SKHA	50kA	2	600V	SKHA26AT1200	SRPK1200AXXX	(2) TCAL125
	35kA	1200A	interchangeable	3	600V	THKMA3XXX	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

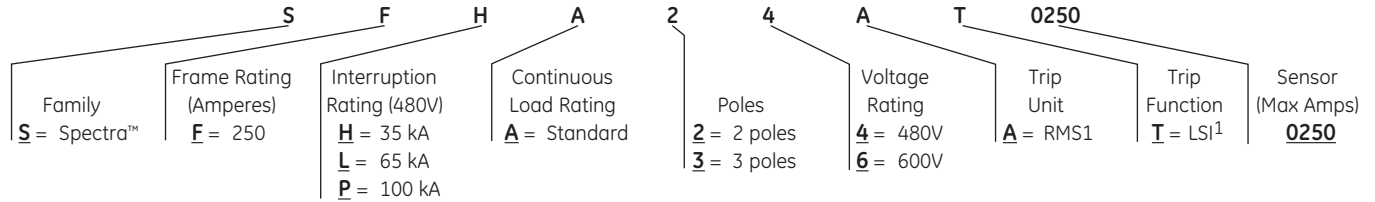


# Molded Case Circuit Breakers

## 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	UL 489 IC @ 480 Vac			Product Number	Wire Range	
	Low	High		Current Sensor	35kA Product Number	65kA Product Number			100kA Product Number
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	UL 489 IC @ 480 Vac			Product Number	Wire Range	
	Low	High		Current Sensor	35kA Product Number	65kA Product Number			100kA Product Number
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 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

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

### SE150 Add-on 3-Pole Limiters

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

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

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

<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).

