

Controls

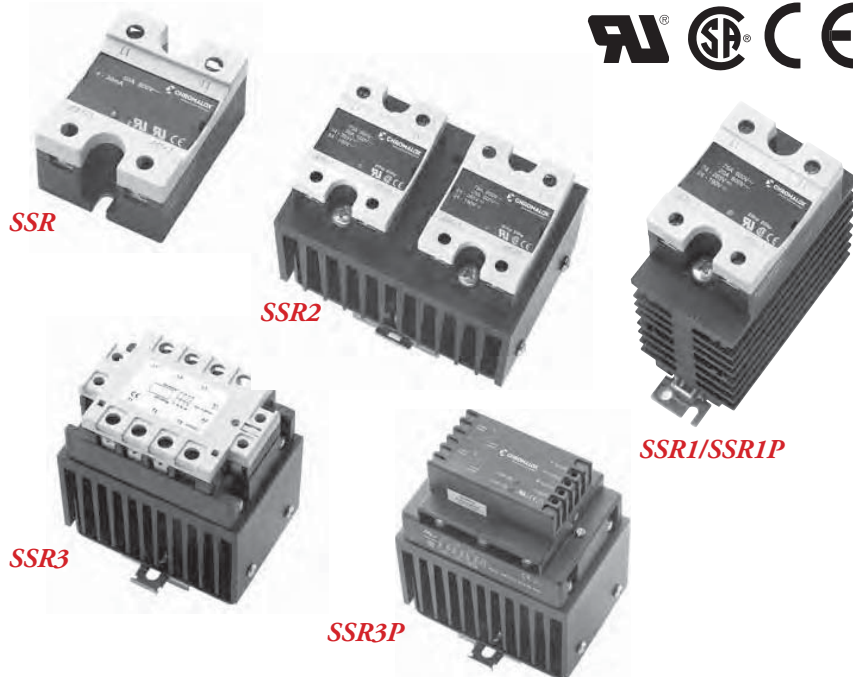
SSR Series

Power Controllers

SSR, SSR1, SSR1P,
SSR2, SSR3 & SSR3P



- Conservative Thermal Design
- 15 - 75 Amp Ratings
- 42-600 VAC Operational Voltage
- Single and Three Phase Offering
- Zero Cross and Phase Angle Fired
- Control Inputs:
4.5-32 VDC
24-265 VAC/24-190 VDC
4-20/0-20 mA
- Din Rail Mount on SSR1, SSR1P, SSR2, SSR3 and SSR3P
- UL Recognized and CSA Approved
- CE Marked
- LED Status Indicator
- IP20 Touch Protection Cover



Description

The Chromalox SSR family line of solid state relays are an ideal low cost power control solution for furnace/oven, heat treating, plastics, food, semiconductor, lighting, and drying applications just to name a few.

The SSR line of power controllers are a complete package. They feature a rugged design, touch safe exterior, back-to-back SCR design, ambient ratings of 40°C, and are DIN rail mount.

The benefits from the Chromalox SSR line are quick and low cost installation, reduced panel space, increased heater life due to fast cycling, and easy replacements for mechanical contactors.

When using any of the SSR's to switch greater than 65 amps, 4 awg wire is required. Lug PN0013-40282 (PCN 389984) can accept a 4 awg wire and can be ordered.

SSR Series

These units are rated for 25, 50 and 75 amps with operational voltages up to 600 VAC. The series is zero-fired single phase control with 4.5 - 32 VDC and 24 - 265 VAC / 24 - 190 VDC control signals.

SSR1, SSR2 and SSR3 Series

These units are rated for 10, 15, 25, 35, 40, 50, 70 and 75 amps with operational voltages up to 600 VAC.

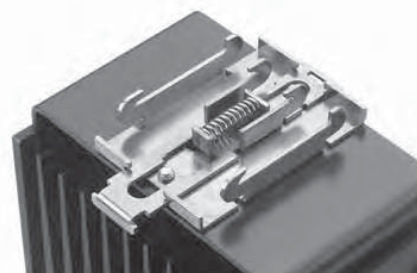
The series is zero-fired single phase, three-phase two leg and three-phase three leg control. The control signal can be 4.5 - 32 VDC, or 24 - 265 VAC / 24 - 190 VDC.

SSR1P and SSR3P Series

These units are rated for 15, 25, 35, 40, 50 and 70 amps with operational voltages up to 600 VAC. The series is phase-angle fired single-phase and three-phase three leg design. The control signal can be 4 - 20 mA or 0 - 20 mA.

Applications:

- Mercury Relay Replacement
- Electric Ovens
- Plastics Machinery
- Packaging Equipment
- Food and Beverage Processing Equipment
- Platen Heater
- Extruders
- Resistance Heating
- Contactor Replacement



DIN Rail Mount

SCR COMPONENTS

Controls

SSR Series

Power Controllers
SSR, SSR1, SSR1P,
SSR2, SSR3 & SSR3P
(cont'd.)

Heat Sink Mounting Dimensions

Heat Sink w/o Fan	Amps									
Compatible solid state relay	15	25	30	35	40	45	50	65	70	75
SSR1/SSR1P	-	Fig. B	-	Fig. A	-	-	Fig. A	-	Fig. C	Fig. C
SSR2	-	Fig. C	-	-	-	-	-	-	-	-
SSR3	Fig. C	Fig. C	Fig. C	-	-	-	-	-	-	-
SSR3P	Fig. C	-	-	-	-	-	-	-	-	-
Heat Sink w/Fan	Amps									
Compatible solid state relay	15	25	30	35	40	45	50	65	70	75
SSR1/SSR1P	-	-	-	-	-	-	-	-	-	-
SSR2	-	-	-	-	-	-	Fig. D	-	-	Fig. D
SSR3	-	-	-	-	-	Fig. E	-	Fig. E	-	-
SSR3P	-	Fig. E	-	-	Fig. E	-	-	-	-	-

	Dimensions		
	H/in. (mm)	W/in. (mm)	D/in. (mm)
Fig. A	4.05 (103)	3.54 (90)	4.29 (109)
Fig. B	4.05 (103)	1.77 (45)	4.29 (109)
Fig. C	3.22 (82)	4.64 (118)	4.80 (122)
Fig. D	5.70 (145)	4.80 (122)	4.92 (125)
Fig. E	5.70 (145)	4.80 (122)	4.92 (125)
Fig. F	2.25 (57)	1.75 (44)	1.125 (28)

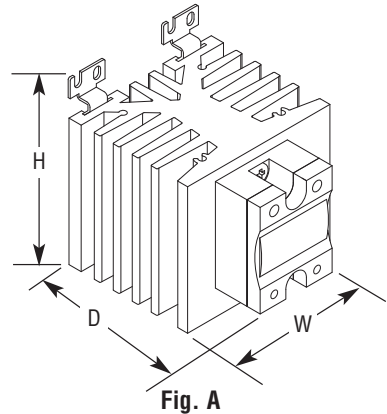


Fig. A

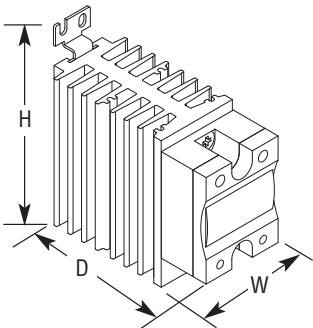


Fig. B

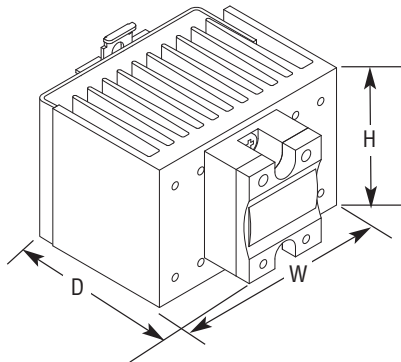


Fig. C

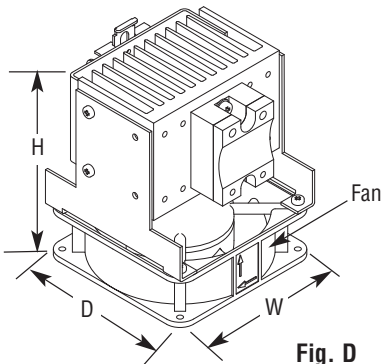


Fig. D

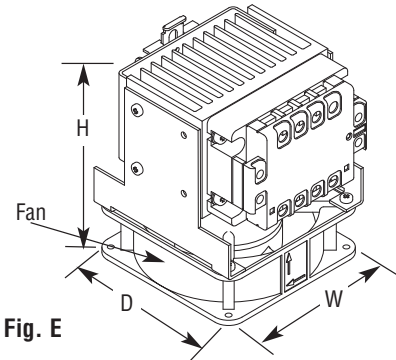


Fig. E

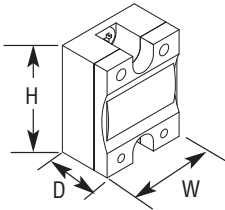


Fig. F
(SSR without heatsink)

Controls

SSR Series

Power Controllers

SSR, SSR1, SSR1P,
SSR2, SSR3 & SSR3P
(cont'd.)

Ordering Information

Complete the model number using the matrix provided.

In Stock

Model	PCN
SSR-251	305744
SSR-501	305752
SSR-751	305760
SSR-252	305779
SSR-502	305787
SSR-752	305795
SSR1-251	305808
SSR1-351	305824
SSR1-501	305840
SSR1-751	305867
SSR1-502	305859
SSR1P-2511	305883
SSR1P-3511	305904
SSR1P-2521	305891
SSR1P-5021	305939

Accessories

Solid State Relay Driver LM-2	
Model	PCN
0135-28144	341260
Lug for Loads greater than 65 Amps	
Model	PCN
0013-40282	389984
Vari-Watt Power Controller	
Model	PCN
0113-10237	339768

Note: For use with SSR, SSR1 and SSR2 Series

MODEL Solid State Relay Power Controller

SSR

The SSR series are industrial single-phase relays for switching resistive loads. Chromalox SSR series offers the following standard features: Zero-voltage turn-on, LED status indicator, IP20 touch protection clip-on cover, two input ranges, operational rating up to 600 VAC, self-lifting terminals, dv/dt protection, CE mark, UL and CSA approvals.

CODE	Current @ 25°C (77°F) Ambient, 42 - 600 VAC	Minimum Heat Sink Required:
25	25 Amp	R0 = 2.5°C/Watt
50	50 Amp	R0 = 0.95°C/Watt
75	75 Amp	R0 = 0.80°C/Watt

CODE Input Control Voltage

1	4.5 - 32 VDC
2	24 - 265 VAC / 24 - 190 VDC

SSR 25 1 Typical Model Number

Note: See SSR Accessories Table for additional options. Thermstrate 0029-00640 (PCN 389976)

MODEL Single-Phase Solid State Relay with Heat Sink

SSR1

The SSR1 series are industrial single-phase relays mounted on heat sinks for switching high current resistive loads. Chromalox SSR1 series offers the following standard features: 40°C Ambient Rating, Zero-voltage turn-on, LED status indicator, IP20 touch protection clip-on cover, two input ranges, operational rating up to 600 VAC, self-lifting terminals, dv/dt protection, DIN rail mount, CE mark, UL and CSA approvals.

CODE	Current @ 40°C (104°F) Ambient, 42 - 600 VAC
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25	25 Amp
35	35 Amp
50	50 Amp
75	75 Amp

CODE Input Control Voltage

1	4.5 - 32 VDC
2	24 - 265 VAC / 24 - 190 VDC

SSR1 25 1 Typical Model Number

Note: See SSR Accessories Table for additional options.

MODEL Single-Phase, Phase Fired Solid State Relay with Heat Sink

SSR1P

The SSR1P series are industrial single-phase relays mounted on heat sinks for switching high current resistive and inductive loads. Chromalox SSR1P series offers the following standard features: 40°C Ambient Rating, Phase-Angle control, variable intensity LED-indication according to the input current, IP20 touch protection clip-on cover, self-lifting terminals, dv/dt protection, integral snubber network, DIN rail mount, CE mark, UL and CSA approvals.

CODE	Current @ 40°C (104°F) Ambient
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25	25 Amp
35	35 Amp
50	50 Amp
70	70 Amp

CODE Voltage

1	120 - 230 VAC
2	410 - 600 VAC

CODE Input Control Signal

1	4 - 20 mA
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SSR1P 25 1 1 Typical Model Number

Note: See SSR Accessories for additional options.

SCR COMPONENTS

Controls

SSR Series

Power Controllers

SSR, SSR1, SSR1P,
SSR2, SSR3 & SSR3P
(cont'd.)

Ordering Information

Complete the model number using the matrix provided.

In Stock

Model	PCN
SSR2-251	339282
SSR2-501	339303
SSR2-751	339320
SSR2-252	339290
SSR2-502	339311
SSR3-251	339362
SSR3-301	339389
SSR3-651	339426
SSR3-302	339397
SSR3-652	339434

MODEL Three Phase 2-Leg Solid State Relay with Heat Sink

SSR2

The SSR2 series are industrial three-phase 2-leg relays mounted on heat sinks for switching high current resistive loads. Chromalox SSR2 series offers the following standard features: 40°C Ambient Rating, Zero-voltage turn-on, LED status indicator, IP20 touch protection clip-on cover, two input ranges, operational rating up to 600 VAC, self-lifting terminals, dv/dt protection, DIN rail mount, CE mark, UL and CSA approvals.

CODE Current @ 40°C (104°F) Ambient, 42 - 600 VAC

25	25 Amp
50	50 Amp Fan Cooled (120 VAC Required for Fan)
75	75 Amp Fan Cooled (120 VAC Required for Fan)

CODE Input Control Voltage

1	4.5 - 32 VDC
2	24 - 265 VAC / 24 - 190 VDC

SSR2 25 1 Typical Model Number

Note: See SSR Accessories Table on page H-86 for additional options.

MODEL Three-Phase 3-Leg Solid State Relay with Heat Sink

SSR3

The SSR3 series are industrial three-phase 3-leg relays mounted on heat sinks for switching resistive loads. Chromalox SSR3 series offers the following standard features: 40°C Ambient Rating, Zero-voltage turn-on, LED status indicator, IP10 back-of-hand protection, 2 input ranges, operational rating up to 600 VAC, self-lifting terminals, dv/dt protection, DIN rail mount, CE mark, UL and CSA approvals.

CODE Current @ 40°C (104°F) Ambient, 42 - 600 VAC

15	15 Amp
25	25 Amp
30	30 Amp
45	45 Amp Fan Cooled (120 VAC Required for Fan)
65	65 Amp Fan Cooled (120 VAC Required for Fan)

CODE Input Control Voltage

1	4 - 32 VDC
2	24 - 275 VAC / 24 - 50 VDC

SSR3 25 1 Typical Model Number

Note: See SSR Accessories Table on page H-86 for additional options.

Controls

SSR Series

Power Controllers

SSR, SSR1, SSR1P,
SSR2, SSR3 & SSR3P

(cont'd.)

Ordering Information

Complete the model number using the matrix provided.

In Stock

Model	PCN
SSR3P-1521	339477
SSR3P-2511	339450
SSR3P-2521	339485
SSR3P-4011	339469
SSR3P-4021	339493

MODEL	Three-Phase, 3-Leg, Phase Fired Solid State Relay with Heat Sink			
SSR3P	The SSR3P series are industrial three-phase 3-leg relays mounted on heat sinks for switching high current resistive and inductive loads. Chromalox SSR3P series offers the following standard features: 40°C Ambient Rating, phase-angle controlled soft-start, LED status indicator for line ON and load ON, two input ranges, varistor protection, DIN rail mount, CE mark, UL and CSA approvals.			
	CODE	Current @ 40°C (104°F) Ambient		
	15	15 Amp		
	25	25 Amp Fan Cooled (120 VAC Required for Fan)		
	40	40 Amp Fan Cooled (120 VAC Required for Fan)		
	CODE	Voltage		
	1	120 - 230 VAC		
	2	277 - 480 VAC		
	CODE	Input Control Voltage		
	1	4 - 20 mA / 0-20 mA		
SSR3P	25	1	1	Typical Model Number

Note:

SSR3P requires external power supply. See SSR Accessories Table below for additional options.

SSR Accessories Table

SSR Series	PCN									
	15 Amps	25 Amps	30 Amps	35 Amps	40 Amps	45 Amps	50 Amps	65 Amps	70 Amps	75 Amps
SSR Thermstrate (Thermal Conductor)	0029-00640	0029-00640	0029-00640	0029-00640	0029-00640	0029-00640	0029-00640	0029-00640	0029-00640	0029-00640
SSR3P Power Supply	PCN 339509	PCN 339509			PCN 339509					