

SSR2 Solid State Relay with Heat Sink

- Zero switching AC Solid State Relay
- Direct copper bonding (DCB) technology
- LED indication
- Clip-on IP 20 protection cover
- Self-lifting terminals
- Housing free of moulding mass
- Operational ratings up to 75 AACrms and 600 VAC
- Opto-insulation: > 4000 VACrms



Order Table

MODEL

SSR2 Three Phase 2-Leg Solid State Relay with Heat Sink

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 600Vac, self-lifting terminals, dv/dt protection, DIN rail mount, CE mark, UL Recognized and CSA approvals.

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

25	25 Amp
50	50 Amp Fan Cooled
75	75 Amp Fan Cooled

CODE Input Control Voltage

1	4.5 - 32 Vdc
2	24 - 265 Vac or 24 - 190 Vdc

SSR2 25 1 Typical Model Number

Specifications

Output Specifications

Switching Mode.....Zero Switching

Rated Operational Current

25 AACrms.....	SSR2-25
50 AACrms.....	SSR2-50
75 AACrms.....	SSR2-75

Operational Voltage Range42 to 660 VACrms

Non-Rep. Peak Voltage.....≥ 1400 V_p

Zero Voltage Turn-On.....≤ 15 V

Operational Frequency Range.....45 to 65 Hz

Power Factor.....> 0.5 @ 600 VACrms

Approvals

UL Recognized, CSA

CE-MarkingYes **

** Heatsink must be connected to ground

Specifications (cont'd.)

Input Specifications

Control Voltage Range	
Code 1	4.5 - 32 VDC
Code 2	24 - 265 VAC
	24 - 190 VDC
Pick-Up Voltage	
Code 1	4.0 VDC
Code 2	4.0 VAC
Drop Out Voltage	
Code 1	2.0 VDC
Code 2	2.0 VAC
Input current	
Code 1: 5 VDC	9 mA
24 VDC	12 mA
Code 2: 5 VAC	10 mA
24 VAC	18 mA

Response Time Pick-Up Max. ≤ 1 cycle

Response Time Drop-Out Max. ≤ 2.5 cycle

Insulation

Rated insulation voltage ≥ 4000 VACrms
Input to output

Rated insulation voltage ≥ 4000 VACrms
Output to case

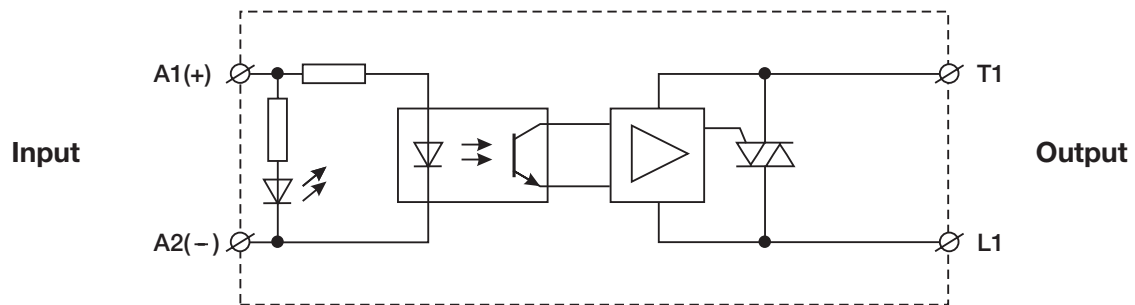
Thermal Specifications (See Rating Curves)

	SSR2-25	SSR2-50	SSR2-75
Operating Temperature Range	-20° to 70°C	-20° to 70°C	-20° to 70°C
Storage Temperature Range	-40° to 100°C	-40° to 100°C	-40° to 100°C
Junction Temperature	≤ 125°C	≤ 125°C	≤ 125°C

Output Specifications

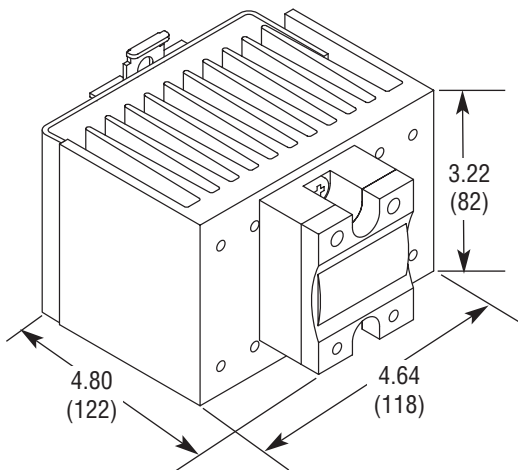
	SSR2-25	SSR2-50	SSR2-75
Rated operational current @ 40°C	25 Arms	50 Arms	75 Arms
Min. Operational Current	150 mA	150 mA	150 mA
Rep. Overload Current t=1 s	< 55 AACrms	< 125 AACrms	< 150 AACrms
Non-rep. Surge Current t=10 ms	250 A _p	600 A _p	1000 A _p
Off-State Leakage Current @ Rated Voltage and Frequency	< 3 mArms	< 3 mArms	< 3 mArms
I ² t for Fusing t=1-10 ms	< 310 A ² s	< 1800 A ² s	< 6600 A ² s
Critical di/dt	≥ 100 A/μs	≥ 100 A/μs	≥ 100 A/μs
On-State Voltage Drop @ Rated Current	1.6 Vrms	1.6 Vrms	1.6 Vrms
Critical dV/dt Commutating	500 V/μs	500 V/μs	500 V/μs
Critical dV/dt Off-State Min.	500 V/μs	500 V/μs	500 V/μs
Zero Crossing Detection	Yes	Yes	Yes

Wiring Diagram

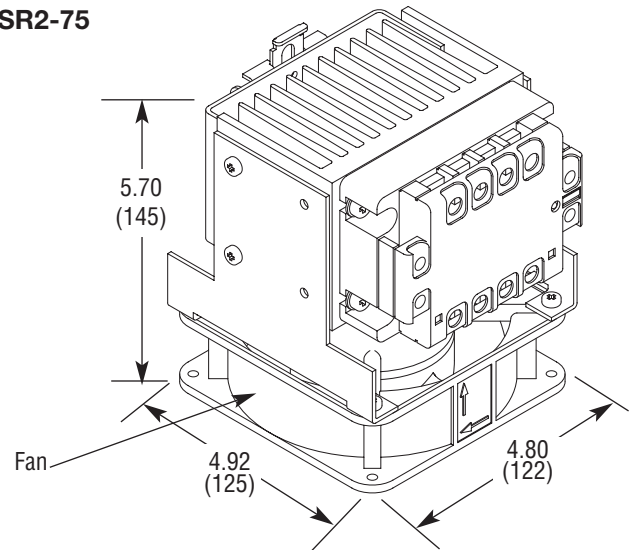


Dimensions

SSR2-25



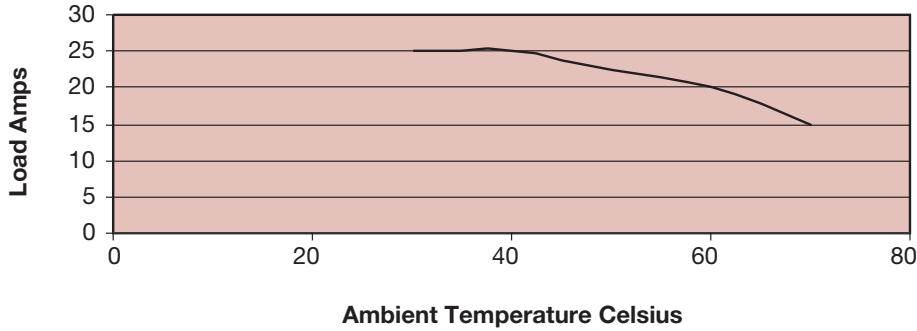
SSR2-50 SSR2-75



Note: Dimensions in mm (in.)

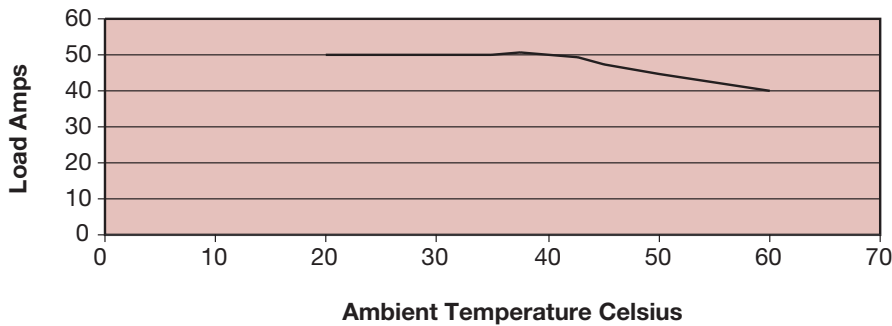
Specification Data Sheet

Heatsink (Load Current Versus Ambient Temperature)



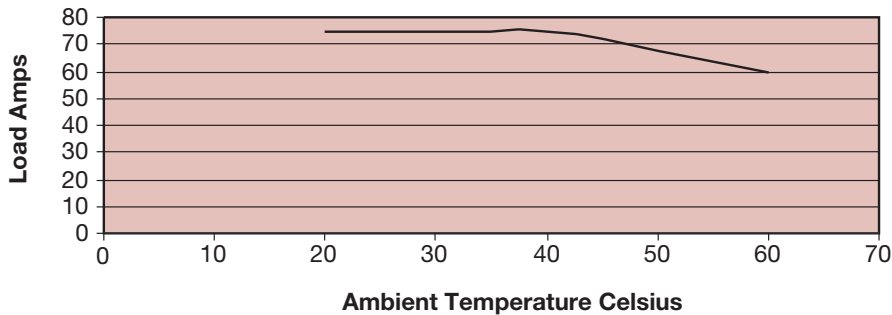
Ambient Temp. °C	Amps
30	25
40	25
50	22.5
60	20
70	15

Derating Curve SSR2-25



Ambient Temp. °C	Amps
20	50
30	50
40	50
50	45
60	40

Derating Curve SSR2-50



Ambient Temp. °C	Amps
20	75
30	75
40	75
50	67.5
60	60

Derating Curve SSR2-75