



SV Series – Solid State Relay

Panel Mounted, Single Phase, Solid State Relay

CONTINENTAL INDUSTRIES INTERNATIONAL



- 10–75 amps, 330Vac max.
- 50–75 amps, 660Vac max.
- Single phase, zero crossing
- LED input indicator
- Clear safety cover included
- Panel mount with optional heatsink available
- DC and AC input versions
- Superior surge survival

SPECIFICATIONS:

Dimensions inches (mm): 2.25 (57.1) H x 1.75 (44.5) W x 1.37 (34.8) D when mounted on a vertical panel.

Load type : Resistive

Inputs :

SVDA–DC Input

DC Logic: 10–25A ON $\geq 4\text{Vdc}/5.4\text{mA}$, 32Vdc/10mA max. current limited
50–75A ON $\geq 4\text{Vdc}/3.5\text{mA}$, 32Vdc/8mA max. current limited
OFF $\leq 1\text{Vdc}$ * See ordering code

SVAA–AC Input

AC Logic: ON $\geq 100\text{V}$, 280Vac max.
OFF $\leq 2\text{mA}$, 10k Ω impedance

Current ratings : 10A, 25A, 50A and 75A

Voltage ratings : 3Vxx rating options*: 24V to 330V max.;
6Vxx rating options*: 24V to 660V max.

Operating temperature : 0°C to 40°C (up to 80°C with derating)

Peak blocking voltage: 800V, impulse (300Vac), 1200 (600Vac)

Offstate dVdT:

300V	600V
10A–750 V/ μsec	50A–500 V/ μsec
25A–750 V/ μsec	75A–500 V/ μsec
50A–1000 V/ μsec	
75A–1000 V/ μsec	

ORDERING CODES:

Model	Rating

Model
SVDA 4–32 Vdc input, AC output
SVAA 100–280 Vac input, AC output

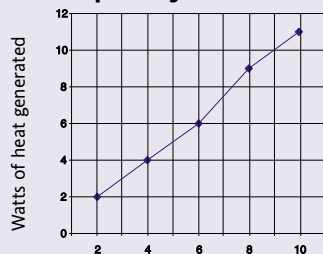
Rating
3V10 10 amps, 300 volts
3V25 25 amps, 300 volts
3V50 50 amps, 300 volts
3V75 75 amps, 300 volts
6V50 50 amps, 600 volts
6V75 75 amps, 600 volts

Heatsinks and Accessories (mm)	
S505-heatsk-2.1	101.6 H x 105.3 W x 26.2 D
S505-heatsk-1.5	76.2 H x 111.8 W x 66.8 D
S505-heatsk-1.0	139.7 H x 111.8 W x 66.8 D
S505-heatsk-DIN	87H x 60W x 71.1D
Cover Safety-000	Clear Cover
Thermal-pad-005	5 pack of thermal pads
Thermal-pad-025	25 pack of thermal pads

Engineering Note: All units must be correctly installed on an appropriate heatsink, with a thermal transfer gel or pad, in order to dissipate the heat generated.

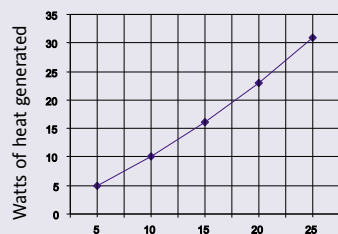
SOLID STATE RELAY DERATING CURVES

10 Amp Relay



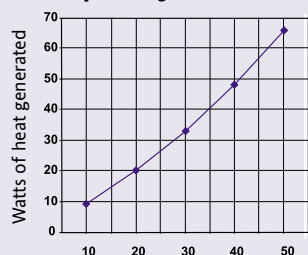
RMS on-state current (amps)
Recommended heatsink: S505-heatsk-2.1 or
S505-heatsk-din (DIN rail mounted)

25 Amp Relay



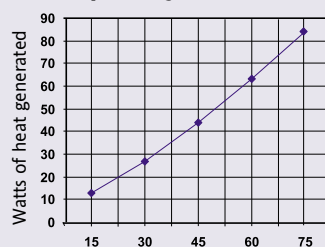
RMS on-state current (amps)
Recommended heatsink: S505-heatsk-1.5 or
S505-heatsk-din (DIN rail mounted)

50 Amp Relay



RMS on-state current (amps)
Recommended heatsink: S505-heatsk-1.0

75 Amp Relay



RMS on-state current (amps)
Recommended heatsink: S505-heatsk-1.0

For more information about heatsinks or
heat dissipation, please visit:
www.ciicontrols.com/library/ssr

Superior Surge Survival – (three tier approach)

- **Attenuate** - New, more rugged, internal snubber circuit to attenuate most industrial noise.
- **Block** - HIGH noise immunity circuit. By using a high Dv/Dt capability and a new high “blocking voltage”, the SV model is more rugged. Most relays only have a 600 volt blocking voltage. Using an external MOV (at 700 volts) offers no protection to most solid state relays which will fail when subjected to a voltage spike. The SV model is 33% better (800 volts) so an external MOV is well below the range of the SSR.
- **Pass** - Fast Turn-on. By using a new, fast responding circuit, the SV can survive a high energy, non-repetitive power line surge and then continue operating normally. Other relays may fail in these installations.

Superior DC Activated Models –

- Wider range of acceptable DC logic inputs: 4-32 Vdc.
- “Current Limited” input to easily integrate with PLC™, PC, or other externally powered circuits.

Superior AC Activated Models –

- Leakage immunity. Most “triac” sources use a .022 microfarad snubber that leaks current. Therefore, ac activated solid state relays typically require a burden resistor across the input circuit adding cost and installation time. The SV model does NOT need a burden resistor when used in these applications.
- Linear control. Most AC activated relays have a turn-on and turn-off delay built-in. When used as high-speed pulsing control (such as with temperature controllers) the other SSR control response is irregular for the first 16% and last 16% of the duty cycle. This error may impact start up control, overshoot control, and other parts of the control operation. The new SV relays provide linear response so you receive predictable control from 1-100% output in your application.

ACCESSORIES:

High Speed I²T Fuse and Fuse Holder Selector Chart:

Phase	Current Fuse	Replacement Fuse	Fuse and Holder	Fuse Holder Dimensions H x W x D inches (mm)
1	10A	FUSE-EXT-14-010	FUSE-KIT-14-010	4.17 (106) X 0.98 (26) X 3.19 (81)
1	25A	FUSE-EXT-14-025	FUSE-KIT-14-025	4.17 (106) X 0.98 (26) X 3.19 (81)
3	30A	FUSE-EXT-14-030	FUSE-KIT-14-330	4.17 (106) X 3.07 (78) X 3.19 (81)
1	40A	FUSE-EXT-14-040	FUSE-KIT-14-040	4.17 (106) X 0.98 (26) X 3.19 (81)
1	50A	FUSE-EXT-14-050	FUSE-KIT-14-050	4.17 (106) X 0.98 (26) X 3.19 (81)
1	75A	FUSE-EXT-22-075	FUSE-KIT-22-075	5.51 (140) X 1.38 (35) X 3.46 (88)
1	100A	FUSE-EXT-22-100	FUSE-KIT-22-100	5.51 (140) X 1.38 (35) X 3.46 (88)
FUSE HOLDERS ONLY				
1	10-50A		FUSE-HLDR-14-01	4.17 (106) X 0.98 (26) X 3.19 (81)
1	75-100A		FUSE-HLDR-22-01	5.51 (140) X 1.38 (35) X 3.46 (88)
3	30A		FUSE-HLDR-14-03	4.17 (106) X 3.07 (78) X 3.19 (81)

I²T fuses protect the relay only. Customer to supply additional circuit breaker or fuses in accordance with local electrical codes.

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