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# DUAL RELAYS DC INPUT AC OUTPUT

## S2DA-120-..., S2DA-280-..., S2DA-480-..., S2DA-660-... SERIES

### Features

- INPUT: 4-15, 15-32 or 4-32 DC Control
- OUTPUT: Direct Copper Bonded Back-To-Back SCR
- 120/280, 480, 660 VAC operating voltage
- Opto Isolation 4000 VAC Input to output
- Zero Voltage Turn-on and Random turn-on models
- IP 20 protective cover (optional).
- Reverse Voltage Protection for DC control
- Built in Snubber
- Low leakage current
- LED Indicator showing Relay 'ON' status for each channel
- Industry standard panel mount package, Faston Terminals, screw terminals



### Dual Output SSRs

S2DA series Dual SSRs have two totally independent AC output relays or common controller in a single standard panel mount package making them ideal for a wide variety of applications including Heating, Lighting and Motion Control. Each Dual SSR has two outputs controlled by two independent inputs. This allows engineers using multiple Solid State Relays in a panel to save space in many applications. Fast-on termination suitable for rated load currents to 40 amps/ 530 VAC per channel is standard. Terminations for the input controls are either square pins or fast-on connectors. Utilizing dual SCR's for the AC switch output with internal snubber, Dual SSRs provide greater protection against false triggering. Model choices include zero voltage or random turn-on switching. Dual SSR offer an improved mechanical and thermal design providing higher capacity outputs and significantly increased power density. Available with either zero voltage or random turn on. Dual Solid State relays also feature LED input status indicators for each channel.

### Type Selection Guide 1

Input Control Voltage	Rated operational voltage	Rated operational current AC rms.			
		10 amps	25 amps	40 amps	50 amps
D: 4-15VDC	12-280 VAC rms	S2DA-280-10D	S2DA-280-25D	S2DA-280-40D	---
E: 15-32 VDC		S2DA-280-10E	S2DA-280-25E	S2DA-280-40E	---
W: 4-32 VDC constant current		S2DA-280-10W	S2DA-280-25W	S2DA-280-40W	---
D: 4-15 VDC	24-480 VAC rms	S2DA-480-10D	S2DA-480-25D	S2DA-480-40D	S2DA-480-50D
E: 15-32 VDC		S2DA-480-10E	S2DA-480-25E	S2DA-480-40E	S2DA-480-50E
W: 4-32 VDC constant current		S2DA-480-10W	S2DA-480-25W	S2DA-480-40W	S2DA-480-50W
D: 4-15 VDC	24-660VAC rms	---	---	---	S2DA-660-50D
E: 15-32 VDC		---	---	---	S2DA-660-50E
W: 4-32 VDC constant current		---	---	---	S2DA-660-50W

NOTE: For Random turn-on ssrs ADD 'K' TO S2KDA EG: S2KDA-480-50E  
FOR SELECTION OF CASING ADD CASING NO. AS SUFFIX TO TYPE EG: S2DA-480-50.3

## Input Specifications

Type	S2DA-***-**D	S2DA-***-**E	S2DA-***-**W.
Control Voltage	4- 15 VDC	15- 32 VDC	4- 32 VDC
Pick-Up Voltage	4 VDC	15VDC	4 VDC
Min Input current(for On state)	7.5mA	13 mA	7.8mA
Drop Out Voltage	1 VDC	1 VDC	1 VDC
Max. input current	34 mA	24 mA	7.8mA
Input resistance in Ohms	500 Ohms	1500 Ohms	Current regulator
Turn-on time	10msecs	10msecs	10msecs
Turn-off time	10msecs	10msecs	10msecs
Random SSRs turn-on	<100 $\mu$ s	<100 $\mu$ s	<100 $\mu$ s

## Output Specifications

Type	S2DA-***-10 D/E/W	S2DA-***-25 D/E/W	S2DA-***-40 D/E/W.	S2DA-***-50 D/E/W	S2DA-***-90 D/E/W
Voltage Range Vrms	24-280 VAC / 24-480 VAC	24-280 VAC 24-480 VAC	24-280 VAC 24-480 VAC	24-480 VAC 24-660 VAC	24-660VAC
Current Range with suitable heat sink (IT)	10 A	25 A	40 A	50 A	90 A
Surge Current non-repetitive t =10secs ITMS (50- 60Hz)	100 A	500 A	625 A	750 A	1350 A
Voltage Drop @ Current - VTM	1.6 VAC	1.6 VAC	1.6 VAC	1.6 VAC	2.0 VAC
Over Voltage Rating (PIV) Transient Peak	600/800 V peak	600/800 V peak	600/800 V peak	1200/ 1600 V peak	1600 V/ 1800 V peak
Off-state leakage current @ voltage -IDRM	10 mA rms	10 mA rms	10 mA rms	10 mA rms	10 mA rms
Turn-on (max) - T-on	10 ms	10 ms	10 ms	10 ms	10ms
Turn-off (max) - T-off	10 ms	10 ms	10 ms	10 ms	10ms
Dv/Dt @Voltage (out)	500 V/ $\mu$ s	500 V/ $\mu$ s	500 V/ $\mu$ s	500V/ $\mu$ s	500V/ $\mu$ s
I <sup>2</sup> T Fusing I <sup>2</sup> t (10 ms)	50 A <sup>2</sup> S	1250A <sup>2</sup> S	1780A <sup>2</sup> S	2520A <sup>2</sup> S	5000 A <sup>2</sup> S

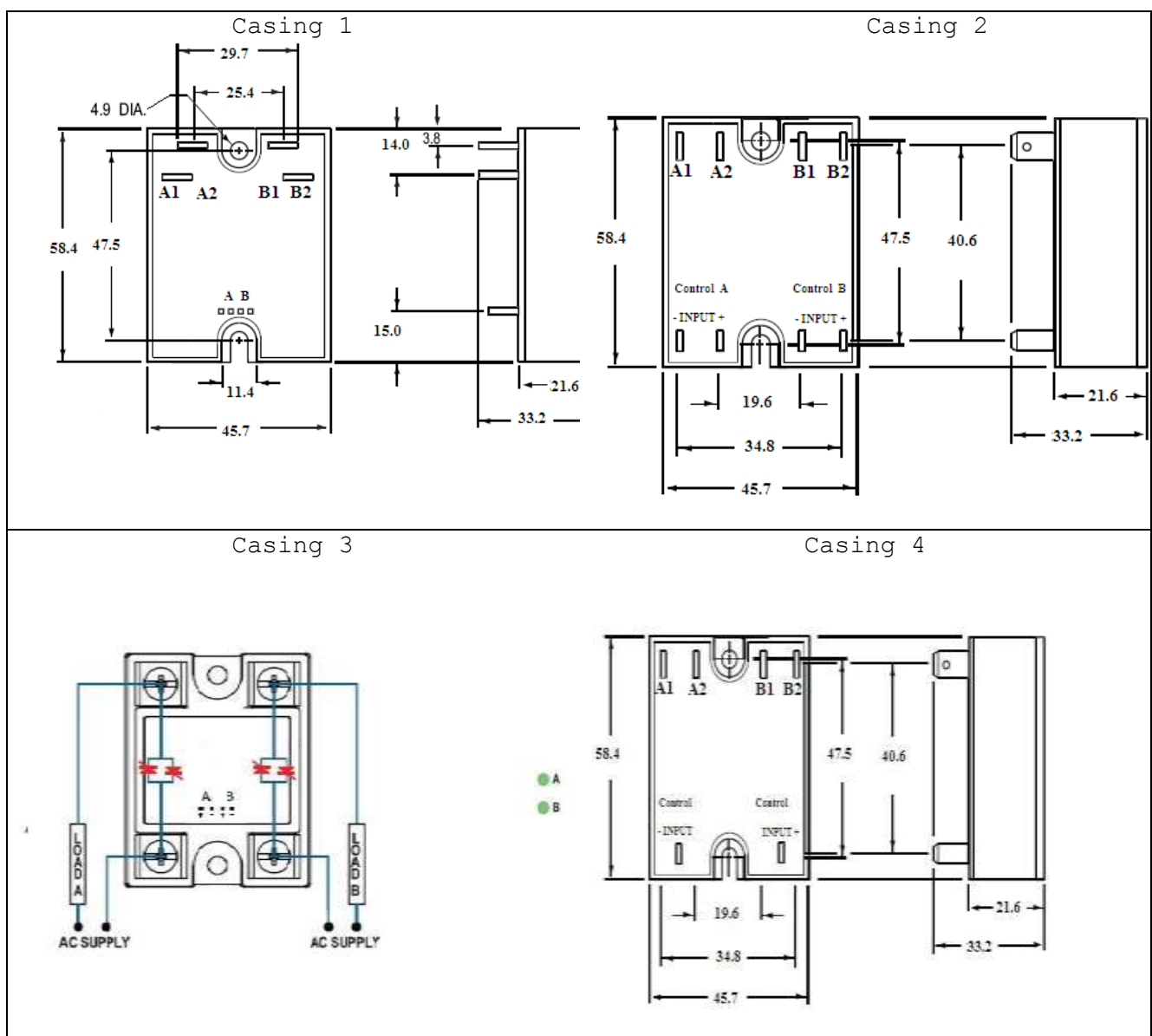
## General Specifications

Type	S2DA-***-10 D/E/W	S2DA-***-25 D/E/W	S2DA-***-40 D/E/W.	S2DA-***-50 D/E/W
Frequency Range	47 - 63 Hz			
Amb. Storage Temp.	- 40 °C to 80 °C			
Amb. Storage Temp.	- 40 °C to 100 °C			
Junction Temperature	100 °C			
Dielectric Strength 50/60 Hz I/O Vrms	4000 VAC rms			
Dielectric Strength 50/60 Hz I/O Vrms	2500 VAC rms			
Weight	Approx. 100 g			
Terminals	0.25" Faston / 0.025" square pins / screw type			
Encapsulation	Thermally conductive epoxy			

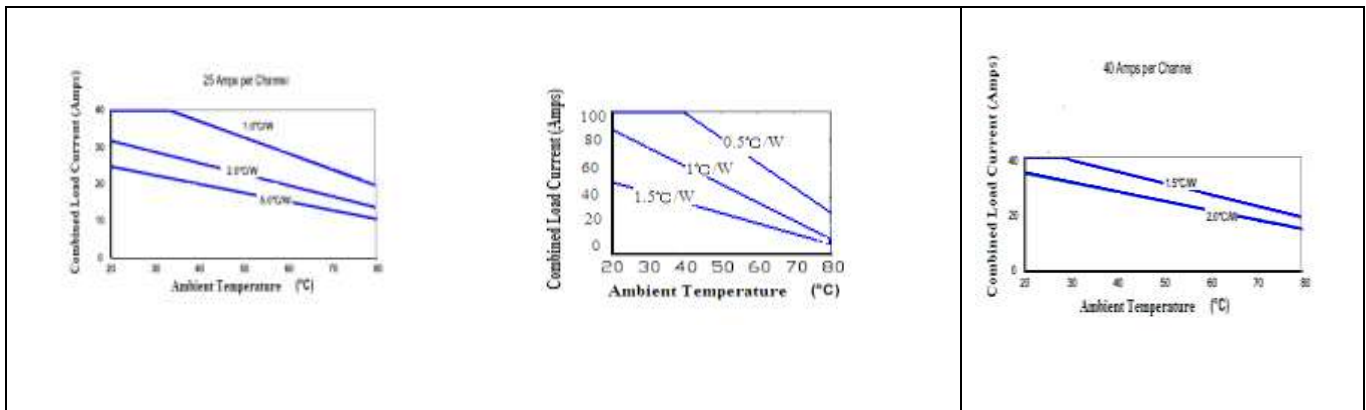
### NOTE:

- All specifications @ 25°C for both channels unless otherwise specified
- Heatsink required please refer to derating curves
- Turn-on time for Random Turn-on (add suffix K or R) versions = 0.1 msec
- 4-32 VDC input incorporates current limitation

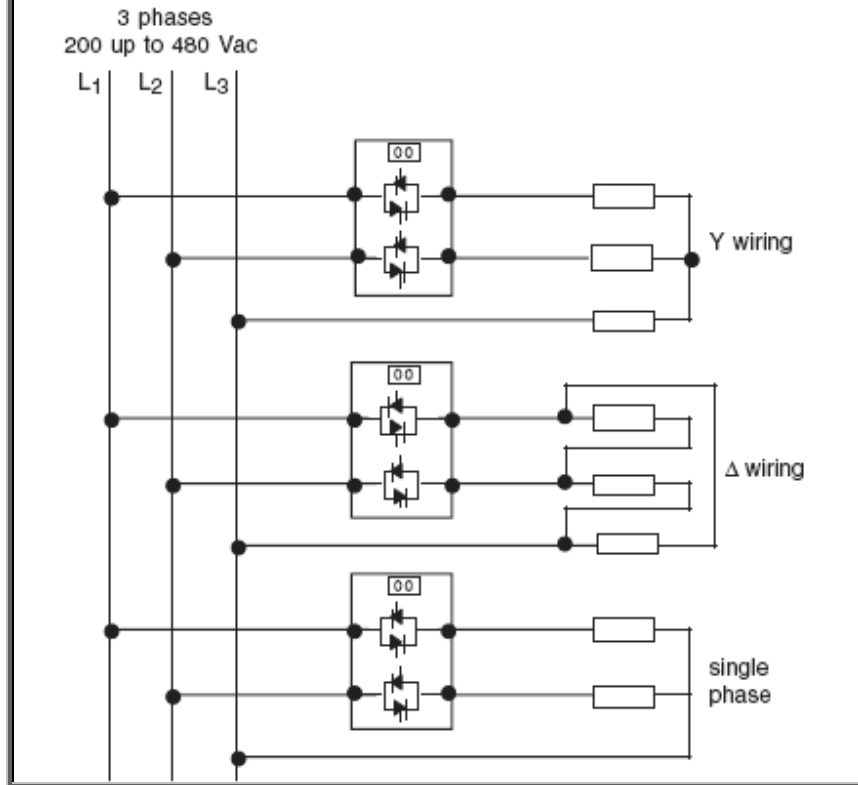
## DIMENSIONS



### THERMAL CHARACTERISTICS



## TYPICAL APPLICATION



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