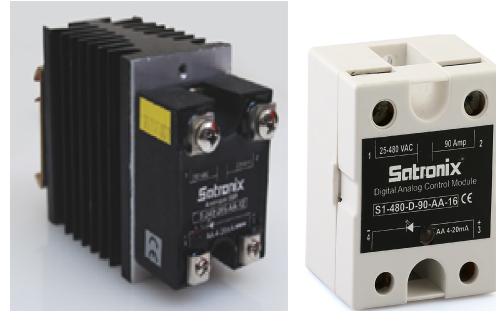


ANALOG SINGLE PHASE SOLID STATE RELAYS

I/P: 4-20mA
Series S1-240/480-...-AA-12

Features

- Using SMT Technology
- Microcontroller based
- LED indication of loop current
- Integral snubber network
- Anti-parallel double SCR
- 4 to 20 mA input
- Galvanic separation between control buffer and power circuits (4000 volts)
- Rated operational voltage: Up to 600 VAC, 50/60 Hz
- Rated operational current: 25, 50, 75 and 90A
- Analog switching for resistive loads
- Reverse polarity protection
- Built-in power supply for 4 to 20 mA input
- Higher ratings available 110 – 205 Amps



Description

S1-240/480-...-AA/12 is an analog single phase solid state relay from Satronix. The analog or phase angle control relay is meant for resistive loads. It controls the load linearly (0-100%) on receiving I/P from PID. Control input options of 4-20mA. Offered upto operational voltage range of 600 VACrms and operational current options of 10, 25, 50, 75, 90 A. It has LED indication for current. Ideal for Tungsten Lamp dimming, Resistive Heating Control, and Universal Motor Control and many more applications

Type Selection Guide

Input Control	Rated operational voltage (50/60Hz)	Non-Repetitive voltage	Rated operational Current ACrms			
			Model A	A	B	B
			25 Amps	50 Amps	75 Amps	90 Amps
4 – 20 mA	48-140 VAC rms	850 Vpk	S1-110-D-25AA-12	S1-110-D-50AA-12	S1-110-D-75AA-12	S1-110-D-90AA-12
4 – 20 mA	180-330 VAC rms	1200 Vpk	S1-240-D-25AA-12	S1-240-D-50AA-12	S1-240-D-75AA-12	S1-240-D-90AA-12
4 – 20 mA	280-480VAC rms	1400 Vpk	S1-480-D-25AA-12	S1-480-D-50AA-12	S1-480-D-75AA-12	S1-480-D-90AA-12
4 – 20 mA	330 - 600VAC rms	1600 Vpk	S1-600-D-25AA-12	S1-600-D-50AA-12	S1-600-D-75AA-12	S1-600-D-90AA-12

Model A: upto 25-50 Amps Model B: 75 – 90 Amps

**Available on request - Rated operational voltage: Up to 600 VAC rms / PIV 1600
also higher current ratings available in microcontroller based models**

Input Specifications

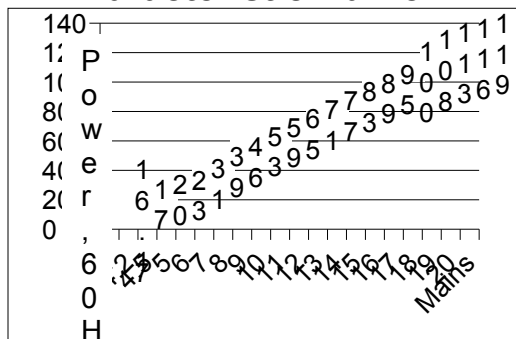
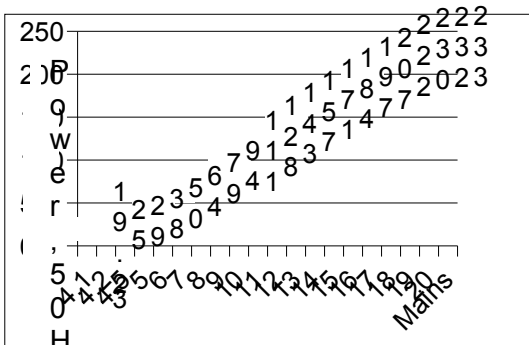
Type	S1 – 240 -D-.. AA – 08/12
Control	4 – 20 mA
Allowable input current	<=30 mA
Voltage Drop @20mA	<10 VDC
Reverse Polarity Protection	Yes
Impedance (Rc)	>=330 Ω

Current to input should not exceed 30 mA

Output Specifications

TYPE	S1-240-D-480-25AA/12	S1-240-D-480-50AA/12	S1-240-D-480-75AA/12	S1-240-D-480-90AA/12
Current Range with proper heat sink (IT)	25 A	50 A	75 A	90 A
On-state voltage drop (VTM)	1.6	1.6	1.6	1.6
Off-state leakage current @ voltage, frequency (IDRM)	<10 mA	<10 mA	<10 mA	<10 mA
Load Voltage Range	48-140/ 180 – 330 / 280 – 480 VAC rms Optional : 330 – 600 VAC			
Peak one cycle surge current (non-rep) (ITM)	260 A	625 A	1150 A	1500 A
Holding Current (IH)	250 mA	250 mA	250 mA	250 mA
dv/dt off-state (critical)	1000 V/μs	1000 V/μs	1000 V/μs	1000 V/μs
I ² T Fusing (t = 1 – 10ms)	450 A ² S	1680 A ² S	6600 A ² S	11000 A ² S
Thermal Resistance Junction to case R _{jc} °C/W	1.02 °C/W	0.63 °C/W	0.31 °C/W	0.28 °C/W

Characteristic Curve



General

Specifications

Frequency Range	50/60 Hz
Isolation I/P to O/P, I/P to case, O/P to case	10 ¹⁰ Ω
Insulation Cap. Input Current 4-O/P 20mA	Q _c =8 pF %
Insulation voltage I/P to O/P to case	4000 VACrms
Weight	Approx. 100 g
Storage Temp. Junction Temp.	- 40 °C to 100 °C

Input Current 4-20mA

Characteristic Curve

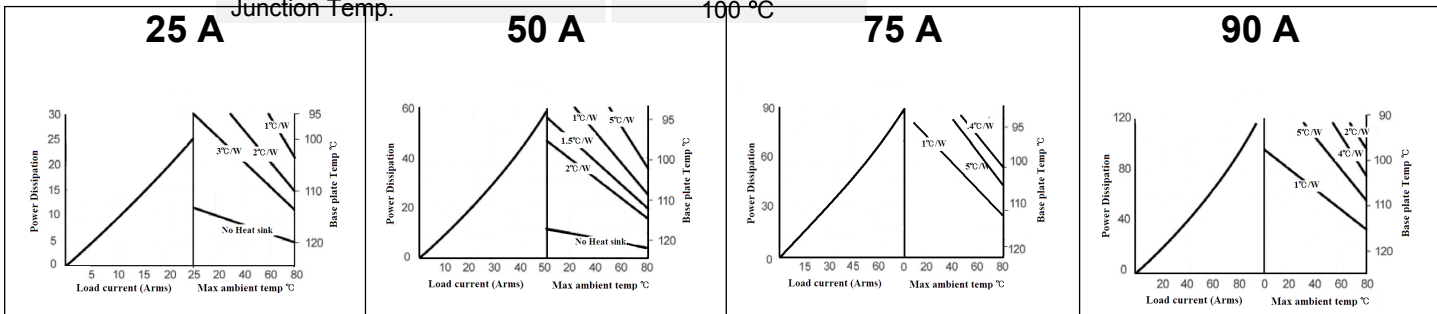
100 °C

25 A

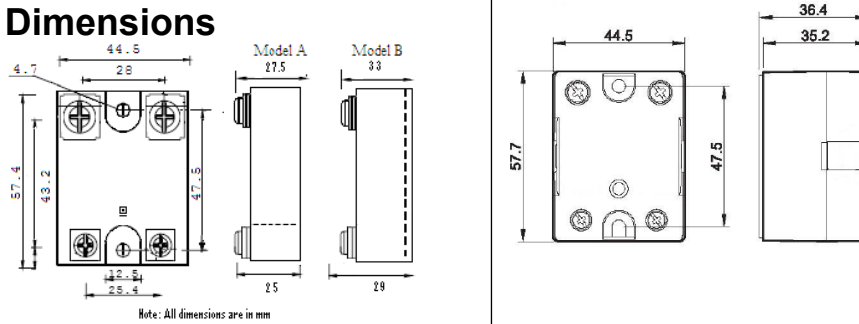
50 A

75 A

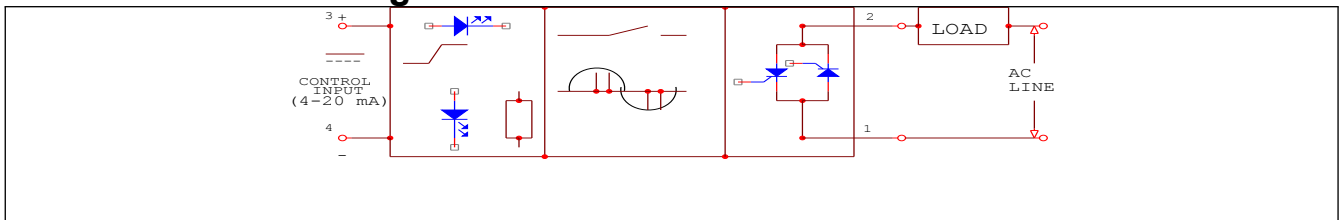
90 A



Dimensions



Functional Block Diagrams



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