



Bulletin 700-SA

- 5 A (Resistive) Max. Continuous Load Current
- 264V AC or 125V DC Max. Load Voltage Range
- Photocoupler Isolation Between Control and Load Voltage
- LED Indicator for Input/Logic ON/OFF Status Monitoring
- 700-HN100, -HN125, -HN 202, or -HN108 Socket Compatible

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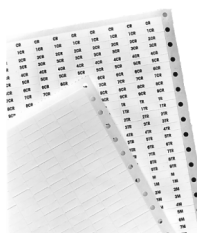
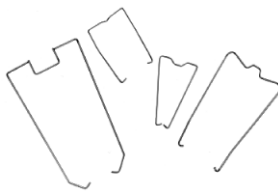
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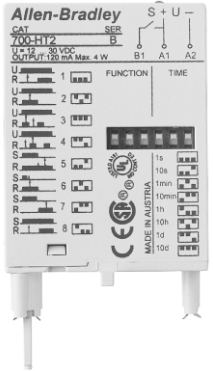
Product Selection

	Input-to-Output Isolation Method	Zero Cross Function	LED Indicator	Rated Output (Load) Max. Current and Voltage Range	Rated Input Control Voltage	Cat. No.	Factory-stocked Item (Single Pack)
	Photocoupler	Yes	Yes	5 A @ 100...240V AC	5...24V DC	700-SAZY5Z25	✓
		—		3 A @ 5...110V DC		700-SANY3Z25	✓

Bulletin 700-SA Solid-State Relays

Accessories

	Description	Pkg. Quantity	Cat. No.	Factory-stocked Item
 Cat. No. 700-HN100	Screw Terminal Tube Base Socket — Panel or DIN Rail Mounting; Guarded Terminal Construction Order ten or multiples of ten	10	700-HN100	✓
 Cat. No. 700-HN108	Specialty Socket 8-pin backwired socket with solder terminals Order ten or multiples of ten	10	700-HN108	✓
 Cat. No. 700-HN125	Screw Terminal Tube Base Socket — Panel or DIN Rail Mounting; Open Style Construction Order must be for 10 sockets or multiples of 10. No retainer clip required.	10	700-HN125	✓
 Cat. No. 199-DR1	DIN Rail Mounting Pack Standard 35 x 7.5 mm DIN Rail, 1 meter long, 10 rails per package. Order must be for 10 rails or multiples of 10.	10	199-DR1	✓
	Pre-printed identification tags — contains 10 sheets of pre-printed and blank tags. Each sheet contains 13 sets of the markings CR...9CR, TR...9TR, M...9M, F, R, 1S, and 117 blank tags. Tags are peel-off with sticky backing for easy placement on relays.	10	700-N40	
	Blank identification tags — contains 10 sheets of blank identification tags for customer specialized printing. Each sheet contains 546 blank tags. Tags are peel-off with sticky backing for easy placement on relays.	10	700-N41	
 Sample Retainer Clips	Retainer Clip for Cat. No. 700-HN153 Sockets with 700-SA Relays Secures relay in socket. Order must be for 10 clips or multiples of 10.	10	700-HN158	✓
	8-Pin Socket — can be used with or without timing attachment Order ten or multiples of ten	10	700-HN202	✓

	Description	Pkg. Quantity	Cat. No.	Factory-stocked Item
 Cat. No. 700-HT2	Multi-Function Multi-Range Time Module	1	700-HT2	

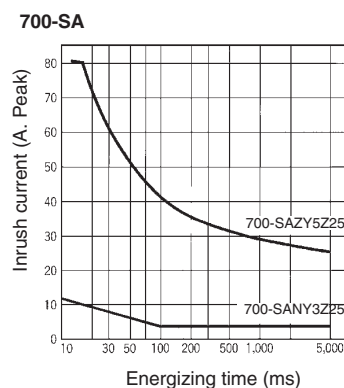
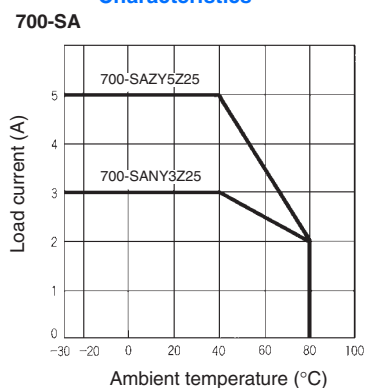
Specifications

Control/Input Ratings						
Cat. No.	Rated Control Voltage	Operating Control Voltage Range	Impedance		Control Voltage Levels	
					Pick-up Voltage	Drop-out Voltage
700-SAZY5Z25	5...24V DC	4...30V DC	1.5 K Ω (+20% -10%)		4V DC max.	1V DC min.
700-SANY3Z25						
Load/Output Ratings						
Cat. No.	Applicable Load					
	Rated Load Voltage	Load Voltage Range	Continuous Load Current (Resistive)		Max. Inrush Current ❶	
—	—	—	Min.	Max. ❷		
700-SAZY5Z25	100...240V AC	75...264V AC	0.1 A	5.0 A	80 A, @ 50/60 Hz for 1 cycle	
700-SANY3Z25	5...110V DC	3...125V DC	0.1 A	3.0 A	12 A (10 ms)	
Characteristics						
Item	700-SAZY5Z25			700-SANY3Z25		
Load Switching Method/Device	Triac			Transistor		
Pick-up time	1/2 cycle of load power source + 1 ms max.			0.5 ms max.		
Drop-out time	1/2 cycle of load power source + 1 ms max.			2.5 ms max.		
Output ON voltage drop	1.6 V (RMS) max.			1.5 V max.		
Output Leakage current	5 mA max. (at 100V AC); 10 mA max. (at 200V AC)			5 mA max. (at 125V DC)		
Output V _{DRM} V _{CEO} (V)	600			150		
Output di/dt (A/uS)	50			—		
Output dv/dt (V/uS)	500			—		
Output I ² t (A ² S)	41.6			—		
Output T _j (°C) Max.	125			150		
Insulation resistance	100 M Ω min. (at 500V DC)					
Dielectric strength	1,500V AC, 50/60 Hz for 1 min.					
Vibration resistance (max.)	10...55 Hz, 1.5 mm double amplitude (10 G)					
Shock resistance (max.)	1,000 m/s ² (100 G)					
Ambient temperature	Operating Storage	-30...80°C (-22...176°F) with no icing or condensation				
		-30...100°C (-22...212°F) with no icing or condensation				
Ambient humidity		45...85% (no condensation)				
Standards		UL508, CSA C22.2 , VDE, CE				
Weight		Approx. 70 g				

❶ If the SSR operation is continuous ON/OFF, this value should be reduced by 50%. Refer to "Inrush Current Resistivity" graphs below.

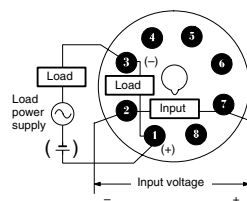
❷ Refer to the following graph "Load Current Vs. Ambient Temperature Characteristics" for additional load current details.

Load Current vs. Ambient Temperature Characteristics **Inrush Current Resistivity ❸**



❸ Inrush current resistivity is the ability of an SSR to withstand a large surge current for a short period of time. Surges are considered non-repetitive (max. repeatability once every 5 seconds). Keep the inrush current to half the rated value if it occurs repetitively. Exceeding the non-repetitive inrush current will damage the SSR.

Terminal Arrangement (Bottom View)



Note: The plus and minus symbols shown in parentheses are for DC loads.

Basic Application Considerations

High Density Mounting of Multiple SSRs

If multiple SSRs are installed side by side be aware that the outer case wall of the SSR serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current to half.

Protective Component

When controlling AC inductive loads, connect an inrush/surge absorbing device (varistor) across the SSR load terminals. If the SSR has built-in surge suppression (Bulletins 700-SE and 700-SH) and additional surge suppression is required, connect the varistor across the terminals of the load device. Select a varistor that meets the conditions of the load voltage outlined in the table below.

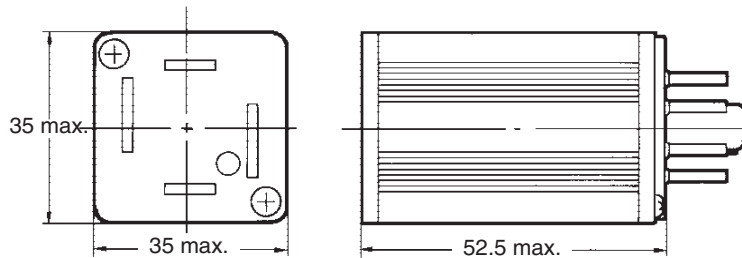
Load Voltage	Varistor Voltage	Varistor Surge Resistance
100...120V AC	240...270 V	1000 A min.
200...240V AC	440...470 V	
380...480V AC	820...1000 V	

For additional details applying solid-state relays, refer to pub. 700-AT001A-EN-E, "Solid-State Relay Application Guide" available at www.theautomationbookstore.com.

Bulletin 700-SA
Solid-State Relays
Approximate Dimensions

Note: All units in millimeters unless otherwise indicated. Dimensions are not intended to be used for manufacturing purposes.

700-SA ^❶



❶ Bulletin 700-SA is compatible with cat. nos. 700-HN100, -108, -125, and -202 (sockets).