

Bulletin 700-SC

- 3 A (resistive) Max. Continuous Load (Output) Current
- 264V AC, 48V DC or 125V DC Max. Load Voltage Range Options
- 5...24V DC or 110/220V AC Control (Input) Voltage Options
- LED Indicator (Optional) For Input/Logic ON/OFF Status Monitoring
- 700-HN103, 700-HN104, or 700-HN128 Socket Compatible
- Compatible with 700-AT1 or 700-AT2 Timer Module

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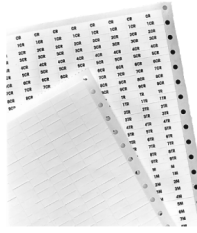
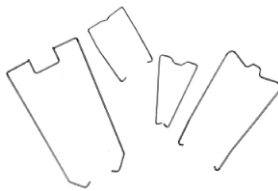

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Product Selection

	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	3 A @ 100...240V AC	5...24V DC	700-SCZY3Z25	✓
				2 A @ 100...240V AC	100/110V AC	700-SCZY2A1	✓
					200/220V AC	700-SCZY2A2	✓
	Phototriac	No	No	3 A @ 100...240V AC	24V DC	700-SCTY3Z24	✓
	Photocoupler	No		3 A @ 4...48V DC	5...24V DC	700-SCNY3Z25	✓
		Yes		3 A @ 100...240V AC	4...24V DC	700-SCZN3Z26	✓
	Phototriac	No	24V DC		700-SCTN3Z24	✓	
	Photocoupler	N/A		3 A @ 4...48V DC	4...24V DC	700-SCNN3Z26	✓
				2 A @ 5...110V DC	5...24V DC	700-SCNN2Z25	✓

Bulletin 700-SC
Solid-State Relays

Accessories

	Description	Pkg. Quantity	Cat. No.	Factory-stocked Item
 Cat. No. 700-HN103	Screw Terminal Socket — Panel or DIN Rail Mounting; Guarded Terminal Construction Order must be in ten or multiples of ten	1	700-HN103	✓
 Cat. No. 700-HN104	Screw Terminal Socket – Panel or DIN Rail Mounting, Guarded Terminal Construction 14-blade miniature socket for use with Bulletin 700-SC relays. This socket has coil and contact separation as well as the ability to plug in optional plug in modules (700-A** accessories: LED, Surge Suppression, Timing Modules)	10	700-HN104	✓
 Cat. No. 700-HN128	Screw Terminal Base Socket — Panel or DIN Rail Mounting; Open Style Construction Order must be in multiples of ten	10	700-HN128	✓
 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 Secures relay in socket. Order must be for 10 clips or multiples of 10.	10	700-HN114(B)❶	✓
	ON-Delay Time Module Voltage Range: 12...24V AC/DC used with 700-HN153 socket	1	700-AT1	
	One Shot Timing Module Voltage Range: 12...24V AC/DC used with 700-HN153 socket	1	700-AT2	

❶ Series B retainer clip must be used with Bulletin 700-SC

Control/Input Ratings					
Cat. No.	Rated Control Voltage	Operating Control Voltage Range	Impedance	Control Voltage Levels	
				Pick-up Voltage	Drop-out Voltage
700-SCZY3Z25	5...24V DC	4...28V DC	15 mA max. ❶	4V DC max.	1V DC min.
700-SCZY2A1	100/110V AC	75...125V AC	41 KΩ ± 20%	75V AC max.	20V AC min.
700-SCZY2A2	200/220V AC	150...250V AC	72 KΩ ± 20%	150V AC max.	40V AC min.
700-SCTY3Z24	24V DC	19.2...28.8V DC	2 KΩ ± 20%	19.2V DC max.	1V DC min.
700-SCNY3Z25	5...24V DC	4...28V DC	1.5 KΩ + 20%/–10% ❷	4V DC max.	
700-SCZN3Z26	4...24V DC	3...28V DC	15 mA max. ❶	3V DC max.	
700-SCTN3Z24	24V DC	19.2...28.8V DC	2 kΩ ± 20%	19.2V DC max.	
700-SCNN3Z26	4...24V DC	3...28V DC	1.5 KΩ + 20%/–10% ❷	3V DC max.	
700-SCNN2Z25	5...24V DC				

Load/Output Ratings					
Cat. No.	Rated Load Voltage	Applicable Load			
		Load Voltage Range	Continuous Load Current (Resistive)		Max. Inrush Current ❸
—	—	—	Min.	Max. ❹	—
700-SCZY3Z25	100...240V AC	75...264V AC	0.1 A	3 A	45 A (@ 50/60 Hz, 1 cycle)
700-SCTY3Z24					
700-SCZN3Z26					
700-SCTN3Z24					
700-SCZY2A1	100...240V AC	3...52.8V DC	0.1 A	2 A	18 A (10 ms)
700-SCZY2A2					
700-SCNN3Z25	4...48V DC	3...52.8V DC	0.1 A	3 A	18 A (10 ms)
700-SCNY3Z26	5...110V DC	3...125V DC	0.1 A	2 A	10 A (10 ms)
700-SCNN2Z25					

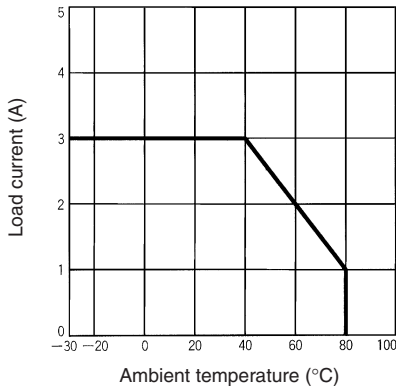
- ❶ With constant current input circuit system. SSR impedance varies with a change in input voltage.
- ❷ Input impedance attains its maximum at the operating voltage.
- ❸ If the SSR operation is continuous ON/OFF, this value should be reduced by 50%. Refer to "Inrush Current Resistivity" graphs on page 40 for details.
- ❹ Refer to the following "Load Current Versus Ambient Temperature Characteristics" graphs on page 40 for additional load current details.

Characteristics				
Cat. No.	700-SCZ....	700-SCT	700-SCNN3...	700-SCNN2...
Load Switching Method/Device	Triac		Transistor	
Pick-up Time	1/2 of load power source + 1 ms max. (DC input)	1 ms max	0.5 ms max	0.5 ms max
	3/2 of load power source + 1 ms max. (AC input)			
Drop-out Time	1/2 of load power source + 1 ms max. (DC input)	1/2 of load power source + 1 ms max	2 ms max	2.5 ms max
	3/2 of load power source + 1 ms max. (AC input)			
Output ON Voltage Drop	1.6 V (RMS) max	1.6V (RMS)	1.5 V max.	1.5V max.
Output Leakage Current	5 mA max (@ 100 V AC) 10 mA max (@ 200 V AC)	2.5 mA max (@ 100 V AC) 5 mA max (at 200 V AC)	5 mA max (@ 50 V DC)	0.1 mA max (@ 100 V DC)
Output V_{DRM}, V_{CEO} (V)	600	600	80	80
Output di/dt (A/uS)	50	50	—	—
Output dv/dt (V/uS)	250	250	—	—
Output I²t (A²S)	18	18	—	—
Output T_j °C Max.	125	125	150	150
Insulation Resistance	100 MΩ min (@ 500V DC)			
Dielectric Strength	1,500 V AC, 50/60 Hz for 1 minute			
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: -30°C...80°C (-22...176°F) with no icing or condensation Storage: -30°C...100°C (-22...212°F) with no icing or condensation			

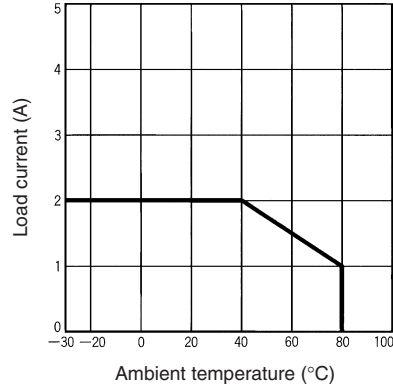
Characteristics	
Standards	UL508, CSA C 22.2, CE, VDE
Ambient Humidity	Operating: 45%...85% (no condensation)
Weight	Approx. 50 g

Load Current Versus Ambient Temperature Characteristics

700-SC_3...

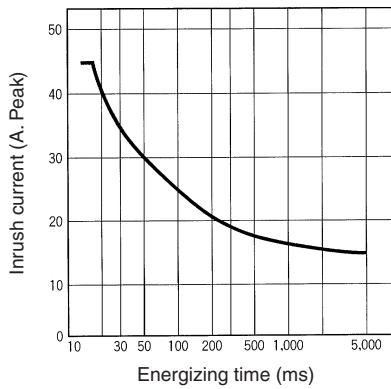


700-SC_2...



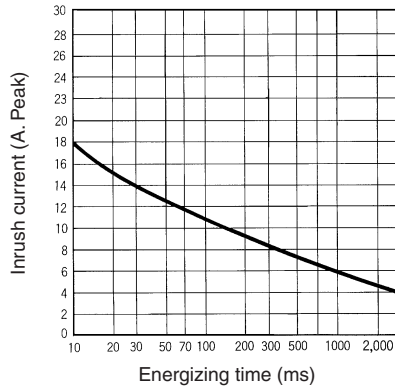
Inrush Current Resistivity

700-SCZ...



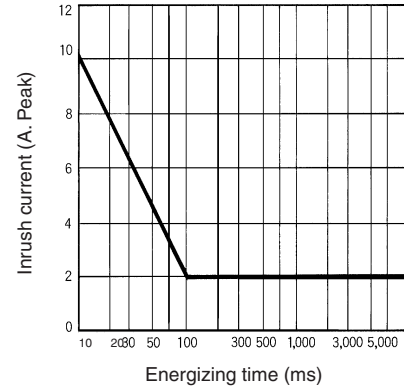
700-SCT...

700-SCNN3...



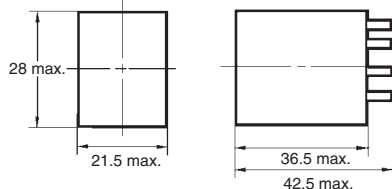
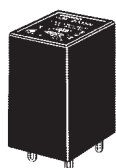
700-SCNY3

700-SCNN2...



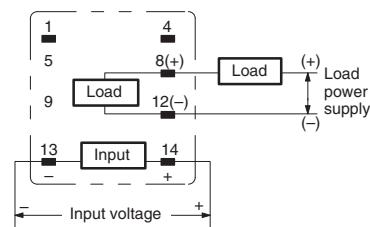
❶ Inrush current resistivity is the ability of an SSR to withstand a large surge current for a short period of time. Surges are considered non-repetitive (max. repeatability once every 2...5 seconds). Keep the inrush current to half the rated value if it occurs repetitively. Exceeding the non-repetitive inrush current will damage the SSR.

Note: Bulletin 700-SC is compatible with the 700-HN103, 700-HN104, and 700-HN128 sockets. All units in millimeters unless otherwise indicated. Dimensions are not intended for manufacturing purposes.



Cat. No 700-SC... ●

**Terminal Arrangement/
Internal Connections
(Bottom View)**



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

- Bulletin 700-SC is compatible with cat. nos. 700-HN103, -HN104, and -HN128 socket.

Basic Application Considerations For Bulletin 700-SC

Connection

For DC Load Switching, Bulletin 700-SC will operate properly if the load is connected to either the positive or negative SSR load terminal.

High-density Mounting of Multiple SSRs

If multiple relays are mounted side by side, be aware that the outer wall of each SSR works as a radiator. The SSR casing serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current by 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. Note: For additional details applying solid-state relays, refer to pub. number 700-AT001A-EN-E, "Solid-State Relay Application Guide." Document available at www.theautomationbookstore.com.

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	