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Series 896

- Mini ISO automotive relay
- SPNC, SPNO, SPDT, DPNO contact configurations
- NO contacts switch 50A rated load (resistive), NC contacts switch 30A rated load (resistive), 100,000 ops., 23°C
- Operating ambient temperature -40°C to 125°C
- Available with plain cover, flanged cover, bracketed cover, skirted cover and weather proof cover
- Optional resistor or diode for coil transient suppression
- RoHS Compliant; ELV Compliant



1. 896 - Model series

2.

Blank - Standard type H* - High power type

3.

3. Blank* - Socket terminal P - PCB terminal

4.

1AH* - Single pole normally open, contact material AgSnO 1CH* - Single pole double throw, contact material AgSnO 2AH - Double pole double make, contact material AgSnO 2AUH - Single pole normally open, contact material AgSnO (2×#87 terminal)

5.

D* - Dust cover

C - Flux tight

D1* - Dust cover with plastic bracket

C1 - Flux cover with plastic bracket

D1S - Dust cover with steel bracket

C1S - Flux tight with steel bracket

6.

Blank* - Standard type

R1 - Coil parallel with resistor 1/2W for 12V 680 Ω , 24V 2700 Ω

7.

.. Blank* - Standard type T - Special requirement for Tin plated terminal

8.

Blank* - Standard type 001* - Coil parallel with diode 1N4007 the diode anode on #85 terminal 002 - Coil parallel with diode 1N4007 the diode cathode on #85 terminal

9.

Coil voltage (please refer to the coil rating data)

Contact Rating

Туре	896 1A	896 1C	896 2A	896 H 1A	896H 1C	896 2A
Rated load (Resistive)	40A 14V DC	NO: 40A 14VDC NC: 30A 14VDC	2×15A 14VDC	50A 14VDC 20A 28VDC	NO: 50A 14VDC, 20A 28VDC NC: 30A 14VDC, 15A 28VDC	2×30A 14VDC 2×10A 28VDC

Contact material		AgSnO Alloy
Contact voltage drop (1)		Typ. 50mV at 10A
Operating time ⁽¹⁾		20ms Max
Release time ⁽¹⁾		20ms Max
Insulation resistance ⁽¹⁾		20MΩ Min. (DC 500V)
Dielectric strength ⁽¹⁾		Between open contact: AC 500V, 50/60Hz 1 min
		Between contact and coil: AC 500V, 50/60Hz 1 min
Vibration resistance	Operating extremes	10-500Hz, 5.0G
	Damage limits	10-500Hz, 5.0G
Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	10,000,000 ops. (frequency 18,000 ops./hr)
	Electrical	100,000 ops. (frequency 1,200 ops./hr)
Operating ambient temperature		-40 up to +125°C (no freezing)
Weight		Approx, 40 g

Note

Initial value. Operate and release time excluding contact bounce.
Unless otherwise specified, all tests are under room temperature and humidity.
Consider the heat of PCB is necessary, please check the actual condition of PCB.
Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.
To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.
Dust cover version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.
Use suitable harnesses and bus bars according to the current as below:

40A type:Min. 8.4 mm²
50A type:Min. 10.0 mm²

50A type:Min. 10.0 mm²
(8) Usage, transport and storage conditions
1. Temperature: -40 up to +125°C
2. Humidity: 5 to 85% R.H.
3. Pressure: 86 to 106 kPa

• Furthermore, the humidity range varies with the temperature. So, use relays within the range indicated in the graph below.



Rated voltage	12V	24V		
Rated current ±10 %	without resistor	133 mA	67 mA	
at 23°C	with resistor	150 mA	75 mA	
Coil resistance ±10	without resistor	90 Ω	360 Ω	
% at 23°C	with resistor	80 Ω	320 Ω	
Max. continuous voltage at 85°C ⁽¹⁾	133% of rated voltage			
Pick up voltage (Max.) at 23°C		65% of rate	d voltage	
Drop out voltage (Min.) at 23°C	10% of rated voltage			
Power consumption	without resistor	approx. 1.6W		
at rated voltage	with resistor	approx. 1.8W		

Note: (1) With continuous contact current 20A.

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896, 896H (C,D,S)



896, 896H (C1S,D1S,S1S)





896H (D1SF)



896H (DUSW)



Wiring Diagram



896, 896H (C1,D1,S1)



896P, 896HP (C,D,S)





896H (D1SW)



PC Board Layout





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Engineering Data











Maximum mean coil temperature=155°C



