

»» Features

- Mini ISO high power automotive relay 30A/50A.
- High temperature endurance up to 125 degree C.
- Optional SPNC, SPNO, SPDT, DPNO contact configurations.
- Optional to be equipped with protection diode or resistor.
- Both available PCB terminal and quick connect terminal versions.
- Available for plain cover type, skirted cover flanged cover, and weather proof versions.
- Tinned terminal is available on request.
- Comply with RoHS-Directive 2002/95/EC, and ELV-Directive 2000/53/EC.

»» Type List

| Terminal style | Contact form | Enclosure style | | |
|-----------------|--------------|-----------------|-------------|----------------------|
| | | Dust cover | Flux tight | Sealed type washable |
| Socket terminal | 1A (SPNO) | 896-1AH-D | 896-1AH-C | 896-1AH-S |
| | | 896H-1AH-D | 896H-1AH-C | 896H-1AH-S |
| | 1C (SPDT) | 896-1CH-D | 896-1CH-C | 896-1CH-S |
| | | 896H-1CH-D | 896H-1CH-C | 896H-1CH-S |
| | 2A (DPNO) | 896-2AH-D | 896-2AH-C | 896-2AH-S |
| | | 896H-2AH-D | 896H-2AH-C | 896H-2AH-S |
| PCB terminal | 1A (SPNO) | 896P-1AH-D | 896P-1AH-C | 896P-1AH-S |
| | | 896HP-1AH-D | 896HP-1AH-C | 896HP-1AH-S |
| | 1C (SPDT) | 896P-1CH-D | 896P-1CH-C | 896P-1CH-S |
| | | 896HP-1CH-D | 896HP-1CH-C | 896HP-1CH-S |
| | 2A (DPNO) | 896P-2AH-D | 896P-2AH-C | 896P-2AH-S |
| | | 896HP-2AH-D | 896HP-2AH-C | 896HP-2AH-S |

| Terminal style | Contact form | Enclosure style | |
|-----------------|--------------|----------------------------|----------------------------|
| | | Flanged cover (dust cover) | Flanged cover (flux tight) |
| Socket terminal | 1A (SPNO) | 896-1AH-D1 | 896-1AH-C1 |
| | | 896H-1AH-D1 | 896H-1AH-C1 |
| | 1C (SPDT) | 896-1CH-D1 | 896-1CH-C1 |
| | | 896H-1CH-D1 | 896H-1CH-C1 |
| | 2A (DPNO) | 896-2AH-D1 | 896-2AH-C1 |
| | | 896H-2AH-D1 | 896H-2AH-C1 |

| Terminal style | Contact form | Enclosure style | |
|-----------------|--------------|-----------------------------|----------------------------|
| | | Steel bracket (dust cover) | Steel bracket (flux tight) |
| Socket terminal | 1A (SPNO) | 896-1AH-D1S | 896-1AH-C1S |
| | | 896H-1AH-D1S | 896H-1AH-C1S |
| | 1C (SPDT) | 896-1CH-D1S | 896-1CH-C1S |
| | | 896H-1CH-D1S | 896H-1CH-C1S |
| | 2A (DPNO) | 896-2AH-D1S | 896-2AH-C1S |
| | | 896H-2AH-D1S | 896H-2AH-C1S |

| Terminal style | Contact form | Designation (provided with) | Enclosure style | |
|-----------------|--------------|-----------------------------|---|--|
| | | | Steel bracket (dust cover with shroud) | Steel bracket (dust cover with weather proof) |
| Socket terminal | 1C (SPDT) | Resistor | 896H-1CH-D1SF-R1 | 896H-1CH-D1SW-R1 |

»» Ordering Information

896 H P - 1CH - C - R1 - T 001
 1 2 3 4 5 6 7 8

- | | | | | | |
|----|-------|--|------|--|---|
| 1. | 896 | -- Basic series designation | D1S | -- Steel bracket (dust cover) | |
| 2. | Blank | -- Standard type | C1S | -- Steel bracket (flux tight) | |
| | H | -- High power type | S1S | -- Steel bracket (sealed type washable) | |
| 3. | Blank | -- Socket terminal | D1SF | -- Steel bracket (dust cover with shroud) | |
| | P | -- PCB terminal | D1SW | -- Steel bracket (dust cover with weather proof) | |
| 4. | 1AH | -- Single pole normally open, contact material AgSnO | 6. | Blank | -- Standard type |
| | 1BH | -- Single pole normally closed, contact material AgSnO | | R1 | -- Coil parallel with resistor 1/2W for 12V 680Ω , 24V 2700Ω |
| | 1CH | -- Single pole double throw, contact material AgSnO | 7. | Blank | -- Standard type |
| | 2AH | -- Double pole double make, contact material AgSnO | | T | -- Special requirement for Tin plated terminal |
| 5. | D | -- Dust cover | 8. | Blank | -- Standard type |
| | C | -- Flux tight | | 001 | -- Coil parallel with diode IN4007 the positive pole on # 85 terminal |
| | S | -- Sealed type washable | | 002 | -- Coil parallel with diode IN4007 the negative pole on # 85 terminal |
| | C1 | -- Flanged cover (flux tight) | | | |
| | D1 | -- Flanged cover (dust cover) | | | |
| | S1 | -- Flanged cover (sealed type washable) | | | |

»» Contact Rating

| Type | 896 1A | 896 1B | 896 1C | 896 2A |
|----------------|-----------|-----------|----------------------------------|-------------|
| Resistive load | 40A 14VDC | 40A 14VDC | NO : 40A 14VDC NC : 30A 14VDC | 2×15A 14VDC |

| Type | 896H 1A | 896H 1B | 896H 1C | 896H 2A |
|----------------|------------------------|------------------------|--|----------------------------|
| Resistive load | 50A 14VDC 20A 28VDC | 40A 14VDC 15A 28VDC | NO : 50A 14VDC, 20A 28VDC NC : 30A 14VDC, 15A 28VDC | 2×30A 14VDC 2×10A 28VDC |

»» Coil Rating(DC)

| Rated voltage (V) | Rated current ±10 % at 23°C (mA) | Coil resistance ±10 % at 23°C (Ω) | Max. continuous Voltage at 85°C ⁽¹⁾ | Pick up voltage(Max) at 23°C | Drop out voltage(Min) at 23°C | Power consumption at rated voltage |
|-------------------|----------------------------------|-----------------------------------|--|------------------------------|-------------------------------|------------------------------------|
| 12 | 133 | 90 | 120 % of rated voltage | 65 % of rated voltage | 10 % of rated voltage | approx. 1.6W |
| 24 | 66.7 | 360 | | | | |

Notes : (1) Without switching the load.

»» Specification

| | | |
|--------------------------------------|--------------------------|---|
| Contact material | AgSnO alloy | |
| Contact voltage drop ⁽¹⁾ | Typ. 50mV at 10A | |
| Insulation resistance ⁽¹⁾ | 20MΩ Min. (DC 500V) | |
| Operate time ⁽¹⁾ | 20ms Max. | |
| Release time ⁽¹⁾ | 20ms Max. | |
| 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 | 10~55Hz , amplitude 2mm |
| Shock resistance | Operating extremes | 10G |
| | Damage limits | 100G |
| Life expectancy | Mechanical | 10,000,000 operations (frequency 18,000 operations/hr) |
| | Electrical | 100,000 operations (frequency 1,200 operations/hr) |
| Temperature range | Operating | -40 ~ +125°C (no freezing) |
| Weight | Approx. 40 g | |

Note : (1) initial value

»» Outline Dimensions

◆ 896,896H (C,D,S)



◆ 896,896H (C1,D1,S1)



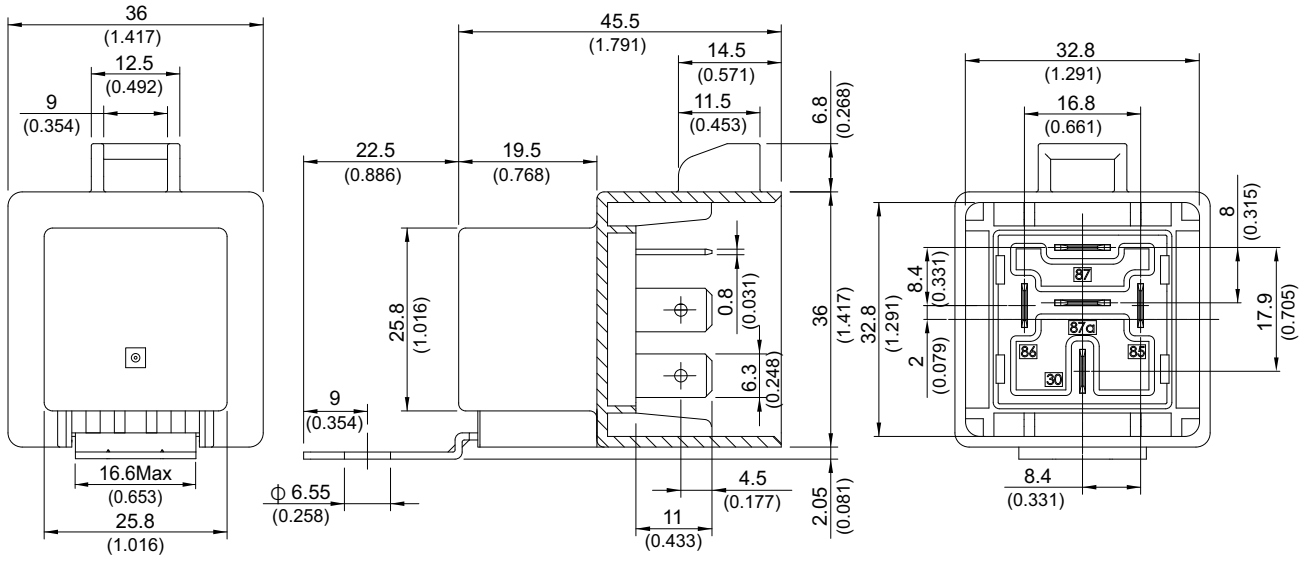
◆ 896,896H (C1S,D1S,S1S)



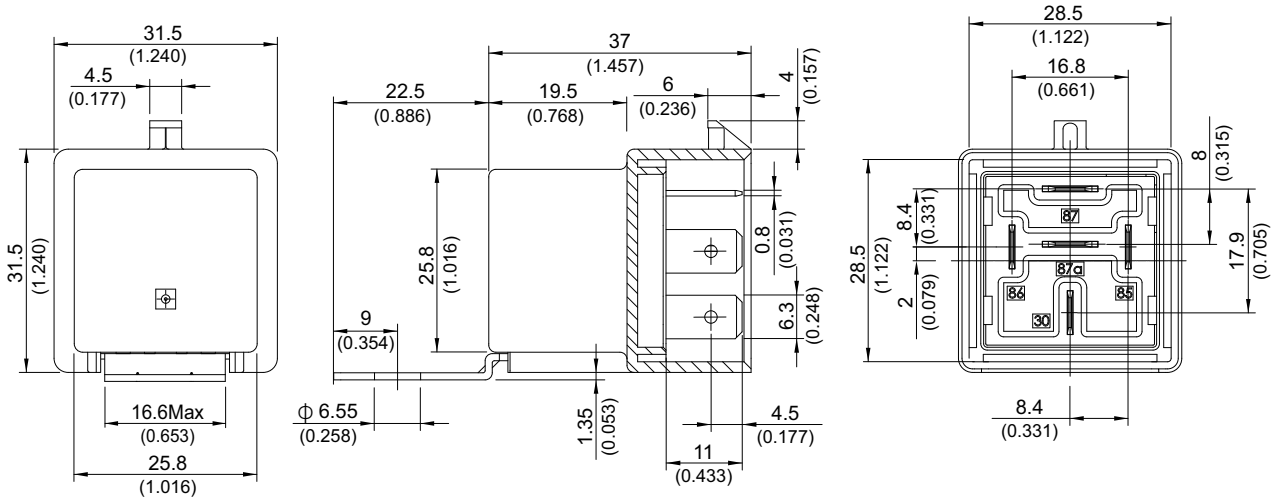
◆ 896P,896HP (C,D,S)



◆ 896H (D1SW)



◆ 896H (D1SF)



»» Wiring Diagram

BOTTOM VIEW

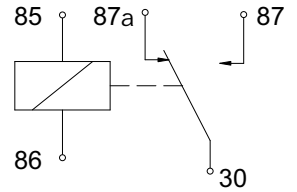
1A



1B



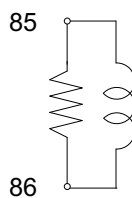
1C



2A



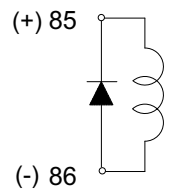
R1



001



002



»» PC Board Layout

BOTTOM VIEW



»» Engineering Data

