

### »» Features

- High Power Mini ISO automotive relay.
- Switches up to 70A resistive load, 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.
- Available with PCB terminals or quick connect terminals.
- Optional resistor or diode for coil transient suppression.
- Complies with RoHS-Directive 2011/65/EU and ELV-Directive 2000/53/EC.



### »» Type List

Terminal style	Contact form	Designation (provided with)	Enclosure style		
			Dust cover	Flux tight	Sealed type washable
Socket terminal	1A (SPNO)	-----	897-1AH-D	897-1AH-C	897-1AH-S
		Resistor	897-1AH-D-R1	897-1AH-C-R1	897-1AH-S-R1
PCB terminal <sup>(1)</sup>	1A (SPNO)	-----	897P-1AH-D	897P-1AH-C	897P-1AH-S
		Resistor	897P-1AH-D-R1	897P-1AH-C-R1	897P-1AH-S-R1

Terminal style	Contact form	Designation (provided with)	Enclosure style	
			Flanged cover (dust cover)	Flanged cover (flux tight)
Socket terminal	1A (SPNO)	-----	897-1AH-D1	897-1AH-C1
		Resistor	897-1AH-D1-R1	897-1AH-C1-R1

Terminal style	Contact form	Designation (provided with)	Enclosure style	
			Dust cover with steel bracket	Flux tight with steel bracket
Socket terminal	1A (SPNO)	-----	897-1AH-D1S	897-1AH-C1S
		Resistor	897-1AH-D1S-R1	897-1AH-C1S-R1

Terminal style	Contact form	Designation (provided with)	Enclosure style	
			Dust cover with shroud and steel bracket	Dust cover with weather proof and steel bracket
Socket terminal	1A (SPNO)	Resistor	897-1AH-D1SF-R1	897-1AH-D1SW-R1

Note : (1) Special PCB terminal version (NO, COM 3 pin type) are available.

### »» Ordering Information

897        -    1AH    -    C    -        -           

1        2        3        4        5        6        7        8

- |  |   |
|--|---|
| <p>1. 897 -- Basic series designation</p> <p>2. Blank -- Socket terminal<br/>P -- PCB terminal<br/>P1 -- Special PCB terminal (NO,COM 3 pin type)</p> <p>3. 1AH -- Single pole normally open, contact material AgSnO</p> | <p>4. D -- Dust cover<br/>C -- Flux tight<br/>S -- Sealed type washable<br/>D1 -- Flanged cover (dust cover)<br/>C1 -- Flanged cover (flux tight)<br/>S1 -- Flanged cover (sealed type washable)<br/>D1S -- Dust cover with steel bracket</p> |
|--|---|

- C1S -- Flux tight with steel bracket  
 S1S -- Sealed type washable with steel bracket  
 D1SF -- Dust cover with shroud and steel bracket  
 D1SW -- Dust cover with weather proof and steel bracket  
 DUSW -- Dust cover with weather proof
5. Blank -- Standard type  
 R1 -- Coil parallel with resistor 1/2W for 12V 680Ω , 24V 2700Ω
6. Blank -- Standard type  
 T -- Special requirement for Tin plated terminal
7. 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
8.  -- Coil voltage (please refer to the coil rating data for the availability)

### »» Contact Rating

Resistive load	70A 14VDC, 25A 28VDC
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### »» Coil Rating (DC)

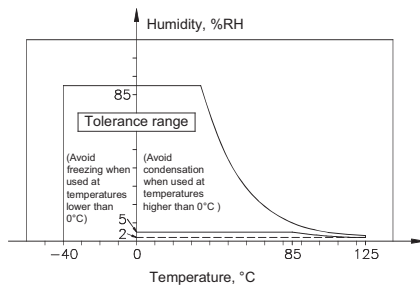
Rated voltage	Rated current ±10 % at 23°C		Coil resistance ±10 % at 23°C		Max. continuous voltage at 85°C <sup>(1)</sup>	Pick up voltage (Max.) at 23°C	Drop out voltage (Min.) at 23°C	Power consumption at rated voltage	
	without resistor	with resistor	without resistor	with resistor				without resistor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

Note : (1) With continuous contact current 25A.

### »» Specification

Contact material	AgSnO alloy	
Contact voltage drop <sup>(1)</sup>	Typ. 30mV at 10A	
Operate time <sup>(1)</sup>	20ms Max.	
Release time <sup>(1)</sup>	20ms Max.	
Insulation resistance <sup>(1)</sup>	20MΩ Min. (DC 500V)	
Dielectric strength <sup>(1)</sup>	Between open contact	: AC 500V , 50/60Hz 1min.
	Between contact and coil	: AC 500V , 50/60Hz 1min.
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~+125°C (no freezing)	
Weight	Approx. 40 g	

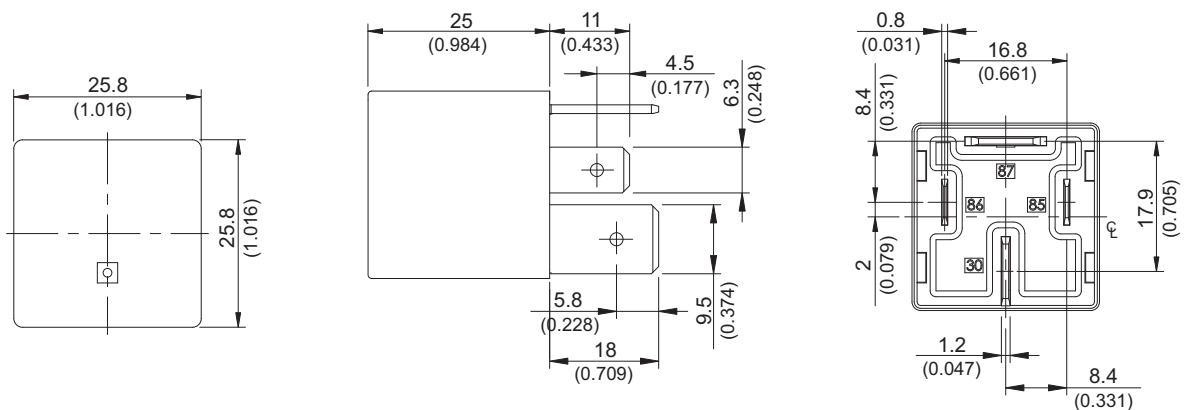
- Note : (1) Initial value. Operate and release time excluding contact bounce.  
 (2) Unless otherwise specified, all tests are under room temperature and humidity.  
 (3) Consider the heat of PCB is necessary, please check the actual condition of PCB.  
 (4) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.  
 (5) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.  
 (6) Do not switch the contacts without any load as the contact resistance may become increased rapidly.  
 (7) Flux tight version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.  
 (8) Use suitable harnesses and bus bars according to the current as below :  
 25A type : Min.  $6.0 \text{ mm}^2$   
 70A type : Min.  $21.1 \text{ mm}^2$   
 (9) Usage, transport and storage conditions
- 1. Temperature:  $-40 \sim +125^\circ\text{C}$
  - 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.



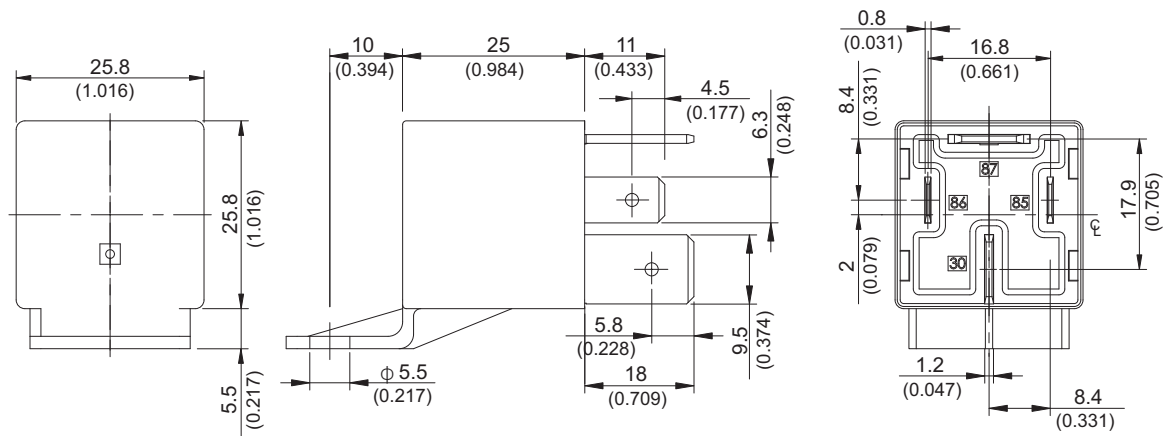
- (10) Please contact Song Chuan for the detailed information.

## »» Outline Dimensions

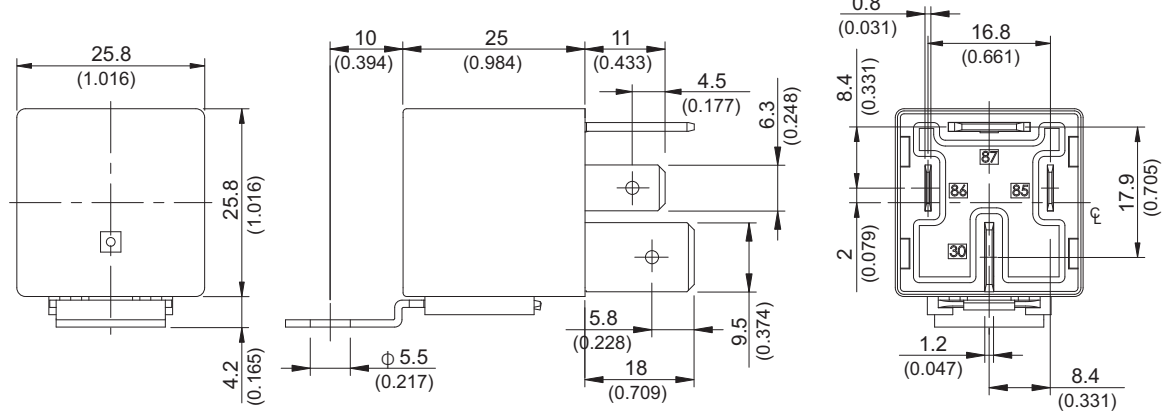
### ◆ 897 (C,D,S)



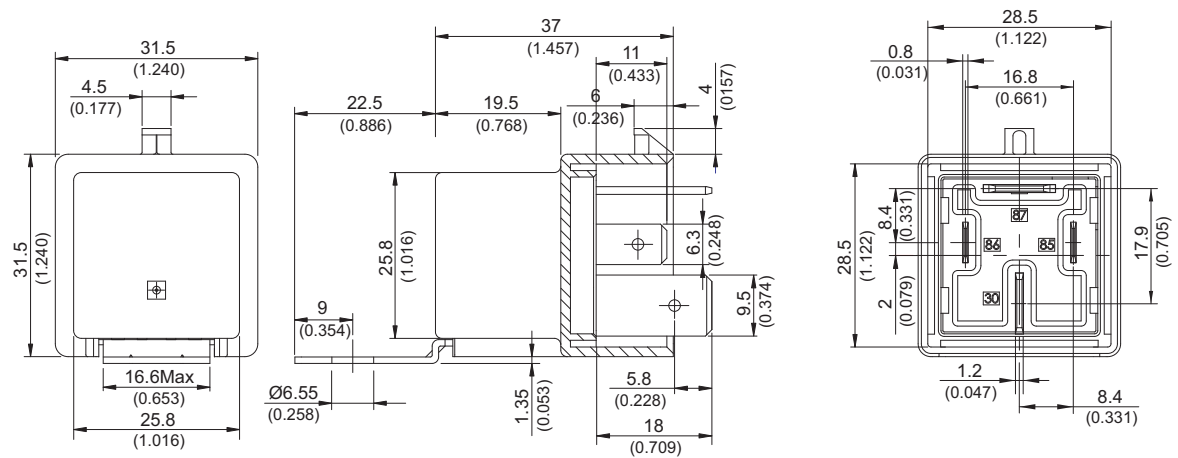
## ◆897 (C1,D1,S1)



## ◆897 (C1S,D1S,S1S)

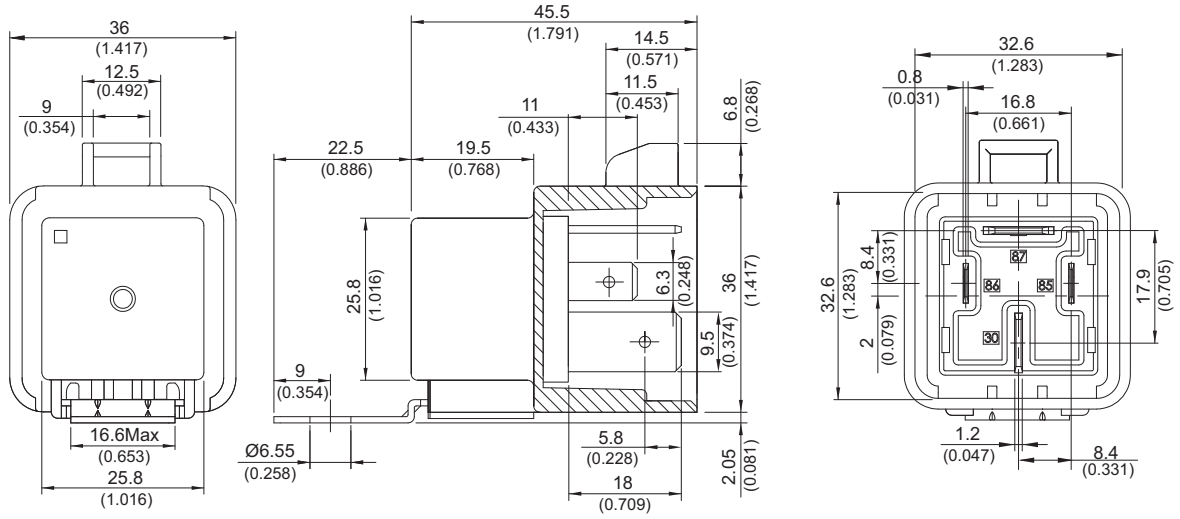


## ◆897 (D1SF)

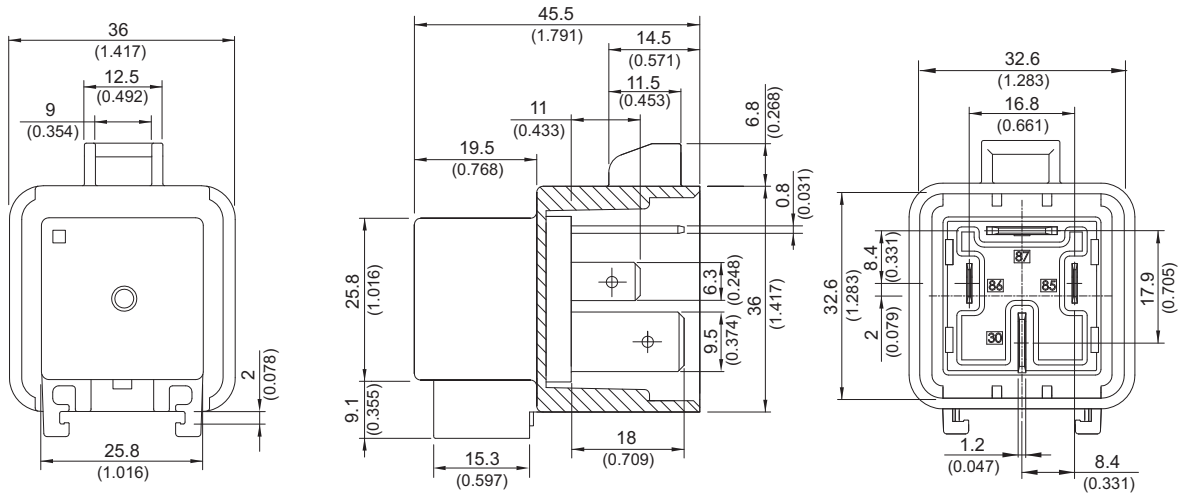


# 897

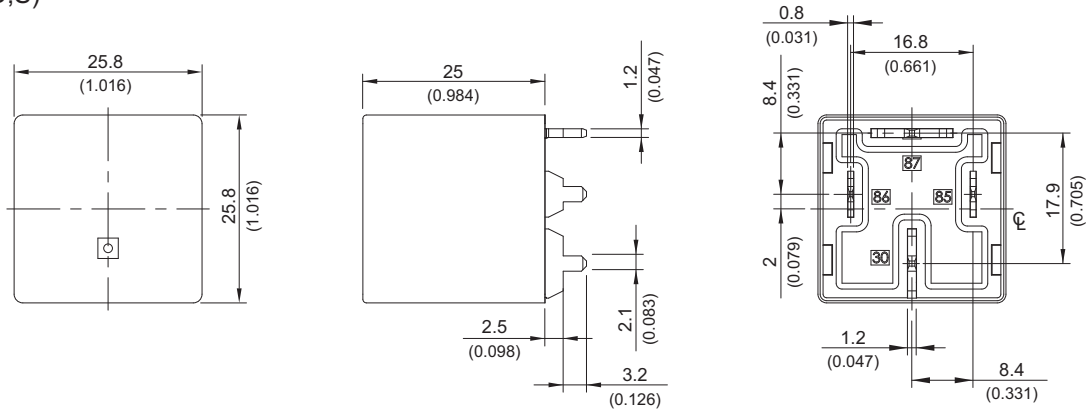
◆897 (D1SW)



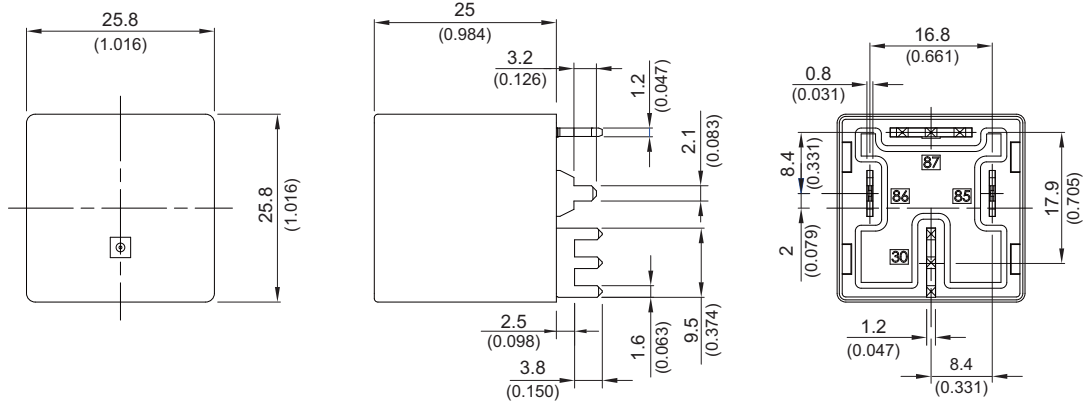
◆897 (DUSW)



◆897P (C,D,S)



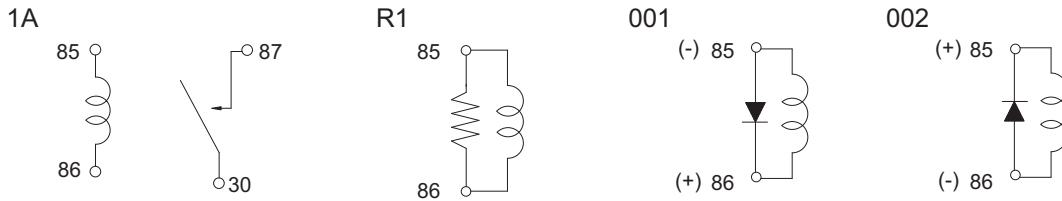
◆ 897P1 (C,D,S)



TOLERANCE:  
 LESS THAN: 1(0.039) ±0.1(0.004)  
 5(0.197) ±0.3(0.012)  
 20(0.787) ±0.5(0.020)  
 MORE THAN: 20(0.787) ±1(0.039)

»» Wiring Diagram

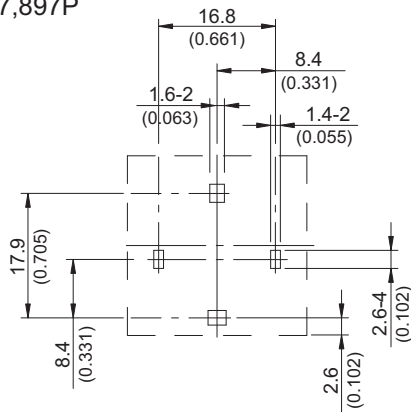
BOTTOM VIEW



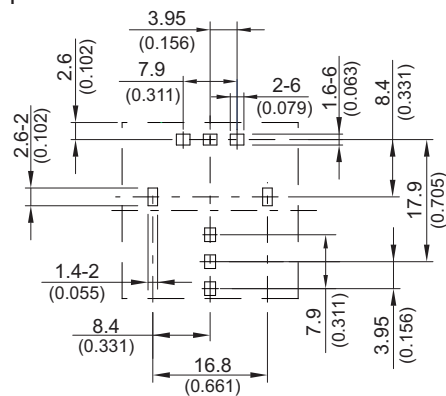
»» PC Board Layout

BOTTOM VIEW

◆ 897,897P



◆ 897P1



## » Engineering Data

