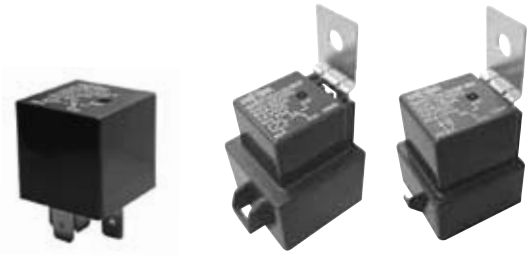


## Features

- 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

2. Blank -- Standard type
   H -- High power type

3. Blank -- Socket terminal
   P -- PCB terminal

4. 1AH -- Single pole normally open, contact material AgSnO
   1BH -- Single pole normally closed, contact material AgSnO
   1CH -- Single pole double throw, contact material AgSnO
   2AH -- Double pole double make, contact material AgSnO

5. D -- Dust cover
   C -- Flux tight
   S -- Sealed type washable
   C1 -- Flanged cover (flux tight)
   D1 -- Flanged cover (dust cover)
   S1 -- Flanged cover (sealed type washable)
   D1S -- Steel bracket (dust cover)
   C1S -- Steel bracket (flux tight)
   S1S -- Steel bracket (sealed type washable)
   D1SF -- Steel bracket (dust cover with shroud)
   D1SW -- Steel bracket (dust cover with weather proof)

6. Blank -- Standard type
   R1 -- Coil parallel with resistor 1/2W for 12V 680Ω，24V 2700Ω

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

8. Blank -- Standard type
   001 -- Coil parallel with diode IN4007 the positive pole on # 85 terminal
   002 -- Coil parallel with diode IN4007 the negative pole on # 85 terminal

## Contact Rating

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

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

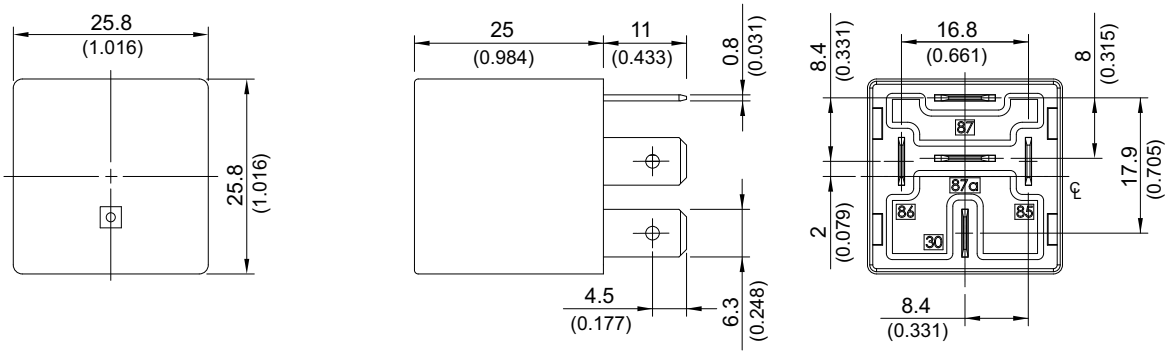
## Specification

| | | |
|---|---|---|
| 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<br>(frequency 18,000 operations/hr) |
| | Electrical | 100,000 operations<br>(frequency 1,200 operations/hr) |
| Temperature range | Operating | -40～+125°C (no freezing) |
| Weight | Approx. 40 g | |

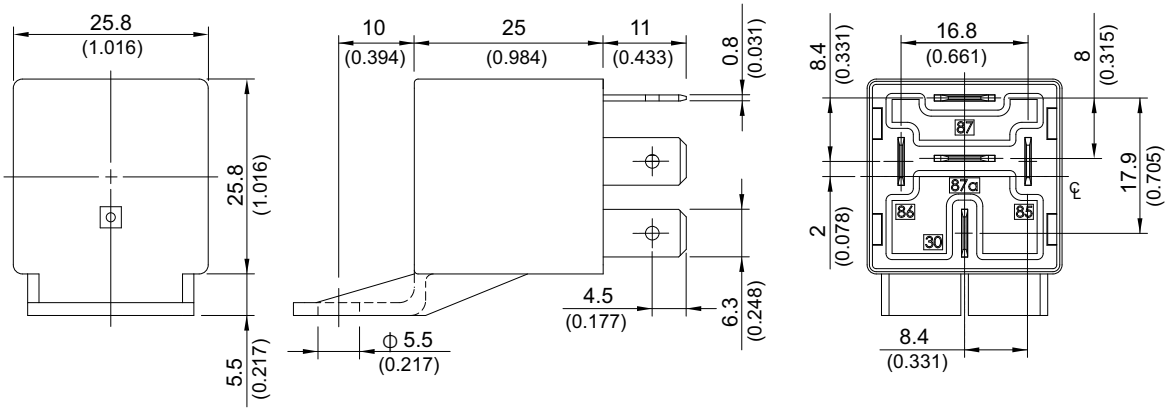
Note：(1) initial value

## Outline Dimensions

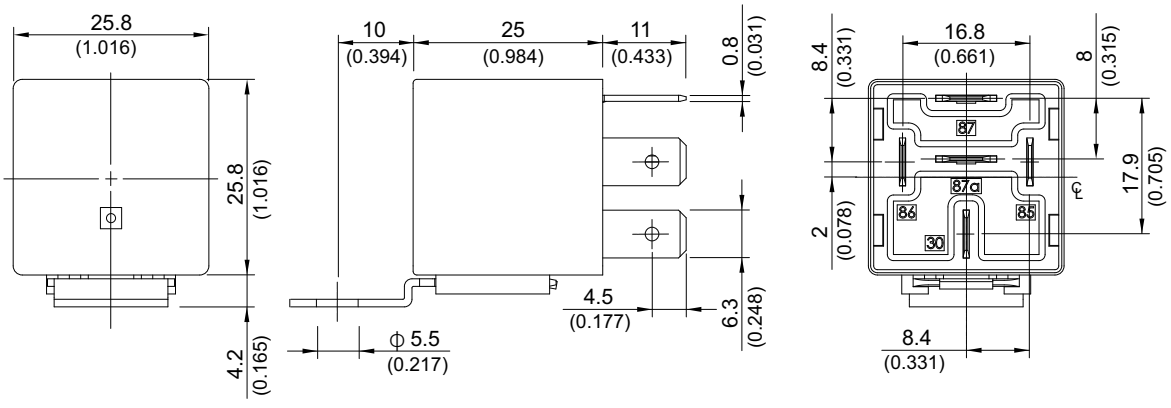
◆896,896H (C,D,S)



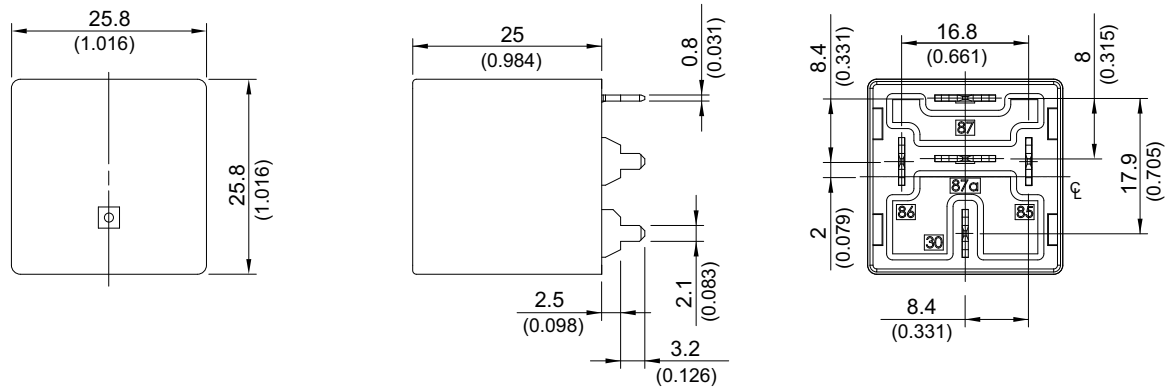

◆896,896H (C1,D1,S1)



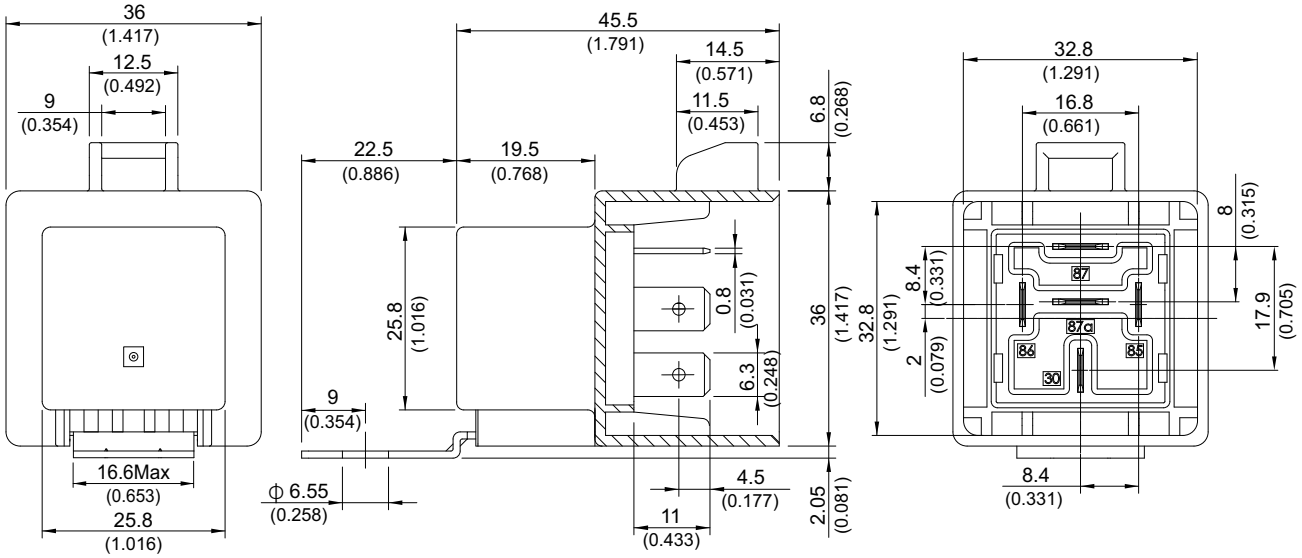

◆896,896H (C1S,D1S,S1S)



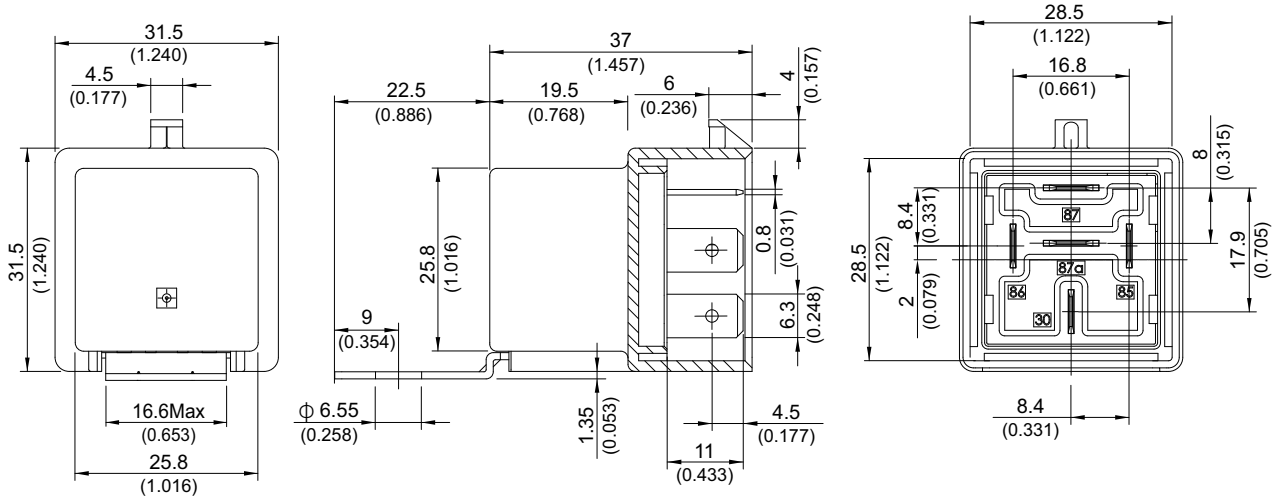

◆896P,896HP (C,D,S)



## ◆896H (D1SW)



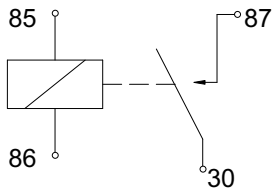

## ◆896H (D1SF)



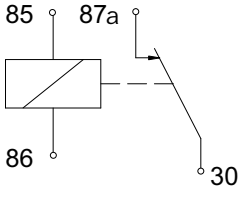

## Wiring Diagram

BOTTOM VIEW

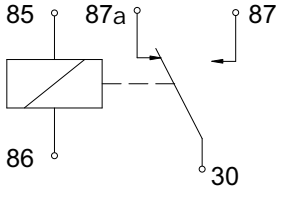
1A



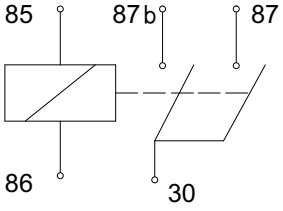

1B



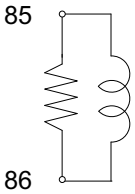

1C



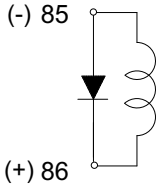

2A



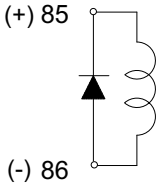

R1




001

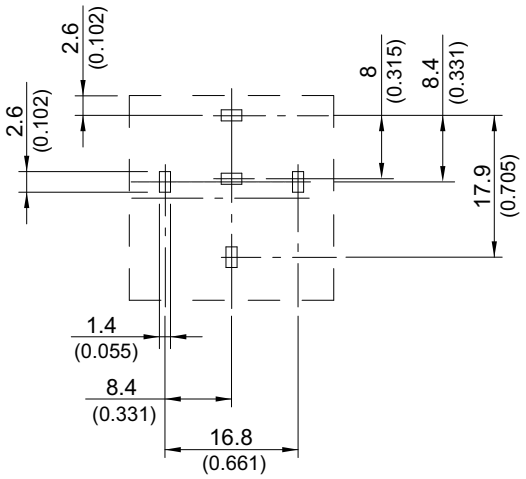



002



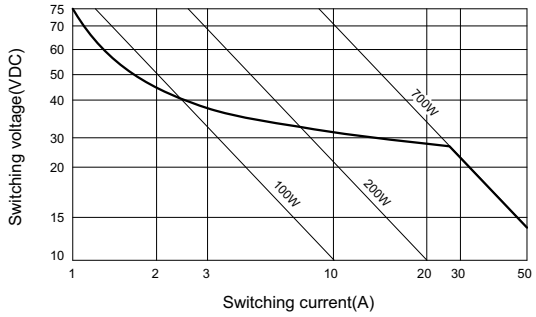
## PC Board Layout

BOTTOM VIEW

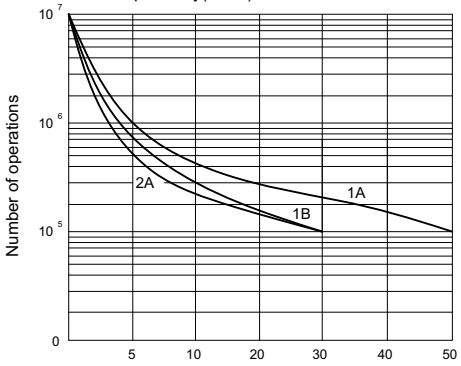



## Engineering Data

Safe breaking,arc extinguished
(normally open contact)for resistive loads(896H)

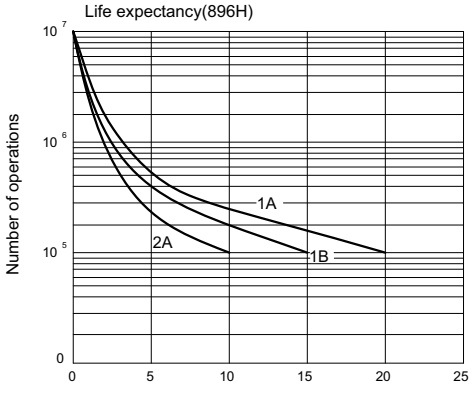



Life expectancy(896H)



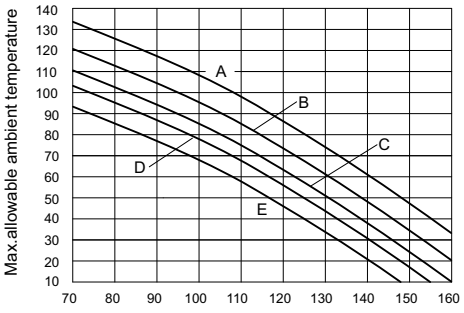

14VDC resistive load/Switching current(A)

Life expectancy(896H)




28VDC resistive load/Switching current(A)

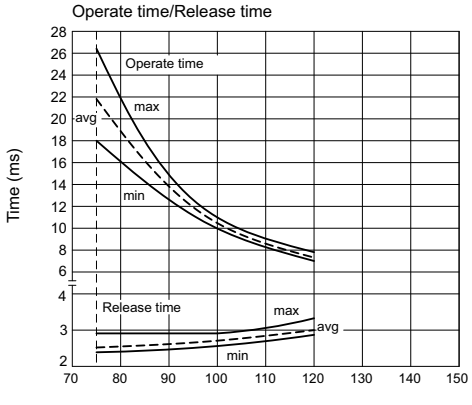
Ambient temperature vs coil voltage for continuous duty



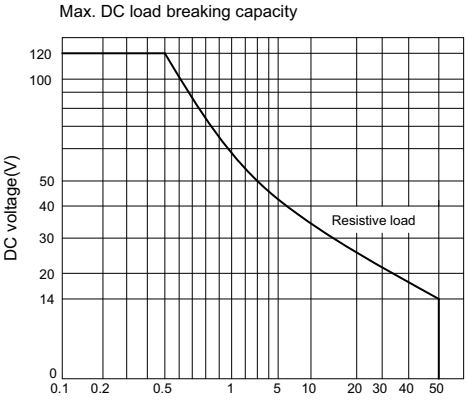

A:0A B:25A C:30A D:40A E:50A Contact load(resistive)

Maximum mean coil temperature=155℃

Operate time/Release time




Max. DC load breaking capacity



LifeElectronics
Живое партнерство

**ООО «ЛайфЭлектроникс»** **“LifeElectronics” LLC**

*ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703*

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