



### »» Features

- 25A miniature general purpose Power Relay.
- With or without quick terminal & PCB terminal.
- CSA/CUS, TUV,UL/CUL approved.
- Designed for compressor load switching application and office equipment of motor control or lamp load switching.
- Complies with RoHS-Directive 2011/65/EU.
- Optional for explosion-proof version.

### »» Type List

Terminal style	Contact form	Designation
WP (Quick terminal & PCB terminal)	SPNO	891WP-1A-C
P (PCB terminal)	SPNO	891P-1A-C

### »» Ordering Information

891 WP - 1A -  - C

1 2 3 4 5 6

- |                                     |   |
|-------------------------------------|---|
| 1. 891 -- Basic series designation  | 4. Blank -- Standard type   |
|                                     | F -- Class F  |
| 2. P -- PCB terminal                |   |
| WP -- Quick terminal & PCB terminal | 5. C -- Flux tight  |
| 3. 1A -- Single pole normally open  | 6. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability) |

### »» Contact Rating

Resistive load	25A 250VAC
Inductive load / Compressor load	Inrush 80A 240VAC $\cos\phi 0.7$ Steady state 20A 240VAC $\cos\phi 0.9$
Max. switching current	25A
Max. switching voltage	277VAC
Max. switching capacity	6250VA

### »» Coil Rating (DC)

Rated voltage (V)	Rated current $\pm 10\%$ at 23°C (mA)	Coil resistance $\pm 10\%$ at 23°C ( $\Omega$ )	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
5	180	27.8	150 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.9W
6	150	40				
9	100	90				
12	75	160				
24	38	640				
48	19	2,560				

## »» Specification

Contact material	AgSnO alloy	
Contact resistance <sup>(1)</sup>	100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time <sup>(1)</sup>	20ms Max.	
Release time <sup>(1)</sup>	10ms Max.	
Vibration resistance	Operating extremes	10~55Hz , amplitude 1.5 mm
	Damage limits	10~55Hz , amplitude 2.0 mm
Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	5,000,000 ops. (frequency 18,000 ops./hr)
	Electrical	100,000 ops. (frequency 360 ops./hr)
Operating ambient temperature	-40~+ 85°C (no freezing)	
Weight	Approx. 22g	

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) Applying no diode to this relay. The life expectancy will be lower when a diode is used. To use a varistor (ZNR) could absorb the coil surge of relay that is recommended.

(5) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.

(6) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

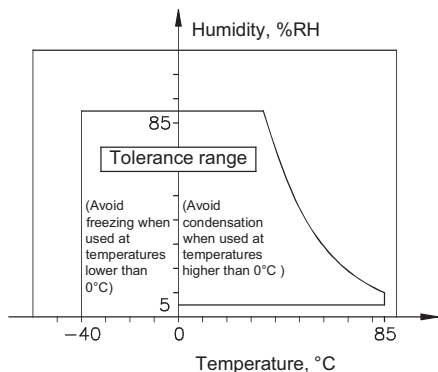
(7) Do not switch the contacts without any load as the contact resistance may become increased rapidly.

(8) Use suitable harnesses and bus bars according to the current as below :

25A type : Min. 6.0 mm<sup>2</sup>

(9) Usage, transport and storage conditions

- 1. Temperature: -40~+85°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.

## »» Insulation Data

Insulation resistance <sup>(1)</sup>	1000 MΩ Min. (DC 500V)
Dielectric strength <sup>(1)</sup>	Between open contact : AC 1000V , 50/60Hz 1 min.
	Between contact and coil : AC 4500V, 50/60Hz 1 min.
Insulation of IEC 61810-1	
Clearance / creepage distances	Between coil to contact : Reinforce, $\geq 3.0\text{mm} / \geq 5.0\text{mm}$
	Between open contact : Functional
Rated insulation voltage	250V
Rated impulse withstand voltage	2500V
Pollution degree	2
Rated voltage	230 / 400V
Overvoltage category	II

Note : (1) Initial value.

## »» Safety Approval

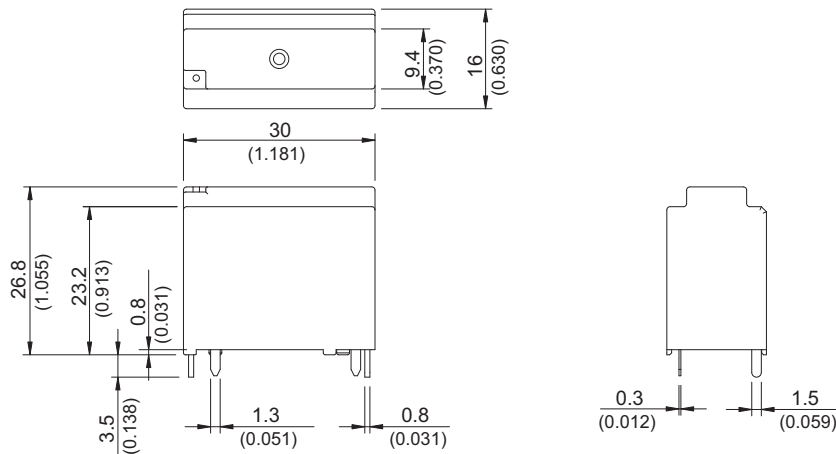
Certified	CSA / CUS	TUV	UL / CUL
File No.	1165173	R50003966	E88991

## »» Safety Approval Rating

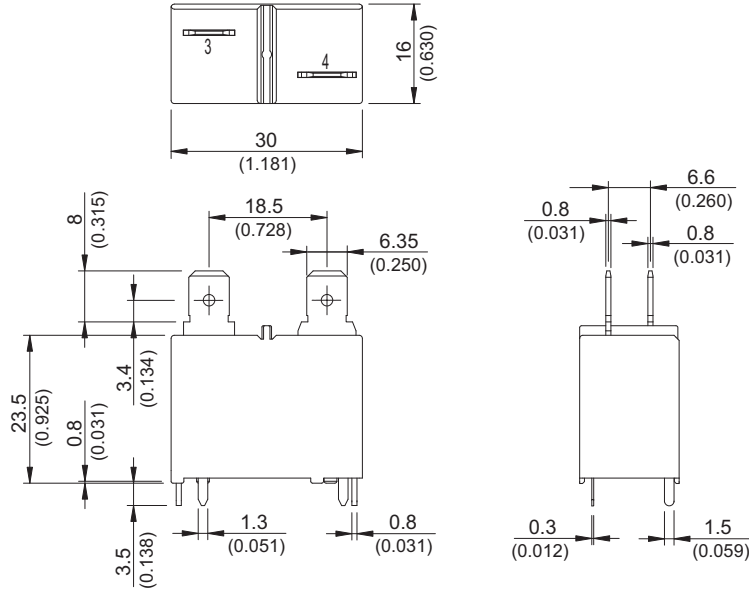
CSA / CUS	TUV	UL / CUL
25A 277VAC 1.5HP 125/250VAC	25A 250VAC 20A 250VAC $\cos\phi 0.7$	25A 277VAC 1.5HP 125VAC/250VAC 18FLA/98LRA 240VAC

## »» Outline Dimensions

### ◆ 891P

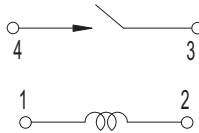


◆891WP

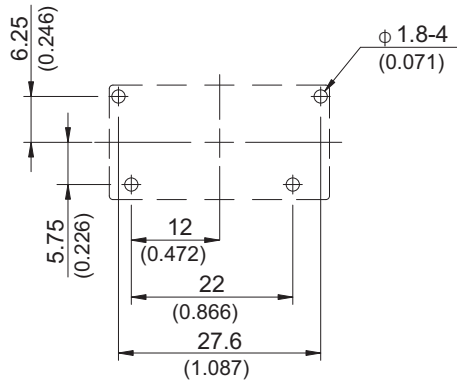


TOLERANCE:  
 LESS THAN: 1(0.039) ±0.1(0.004)  
 5(0.197) ±0.3(0.012)  
 20(0.787) ±0.5(0.020)  
 MORE THAN: 20(0.787) ±1(0.039)

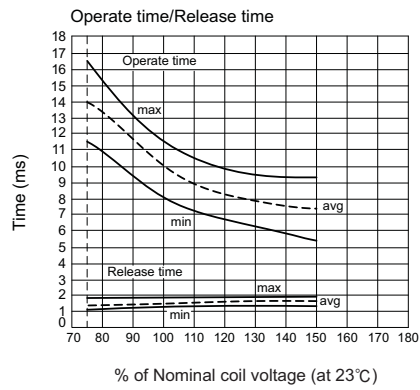
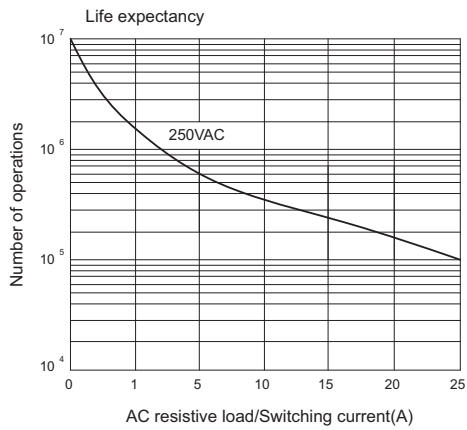
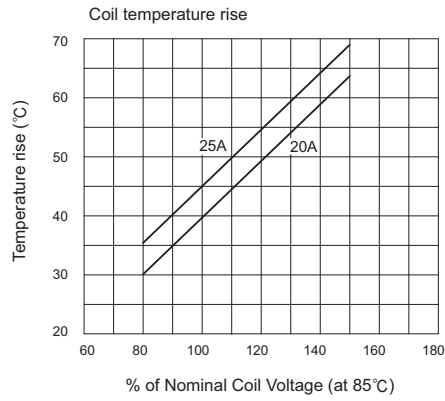
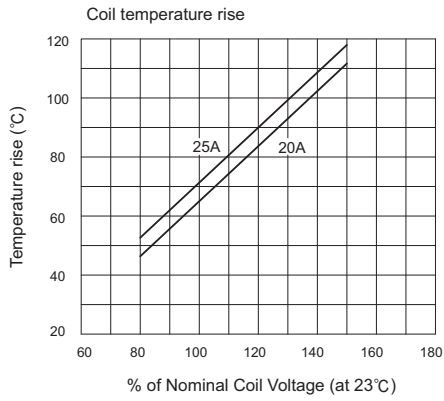
»» Wiring Diagram  
 BOTTOM VIEW



»» PC Board Layout  
 BOTTOM VIEW



## »» Engineering Data



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