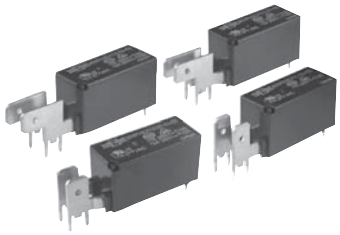
881WP



Features

- Low Profile 15.7mm w/ fasten terminals.
- High Rating 17A 277VAC.
- High temperature withstand up to 125℃.
- UL/CUL、VDE approvals.
- High CTI 250 material or product comply with IEC 60335-1 are available.
- Complies with RoHS-Directive 2011/65/EU.

Type List

Terminal style	Contact form	UL Insulation system approval	Designation (provided with)		
			Flux tight	Sealed type	Sealed type washable
WP1 (High power type, Quick terminal & PCB terminals)- 5.0mm pitch	1A (SPNO)	F	881WP1-1AC-F-C	881WP1-1AC-F-V	881WP1-1AC-F-S
WP2 (High power type, Quick terminal & PCB terminals)- 7.5mm pitch	1A (SPNO)	F	881WP2-1AC-F-C	881WP2-1AC-F-V	881WP2-1AC-F-S
WP3 (High power type, Quick terminal & PCB terminals)- 5.0mm pitch	1A (SPNO)	F	881WP3-1AC-F-C	881WP3-1AC-F-V	881WP3-1AC-F-S
WP4 (High power type, Quick terminal & PCB terminals)- 7.5mm pitch	1A (SPNO)	F	881WP4-1AC-F-C	881WP4-1AC-F-V	881WP4-1AC-F-S

Ordering Information

881 WP1 - 1A C - □ - C □ □

1 2 3 4 5 6 7 8

1. 881 -- Basic series designation

2. WP1 -- High power type w/quick connect & PCB terminals - 5.0mm pitch
   WP2 -- High power type w/quick connect & PCB terminals - 7.5mm pitch
   WP3 -- High power type w/horizontal quick connect & PCB terminals - 5.0mm pitch
   WP4 -- High Power type w/horizontal quick connect & PCB terminals - 7.5mm pitch

3. 1A -- Single pole normally open
   1B -- Single pole normally closed

4. C -- Contact material AgNi

5. Blank -- Standard type
   F -- Class F

6. C -- Flux tight
   V -- Sealed type
   S -- Sealed type washable

7. Blank -- Standard type
   E1 -- Comply with IEC 60335-1

8. □ -- Coil voltage (please refer to the coil rating data for the availability)

Contact Rating

Rated load (resistive)	16A 240VAC, at 105°C, 75K ops. ; 11A 240VAC, at 105°C, typ. 300K ops.
Max. switching current	17A
Max. switching voltage	277VAC
Max. switching capacity	3840VA

Coil Rating (DC)

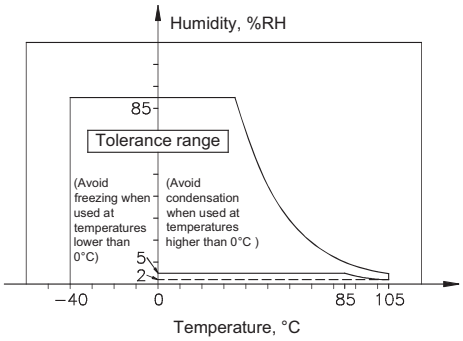
Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10% at 23°C (Ω)	Max. continuous voltage at 105°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
5	80	62	110 % of rated voltage	70 % of rated voltage	10 % of rated voltage	approx. 0.4W
6	67	90				
9	44	203				
12	33	360				
18	23	771				
24	17	1,440				
36	11.1	3,240				
48	8.7	5,520				
60	8	7,340±15%				

Specification

Contact material	AgNi alloy	
Contact resistance (1)	100mΩ Max. (at 1A/ 6VDC by 4-wire resistance measurement)	
Operate time (1)	20ms Max.	
Release time (1)	10ms Max.	
Vibration resistance	Operating extremes	10～55Hz , amplitude 1.5 mm
	Damage limits	10～55Hz , amplitude 1.5 mm
Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	10,000,000 ops. (frequency 72,000 ops./hr)
	Electrical	100,000 ops. (frequency 360 ops./hr)
Operating ambient temperature	-40～+105°C (no freezing) (2)	
Weight	Approx. 13 g	

Note ：(1) Initial value. Operate and release time excluding contact bounce.
(2) Special version of high temperature 125°C can be selected.
(3) Unless otherwise specified, all tests are under room temperature and humidity.
(4) Consider the heat of PCB is necessary, please check the actual condition of PCB.
(5) 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.

(6) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.
(7) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.
(8) Do not switch the contacts without any load as the contact resistance may become increased rapidly.
(9) Flux tight version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.
(10) Use suitable harnesses and bus bars according to the current as below：
11A type：Min. 3.0 mm^2
16A type：Min. 3.0 mm^2
(11) Usage, transport and storage conditions
- 1. Temperature: -40～+105°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.



(12) Please contact Song Chuan for the detailed information.

Insulation Data

Insulation resistance (1)	1000MΩ Min. (DC 500V)	
Surge voltage withstand (1)	Between contact and coil	: 10KV (1.2X50) μS
Dielectric strength (1)	Between open contact	: AC 1000V, 50/60Hz 1 min.
	Between contact and coil	: AC 5000V, 50/60Hz 1 min.
Insulation of IEC 61810-1		
Clearance / creepage distances	Between coil to contact	: Reinforce, ≧ 6.0mm / ≧ 8.0mm
	Between open contact	: Functional
Rated insulation voltage	250V	
Rated impulse withstand voltage	4000V	
Pollution degree	3	
Rated voltage	230 / 400V	
Overvoltage category	II	

Note：(1) Initial value.

Safety Approval

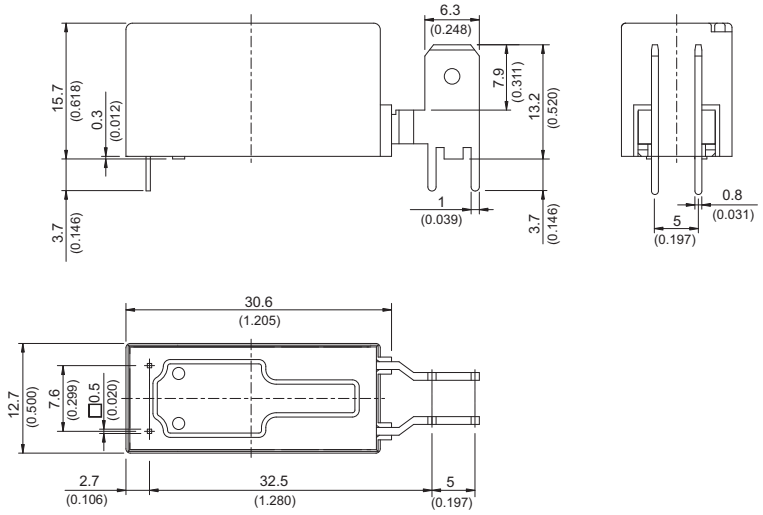
Certified	UL / CUL	VDE
File No.	E88991	132905

Safety Approval Rating

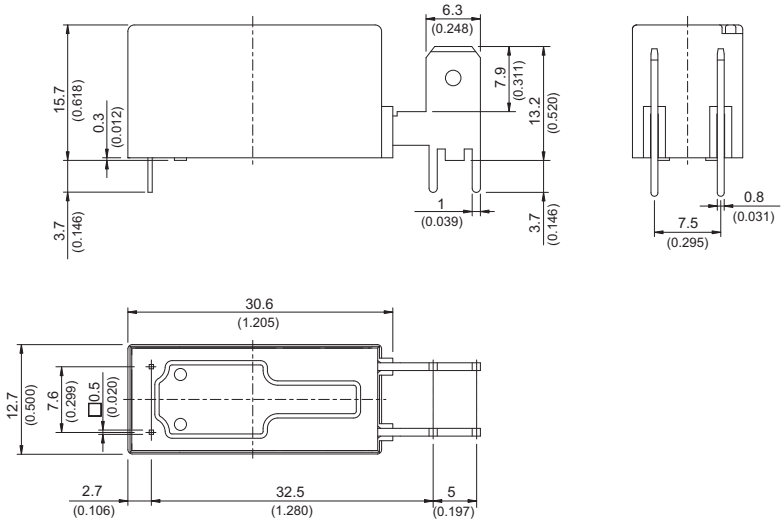
UL / CUL	VDE
17A 277VAC 10A 400VAC	12A 250VAC T125 10A 400VAC T125 17A 250VAC T105

Outline Dimensions

◆881WP1

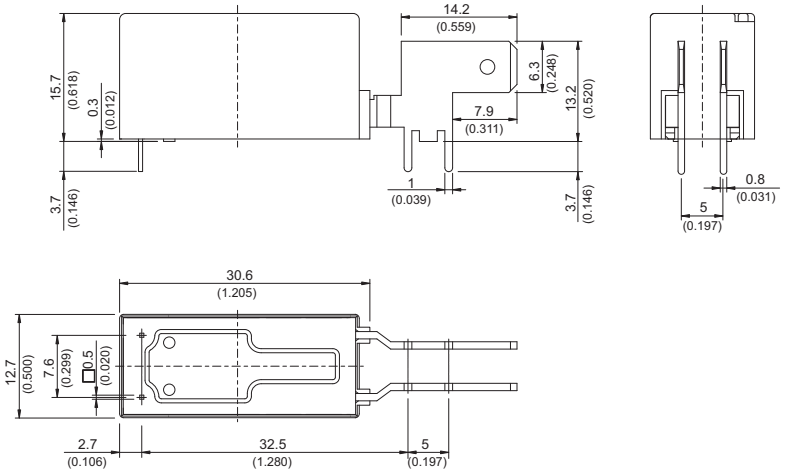


◆881WP2

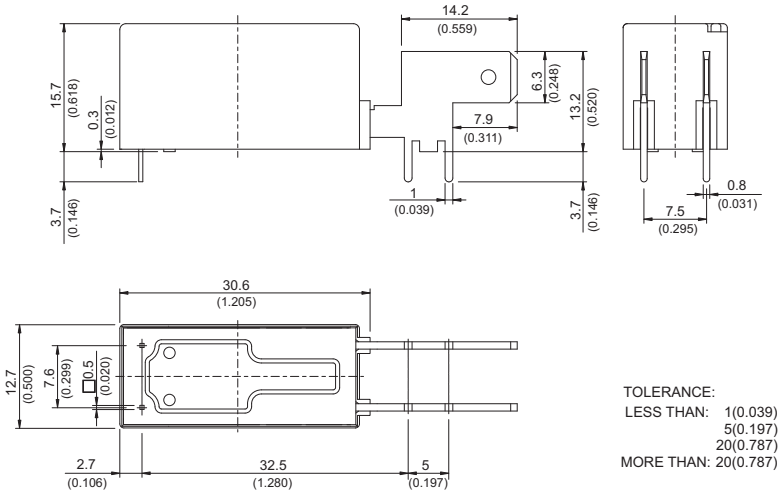


881WP

◆881WP3



◆881WP4



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

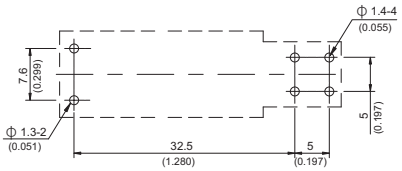
1A

1B

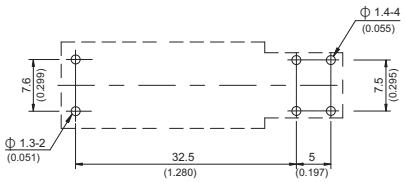
PC Board Layout

BOTTOM VIEW

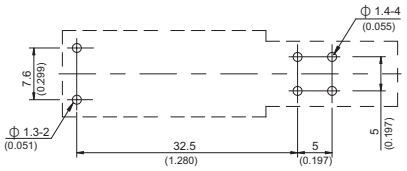
◆881WP1



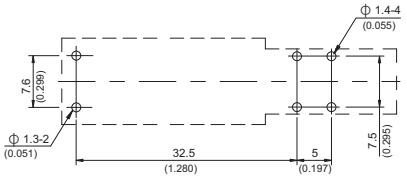
◆881WP2



◆881WP3

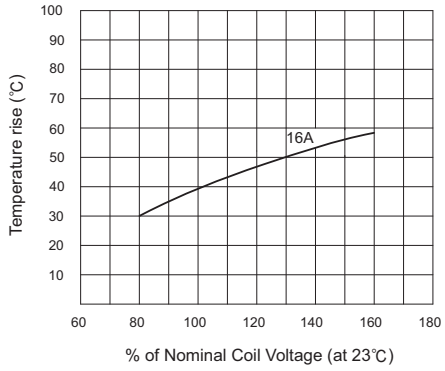


◆881WP4

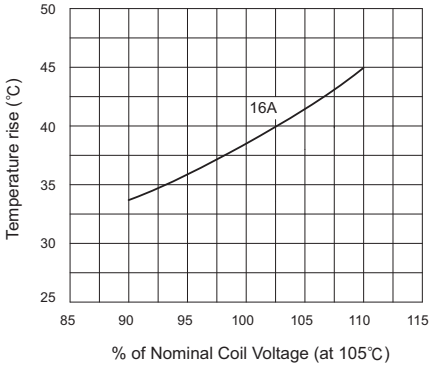


Engineering Data

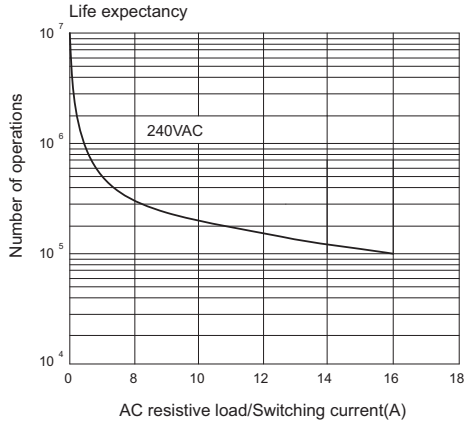
Coil temperature rise



Coil temperature rise



Life expectancy



Operate time/Release time