

731



»» Features

- ☐ 10A general purpose Power Relay.
- ☐ SPDT, DPDT, TPDT contact configurations.
- ☐ AC & DC coils are both available.
- ☐ Optional for anti-rotation tab, tapped core, indicator lamp & push-to-test button, flanged cover.
- ☐ Complies with RoHS-Directive 2011/65/EU.

»» Type List

◆ 731

Terminal style	Contact form	Enclosure style				
		Open type	Dust cover	Ears on cover	Antirotation -tab	Ears on top
Quick terminal	1A (SPNO)	731-SPNO	731-SPNO-C	731-SPNO-C1	731-SPNO-C2	731-SPNO-C3
	1C (SPDT)	731-SPDT	731-SPDT-C	731-SPDT-C1	731-SPDT-C2	731-SPDT-C3
	2A (DPNO)	731-DPNO	731-DPNO-C	731-DPNO-C1	731-DPNO-C2	731-DPNO-C3
	2C (DPDT)	731-DPDT	731-DPDT-C	731-DPDT-C1	731-DPDT-C2	731-DPDT-C3
	3A (TPNO)	731-TPNO	731-TPNO-C	731-TPNO-C1	731-TPNO-C2	731-TPNO-C3
	3C (TPDT)	731-TPDT	731-TPDT-C	731-TPDT-C1	731-TPDT-C2	731-TPDT-C3

◆ 731H

Terminal style	Contact form	Enclosure style		
		Dust cover	Ears on cover	Ears on top
Quick terminal	1A (SPNO)	731H-SPNO-C	731H-SPNO-C1	731H-SPNO-C3
	1C (SPDT)	731H-SPDT-C	731H-SPDT-C1	731H-SPDT-C3
	2A (DPNO)	731H-DPNO-C	731H-DPNO-C1	731H-DPNO-C3
	2C (DPDT)	731H-DPDT-C	731H-DPDT-C1	731H-DPDT-C3
	3A (TPNO)	731H-TPNO-C	731H-TPNO-C1	731H-TPNO-C3
	3C (TPDT)	731H-TPDT-C	731H-TPDT-C1	731H-TPDT-C3

»» Ordering Information

731 ☐ - TPDT - ☐ ☐ - ☐ ☐

1 2 3 4 5 6 7

1. 731 -- Basic series designation
2. Blank -- Standard type
H -- High power type
3. SPDT -- Single pole double throw
SPNO -- Single pole normally open
SPNC -- Single pole normally closed

- DPDT -- Double pole double throw
- DPNO -- Double pole normally open
- DPNC -- Double pole normally closed
- TPDT -- Three pole double throw
- TPNO -- Three pole normally open
- TPNC -- Three pole normally closed

4. Blank -- Open type without frame tab
 C -- With cover
 C1 -- With mounting ears on cover
 C2 -- With accessible mounting hole with anti-rotation tab
 C3 -- Mounting Ears on top of cover
 X -- Open type with frame tab
5. Blank -- No special feature
 M -- With manual operator
- T -- Printed circuit board terminals
 L -- Pilot lamp
6. Blank -- Standard type
 F -- Class F
7. ☐ -- Coil voltage (please refer to the coil rating data for the availability)

»» Contact Rating

	731	731H 1P · 2P	731H 3P
Resistive load	10A 28VDC 10A 240VAC	20A 300VAC 25A 277VAC	16A 300VAC 20A 277VAC

»» Coil Rating (DC)

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
6	188	32	140 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 1.2W
12	100	120				
24	51	472				
48	27	1800				
110	11	10000				
120	12	10000				

»» Coil Rating (AC)

Rated voltage (V)		Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
SP DP	12	21	110 % of rated voltage	85 % of rated voltage	30 % of rated voltage	approx. 2.0VA
	24	85				
	110	1700				
	115	1700				
	120	2250				
	220	7200				
	230	7200				
	240	9110				

»» Coil Rating (AC)

Rated voltage (V)		Coil resistance $\pm 10\%$ at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
TP	12	18	110 % of rated voltage	85 % of rated voltage	30 % of rated voltage	approx. 2.7VA
	24	72				
	110	1300				
	115	1300				
	120	1700				
	220	5600				
	230	5600				
	240	7200				

»» Specification

Contact material	AgSnO alloy		
Contact resistance ⁽¹⁾	50mΩ Max. (for 731) ; 100mΩ Max. (for 731H) (1A/6VDC by 4 pipes mΩ meter)		
Operate time ⁽¹⁾	20 ms Max.		
Release time ⁽¹⁾	20 ms Max.		
Insulation resistance ⁽¹⁾	1000 MΩ Min. (DC 500V)		
Dielectric strength ⁽¹⁾	Between open contact	: AC 500V , 50/60Hz 1 min.	(for 731)
		: AC 1000V , 50/60Hz 1 min.	(for 731H)
	Between contact and coil	: AC 1500V , 50/60Hz 1 min.	(for 731)
		: AC 2500V , 50/60Hz 1 min.	(for 731H)
	Between contact circuits	: AC 1500V , 50/60Hz 1 min.	(for 731)
		: AC 2500V , 50/60Hz 1 min.	(for 731H)
Vibration resistance	Operating extremes	10～55Hz , amplitude 1.0 mm	
	Damage limits	10～55Hz , amplitude 1.5 mm	
Shock resistance	Operating extremes	10G	
	Damage limits	100G	
Life expectancy	Mechanical	10,000,000 operations (frequency 18,000 ops./hr)	
	Electrical	100,000 operations (frequency 1,200 ops./hr) (for 731) 50,000 operations (frequency 360 ops./hr) (for 731H)	
Operating ambient temperature	-45～+70°C (no freezing)		(for 731)
	AC coil : -45～+55°C (no freezing) DC coil : -45～+65°C (no freezing)		(for 731H)
Weight	Approx. 79.2 g		

Note : (1) Initial value. Operate and release time excluding contact bounce.

»» Safety Approval

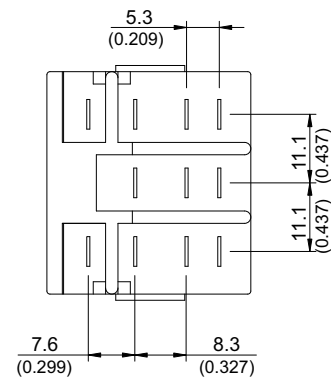
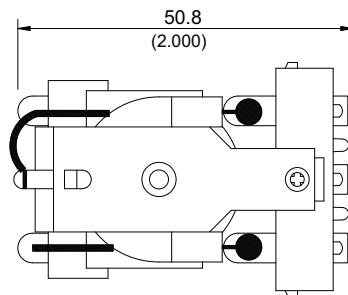
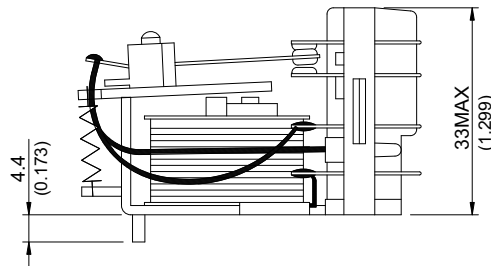
Certified	731		731H
	UL / CUL	CSA	UL / CUL
File No.	E88991	1663800	E88991

»» Safety Approval Rating

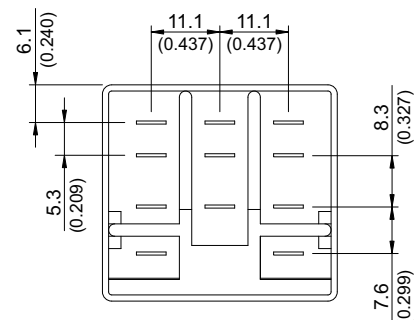
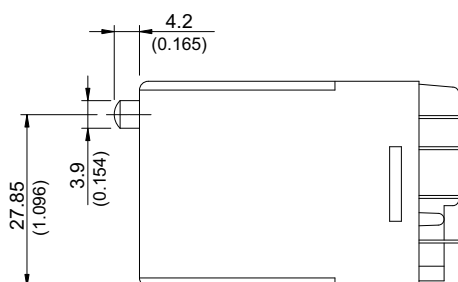
731	731H 1P 、 2P	731H 3P
UL / CUL 、 CSA	UL / CUL	
10A 240VAC	20A 300VAC	16A 300VAC
10A 28VDC	25A 277VAC	20A 277VAC
1/3HP 120VAC	1.5HP 240VAC	1.5HP 240VAC
1/2HP 240VAC	1HP 120VAC	1HP 120VAC

»» Outline Dimensions

◆ 731 OPEN

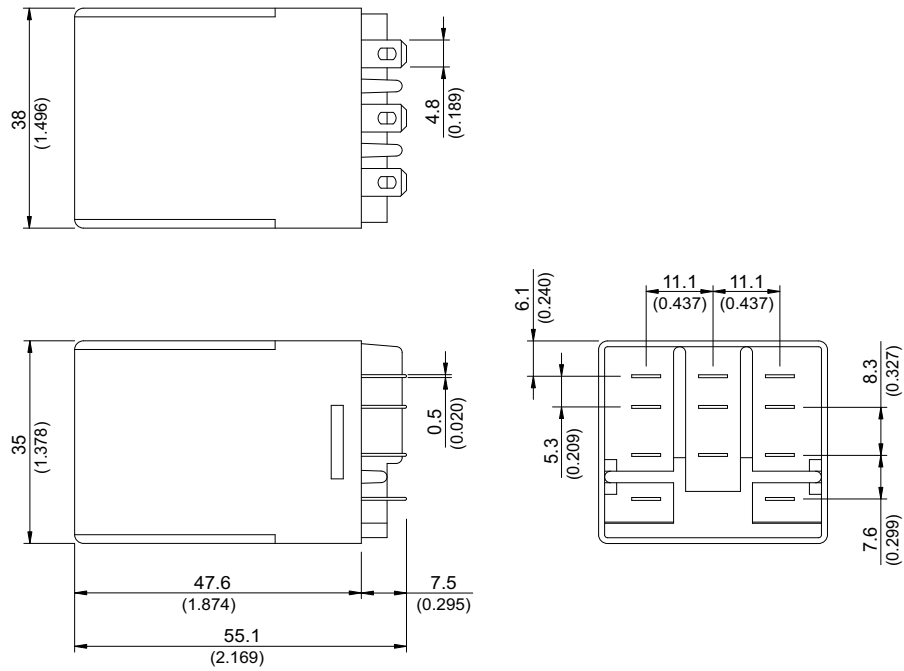


◆ 731 M

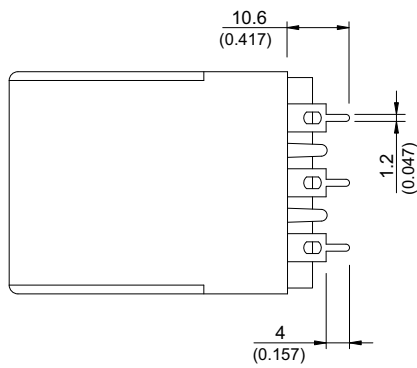


731

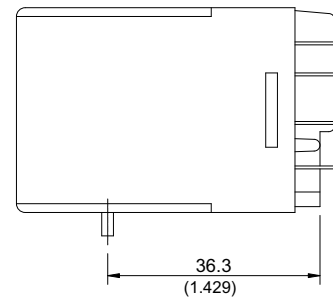
◆ 731 C



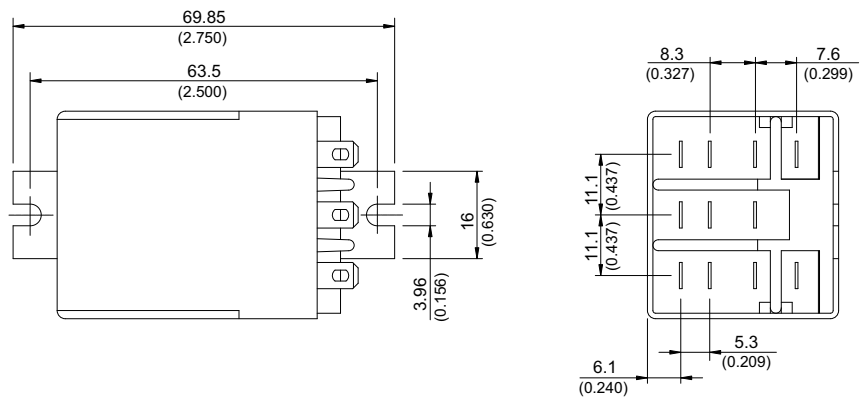
◆ 731 T



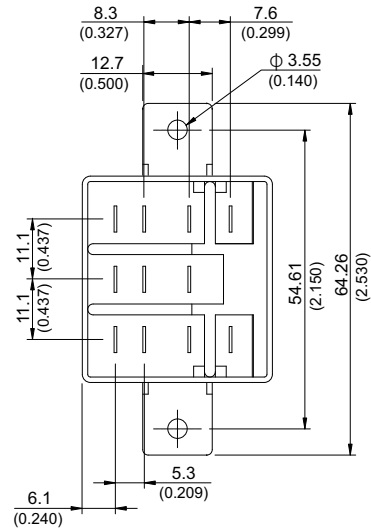
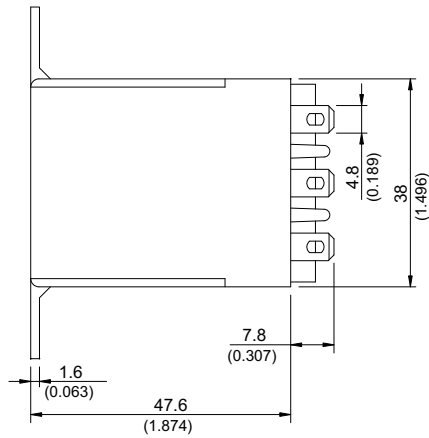
◆ 731 C2



◆ 731 C1

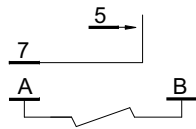


◆ 731 C3

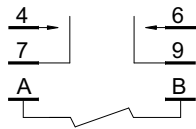


»» Wiring Diagram
BOTTOM VIEW

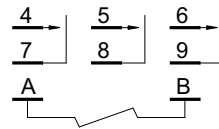
SPNO



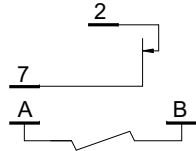
DPNO



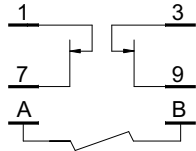
TPNO



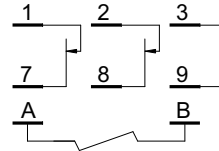
SPNC



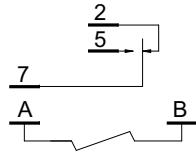
DPNC



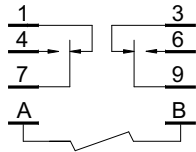
TPNC



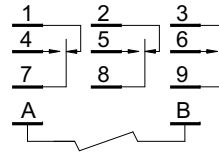
SPDT



DPDT

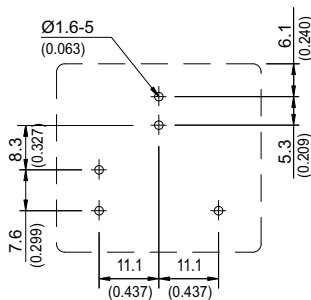


TPDT

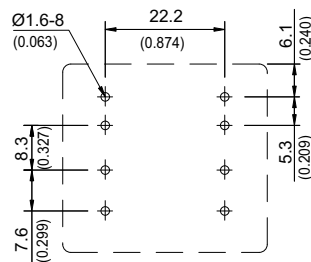


»» PC Board Layout
BOTTOM VIEW

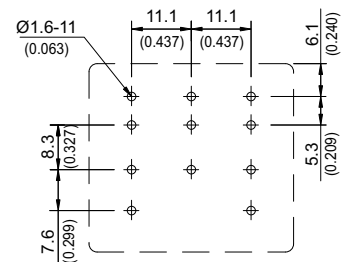
1P



2P

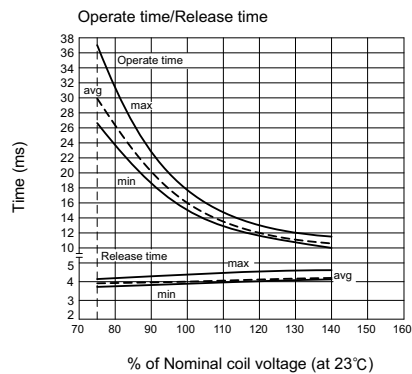
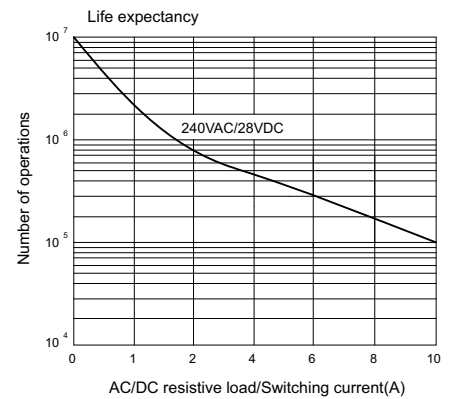
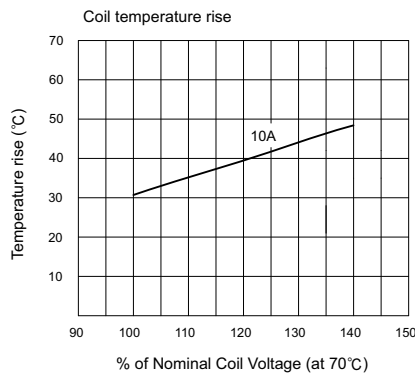
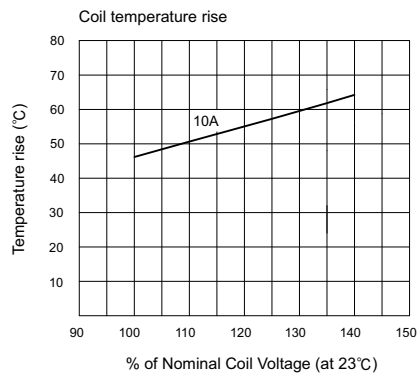


3P



» Engineering Data

◆731



◆731 H

