

## »» Features



- ☐ 10A general purpose Power Relay.
- ☐ Both available 0.25 and 0.187 terminals.
- ☐ 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.
- ☐ Comply with RoHS-Directive 2002/95/EC.

## »» 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

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

### »» Contact Rating

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

### »» Coil Rating (DC)

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

### »» Coil Rating (AC)

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

### »» Coil Rating (AC)

| Rated voltage<br>(V) |     | Coil resistance<br>±10 % at 23°C<br>(Ω) | Max. continuous<br>voltage<br>at 70°C | Pick up<br>voltage(Max)<br>at 23°C | Drop out<br>voltage(Min)<br>at 23°C | Power consumption<br>at rated<br>voltage |
|----------------------|-----|-----------------------------------------|---------------------------------------|------------------------------------|-------------------------------------|------------------------------------------|
| TP                   | 12  | 18                                      | 110 % of<br>rated<br>voltage          | 85 % of<br>rated<br>voltage        | 30 % of<br>rated<br>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 <sup>(1)</sup>    | 50mΩ Max. (for 731) ; 100mΩ Max. (for 731H) (1A/6VDC by 4 pipes mΩ meter) |                                                                                                                |            |
| Operate time <sup>(1)</sup>          | 20 ms Max.                                                                |                                                                                                                |            |
| Release time <sup>(1)</sup>          | 20 ms Max.                                                                |                                                                                                                |            |
| Insulation resistance <sup>(1)</sup> | 1000 MΩ Min. (DC 500V)                                                    |                                                                                                                |            |
| Dielectric strength <sup>(1)</sup>   | 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) |
| 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)<br>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) (for 731H)                              |                                                                                                                |            |
|                                      | DC coil : -45~+65°C (no freezing)                                         |                                                                                                                |            |
| Weight                               | Approx. 79.2 g                                                            |                                                                                                                |            |

Note : (1) initial value.

### »» Safety Approval

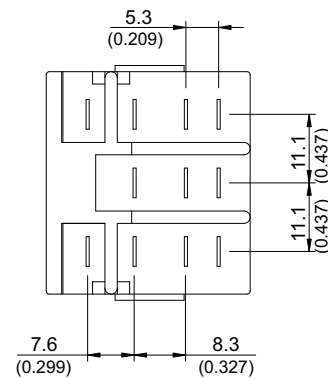
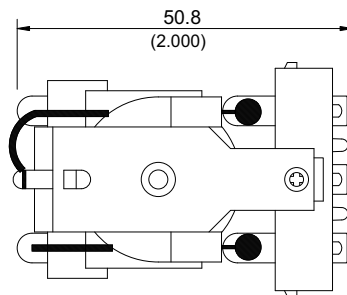
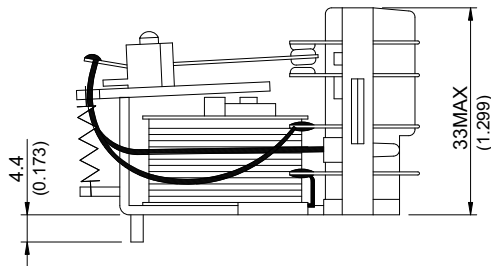
| Certified | 731    |         |       | 731H     |
|-----------|--------|---------|-------|----------|
|           | UL     | CSA     | FIMKO | UL / CUL |
| File No.  | E88991 | 1663800 | 23797 | E88991   |

### »» Safety Approval Rating

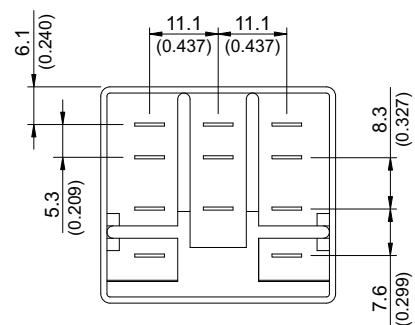
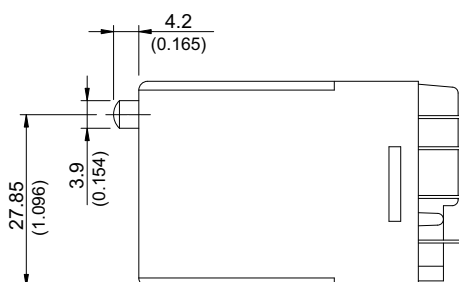
| 731          |            | 731H 1P、2P   | 731H 3P      |
|--------------|------------|--------------|--------------|
| UL、CSA       | FIMKO      | UL / CUL     |              |
| 10A 240VAC   | 10A 250VAC | 20A 300VAC   | 16A 300VAC   |
| 10A 28VDC    |            | 25A 277VAC   | 20A 277VAC   |
| 1/3HP 120VAC |            | 1.5HP 240VAC | 1.5HP 240VAC |
| 1/2HP 240VAC |            | 1HP 120VAC   | 1HP 120VAC   |

### »» Outline Dimensions

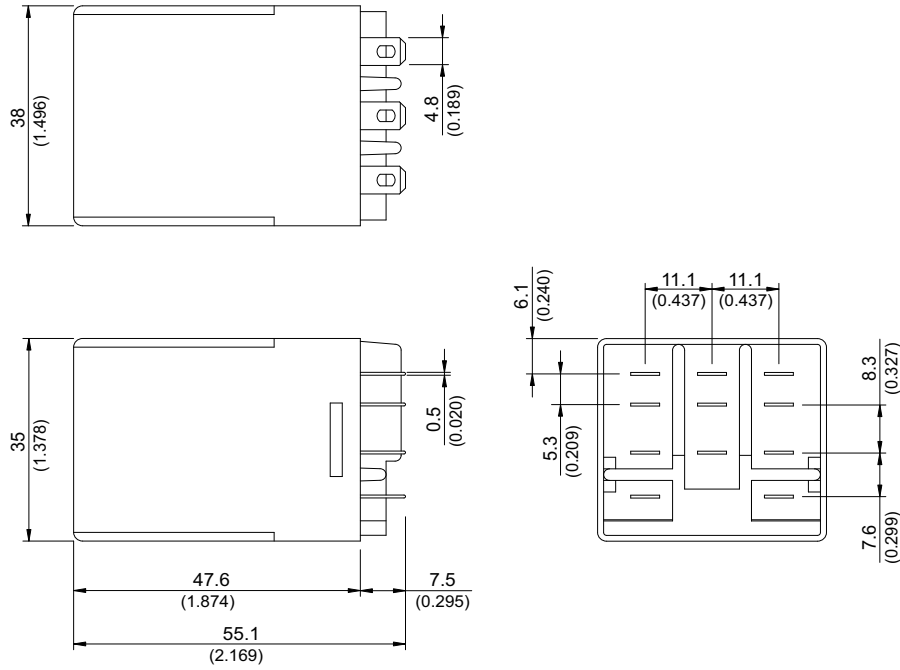
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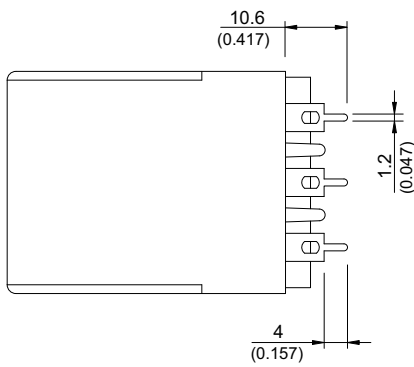
#### ◆731 M



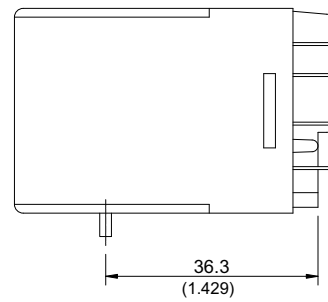
◆ 731 C



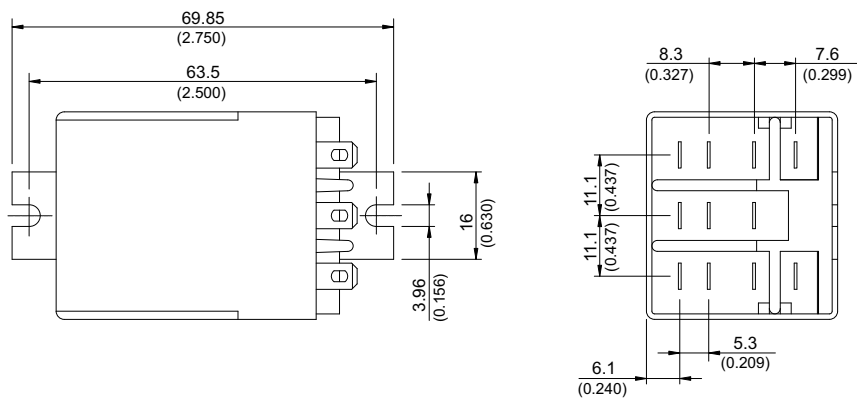
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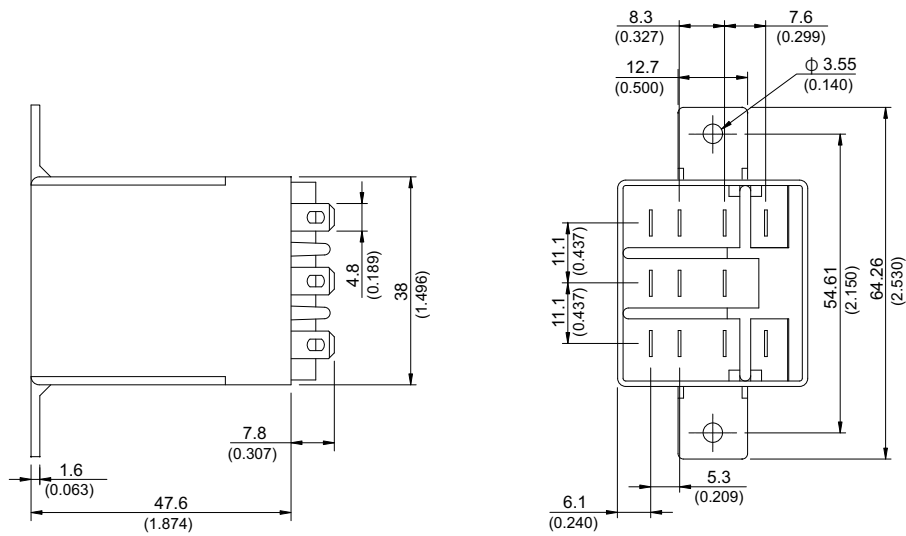
◆ 731 C2



◆ 731 C1



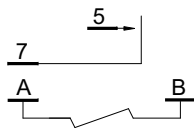
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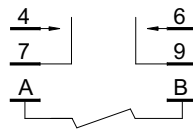
### »» Wiring Diagram

BOTTOM VIEW

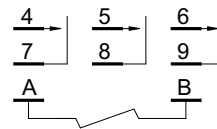
SPNO



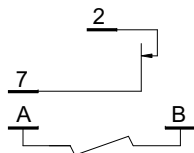
DPNO



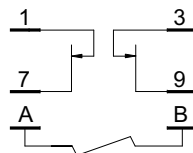
TPNO



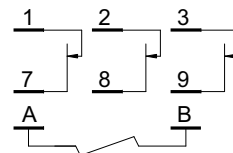
SPNC



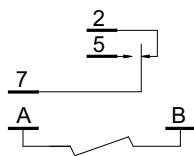
DPNC



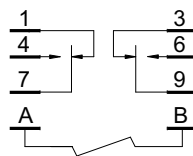
TPNC



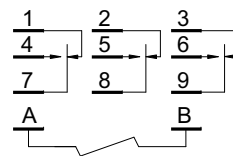
SPDT



DPDT



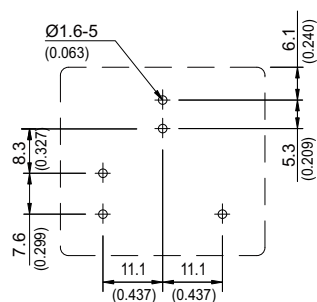
TPDT



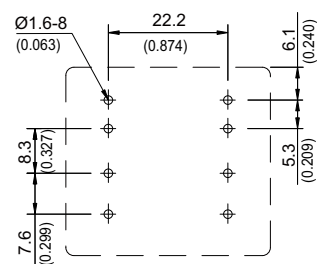
### »» PC Board Layout

BOTTOM VIEW

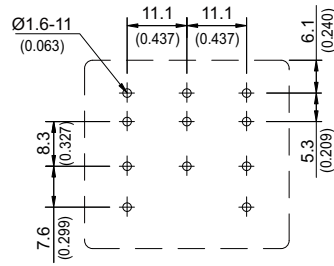
1P



2P

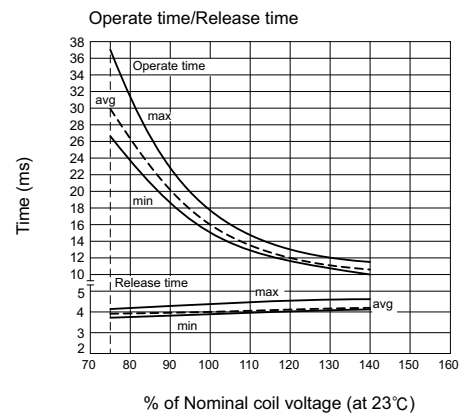
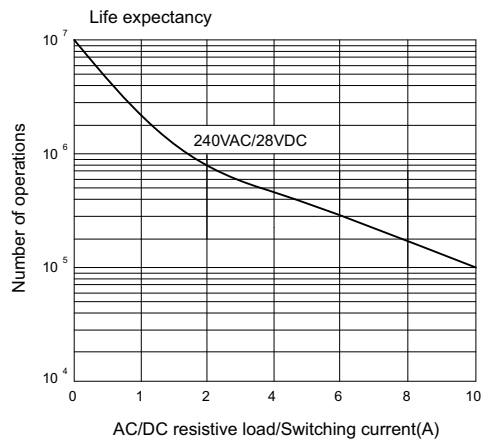
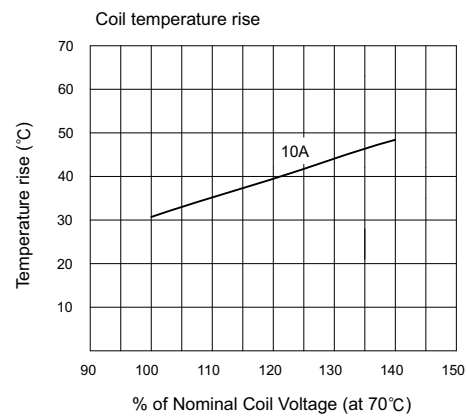
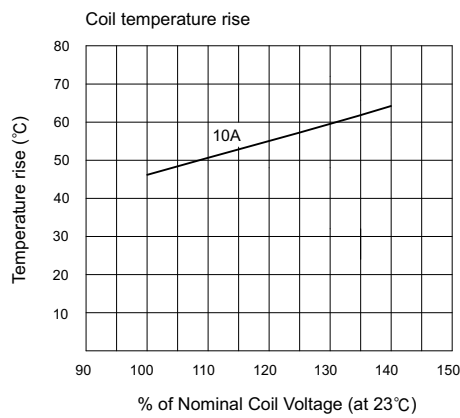


3P

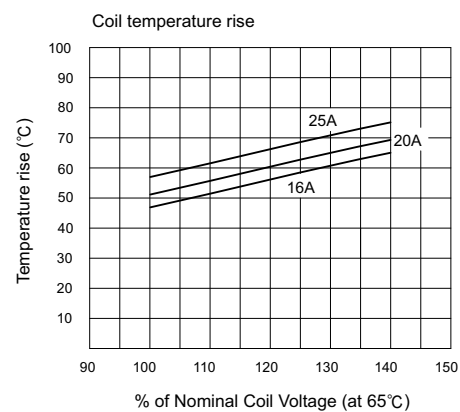
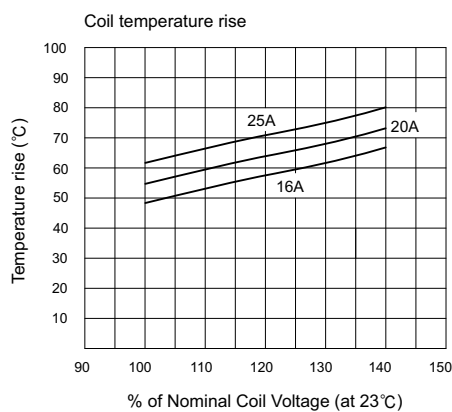


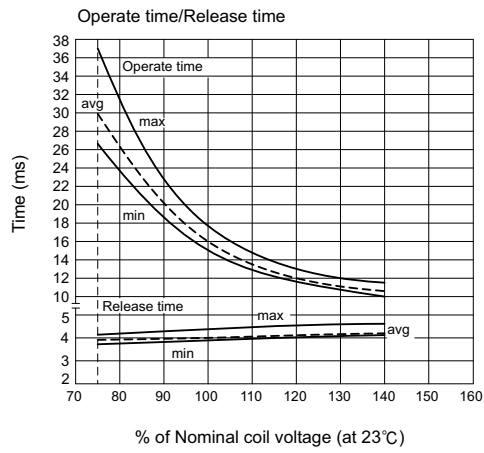
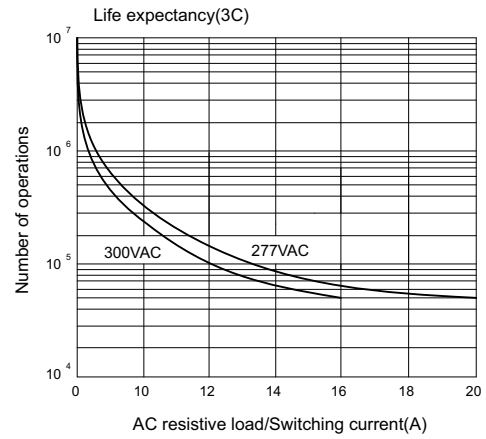
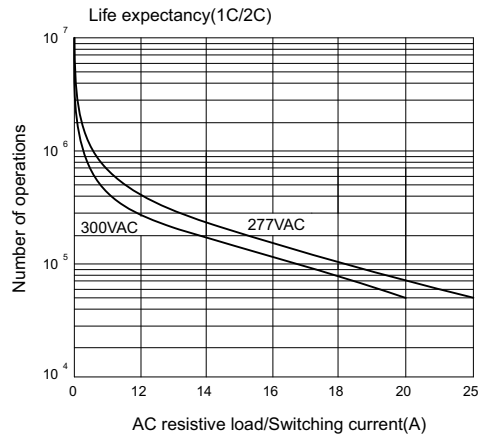
## Engineering Data

◆731



◆731 H





## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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