



## »» Features

- ☐ 20A/25A general purpose Power Relays.
- ☐ SPDT, DPDT, TPDT contact configurations.
- ☐ DC & AC coils are both available.
- ☐ Optional for flange covers, tapped core w/anti-rotation tab, indicator lamp, push-to-test button, PCB terminals
- ☐ Comply with RoHS-Directive 2002/95/EC.

## »» Type List

### ◆ Standard Type

| Terminal style | Contact form | Enclosure style |            |               |                  |             |
|----------------|--------------|-----------------|------------|---------------|------------------|-------------|
|                |              | Open type       | Dust cover | Ears on cover | Antirotation-tab | Ears on top |
| Quick terminal | 1A (SPNO)    | 735-1A          | 735-1A-C   | 735-1A-C1     | 735-1A-C2        | 735-1A-C3   |
|                | 1B (SPNC)    | 735-1B          | 735-1B-C   | 735-1B-C1     | 735-1B-C2        | 735-1B-C3   |
|                | 1C (SPDT)    | 735-1C          | 735-1C-C   | 735-1C-C1     | 735-1C-C2        | 735-1C-C3   |
|                | 2A (DPNO)    | 735-2A          | 735-2A-C   | 735-2A-C1     | 735-2A-C2        | 735-2A-C3   |
|                | 2B (DPNC)    | 735-2B          | 735-2B-C   | 735-2B-C1     | 735-2B-C2        | 735-2B-C3   |
|                | 2C (DPDT)    | 735-2C          | 735-2C-C   | 735-2C-C1     | 735-2C-C2        | 735-2C-C3   |
|                | 3A (TPNO)    | 735-3A          | 735-3A-C   | 735-3A-C1     | 735-3A-C2        | 735-3A-C3   |
|                | 3B (TPNC)    | 735-3B          | 735-3B-C   | 735-3B-C1     | 735-3B-C2        | 735-3B-C3   |
|                | 3C (TPDT)    | 735-3C          | 735-3C-C   | 735-3C-C1     | 735-3C-C2        | 735-3C-C3   |
| PCB terminal   | 1A (SPNO)    | -----           | 735-1A-C-T | -----         | -----            | -----       |
|                | 1B (SPNC)    | -----           | 735-1B-C-T | -----         | -----            | -----       |
|                | 1C (SPDT)    | -----           | 735-1C-C-T | -----         | -----            | -----       |
|                | 2A (DPNO)    | -----           | 735-2A-C-T | -----         | -----            | -----       |
|                | 2B (DPNC)    | -----           | 735-2B-C-T | -----         | -----            | -----       |
|                | 2C (DPDT)    | -----           | 735-2C-C-T | -----         | -----            | -----       |
|                | 3A (TPNO)    | -----           | 735-3A-C-T | -----         | -----            | -----       |
|                | 3B (TPNC)    | -----           | 735-3B-C-T | -----         | -----            | -----       |
|                | 3C (TPDT)    | -----           | 735-3C-C-T | -----         | -----            | -----       |

### ◆ High Power Type

| Terminal style | Contact form | Insulation system | Enclosure style |               |
|----------------|--------------|-------------------|-----------------|---------------|
|                |              |                   | Dust cover      | Ears on cover |
| Quick terminal | 1A (SPNO)    | F                 | 735H-1A-F-C     | 735H-1A-F-C1  |
|                | 1B (SPNC)    |                   | 735H-1B-F-C     | 735H-1B-F-C1  |
|                | 1C (SPDT)    |                   | 735H-1C-F-C     | 735H-1C-F-C1  |
|                | 2A (DPNO)    |                   | 735H-2A-F-C     | 735H-2A-F-C1  |
|                | 2B (DPNC)    |                   | 735H-2B-F-C     | 735H-2B-F-C1  |
|                | 2C (DPDT)    |                   | 735H-2C-F-C     | 735H-2C-F-C1  |

## »» Ordering Information

735    H    -    2C    -    F    -    C1    -    M  
 1       2       3       4       5       6

- |          |                                |          |                                                         |
|----------|--------------------------------|----------|---------------------------------------------------------|
| 1. 735   | -- Basic series designation    | 4. Blank | -- Standard type                                        |
|          |                                | F        | -- Class F                                              |
| 2. Blank | -- Standard type               | 5. Blank | -- Open type                                            |
| H        | -- High power type             | C        | -- With cover                                           |
| 3. 1A    | -- Single pole normally open   | C1       | -- With mounting ears on cover                          |
| 1B       | -- Single pole normally closed | C2       | -- With accessible mounting hole with anti-rotation tab |
| 1C       | -- Single pole double throw    | C3       | -- Mounting ears on top of cover                        |
| 2A       | -- Double pole normally open   |          |                                                         |
| 2B       | -- Double pole normally closed | 6. Blank | -- No special feature                                   |
| 2C       | -- Double pole double throw    | M        | -- With manual operator                                 |
| 3A       | -- Three pole normally open    | T        | -- Printed circuit board terminals                      |
| 3B       | -- Three pole normally closed  | L        | -- Pilot lamp                                           |
| 3C       | -- Three pole double throw     |          |                                                         |

## »» Contact Rating

| TYPE           | 735                     |                                | 735H                    |
|----------------|-------------------------|--------------------------------|-------------------------|
|                | 1A, 1B, 1C, 2A, 2B, 2C  | 3A, 3B, 3C                     |                         |
| Resistive load | 20A 240VAC<br>15A 28VDC | 20A 120VAC<br>15A 240VAC/28VDC | 30A 240VAC<br>15A 28VDC |

## »» Coil Rating (DC)

## ◆ Standard Type

|          | Rated voltage (V) | Rated current ±10 % at 23°C (mA) | Coil resistance ±10 % at 23°C (Ω) | Max. continuous voltage at 50°C | Pick up voltage(Max) at 23°C | Drop out voltage(Min) at 23°C | Power consumption at rated voltage |
|----------|-------------------|----------------------------------|-----------------------------------|---------------------------------|------------------------------|-------------------------------|------------------------------------|
| SP<br>DP | 6                 | 188                              | 32                                | 160 % of rated voltage          | 80 % of rated voltage        | 10 % of rated voltage         | approx. 1.2W                       |
|          | 12                | 100                              | 120                               |                                 |                              |                               |                                    |
|          | 24                | 51                               | 472                               |                                 |                              |                               |                                    |
|          | 48                | 27                               | 1800                              |                                 |                              |                               |                                    |
|          | 110               | 11                               | 10000                             |                                 |                              |                               |                                    |
|          | 125               | 12.5                             | 10000                             |                                 |                              |                               |                                    |
| TP       | 6                 | 250                              | 24                                |                                 |                              |                               | approx. 1.5W                       |
|          | 12                | 125                              | 96                                |                                 |                              |                               |                                    |
|          | 24                | 63                               | 384                               |                                 |                              |                               |                                    |
|          | 48                | 31                               | 1536                              |                                 |                              |                               |                                    |
|          | 110               | 11.5                             | 9600                              |                                 |                              |                               |                                    |
|          | 125               | 13                               | 9600                              |                                 |                              |                               |                                    |

### ◆ High Power Type

| 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 55 °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                                       | 160 % of<br>rated<br>voltage           | 80 % 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                                    |                                        |                                     |                                      |                                          |
| 125                  | 12.5                                    | 10000                                    |                                        |                                     |                                      |                                          |

## »» Coil Rating (AC)

### ◆ Standard Type

| Rated voltage<br>(V) |     | Coil resistance<br>±10 % at 23 °C<br>(Ω) | Max. continuous<br>voltage<br>at 50 °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             | 6   | 4.2                                      | 130 % of<br>rated<br>voltage           | 85 % of<br>rated<br>voltage         | 30 % of<br>rated<br>voltage          | approx. 3.0VA                            |
|                      | 12  | 18                                       |                                        |                                     |                                      |                                          |
|                      | 24  | 72                                       |                                        |                                     |                                      |                                          |
|                      | 110 | 1580                                     |                                        |                                     |                                      |                                          |
|                      | 120 | 1700                                     |                                        |                                     |                                      |                                          |
|                      | 220 | 5850                                     |                                        |                                     |                                      |                                          |
|                      | 240 | 7200                                     |                                        |                                     |                                      | approx. 3.4VA                            |
| TP                   | 6   | 3.9                                      |                                        |                                     |                                      |                                          |
|                      | 12  | 14.5                                     |                                        |                                     |                                      |                                          |
|                      | 24  | 64                                       |                                        |                                     |                                      |                                          |
|                      | 110 | 1450                                     |                                        |                                     |                                      |                                          |
|                      | 120 | 1540                                     |                                        |                                     |                                      |                                          |
|                      | 220 | 5850                                     |                                        |                                     |                                      |                                          |
|                      | 240 | 6750                                     |                                        |                                     |                                      |                                          |

### ◆ High Power Type

| Rated voltage<br>(V) | Coil resistance<br>±10 % at 23 °C<br>(Ω) | Max. continuous<br>voltage<br>at 55 °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                    | 4.2                                      | 130 % of<br>rated<br>voltage           | 85 % of<br>rated<br>voltage         | 30 % of<br>rated<br>voltage          | approx. 3.4VA                            |
| 12                   | 18                                       |                                        |                                     |                                      |                                          |
| 24                   | 72                                       |                                        |                                     |                                      |                                          |
| 110                  | 1580                                     |                                        |                                     |                                      |                                          |
| 120                  | 1700                                     |                                        |                                     |                                      |                                          |
| 220                  | 5850                                     |                                        |                                     |                                      |                                          |
| 240                  | 7200                                     |                                        |                                     |                                      |                                          |

## »» Specification

|                                      |                                                                         |                                                                                   |
|--------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Contact material                     | AgSnO alloy                                                             |                                                                                   |
| Contact resistance <sup>(1)</sup>    | 50 mΩ Max. (for 735) , 100 mΩ Max. (for 735H)                           |                                                                                   |
| Operate time <sup>(1)</sup>          | 25 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 1000V, 50/60Hz 1 min. (for 735)<br>: AC 1500V, 50/60Hz 1 min. (for 735H)     |
|                                      | Between contact and coil                                                | : AC 1600V, 50/60Hz 1 min. (for 735)<br>: AC 3000V, 50/60Hz 1 min. (for 735H)     |
|                                      | Between contact circuits                                                | : AC 1600V, 50/60Hz 1 min. (for 735)<br>: AC 3000V, 50/60Hz 1 min. (for 735H)     |
| Vibration resistance                 | Operating extremes                                                      | 10~55Hz, amplitude 2.0 mm                                                         |
|                                      | Damage limits                                                           | 10~55Hz, amplitude 2.0 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 735)                            |
|                                      |                                                                         | NO: 30,000 operations NC: 10,000 operations<br>(frequency 360 ops./hr) (for 735H) |
| Operating ambient temperature        | -30~+50°C (no freezing) (for 735)<br>-30~+55°C (no freezing) (for 735H) |                                                                                   |
| Weight                               | Approx. 80 g                                                            |                                                                                   |

Note : (1) initial value

## »» Safety Approval

| Certified | 735    |         |       | 735H     |
|-----------|--------|---------|-------|----------|
|           | UL     | CSA     | FIMKO | UL / CUL |
| File No.  | E88991 | 1664125 | 14426 | E88991   |

## »» Safety Approval Rating (FIMKO)

| 735 1A, 1B, 1C | 735 2A, 2B, 2C | 735 3A, 3B, 3C |
|----------------|----------------|----------------|
| 25A 250VAC     | 25A 250VAC     | 20A 250VAC     |

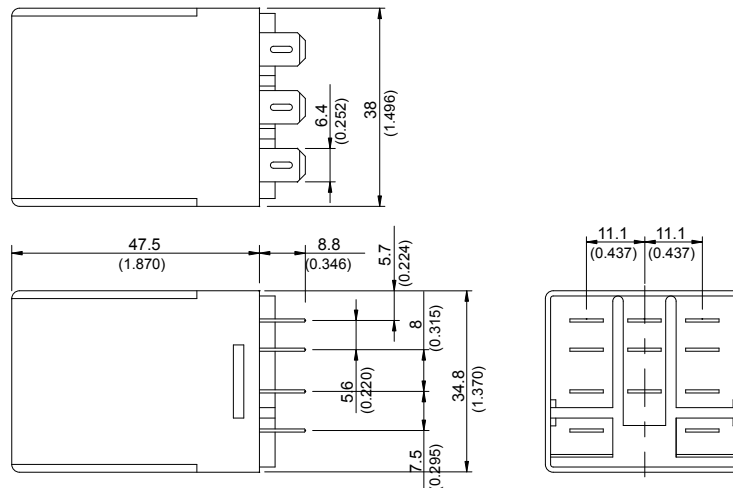
## »» Safety Approval Rating(UL、CSA)

| UL             |                |                | CSA            |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 735 1A, 1B, 1C | 735 2A, 2B, 2C | 735 3A, 3B, 3C | 735 1A, 1B, 1C | 735 2A, 2B, 2C | 735 3A, 3B, 3C |
| 25A 28VDC      | 20A 28VDC      | 15A 28VDC      | 30A 277VAC     | 25A 277VAC     | 20A 277VAC     |
| 25A 277VAC     | 25A 277VAC     | 20A 277VAC     | 10A 600VAC     | 10A 600VAC     | 15A 28VDC      |
| 10A 600VAC     | 10A 600VAC     | 3/4HP 120VAC   | 25A 28VDC      | 20A 28VDC      | 3/4HP 120VAC   |
| 1.5HP 240VAC   | 1.5HP 240VAC   | 1HP 240VAC     | 1.5HP 240VAC   | 1.5HP 240VAC   | 1HP 240VAC     |
| 1HP 120VAC     | 1HP 120VAC     |                | 1HP 120VAC     | 1HP 120VAC     |                |

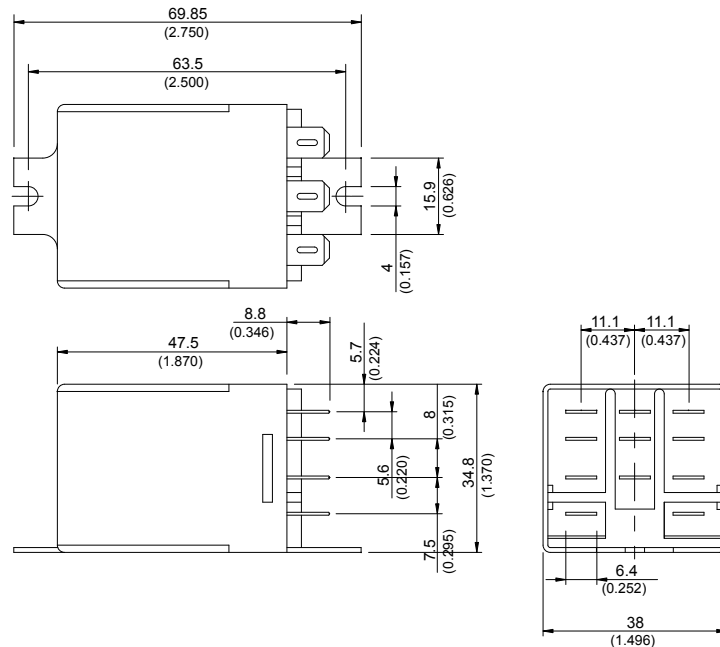
| UL / CUL        |                 |
|-----------------|-----------------|
| 735H 1A, 1B, 1C | 735H 2A, 2B, 2C |
| 30A 277VAC      | 30A 277VAC      |
| 25A 28VDC       | 20A 28VDC       |
| 10A 600VAC      | 10A 600VAC      |
| 1.5HP 240VAC    | 1.5HP 240VAC    |
| 1HP 120VAC      | 1HP 120VAC      |

## »» Outline Dimensions

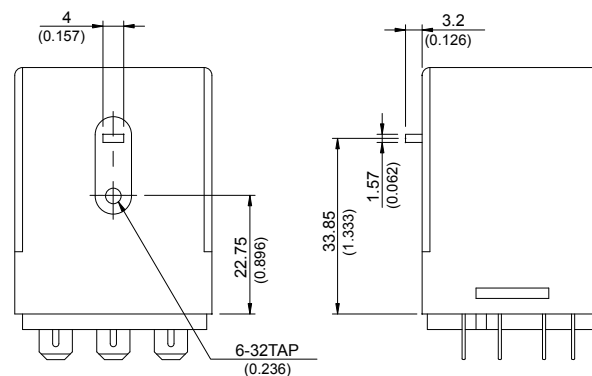
### ◆ 735 C



### ◆ 735 C1

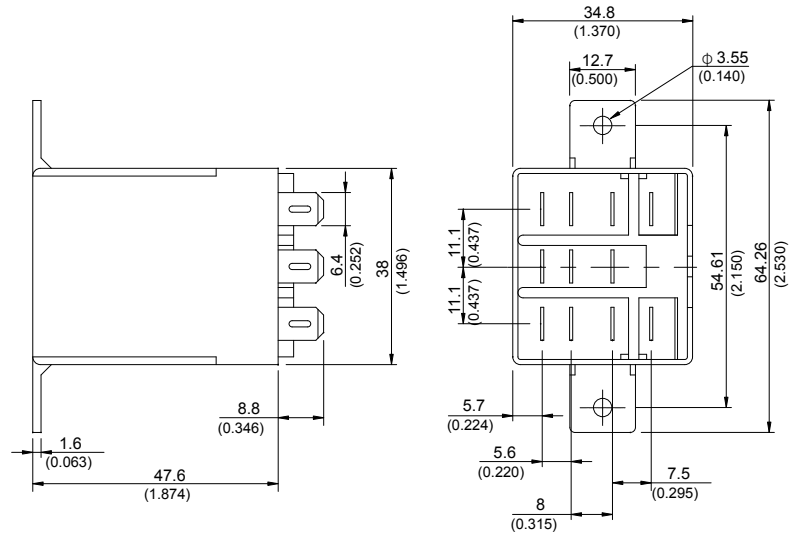


### ◆ 735 C2

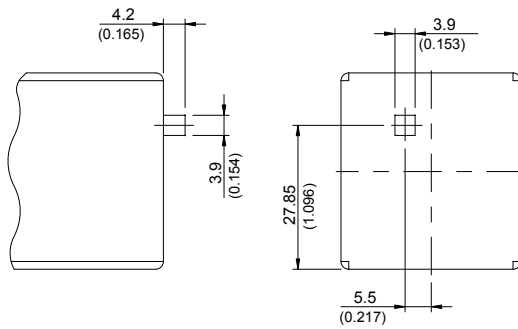


735

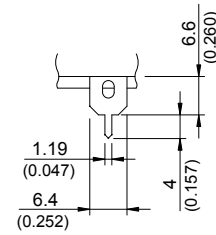
## ◆ 735 C3



## ◆ 735 M

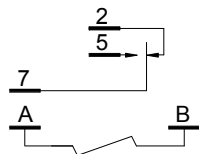


## ◆ 735 T

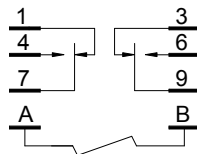


# Wiring Diagram BOTTOM VIEW

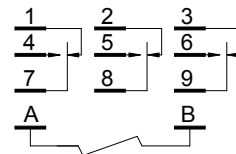
1C



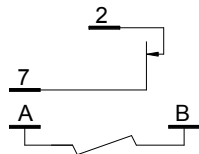
2C



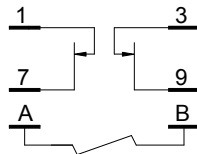
3C



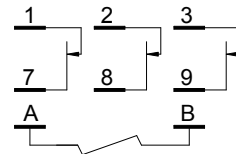
1B



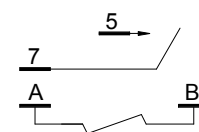
2B



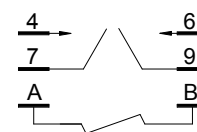
3B



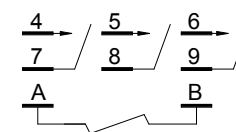
1A



2A

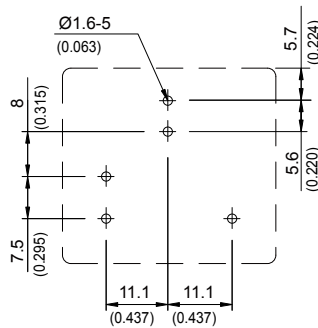


3A

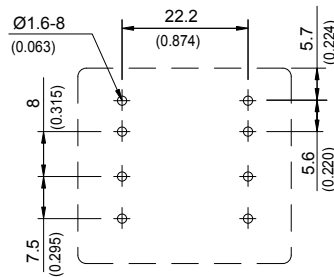


## >>> PC Board Layout BOTTOM VIEW

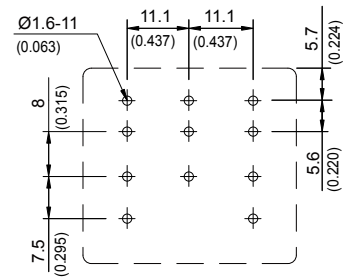
1P



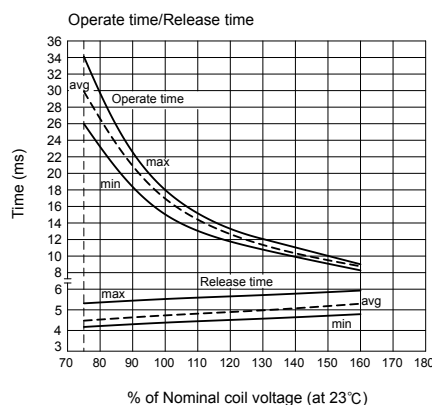
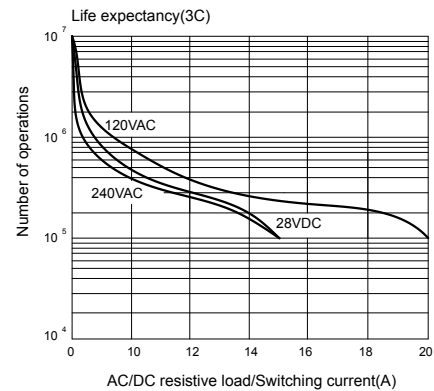
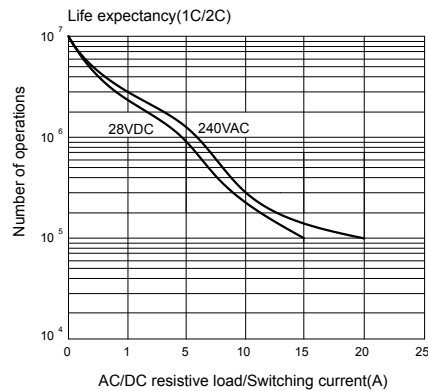
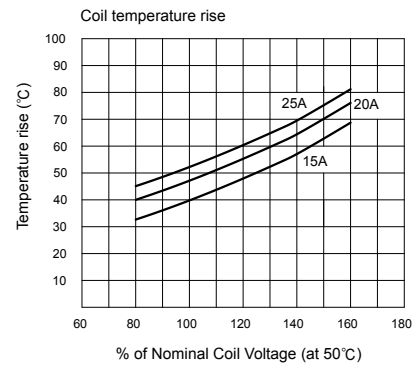
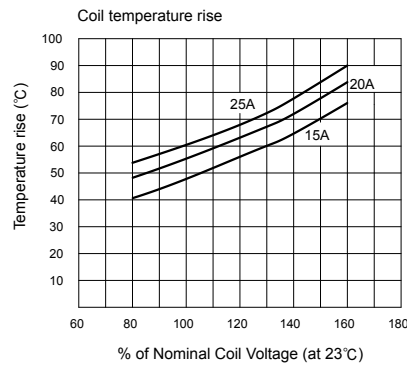
2P



3P



## >>> Engineering Data



## 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.

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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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