

## »» 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   | 6. Blank | -- No special feature                                   |
| 2B       | -- Double pole normally closed | M        | -- With manual operator                                 |
| 2C       | -- Double pole double throw    | T        | -- Printed circuit board terminals                      |
| 3A       | -- Three pole normally open    | L        | -- Pilot lamp   |
| 3B       | -- Three pole normally closed  |          |   |
| 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                                | 160 % of rated voltage          | 80 % of rated voltage        | 10 % of rated voltage         | approx. 1.5W                       |
|          | 12                | 125                              | 96                                |                                 |                              |                               |                                    |
|          | 24                | 63                               | 384                               |                                 |                              |                               |                                    |
|          | 48                | 31                               | 1536                              |                                 |                              |                               |                                    |
|          | 110               | 11.5                             | 9600                              |                                 |                              |                               |                                    |
|          | 125               | 13                               | 9600                              |                                 |                              |                               |                                    |



## ◆ High Power Type

| Rated voltage (V) | Rated current $\pm 10\%$ at 23°C (mA) | Coil resistance $\pm 10\%$ at 23°C ( $\Omega$ ) | Max. continuous voltage at 55°C | Pick up voltage(Max) at 23°C | Drop out voltage(Min) at 23°C | Power consumption at rated voltage |
|-------------------|---------------------------------------|---|---------------------------------|------------------------------|-------------------------------|------------------------------------|
| 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   |                                 |                              |                               |                                    |

## »» Coil Rating (AC)

## ◆ Standard Type

| Rated voltage (V) | Coil resistance $\pm 10\%$ at 23°C ( $\Omega$ ) | 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   | 4.2                             | 130 % of rated voltage       | 85 % of rated voltage         | 30 % of rated voltage              | approx. 3.0VA |
|                   | 12  | 18                              |                              |                               |                                    |               |
|                   | 24  | 72                              |                              |                               |                                    |               |
|                   | 110   | 1580                            |                              |                               |                                    |               |
|                   | 120   | 1700                            |                              |                               |                                    |               |
|                   | 220   | 5850                            |                              |                               |                                    |               |
| TP                | 6   | 3.9                             | 130 % of rated voltage       | 85 % of rated voltage         | 30 % of rated voltage              | approx. 3.4VA |
|                   | 12  | 14.5                            |                              |                               |                                    |               |
|                   | 24  | 64                              |                              |                               |                                    |               |
|                   | 110   | 1450                            |                              |                               |                                    |               |
|                   | 120   | 1540                            |                              |                               |                                    |               |
|                   | 220   | 5850                            |                              |                               |                                    |               |
| 240               | 6750  |                                 |                              |                               |                                    |               |

## ◆ High Power Type

| Rated voltage (V) | Coil resistance $\pm 10\%$ at 23°C ( $\Omega$ ) | Max. continuous voltage at 55°C | Pick up voltage(Max) at 23°C | Drop out voltage(Min) at 23°C | Power consumption at rated voltage |
|-------------------|---|---------------------------------|------------------------------|-------------------------------|------------------------------------|
| 6                 | 4.2   | 130 % of rated voltage          | 85 % of rated voltage        | 30 % of rated 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

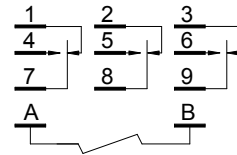
1C



2C



3C



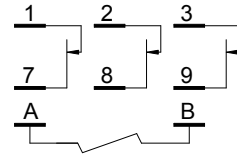
1B



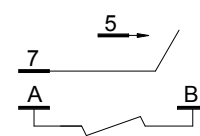
2B



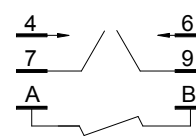
3B



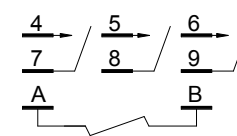
1A



2A



3A



## »» PC Board Layout BOTTOM VIEW

1P



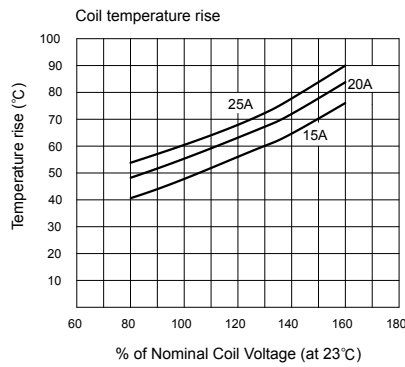
2P



3P



## »» Engineering Data





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.