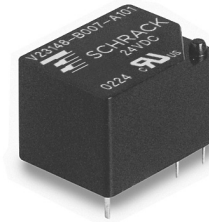


**Power PCB Relay U/UB (V23148)**

- 1 pole 7A, mono or bistable
- 1 form C (CO) or 1 form A (NO) or 1 form B (NC contact)
- Bistable and DC version
- Wash tight version
- Version for 10A on request



Typical applications  
Heating control, installation, battery powered equipment



**Approvals**

UL E214024  
Technical data of approved types on request

| Contact Data   | Standard   | Bistable  | Sensitive  |
|--|------------|---|------------|
| Contact arrangement                                  |            | 1 form C (CO) or<br>1 form A (NO) or<br>1 form B (NC) |            |
| Rated voltage  |            | 250VAC  |            |
| Max. switching voltage                               |            | 400VAC  |            |
| Rated current  | 7A         | 7A  | 5A         |
| Limiting making current,<br>max 4 s, duty factor 10% | 12A        | 12A   | 12A        |
| Breaking capacity max.                               | 1750VA     | 1750VA  | 1250VA     |
| Contact material                                     | AgNI 90/10 | AgNI 90/10  | AgNI 90/10 |
| Frequency of operation,<br>with/without load         |            | 600/18000h <sup>-1</sup>                              |            |
| Operate/release time typ.                            | 5/3ms      | -   | 7/3 ms     |
| Set/reset time typ.                                  | -          | 5/3 ms  | -          |
| Bounce time typ., form A/form B                      | 2/10 ms    | 2/10 ms   | 2/10 ms    |
| Mechanical endurance                                 |            | >20x10 <sup>6</sup> operations                        |            |

**Contact ratings**

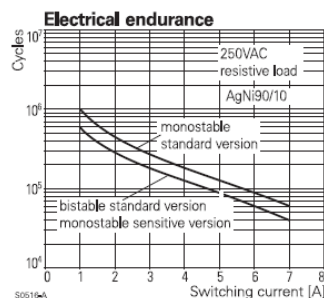
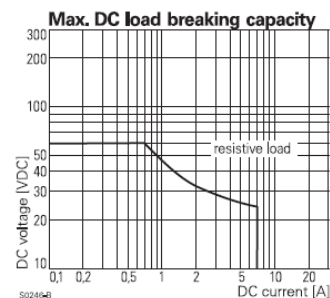
| Type         | Contact                                      | Load | Cycles |
|--------------|--|------|--------|
| <b>UL508</b> |  |      |        |
| U/UB C/A/B   | (CO/NO/NC) 7A, 250VAC, general purpose, 40°C |      | 6.000  |

| Coil Data                                      | Standard             | Bistable    | Sensitive   |
|--|----------------------|-------------|-------------|
| Coil voltage range                             | 5 to 48 VDC          | 3 to 48 VDC | 5 to 48 VDC |
| Operative range IEC 61810                      | 2                    | 2           | 2           |
| Reset voltage min.,<br>% of rated coil voltage | -                    | 25%         | -           |
| Reset voltage max.,<br>% of rated coil voltage | -                    | 45%         | -           |
| Rated operate power                            | - 900 to 1300mW/20ms | -           | -           |

**Coil versions, DC coil**

| Coil code             | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------------------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| <b>Standard coil</b>  |                   |                     |                     |                       |                     |
| 002                   | 5                 | 3.5                 | 0.5                 | 56                    | 446                 |
| 003                   | 6                 | 4.2                 | 0.6                 | 80                    | 450                 |
| 005                   | 12                | 8.4                 | 1.2                 | 320                   | 450                 |
| 007                   | 24                | 16.8                | 2.4                 | 1280                  | 450                 |
| 008                   | 48                | 33.6                | 4.8                 | 3800                  | 606                 |
| <b>Sensitive coil</b> |                   |                     |                     |                       |                     |
| 102                   | 5                 | 3.7                 | 0.5                 | 80                    | 313                 |
| 103                   | 6                 | 4.4                 | 0.6                 | 110                   | 327                 |
| 105                   | 12                | 8.8                 | 1.2                 | 440                   | 327                 |
| 107                   | 24                | 17.5                | 2.4                 | 1780                  | 324                 |
| 108                   | 48                | 35.0                | 4.8                 | 4000                  | 576                 |

All figures are given for coil without pre-energization, at ambient temperature +23°C. Other coil voltages on request.



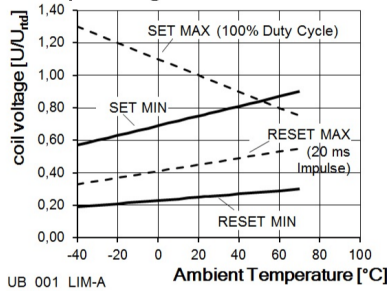
**Power PCB Relay U/UB (V23148) (Continued)**

**Coil versions, bistable 1 coil**

| Coil code | Rated voltage VDC | Set voltage VDC | Reset voltage VDC | Coil resistance $\Omega \pm 10\%$ | Rated coil power mW |
|-----------|-------------------|-----------------|-------------------|-----------------------------------|---------------------|
| 001       | 3                 | 2.3             | 0.75              | 8                                 | 1125                |
| 002       | 5                 | 3.9             | 1.25              | 22                                | 1136                |
| 003       | 6                 | 4.7             | 1.5               | 33                                | 1091                |
| 005       | 12                | 9.4             | 3.0               | 119                               | 1210                |
| 007       | 24                | 18.7            | 6.0               | 475                               | 1213                |
| 008       | 48                | 37.4            | 12.0              | 1750                              | 1317                |

All figures are given for coil without pre-energization, at ambient temperature +23°C.  
Other coil voltages on request.

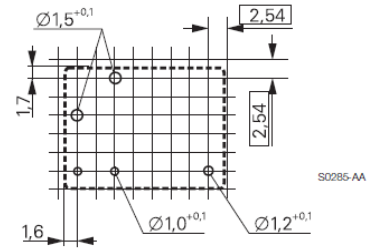
**Coil operating bistable**



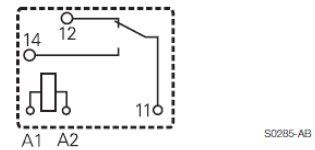
**PCB layout / terminal assignment**

Bottom view on solder pins

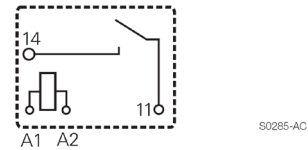
Monostable and bistable 1 coil



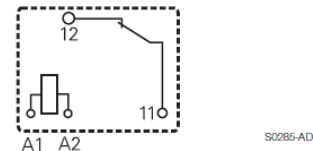
Form C contact (CO)



Form A contact (NO)



Form B contact (NC)



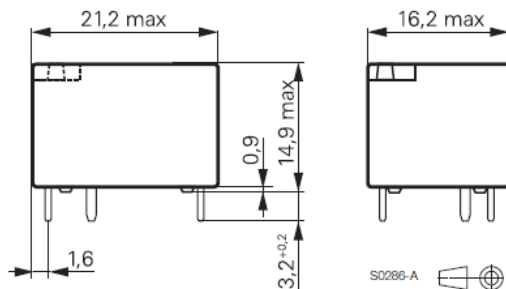
| Insulation Data                    | 2kV <sub>rms</sub>   | 4kV <sub>rms</sub>   |
|------------------------------------|----------------------|----------------------|
|                                    | Version V23148-*0*** | Version V23148-*1*** |
| Initial dielectric strength        |                      |                      |
| between open contacts              | 1000V <sub>rms</sub> | 1000V <sub>rms</sub> |
| between contact and coil           | 2000V <sub>rms</sub> | 4000V <sub>rms</sub> |
| Clearance/creepage                 |                      |                      |
| between contact and coil           | ≥2.5/2.5mm           | ≥3.5/3.5mm           |
| Material group of insulation parts | ≥IIIa                | ≥IIIa                |

**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

|  |                    |
|--|--------------------|
| Ambient temperature                              | -25 to +70°C       |
| Category of environmental protection             |                    |
| IEC 61810  | RTIII - wash tight |
| Terminal type                                    | PCB-THT            |
| Weight   | 8.7g               |
| Vibration resistance (functional), form A/form B | 10/10g             |
| Shock resistance (functional), form A/form B     | 10/10g             |
| Resistance to soldering heat THT                 |                    |
| IEC 60068-2-20                                   | 260°C/5s           |
| Packaging/unit                                   | 25 pcs.            |

**Dimensions**



**Power PCB Relay U/UB (V23148)** (Continued)

**Product code structure**

Typical product code

**V23148 -A 0 0 07 -A 101**

**Type**

**V23148** Power PCB Relay U/UB

**Version**

- A** Monostable (Miniature power relay U)
- B** Bistable (Miniature power relay UB, remanence version)

**Dielectric strength coil-contact**

**0** 2kV<sub>rms</sub>      **1** 4kV<sub>rms</sub>

**Version**

- |                    |                   |
|--------------------|-------------------|
| <b>0</b> Standard  | <b>0</b> Standard |
| <b>1</b> Sensitive | <b>0</b> Bistable |

**Coil**

Coil code: please refer to coil versions table

**Contact configuration**

- A** 1 form C contact (1 CO)      **C** 1 form B contact (1NC)
- B** 1 form A contact (1 NO)

**Contact configuration**

**101** AGNI10

Other types on request

| Product code      | Version                | Dielectric                | Version   | Arrangement   | Part Number   |
|-------------------|------------------------|---------------------------|-----------|---------------|---------------|
| V23148-A0005-C101 | Monostable<br>relay ,U | 2000 Vrms<br>contact-coil | Standard  | 1 form B (NC) | 1-1393203-0   |
| V23148-A0007-A101 |                        |                           |           | 1 form C (CO) | 1-1393203-1   |
| V23148-A0007-B101 |                        |                           |           | 1 form A (NO) | 1-1393203-2   |
| V23148-A0007-C101 |                        |                           |           | 1 form B (NC) | 1-1393203-3   |
| V23148-A0008-A101 |                        |                           |           | 1 form C (CO) | 1-1393203-4   |
| V23148-A0002-A101 |                        |                           |           | 1 form C (CO) | 1393203-1     |
| V23148-A0002-B101 |                        |                           |           | 1 form A (NO) | 1393203-2     |
| V23148-A0002-C101 |                        |                           |           | 1 form B (NC) | 1393203-3     |
| V23148-A0003-A101 |                        |                           |           | 1 form C (CO) | 1393203-4     |
| V23148-A0003-B101 |                        |                           |           | 1 form A (NO) | 1393203-5     |
| V23148-A0004-A101 |                        |                           |           | 1 form C (CO) | 1393203-7     |
| V23148-A0005-A101 |                        |                           |           | 1 form C (CO) | 1393203-8     |
| V23148-A0005-B101 |                        |                           |           | 1 form A (NO) | 1393203-9     |
| V23148-A0102-A101 |                        |                           | Sensitive | 1 form C (CO) | 1-1393203-5   |
| V23148-A0102-B101 |                        |                           |           | 1 form A (NO) | 1-1393203-6   |
| V23148-A0102-C101 |                        |                           |           | 1 form B (NC) | 1-1393203-7   |
| V23148-A0103-A101 |                        |                           |           | 1 form C (CO) | 1-1393203-8   |
| V23148-A0103-B101 |                        |                           |           | 1 form A (NO) | 1-1393203-9   |
| V23148-A0103-C101 |                        |                           |           | 1 form B (NC) | 2-1393203-0   |
| V23148-A0105-A101 |                        |                           |           | 1 form C (CO) | 2-1393203-1   |
| V23148-A0105-B101 |                        |                           |           | 1 form A (NO) | 2-1393203-2   |
| V23148-A0105-C101 |                        |                           |           | 1 form B (NC) | 2-1393203-3   |
| V23148-A0107-A101 |                        |                           |           | 1 form C (CO) | 2-1393203-4   |
| V23148-A0107-B101 |                        |                           |           | 1 form A (NO) | 2-1393203-5   |
| V23148-A0107-C101 |                        |                           |           | 1 form B (NC) | 2-1393203-6   |
| V23148-A1005-A101 |                        | 4000 Vrms<br>contact-coil | Standard  | 1 form C (CO) | 2-1393203-7   |
| V23148-A1007-A101 |                        |                           |           |               | 1 form C (CO) |
| V23148-A1105-A101 |                        |                           |           | 1 form C (CO) | 2-1393203-9   |
| V23148-A1105-B101 |                        |                           |           | 1 form A (NO) | 3-1393203-0   |
| V23148-A1107-A101 |                        |                           |           | 1 form C (CO) | 3-1393203-1   |
| V23148-B0007-A101 | Bistable<br>relay ,UB  | 2000 Vrms<br>contact-coil |           | 1 form C (CO) | 1-1393204-0   |
| V23148-B0007-B101 |                        |                           |           | 1 form A (NO) | 1-1393204-1   |
| V23148-B0007-C101 |                        |                           |           | 1 form B (NC) | 1-1393204-2   |
| V23148-B0008-A101 |                        |                           |           | 1 form C (CO) | 1-1393204-3   |
| V23148-B1001-A101 |                        |                           |           | 1 form C (CO) | 1-1393204-5   |
| V23148-B0001-A101 |                        |                           |           | 1 form C (CO) | 1393204-1     |
| V23148-B0002-A101 |                        |                           |           | 1 form C (CO) | 1393204-2     |
| V23148-B0002-B101 |                        |                           |           | 1 form A (NO) | 1393204-3     |
| V23148-B0003-B101 |                        |                           |           | 1 form A (NO) | 1393204-5     |
| V23148-B0003-C101 |                        |                           |           | 1 form B (NC) | 1393204-6     |
| V23148-B0005-A101 |                        |                           |           | 1 form C (CO) | 1393204-7     |
| V23148-B0005-B101 |                        |                           |           | 1 form A (NO) | 1393204-8     |
| V23148-B0005-C101 |                        |                           |           | 1 form B (NC) | 1393204-9     |

This list represents the most common types and does not show all variants covered by this data sheet.

Other types on request



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

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- 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;
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- 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.