

F0150-B

## **Power PCB Relay RPII/2**

2 pole 8 A, 2 form C (CO) or 2 form A (NO) contacts

■ 4 kv/8 mm coil contact



Applications Domestic appliances, UPS

#### Approvals

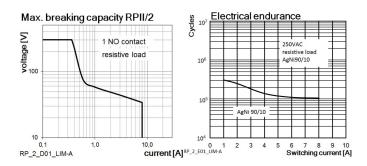
VDE Cert. No. 40025448, UL E214025 Technical data of approved types on request

#### **Contact Data**

| Contact configuration                              | 2 form C (CO) or            |
|--|-----------------------------|
|  | 2 form A (NO)               |
| Rated voltage / max.switching voltage AC           | 250 VAC                     |
| Max. switching voltage                             | 400 VAC                     |
| Rated current                                      | 8 A (UL: 10A)               |
| Limiting making capacity, max 4 s, duty factor 10% | 14 A                        |
| Breaking capacity max.                             | 2000 VA                     |
| Contact material                                   | AgNi 90/10                  |
|  | AgNi0.15 gold flashed       |
| Frequency of operation with load                   | 600 h <sup>-1</sup>         |
| Frequency of operation without load DC-/REM-coil   | 36000/18000 h <sup>-1</sup> |
| Operate/release time typ.                          | 9/3 ms                      |
| Bounce time typ., form A/form B                    | 2/3 ms                      |
|  |                             |

#### **Contact ratings**

| oomaotraang      | •       |                                |                     |
|------------------|---------|--------------------------------|---------------------|
| Туре             | Contact | Load                           | Cycles              |
| IEC61810         |         |                                |                     |
| RP421            | A (NO)  | 8A, 250 VAC, resistive, 35°C   | 100x10 <sup>3</sup> |
| RP424 DC-coil    | A (NO)  | 8A, 250 VAC, resistive, 35°C   | 100x10 <sup>3</sup> |
| RP424 DC-coil    | C (CO)  | 5A, 250 VAC, resistive, 70°C   | 20x10 <sup>3</sup>  |
| RP424 DC-coil    | A (NO)  | 8A, 250 VAC, resistive, 70°C   | 30x10 <sup>3</sup>  |
| RP424 REM        | A (NO)  | 8A, 250 VAC, resistive, 35°C   | 50x10 <sup>3</sup>  |
| UL508            |         |                                |                     |
| RP421            | C (CO)  | 8A, 250 VAC, gen. purp, 40°C   | 6x10 <sup>3</sup>   |
| RP424            | A (NO)  | 10A, 250 VAC, gen. purp, 65°C  | 30x10 <sup>3</sup>  |
| RP424            | C (CO)  | 8A, 250 VAC, gen. purp, 70°C   | 6x10 <sup>3</sup>   |
| Mechanical en    | durance |                                |                     |
| DC-coil version: |         | >20x10 <sup>6</sup> operations |                     |
| REM/bistable ve  | ersion: | >1x10 <sup>6</sup> operations  |                     |



| Coil Data                 |             |
|---------------------------|-------------|
| Coil voltage range        | 5 to 110VDC |
| Operative range JEC 61810 | 2           |

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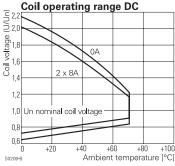
#### Coil versions, DC coil

|      | 50113, 00 00 |         |         |                        |            |
|------|--------------|---------|---------|------------------------|------------|
| Coil | Rated        | Operate | Release | Coil                   | Rated coil |
| code | voltage      | voltage | voltage | resistance             | power      |
|      | VDC          | VDC     | VDC     | $\Omega \pm 10\%^{1)}$ | mW         |
| 005  | 5            | 3.5     | 0.5     | 54                     | 500        |
| 006  | 6            | 4.2     | 0.6     | 68                     | 500        |
| 012  | 12           | 8.4     | 1.2     | 270                    | 500        |
| 024  | 24           | 16.8    | 2.4     | 1100 <sup>1)</sup>     | 500        |
| 048  | 48           | 33.6    | 4.8     | 4400 <sup>1)</sup>     | 500        |
| 060  | 60           | 42.0    | 6.0     | 6540 <sup>1)</sup>     | 500        |
| 110  | 110          | 77.0    | 11.0    | 23100 <sup>1)</sup>    | 500        |

1) Coil resistance ±15%.

All figures are given for coil without pre-energization, at ambient temperature +20°C. Other coil voltages on request.





#### Coil versions, REM I (1 coil bistable/remanence)

| Coil | Rated   | Resistance | Magnetisa | Magnetisation range |           | isation range |  |  |  |  |
|------|---------|------------|-----------|---------------------|-----------|---------------|--|--|--|--|
| code | voltage | Ω±15%      | MIN./ Vdc | MAX./Vdc            | MIN./ Vdc | MAX./Vdc      |  |  |  |  |
|      | VDC     |            |           |                     |           |               |  |  |  |  |
| A12  | 12      | 115        | 9         | 18                  | 3         | 4.8           |  |  |  |  |
| A24  | 24      | 460        | 18        | 36                  | 6         | 9.6           |  |  |  |  |
| A48  | 48      | 1748       | 36        | 72                  | 12        | 19.2          |  |  |  |  |

#### Coil versions, REM II (2 coil bistable/remanence)

|            | Conversions, new in (2 con bistable/remanence) |            |            |           |           |               |  |  |  |
|------------|--|------------|------------|-----------|-----------|---------------|--|--|--|
| Coil Rated |  | Resistance | Magnetisat | ion range | Demagnet  | isation range |  |  |  |
| code       | voltage  | Ω±15%      | MIN./ Vdc  | MAX./Vdc  | MIN./ Vdc | MAX./Vdc      |  |  |  |
|            | VDC  |            |            |           |           |               |  |  |  |
| F05        | 5  | 20         | 3.7        | 7.5       | 3.7       | 6             |  |  |  |
| F12        | 12   | 105        | 9          | 18        | 9         | 14.4          |  |  |  |
| F24        | 24   | 460        | 18         | 36        | 18        | 28.8          |  |  |  |

All figures are given for coil without pre-energization, at ambient temperature +20°C. Other coil voltages on request.

Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at <u>http://relays.te.com/definitions</u>

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change. 1

07-2020, Rev. 0720 www.te.com © 2015 Tyco Electronics Corporation, a TE Connectivity Ltd. company Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.



## Power PCB Relay RPII/2 (Continued)

| Insulation                         |                      |
|------------------------------------|----------------------|
| Initial dielectric strength        |                      |
| coil-contact circuit               | 4000V <sub>rms</sub> |
| open contact circuit               | 1000V <sub>rms</sub> |
| adjacent contact circuits          | 2500V <sub>rms</sub> |
| Clearance/creepage                 |                      |
| coil-contact circuit               | ≥8/8mm               |
| Material group of insulation parts | Illa                 |

## **Other Data**

Packaging unit

Dimensions

Dimensions in mm

29,0

| Material compliance: EU RoHS/EL               | V, China RoHS, REACH, Halogen content |  |  |  |  |  |
|---|---------------------------------------|--|--|--|--|--|
| refer to the Product Compliance Support Cente |                                       |  |  |  |  |  |
| www.te.com/customersupport/rohssupportcen     |                                       |  |  |  |  |  |
| Ambient temperature                           | -40 to +70°C                          |  |  |  |  |  |
| Category of environmental                     |                                       |  |  |  |  |  |
| IEC 61810                                     | RTII - flux proof, RTIII - wash tight |  |  |  |  |  |
| Vibration resistance (functional),            |                                       |  |  |  |  |  |
| form A/form B, 30 to 150Hz                    | 11/1.5g                               |  |  |  |  |  |
| Shock resistance (destructive)                | 100g                                  |  |  |  |  |  |
| Terminal type                                 | PCB-THT                               |  |  |  |  |  |
| Resistance to soldering heat THT, I           | IEC 60068-2-20                        |  |  |  |  |  |
| flux-proof version                            | 270°C / 10s                           |  |  |  |  |  |
| wash-tight version                            | 260°C / 5s                            |  |  |  |  |  |
| Relay weight                                  | 18g                                   |  |  |  |  |  |
|   |                                       |  |  |  |  |  |

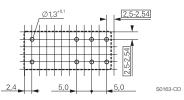
12,6

tube/20 pcs., box/500 pcs.

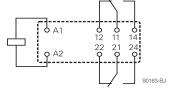
S0273-AB

## PCB layout / terminal assignment

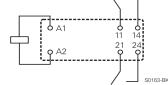
Bottom view on solder pins Dimensions in mm



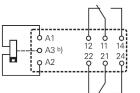
2 form C (CO) contacts



2 form A (NO) contacts



2 form C (CO) contacts (REM II version/ 2 coils)



a) Indicated contact
position while or after coil
energization with reset
voltage.
b) for 2 coil version only

monostable and REM I (REM II version has 3 coil terminals)

| Prod        | uct code structure                          |        | Typical product code                                  | RP | 4 | 2 | 4 | 024 |
|-------------|---|--------|---|----|---|---|---|-----|
| Type<br>RP  | Power PCB Relay RPII/2                      |        |   |    |   |   |   |     |
| Versio<br>4 | n<br>8A, flux proof                         | 8      | 8A, wash tight  |    | - |   |   |     |
| Conta<br>2  | <b>ct arrangement</b><br>2 form C (2 CO)    | 4      | 2 form A (2 NO)                                       |    |   |   |   |     |
| Conta<br>1  | <b>ct material</b><br>AgNi0.15 gold flashed | 0      | Discontinued: AgCdO <sup>2)</sup> <b>4</b> AgNi 90/10 |    |   |   | - |     |
| Coil        | Coil code: please refer to coil version     | ns tal | le  |    | · |   |   |     |

2) AgCdO contacts are discontinued and replaced with AgNi contacts (see PCN E-18-003947)

2



# Power PCB Relay RPII/2 (Continued)

| Product Code | Version    | Contacts               | Cont. Material | Coil Version | Coil   | Part Number |
|--------------|------------|------------------------|----------------|--------------|--------|-------------|
| RP421012     | Flux proof | 2 form C (CO) contacts | AgNi0.15       | monostable   | 12VDC  | 6-1393234-7 |
| RP421024     |            |                        |                |              | 24VDC  | 6-1393234-8 |
| RP421110     |            |                        |                |              | 110VDC | 7-1393234-1 |
| RP821012     | Wash tight |                        | AgNi0.15       |              | 12VDC  | 1393845-4   |
| RP821024     |            |                        |                |              | 24VDC  | 1393845-5   |
| RP424005     | Flux proof |                        | AgNi 90/10     |              | 5VDC   | 6-1415546-2 |
| RP424006     |            |                        |                |              | 6VDC   | 6-1415546-3 |
| RP424012     |            |                        |                |              | 12VDC  | 6-1415546-4 |
| RP424024     |            |                        |                |              | 24VDC  | 6-1415546-5 |
| RP424048     |            |                        |                |              | 48VDC  | 6-1415546-6 |
| RP424060     |            |                        |                |              | 60VDC  | 6-1415546-7 |
| RP424110     |            |                        |                |              | 110VDC | 6-1415546-8 |
| RP424A12     |            |                        |                | REM I        | 12VDC  | 6-1415546-9 |
| RP424A24     |            |                        |                |              | 24VDC  | 7-1415546-0 |
| RP424A48     |            |                        |                |              | 48VDC  | 7-1415546-1 |
| RP424F12     |            |                        |                | REM II       | 12VDC  | 7-1415546-2 |
| RP424F24     |            |                        |                |              | 24VDC  | 7-1415546-3 |
| RP444012     |            | 2 form A (NO) contacts |                | monostable   | 12VDC  | 7-1415546-4 |
| RP444024     |            |                        |                |              | 24VDC  | 7-1415546-5 |
| RP824006     | Wash tight | 2 form C (CO) contacts |                |              | 6VDC   | 7-1415546-6 |
| RP824012     |            |                        |                |              | 12VDC  | 7-1415546-7 |
| RP824024     |            |                        |                |              | 24VDC  | 7-1415546-8 |
| RP824048     |            |                        |                |              | 48VDC  | 7-1415546-9 |
| RP824060     |            |                        |                |              | 60VDC  | 8-1415546-0 |
| RP844024     |            | 2 form A (NO) contacts |                |              | 24VDC  | 6-1415546-1 |

Note. This list represents the most common types and does not show all variants covered by this datasheet. Other types on request.

3

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