

**Force Guided Relay SR2M**

- 2 pole relay with force guided contacts according to EN61810-3 (formerly EN50205)
- Reinforced insulation between poles
- Version P1 for use in sockets



F0188-D

Typical applications  
Emergency shut-off, press control, machine control, elevator and escalator control, safety relays



**Approvals**  
VDE 116064, UL E214025, TUV 968/EZ 111, CCC 2020970303000150  
Technical data of approved types on request

**Contact Data**

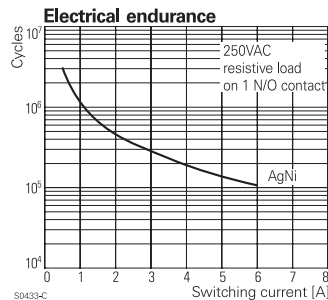
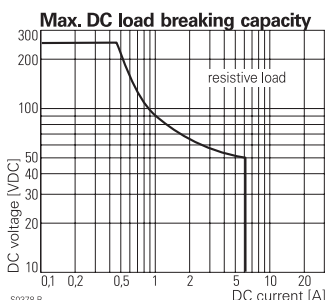
|   |   |
|---|---|
| Contact arrangement                       | 1 form A + 1 form B contacts (1 NO + 1 NC) or 2 form C contacts (2 CO)<br>According EN61810-3 only 1NO / 1NC (11-14 and 22-21 or 12-11 and 21-24) shall be used as force guided contacts. |
| Rated voltage                             | 250VAC  |
| Max. switching voltage                    | 400VAC  |
| Rated current                             | 6A  |
| Contact material                          | AgNi  |
| Contact style                             | single contact, force guided  |
| 1 form A + B, 1 NO + 1 NC                 | type A according to EN61810-3   |
| 2 form C, 2CO                             | type B according to EN61810-3   |
| Min. recommended contact load             | 5V/10mA   |
| Initial contact resistance                | ≤100mΩ at 1A, 24VDC<br>≤20Ω at 10mA, 5VDC   |
| Frequency of operation, with/without load | 6/300min <sup>-1</sup>  |

**Contact ratings**  
**IEC61810-1**  
on 1 form A (NO) contact 6A, 250VAC, cosφ = 1,70°C 100x10<sup>3</sup>

**IEC60947-5-1**  
on 1 form A (NO) contact AC15 - 250V/3A  
DC13 - 24V/3A  
on the basis of DC13 - 24V/6A under conditions specified in product spec. 2158001

**UL508**  
on 1 form A (NO) contact 6A, 250VAC, cosφ = 1,70°C 100x10<sup>3</sup>  
R300 and B300  
form A (NO) + form B (NC) 1A/24VDC gen. purpose, 70°C 100x10<sup>3</sup>

Mechanical endurance 10x10<sup>6</sup> operations

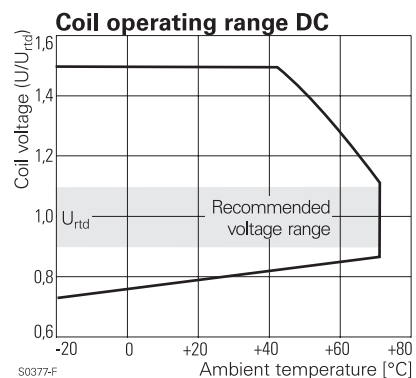


**Coil Data**  
Coil voltage range 5 to 110VDC

**Coil versions, DC-coil**

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 005       | 5                 | 3.8                 | 0.5                 | 35.7                  | 700                 |
| 006       | 6                 | 4.5                 | 0.6                 | 51                    | 706                 |
| 009       | 9                 | 6.8                 | 0.9                 | 116                   | 698                 |
| 012       | 12                | 9                   | 1.2                 | 206                   | 699                 |
| 015       | 15                | 11.3                | 1.5                 | 321                   | 701                 |
| 018       | 18                | 13.5                | 1.8                 | 483                   | 671                 |
| 021       | 21                | 16                  | 2.1                 | 630                   | 700                 |
| 024       | 24                | 18                  | 2.4                 | 823                   | 700                 |
| 036       | 36                | 27                  | 3.6                 | 1851                  | 700                 |
| 040       | 40                | 30                  | 4.0                 | 2286                  | 700                 |
| 048       | 48                | 36                  | 4.8                 | 3291 <sup>1)</sup>    | 700                 |
| 060       | 60                | 45                  | 6                   | 5142 <sup>1)</sup>    | 700                 |
| 080       | 80                | 60                  | 8                   | 9143 <sup>1)</sup>    | 700                 |
| 110       | 110               | 83                  | 11                  | 17285 <sup>1)</sup>   | 700                 |

<sup>1)</sup> Coil resistance ±12%.  
All figures are given for coil without pre-energization, at ambient temperature +23°C.



**Force Guided Relay SR2M (Continued)**

**Insulation**

|  |                    |                      |
|--|--------------------|----------------------|
| Initial dielectric strength                |                    |                      |
| between open contacts                      |                    | 1500V <sub>rms</sub> |
| between contact and coil                   |                    | 4000V <sub>rms</sub> |
| between adjacent contacts                  |                    | 3000V <sub>rms</sub> |
| Clearance/creepage                         |                    |                      |
| between open contacts                      | microdisconnection |                      |
| between contact and coil                   |                    | ≥8/8mm               |
| between adjacent contacts                  |                    | ≥5.5/5.5mm           |
| Insulation to EN 50178, type of insulation |                    |                      |
| between contact and coil                   |                    | reinforced           |
| between adjacent contacts                  |                    | reinforced           |

**Other Data**      **SR2M**      **SR2M Plug-in**

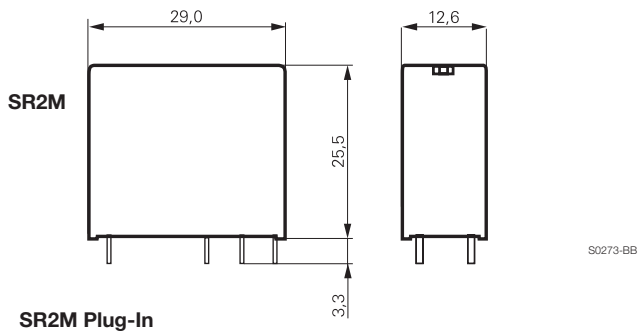
|   |          |              |
|---|----------|--------------|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customersupport/rohssupportcenter">www.te.com/customersupport/rohssupportcenter</a> |          |              |
| Ambient temperature   |          | -40 to 70°C  |
| Category of environmental Protection  |          |              |
| IEC 61 810  | RTIII    | RTII         |
| Weight  |          | 20g          |
| Resistance to soldering heat THT  |          |              |
| IEC 60068-2-20  | 260°C/5s | -            |
| Packaging/unit  |          | tube/20 pcs. |

For more detailed information see product specification 2158001

**Accessories**

For details see datasheet [Accessories Force Guided Relay SR2M plugin](#)  
NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

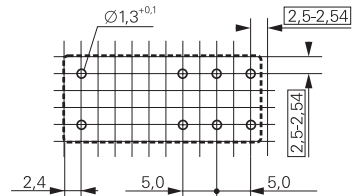
**Dimensions**



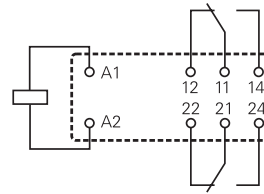
**PCB layout / terminal assignment**

Bottom view on solder pins

2 form C, 2 CO contacts

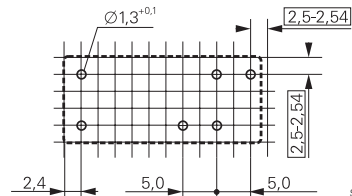


S0163-CO

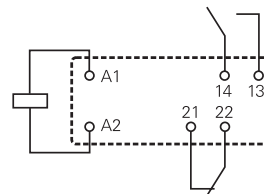


S0163-BJ

1 form A + 1 form B contacts, 1 NO + 1 NC



S0163-CU



S0163-CV

3.9mm

**Force Guided Relay SR2M** (Continued)

|                               |   |               |   |            |           |          |           |
|-------------------------------|---|---------------|---|------------|-----------|----------|-----------|
| <b>Product code structure</b> | Typical product code  | <b>V23047</b> | <b>-A1</b>  | <b>012</b> | <b>-A</b> | <b>5</b> | <b>11</b> |
| <b>Type</b>                   | <b>V23047</b> Relay with force guided contacts SR2M             |               |   |            |           |          |           |
| <b>Version</b>                | <b>A1</b> standard  |               | <b>P1</b> Plug-In                                     |            |           |          |           |
| <b>Coil</b>                   | Coil code: please refer to coil versions table (e.g. 024=24VDC) |               |   |            |           |          |           |
| <b>Contact set</b>            | <b>A</b> single contact   |               |   |            |           |          |           |
| <b>Contact material</b>       | <b>5</b> AgNi   |               |   |            |           |          |           |
| <b>Contact configuration</b>  | <b>01</b> 2 form C contacts (2 CO)                              |               | <b>11</b> 1 form A + 1 form B contacts ( 1 NO + 1 NC) |            |           |          |           |

Other types on request

| Product code      | Version                   | Cont. material | Contact arrangement      | Coil   | Part number |
|-------------------|---------------------------|----------------|--------------------------|--------|-------------|
| V23047-A1005-A501 | Standard                  | AgNi           | 2 form C (CO)            | 5VDC   | 1393258-2   |
| V23047-A1005-A511 | wash tight                |                | 1 A + 1 B, (1 NO + 1 NC) |        | 7-1415006-1 |
| V23047-A1006-A501 |                           |                | 2 form C (CO)            | 6VDC   | 3-1415011-1 |
| V23047-A1006-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 6-1415011-1 |
| V23047-A1009-A501 |                           |                | 2 form C (CO)            | 9VDC   | 1393258-3   |
| V23047-A1009-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 7-1415011-1 |
| V23047-A1012-A501 |                           |                | 2 form C (CO)            | 12VDC  | 1393258-4   |
| V23047-A1012-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 1393258-5   |
| V23047-A1018-A501 |                           |                | 2 form C (CO)            | 18VDC  | 1393258-8   |
| V23047-A1018-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 1393258-9   |
| V23047-A1021-A501 |                           |                | 2 form C (CO)            | 21VDC  | 1-1393258-1 |
| V23047-A1021-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 1-1393258-2 |
| V23047-A1024-A501 |                           |                | 2 form C (CO)            | 24VDC  | 1-1393258-5 |
| V23047-A1024-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 1-1393258-7 |
| V23047-A1036-A501 |                           |                | 2 form C (CO)            | 36VDC  | 2-1393258-0 |
| V23047-A1036-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 8-1415011-1 |
| V23047-A1040-A501 |                           |                | 2 form C (CO)            | 40VDC  | 2-1393258-1 |
| V23047-A1040-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 2-1393258-2 |
| V23047-A1048-A501 |                           |                | 2 form C (CO)            | 48VDC  | 3-1415006-1 |
| V23047-A1048-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 9-1415011-1 |
| V23047-A1060-A511 |                           |                |                          | 60VDC  | 2-1393258-3 |
| V23047-A1110-A501 |                           |                | 2 form C (CO)            | 110VDC | 1-1415012-1 |
| V23047-A1110-A511 |                           |                | 1 A + 1 B, (1 NO + 1 NC) |        | 2-1415012-1 |
| V23047-P1005-A501 | Plug-in<br>for socket use |                | 2 form C (CO)            | 5VDC   | 7-1415543-4 |
| V23047-P1009-A501 |                           |                |                          | 9VDC   | 7-1415543-5 |
| V23047-P1012-A501 |                           |                |                          | 12VDC  | 7-1415543-6 |
| V23047-P1021-A501 |                           |                |                          | 21VDC  | 7-1415543-7 |
| V23047-P1024-A501 |                           |                |                          | 24VDC  | 7-1415543-8 |
| V23047-P1036-A501 |                           |                |                          | 36VDC  | 7-1415543-9 |
| V23047-P1110-A501 |                           |                |                          | 110VDC | 8-1415543-0 |

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