

# Safety Relay SR4 D/M

4 pole 8 A



## Features

- Forcibly guided contacts according to EN 50205
- 4 pole safety relay with either 2 N/O+2 N/C or 3 N/O+1 N/C contacts
- Very small outlines

## Applications

Emergency shut-off, machine control, elevator and escalator control, light barrier control

F0244-A

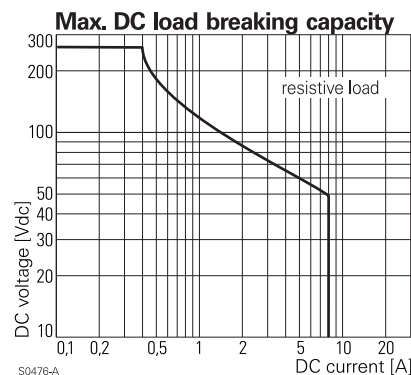


Technical data of approved types on request

in preparation

## Contact data

|   |  |
|---|--|
| Configuration                           | 3 N/O contact and 1 N/C contact<br>or<br>2 N/O contact and 2 N/C contact |
| Type of contact                         | single contact, forcibly guided  |
| Continuous thermal load                 | 8 A  |
| Rated voltage / max.breaking voltage AC | 250 Vac / 440 Vac  |
| Maximum breaking capacity AC            | 2000 VA  |
| Contact material                        | AgSnO <sub>2</sub>   |
| Minimum contact load                    | > 50 mW  |
| Contact resistance                      | ≤100 mΩ / 1 A / 24 Vdc<br>≤20 Ω / 10 mA / 5 Vdc                          |



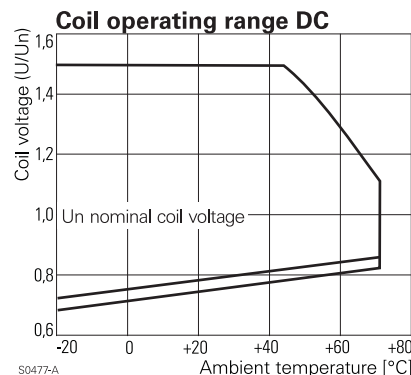
## Coil data

|                    |                        |
|--------------------|------------------------|
| Nominal voltage    | 5...110 Vdc            |
| Nominal coil power | 800 mW                 |
| Operative range    | 2                      |
| Max. coil voltage  | 150 % U <sub>nom</sub> |

## Coil versions

| Coil code | Nominal voltage Vdc | Pull-in voltage Vdc | Release voltage Vdc | Maximum voltage Vdc | Coil resistance Ω | Coil current mA |
|-----------|---------------------|---------------------|---------------------|---------------------|-------------------|-----------------|
| 005       | 5                   | 3.8                 | 0.5                 | 7.5                 | 31±10%            | 161.3           |
| 006       | 6                   | 4.5                 | 0.6                 | 9.0                 | 45±10%            | 133.3           |
| 009       | 9                   | 6.8                 | 0.9                 | 13.5                | 101±10%           | 89.1            |
| 012       | 12                  | 9.0                 | 1.2                 | 18.0                | 180±10%           | 66.7            |
| 015       | 15                  | 11.3                | 1.5                 | 22.5                | 281±10%           | 53.4            |
| 018       | 18                  | 13.5                | 1.8                 | 27.0                | 405±10%           | 44.4            |
| 021       | 21                  | 15.8                | 2.1                 | 31.5                | 551±10%           | 38.1            |
| 024       | 24                  | 18.0                | 2.4                 | 36.0                | 720±10%           | 33.3            |
| 036       | 36                  | 27.0                | 3.6                 | 54.0                | 1620±10%          | 22.2            |
| 040       | 40                  | 30.0                | 4.0                 | 60.0                | 2000±10%          | 20.0            |
| 048       | 48                  | 36.0                | 4.8                 | 72.0                | 2880±10%          | 16.7            |
| 060       | 60                  | 45.0                | 6.0                 | 90.0                | 4500±10%          | 13.3            |
| 085       | 85                  | 63.8                | 8.5                 | 127.5               | 9031±10%          | 9.4             |
| 110       | 110                 | 82.5                | 11.0                | 165.0               | 15125±10%         | 7.3             |

All figures are given for coil without preenergization, at ambient temperature +20°C  
 U<sub>op max</sub>: at 70 °C after preenergization with 1.1 x U<sub>nom</sub> the max. operate voltage is 85% of U<sub>nom</sub>. U<sub>max</sub>: at 70 °C the max. coil voltage is 1.1 x U<sub>nom</sub>  
 Other coil voltages on request



Edition: 02/2003

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## Insulation

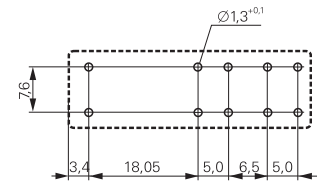
|                                   |                      |                       |
|-----------------------------------|----------------------|-----------------------|
| Dielectric strength               | coil-contacts        | 4000 V <sub>rms</sub> |
|                                   | open contact circuit | 1000 V <sub>rms</sub> |
|                                   | adjacent contacts    | 2500 V <sub>rms</sub> |
| Clearance / creepage              | coil-contact         | 10 / 10 mm            |
|                                   | adjacent contacts    | 3 / 3.5 mm            |
| Insulation to IEC 60664           |                      |                       |
|                                   | Voltage rating       | 250 V                 |
|                                   | Pollution degree     | 2                     |
|                                   | Overvoltage category | III                   |
| Insulation resistance (500 Vdc)   |                      | > 1x10 <sup>6</sup> Ω |
| Tracking resistance of relay base |                      | CTI 250               |

## Other data

|  |   |
|--|---|
| Ambient temperature                          | -25...+70 °C                                |
| Mechanical life                              | ≥ 10x10 <sup>6</sup> operations             |
| Max. switching rate at rated- / minimum load | 6 min <sup>-1</sup> / 300 min <sup>-1</sup> |
| Operate- / release time                      | typ. 12 / 20 ms                             |
| Vibration resistance N/O / N/C contact       | > 8 / 2.5 g, 10...200 Hz                    |
| Category of protection (IEC 61810)           | RT III - wash tight                         |
| Relay weight                                 | 16 g  |
| Packaging unit                               | 10 pcs.                                     |

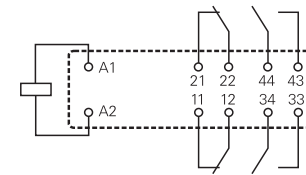
## PCB layout / terminal assignment

View on solder pins  
Dimensions in mm



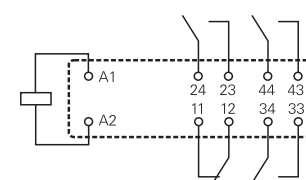
S0413-BC

2 N/O and 2 N/C contacts



S0413-BB

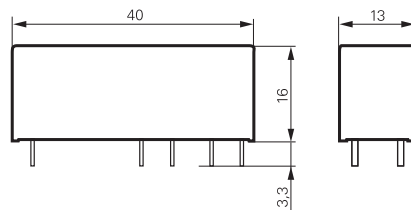
3 N/O and 1 N/C contacts



S0413-BA

## Dimensions

Dimensions in mm



S0412-AH

## Product key



Type

Contact configuration

**D** 2 N/O + 2 N/C contacts

**M** 3 N/O + 1 N/C contacts

Contact material

**4** AgSnO<sub>2</sub>

Coil

Coil code = nominal voltage (e.g. 024=24Vdc)

Other types on request

# Safety Relay SR4 D/M

4 pole 8 A

| Product key | Type                   | Contact configuration     | Contact material | Coil                      | Part number |  |        |             |
|-------------|------------------------|---------------------------|------------------|---------------------------|-------------|--|--------|-------------|
| SR4D4005    | 4 pole<br>safety relay | 2 N/O + 2 N/C<br>contacts | AgSnO            | 5 Vdc                     | 7-1415054-1 |  |        |             |
| SR4D4006    |                        |                           |                  | 6 Vdc                     | 8-1415054-1 |  |        |             |
| SR4D4009    |                        |                           |                  | 9 Vdc                     | 9-1415054-1 |  |        |             |
| SR4D4012    |                        |                           |                  | 12 Vdc                    | 0-1415055-1 |  |        |             |
| SR4D4018    |                        |                           |                  | 18 Vdc                    | 1-1415055-1 |  |        |             |
| SR4D4021    |                        |                           |                  | 21 Vdc                    | 2-1415055-1 |  |        |             |
| SR4D4024    |                        |                           |                  | 24 Vdc                    | 3-1415055-1 |  |        |             |
| SR4D4036    |                        |                           |                  | 36 Vdc                    | 4-1415055-1 |  |        |             |
| SR4D4040    |                        |                           |                  | 40 Vdc                    | 5-1415055-1 |  |        |             |
| SR4D4048    |                        |                           |                  | 48 Vdc                    | 6-1415055-1 |  |        |             |
| SR4D4060    |                        |                           |                  | 60 Vdc                    | 7-1415055-1 |  |        |             |
| SR4D4085    |                        |                           |                  | 85 Vdc                    | 8-1415055-1 |  |        |             |
| SR4D4110    |                        |                           |                  | 110 Vdc                   | 9-1415055-1 |  |        |             |
| SR4M4005    |                        |                           |                  | 3 N/O + 1 N/C<br>contacts |             |  | 5 Vdc  | 5-1415053-1 |
| SR4M4006    |                        |                           |                  |                           |             |  | 6 Vdc  | 6-1415053-1 |
| SR4M4009    |                        |                           |                  |                           |             |  | 9 Vdc  | 7-1415053-1 |
| SR4M4012    |                        |                           |                  |                           |             |  | 12 Vdc | 8-1415053-1 |
| SR4M4018    |                        |                           |                  |                           |             |  | 18 Vdc | 9-1415053-1 |
| SR4M4021    |                        |                           |                  |                           |             |  | 21 Vdc | 0-1415054-1 |
| SR4M4024    |                        |                           |                  |                           |             |  | 24 Vdc | 4-1415053-1 |
| SR4M4036    | 36 Vdc                 | 1-1415054-1               |                  |                           |             |  |        |             |
| SR4M4040    | 40 Vdc                 | 2-1415054-1               |                  |                           |             |  |        |             |
| SR4M4048    | 48 Vdc                 | 3-1415054-1               |                  |                           |             |  |        |             |
| SR4M4060    | 60 Vdc                 | 4-1415054-1               |                  |                           |             |  |        |             |
| SR4M4085    | 85 Vdc                 | 5-1415054-1               |                  |                           |             |  |        |             |
| SR4M4110    | 110 Vdc                | 6-1415054-1               |                  |                           |             |  |        |             |