

## SCS 24VDC P1SIL3DS I

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

www.weidmueller.com



This safety relay is used in areas of process automation that require a functionally safe switch-off. The module meets the requirements for SIL3 according to EN 61508.

- Variant without monitoring circuit
- TUV certified and with "Approved Safety Function"
- cULus certified
- Optional compatible with Triconex® output modules Tricon™, Trident™, and Tri-GP™
- Multi-voltage input (24 - 230 V UC) in the monitoring circuit
- Externally accessible fuse

### General ordering data

|            |   |
|------------|---|
| Version    | SAFESERIES, Safety relay, 24 V DC (16...36 V DC), , Max. switching current, internal fuse : 5 A, SIL 3, EN 61508:2010 |
| Order No.  | <a href="#">2500980000</a>  |
| Type       | SCS 24VDC P1SIL3DS I  |
| GTIN (EAN) | 4050118514322   |
| Qty.       | 1 items   |

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## Technical data

## Approvals

Approvals



ROHS Conform

UL File Number Search [UL Website](#)

Certificate no. (cULus) E141197

## Dimensions and weights

|            |          |                 |             |
|------------|----------|-----------------|-------------|
| Depth      | 114.1 mm | Depth (inches)  | 4.4921 inch |
| Height     | 117.3 mm | Height (inches) | 4.6181 inch |
| Width      | 22.5 mm  | Width (inches)  | 0.8858 inch |
| Net weight | 180 g    |                 |             |

## Temperatures

|                       |                |                     |                       |
|-----------------------|----------------|---------------------|-----------------------|
| Storage temperature   | -40 °C...85 °C | Ambient temperature | -25 °C...50 °C        |
| Operating temperature |                | Humidity            | 95 %, no condensation |

## Environmental Product Compliance

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| RoHS Compliance Status               | Compliant with exemption             |
| RoHS Exemption (if applicable/known) | 7a, 7cI                              |
| REACH SVHC                           | Lead 7439-92-1                       |
| SCIP                                 | 807f1906-ce90-4f93-8801-4b128b343e6b |

## Input (safety circuit)

|   |   |                       |                        |
|---|---|-----------------------|------------------------|
| Connection designation (safety circuit) | A1, A2  | Rated control voltage | 24 V DC (16...36 V DC) |
| Current consumption                     | 50 mA   | Status indicator      | LED yellow             |
| Protective circuit                      | Reverse polarity protection,<br>Free-wheeling diode |                       |                        |

## Output (safety circuit)

|  |              |                                       |                                       |
|--|--------------|---------------------------------------|---------------------------------------|
| Connection designation (safety output) | 13, 14, 15   | Contact design                        | 1 x de-energised to safe (NO contact) |
| Contact base material                  | AgNi         | Max. permitted switching voltage      | 250 V AC / 30 V DC                    |
| Max. permitted switching current       | 5 A          | Max. switching current, internal fuse | 5 A                                   |
| Max. switching current, external fuse  | 5 A          | Max. switching capacity               | 1250 VA                               |
| Internal fuse                          | 5 A time-lag | External back-up fuse                 | 5 A time-lag                          |
| Short circuit resistance               | No           | Switch-on time                        | ≤ 25 ms                               |
| Switch-off time                        | ≤ 30 ms      | Min. switching capacity               | 10 mA @ 12 V                          |

## Safety-related basic specifications

|                                |               |                 |       |
|--------------------------------|---------------|-----------------|-------|
| Tproof                         | 12 a          | Device type     | A     |
| Hardware fault tolerance (HFT) | 2             | Safety category | SIL 3 |
| Safety standard                | EN 61508:2010 |                 |       |

## General data

|                    |                           |                         |                        |
|--------------------|---------------------------|-------------------------|------------------------|
| Operating altitude | ≤ 2000 m, above sea level | Mounting rail           | TS 35                  |
| Colour             | black, yellow             | Resistance to vibration | DNVGL-CG-0339, class A |

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## Insulation coordination

|   |                               |  |                  |
|---|-------------------------------|--|------------------|
| Insulation coordination according to                          | EN 61010-2-201:2013 + AC:2013 | Rated voltage                                    | 300 V            |
| Pollution severity  | 2                             | Surge voltage category                           | III              |
| Clearance and creepage distances for control side - load side | ≥ 6 mm                        | Dielectric strength for control side - load side | 3.51 kVeff/5 s   |
| Type of isolation at input and output                         | reinforced insulation         | Impulse withstand voltage                        | 6 kV (1.2/50 µs) |
| Protection degree   | IP20                          |  |                  |

## Further details of approvals / standards

|           |   |                         |         |
|-----------|---|-------------------------|---------|
| Standards | EN 61010-2-201:2013 + AC:2013, EN 61326-1, EN 61326-3-1, EN 61326-3-2 | Certificate no. (cULus) | E141197 |
|-----------|---|-------------------------|---------|

## Connection data

|   |                     |   |                      |
|---|---------------------|---|----------------------|
| Wire connection method  | Screw connection    | Stripping length, rated connection  | 8 mm                 |
| Tightening torque, min.   | 0.4 Nm              | Tightening torque, max.   | 0.6 Nm               |
| Clamping range, rated connection  | 1.5 mm <sup>2</sup> | Clamping range, min.  | 0.13 mm <sup>2</sup> |
| Clamping range, max.  | 2.5 mm <sup>2</sup> | Wire connection cross section AWG, min.   | AWG 26               |
| Wire connection cross section AWG, max.   | AWG 12              | Wire cross-section, solid, min.   | 0.2 mm <sup>2</sup>  |
| Wire cross-section, solid, max.   | 2.5 mm <sup>2</sup> | Wire connection cross section, finely stranded, min.                                    | 0.2 mm <sup>2</sup>  |
| Wire connection cross section, finely stranded, max.                                    | 2.5 mm <sup>2</sup> | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.2 mm <sup>2</sup>  |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 2.5 mm <sup>2</sup> | Conductor cross-section, flexible, AEH (DIN 46228-1), min.                              | 0.2 mm <sup>2</sup>  |
| Conductor cross-section, flexible, AEH (DIN 46228-1), max.                              | 2.5 mm <sup>2</sup> | Blade size  | size PHO             |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 8.0    | EC001449    | ETIM 9.0    | EC001449    |
| ETIM 10.0   | EC001449    | ECLASS 14.0 | 27-37-18-19 |
| ECLASS 15.0 | 27-37-18-19 |             |             |

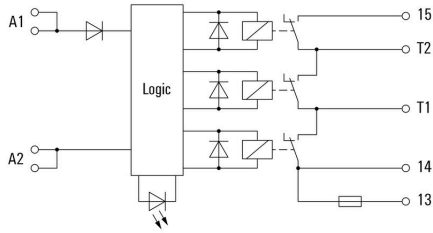
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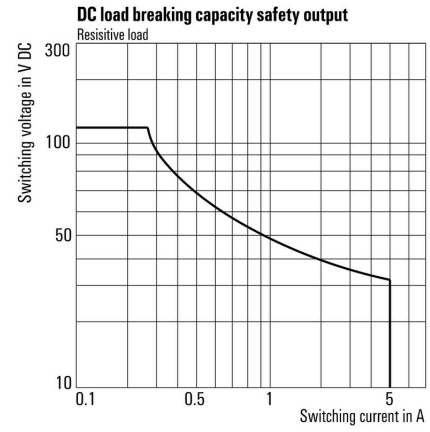
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Drawings

Wiring diagram

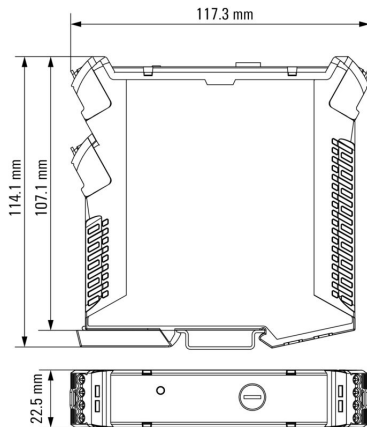


Graph



DC load limit curve

Dimensional drawing



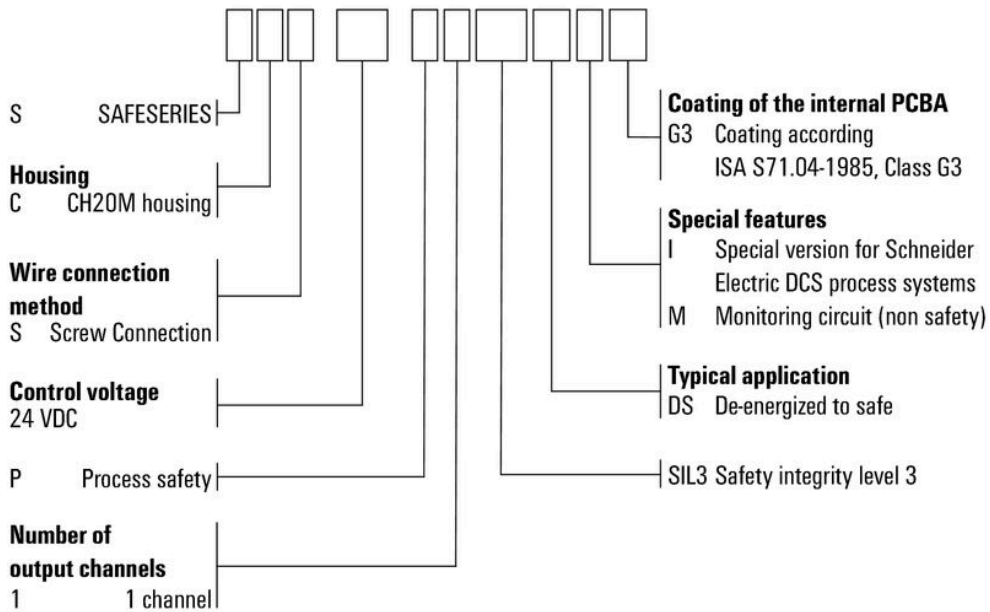
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**Drawings**

**Miscellaneous**



Type codes