**Weidmüller**

## SCS 24VDC P2SIL3ES

Especially for areas of process automation in which the functionally safe shutdown of the fuel supply to combustion plants is necessary. The relay complies with SIL3 and meets the requirements of EN ISO 13849-1 (PLe).

• TUV certified "Approved Safety Function"
• Forcibly guided contacts according to EN 61810-3 Type B
• 2-channel design suitable for protection of human and machine
• Can be used for electrical equipment of combustion plants according to EN 50156

### General ordering data

| | |
|---|---|
| Version | SAFESERIES, Safety relay,24 V DC ±15 %, 24 VDC +15% / -10% during auto-start, 35 mA, 5, SIL 3, DIN EN 61508, EN ISO 13849-1 (PLe) |
| Order No. | 1319280000 |
| Type | SCS 24VDC P2SIL3ES |
| GTIN (EAN) | 4050118125078 |
| Qty. | 1 pc(s). |

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## SCS 24VDC P2SIL3ES

## Technical data

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 114.1 mm | Depth (inches) | 4.492 inch |
| Height | 119.6 mm | Height (inches) | 4.709 inch |
| Width | 22.5 mm | Width (inches) | 0.886 inch |
| Net weight | 292 g | | |

### Temperatures

| | | | |
|---|---|---|---|
| Storage temperature | -40 °C...85 °C | Operating temperature | -25 °C...55 °C |
| Humidity | 40 °C / 93 % rel. humidity, no condensation | | |

### Input (power supply)

| | | | |
|---|---|---|---|
| Connection designation | A1, A2, C1, C2 | Rated control voltage | 24 V DC ±15 %, 24 VDC +15% / -10% during auto-start |
| Current consumption | 55 mA (release circuit enabled), 6 mA (release circuit not enabled) | Guaranteed current consumption at 24 V DC -10% | 35 mA |
| Inrush current | 750 mA / 5 ms (for starting with S33/S34 (start circuit)), 2 A / 20 ms (for starting with A1/A2 (autostart)) | Response time | with bridge via C1/C2: typ. 50 ms, without bridge via C1/C2: typ. 20 ms |
| Status display | LED green: supply, Yellow LED: signal | Protective circuit | Reverse polarity protection, Free-wheeling diode |
| Short-circuit detection | Yes, max. 4 s up to disconnection (thermistor) | | |

### Starting circuit

| | | | |
|---|---|---|---|
| Anschlussbezeichnung | S33, S34, S35 | Operating voltage | 22 V DC, from internal power supply |
| Function | falling edge (button via S33/S34), rising edge (permanent bridge via S33/S35) | | |

### Monitoring circuit

| | | | |
|---|---|---|---|
| Connection designation | S11, S12, S21, S22 | Input | 2, each externally bridgeable |
| Operating voltage | 22 V DC, from internal power supply | | |

### Output (release circuit)

| | | | |
|---|---|---|---|
| Connection designation | 13, 14, 23, 24 | Contact design | 2 NO positively-driven (EN 50205 type B) |
| Contact base material | AgSnO | Switching voltage AC, max. | 250 V |
| Max. permissible switching current | 5 A | Max. switching current, external fuse | 5 A |
| Max. switching capacity | 1250 VA | External back-up fuse | 5 A time-lag |
| Turn-on time | 55 ms (C1/C2 bridged, switched via A1/A2), 30 ms (opening/closing of monitoring circuit) | Turn-off time | 55 ms (C1/C2 bridged, switched via A1/A2), 15 ms (opening/closing of monitoring circuit) |
| Min. switching capacity | 10 mA @ 12 V | | |

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## SCS 24VDC P2SIL3ES

## Technical data

### Feedback output

| | | | |
|---|---|---|---|
| Connection designation | 31, 32 | Contact design | 1 NC positively-driven (EN 50205 type B) |
| Switching voltage AC, max. | 250 V | Max. switching current. | 1 A |

### Safety-related basic specifications

| | | | |
|---|---|---|---|
| Device type | A | $T_{proof}$ | 12 a |
| Hardware fault tolerance (HFT) | 1 | Safety category | SIL 3 |
| Safety standard | DIN EN 61508, EN ISO 13849-1 (PLe) | | |

### General data

| | | | |
|---|---|---|---|
| Operating altitude | ≤ 2000 m, above sea level | Rail | TS 35 |
| Colour | black, yellow | | |

### Insulation coordination

| | | | |
|---|---|---|---|
| Rated voltage | 300 V | Pollution severity | 2 |
| Surge voltage category | III | Clearance and creepage distances for control side - load side | ≥ 5.5 mm |
| Dielectric strength for control side - load side | 4 kV$_{eff}$ / 1 min | Dielectric strength to mounting rail | 4 kV$_{eff}$ / 1 Min. |
| Impulse withstand voltage | 6 kV (1.2/50 µs) | Protection degree | IP20 |

### Further details of approvals / standards

| | | | |
|---|---|---|---|
| Standards | EN 61000, EN 61326-3-2, EN ISO 13849-1 (PLe) | Equipment for furnaces | EN 50156 |

### 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 mm² | Clamping range, min. | 0.13 mm² |
| Clamping range, max. | 2.5 mm² | Wire connection cross section AWG, min. | AWG 26 |
| Wire connection cross section AWG, max. | AWG 12 | Wire cross-section, solid, min. | 0.2 mm² |
| Wire cross-section, solid, max. | 2.5 mm² | Wire connection cross section, finely stranded, min. | 0.2 mm² |
| Wire connection cross section, finely stranded, max. | 2.5 mm² | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.2 mm² |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 2.5 mm² | Conductor cross-section, flexible, AEH (DIN 46228-1), min. | 0.2 mm² |
| Conductor cross-section, flexible, AEH (DIN 46228-1), max. | 2.5 mm² | Blade size | size PH0 |

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## SCS 24VDC P2SIL3ES

## Technical data

### Classifications

| | | | |
|---|---|---|---|
| ETIM 6.0 | EC001449 | ETIM 7.0 | EC001449 |
| ETIM 8.0 | EC001449 | ETIM 9.0 | EC001449 |
| ECLASS 9.0 | 27-37-18-19 | ECLASS 9.1 | 27-37-18-19 |
| ECLASS 10.0 | 27-37-18-19 | ECLASS 11.0 | 27-37-18-19 |
| ECLASS 12.0 | 27-37-18-19 | ECLASS 13.0 | 27-37-18-19 |
| ECLASS 14.0 | 27-37-18-19 | | |

### Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant with exemption |
| RoHS Exemption (if applicable/known) | 7a, 7cl |
| REACH SVHC | Lead 7439-92-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol 119-47-1 |
| SCIP | 332bc555-bc84-431d-ba7a-563be05e80bd |

### Approvals

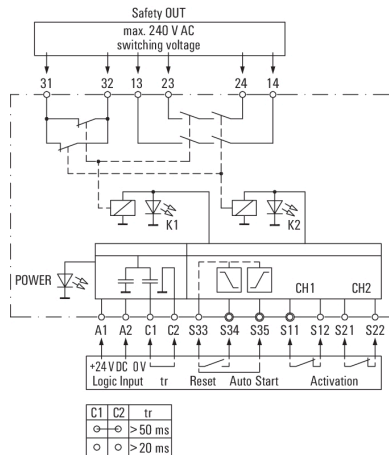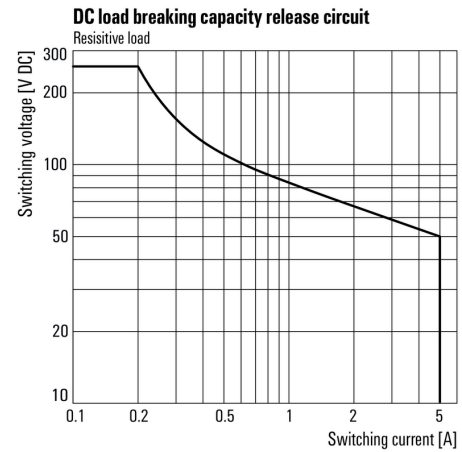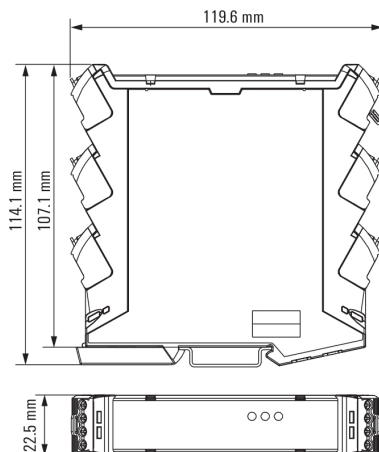| | |
|---|---|
| Approvals | |
| ROHS | Conform |

### Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | TUV Safety Approved certificate<br>EG-Baumusterprüfbescheinigung / EC type-examination certificate<br>EU Konformitätserklärung / EU Declaration of Conformity |
| Engineering Data | CAD data – STEP |
| Software | Library and function block – SISTEMA library 2.0 |
| User Documentation | Beipackzettel / Package Insert - multilingual<br>Sicherheitshandbuch – Deutsch<br>Safety manual – English |
| Catalogues | Catalogues in PDF-format |
| Brochures | |

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# SCS 24VDC P2SIL3ES

## Drawings

### Wiring diagram



### DC load limit curve

**DC load breaking capacity release circuit**
Resisitive load



### Dimensioned drawing



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SCS 24VDC P2SIL3ES

## Accessories

### Yellow

THM GEW woven-fabric labels are made from a very flexible cotton fabric. Delivery on reels for use with thermal transfer printers enables an adhesive layer which is thicker than that of A4 sheets for office laser printers. Together, this flexibility and the thick adhesive layer ensure higher adhesive strength and enable use on angular or round objects such as e.g. cables or hoses.

#### General ordering data

| Type | THM GEW 15/6 GE | Version | | Packaging |
|------|-----------------|---------|--|-----------|
| Order No. | 1059790000 | THM, Device markers, 6 x 15 mm, yellow | | Reel |
| GTIN (EAN) | 4032248808182 | | | |
| Qty. | 1 pc(s). | | | |

### Blank, adhesive backing

SM is a MultiCard marker for labelling control and signalling devices. The tags are clipped into the carriers or attached by means of the adhesive film already fitted to them. Customised tags can be created with the PrintJet CONNECT or Plotter marking systems.
• Users can quickly produce tags to suit their needs
• No need to stock expensive standard tags
• Highly resistant printing quality when using the PrintJet as a substitute for engraving
• For extreme demands, we recommend the ETO SM protective film
• Holders can be used for the 22-mm or 30-mm-diameter push-buttons from Siemens, ABB, Moeller and Télémécanique

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

#### General ordering data

| Type | SM 18/9.5 K MC NE GE | Version |
|------|----------------------|---------|
| Order No. | 1248590000 | SwitchMark, Device markers, 9.5 x 18 mm, Siemens 3 SB, yellow |
| GTIN (EAN) | 4050118038958 | |
| Qty. | 200 pc(s). | |
| Type | SM 18/9.5 K MC NE GR | Version |
| Order No. | 1248610000 | SwitchMark, Device markers, 9.5 x 18 mm, grey |
| GTIN (EAN) | 4050118038675 | |
| Qty. | 200 pc(s). | |

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## SCS 24VDC P2SIL3ES

## Accessories

| Type | SM 18/9.5 K MC NE WS | Version |
|---|---|---|
| Order No. | 1248580000 | SwitchMark, Device markers, 9.5 x 18 mm, white |
| GTIN (EAN) | 4050118038965 | |
| Qty. | 200 pc(s). | |

### Blank

ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.

Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.

Advantages at a glance:

• Tags for universal usage, self-adhesive or clip-on tags, depending on type
• For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
• Individual laser-quality printing according to specifications

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

### General ordering data

| Type | ESG 6/15 K MC NE GE | Version |
|---|---|---|
| Order No. | 1880130000 | ESG, Device markers x 15 mm, PA 66, Colour: yellow, Self-adhesive |
| GTIN (EAN) | 4032248478910 | |
| Qty. | 200 pc(s). | |
| Type | ESG 6/15 K MC NE WS | Version |
| Order No. | 1880100000 | ESG, Device markers x 15 mm, PA 66, Colour: white, Self-adhesive |
| GTIN (EAN) | 4032248478781 | |
| Qty. | 200 pc(s). | |

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Catalogue status 04.01.2025 / We reserve the right to make technical changes.

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## SCS 24VDC P2SIL3ES

## Accessories

### White

THM GEW woven-fabric labels are made from a very flexible cotton fabric. Delivery on reels for use with thermal transfer printers enables an adhesive layer which is thicker than that of A4 sheets for office laser printers. Together, this flexibility and the thick adhesive layer ensure higher adhesive strength and enable use on angular or round objects such as e.g. cables or hoses.

### General ordering data

| Type | THM GEW 15/6 WS | Version | |
|---|---|---|---|
| Order No. | 1059780000 | THM, Device markers, 6 x 15 mm, white | |
| GTIN (EAN) | 4032248808175 | | |
| Qty. | 1 pc(s). | | |

### SM 18/9.5

**Prevention of incorrect operation: SM**
MultiMark device markers can be used with marking materials from different manufacturers.Wherever they are used, they ensure that all components, such as control and signalling devices from different vendors, are clearly assigned.
**Your benefits with MultiMark**
• "Different materials for various requirements"
• Can be used with equipment from many manufacturers
• Device markers with a familiar design

### General ordering data

| Type | SM 18/9.5 MM WS | Version | |
|---|---|---|---|
| Order No. | 2006220000 | SwitchMark, Device markers, 9 x 18 mm, white | |
| GTIN (EAN) | 4050118391435 | | |
| Qty. | 1,000 pc(s). | | |
| Type | SM 18/9.5 MM GE | Version | |
| Order No. | 2006240000 | SwitchMark, Device markers, 9 x 18 mm, yellow | |
| GTIN (EAN) | 4050118390698 | | |
| Qty. | 1,000 pc(s). | | |
| Type | SM 18/9.5 MM GR | Version | |
| Order No. | 2006260000 | SwitchMark, Device markers, 9 x 18 mm, grey | |
| GTIN (EAN) | 4050118390964 | | |
| Qty. | 1,000 pc(s). | | |

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# SCS 24VDC P2SIL3ES

**Accessories**

## Crosshead screwdriver Phillips

VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip

### General ordering data

| Type | SDIK PH0 X 60 | Version | |
|------|---------------|---------|---|
| Order No. | 2749880000 | Screwdriver, Blade width (B): 0 mm, 60 mm, Blade thickness (A): 0 | |
| GTIN (EAN) | 4050118897081 | | |
| Qty. | 1 pc(s). | | |

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### General ordering data

| Type | ESG 9/11 K MC NE WS | Version | |
|------|---------------------|---------|---|
| Order No. | 1857440000 | ESG, Device markers x 11 mm, PA 66, Colour: white, Self-adhesive | |
| GTIN (EAN) | 4032248402731 | | |
| Qty. | 200 pc(s). | | |

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**SCS 24VDC P2SIL3ES**

## Accessories

### ESG 6/17

**Guaranteed long service life: ESG**
The multi-colour and multi-format labels have a strong adhesive layer to ensure the best possible adhesion to the underlying surface. Double laminated polyester makes the basic material very thin and yet extremely tear-resistant.
**Your benefits with MultiMark**
• "Different materials for various requirements"
• Can be used with equipment from many manufacturers
• Device markers with a familiar design

### General ordering data

| Type | ESG 6/17 MM GE | Version | |
|------|----------------|---------|---|
| Order No. | 2005110000 | ESG, Device markers, 6 x 17 mm, yellow | |
| GTIN (EAN) | 4050118390827 | | |
| Qty. | 3,000 pc(s). | | |
| Type | ESG 6/17 MM WS | Version | |
| Order No. | 2005100000 | ESG, Device markers, 6 x 17 mm, white | |
| GTIN (EAN) | 4050118390728 | | |
| Qty. | 3,000 pc(s). | | |

### Crosshead screwdriver Phillips

Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip

### General ordering data

| Type | SDK PH0 X 60 | Version | |
|------|--------------|---------|---|
| Order No. | 2749400000 | Screwdriver, Blade width (B): 60 mm, Blade thickness (A): | |
| GTIN (EAN) | 4050118895629 | | |
| Qty. | 1 pc(s). | | |

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**SCS 24VDC P2SIL3ES**

**Accessories**

## ESG 6/15

### Guaranteed long service life: ESG
The multi-colour and multi-format labels have a strong adhesive layer to ensure the best possible adhesion to the underlying surface. Double laminated polyester makes the basic material very thin and yet extremely tear-resistant.

**Your benefits with MultiMark**
- "Different materials for various requirements"
- Can be used with equipment from many manufacturers
- Device markers with a familiar design

### General ordering data

| Type | ESG 6/15 MM WS | Version | |
|---|---|---|---|
| Order No. | 2619940000 | ESG, Device markers, 6 x 15 mm, white | |
| GTIN (EAN) | 4050118626148 | | |
| Qty. | 3,000 pc(s). | | |

## Blank

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- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

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### General ordering data

| Type | ESG 6.6/20 BHZ 5.00/04 | Version | |
|---|---|---|---|
| Order No. | 1082540000 | ESG, Device markers x 20 mm, PA 66, Colour: white | |
| GTIN (EAN) | 4032248845439 | | |
| Qty. | 200 pc(s). | | |

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# SCS 24VDC P2SIL3ES

## Accessories

**Blank**

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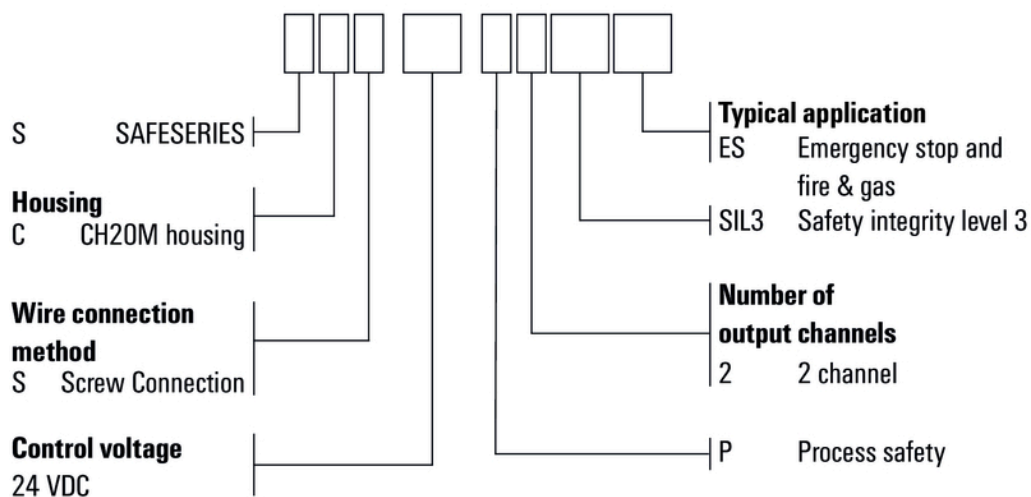
## General ordering data

| Type | ESG 6/17 K MC NE GE | Version |
|---|---|---|
| Order No. | 1880110000 | ESG, Device markers x 17 mm, PA 66, Colour: yellow, Self-adhesive |
| GTIN (EAN) | 4032248478798 | |
| Qty. | 200 pc(s). | |
| Type | ESG 6/17 K MC NE WS | Version |
| Order No. | 1880120000 | ESG, Device markers x 17 mm, PA 66, Colour: white, Self-adhesive |
| GTIN (EAN) | 4032248478804 | |
| Qty. | 200 pc(s). | |

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**SCS 24VDC P2SIL3ES**

**Drawings**

**Miscellaneous**



Type codes