

SAFESERIES SCS 24VDC P2SIL3ES

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The feed-in of fuel must be interrupted as soon as a boiler plant meets any safety criterion. With the SCS 24 V DC P2SIL3ES safety relay, you can conduct an emergency shut-down of the fuel supply to furnaces up to safety requirement level SIL 3.

- Positively-driven contacts acc. to EN 50205 type B
- 2-channel design
- Usage acc. to EN 50156 (electrical equipment for furnaces)
- TÜV certified "Safety Approved"

General ordering data

Type	SCS 24VDC P2SIL3ES
Order No.	1319280000
Version	SAFESERIES, Safety relay, 24 V DC $\pm 15\%$, 24 VDC +15% / -10% during auto-start, 35 mA, 6, SIL 3, DIN EN 61508, EN ISO 13849-1 (PLe)
GTIN (EAN)	4050118125078
Qty.	1 pc(s).

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Technical data
Dimensions and weights

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

Temperatures

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Input (power supply)

Connection designation	A1, A2, C1, C2	Rated control voltage	24 V DC \pm 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 (safety circuit)

External back-up fuse	5 A time lag
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Technical data
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	6 A	Max. switching current, external fuse	5 A
Max. switching capacity	2000 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	20 ms (C1/C2 bridged, switched via A1/A2), 15 ms (opening/closing of monitoring circuit)
Min. switching capacity	10 mA @ 12 V		

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	Hardware fault tolerance (HFT)	1
T _{proof}	12 Years	Safety category	SIL 3
Safety standard	DIN EN 61508, EN ISO 13849-1 (PLe)		

General data

Rail	TS 35	Colour	black, yellow
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Insulation coordination

Rated voltage	300 V	Surge voltage category	III
Pollution severity	2	Protection degree	IP20
Dielectric strength, Input/Output	4 kV _{eff} / 1 min	Creepage and clearance distance input – output	≥ 5.5 mm
Dielectric strength output – output	4 kV _{eff} / 1 min	Creepage and clearance distance output – output	≥ 5.5 mm
Dielectric strength to mounting rail	4 kV _{eff} / 1 Min.	Impulse withstand voltage	6 kV (1.2/50 μs)

Further details of approvals / standards

Standards	EN 50178, EN 61000, EN 61326-3-2, EN ISO 13849-1 (PLe)	Equipment for furnaces	EN 50156
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Technical data**Connection data**

Wire connection method	Screw connection	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.6 Nm	Clamping range, rated connection	1.5 mm ²
Clamping range, min.	0.13 mm ²	Clamping range, max.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 12
Wire cross-section, solid, min.	0.2 mm ²	Wire cross-section, solid, max.	2.5 mm ²
Wire connection cross-section, finely stranded, min.	0.2 mm ²	Wire connection cross section, finely stranded, max.	2.5 mm ²
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min.	0.2 mm ²	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	2.5 mm ²
Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.2 mm ²	Conductor cross-section, flexible, AEH (DIN 46228-1), max.	2.5 mm ²
Twin wire-end ferrules, min.	0.5 mm ²	Twin wire-end ferrules, max.	1.5 mm ²
Blade size	size PHO		

Classifications

ETIM 6.0	EC001449	ETIM 7.0	EC001449
eClass 9.0	27-37-18-19	eClass 9.1	27-37-18-19
eClass 10.0	27-37-18-19		

Approvals

Approvals



ROHS Conform

Downloads

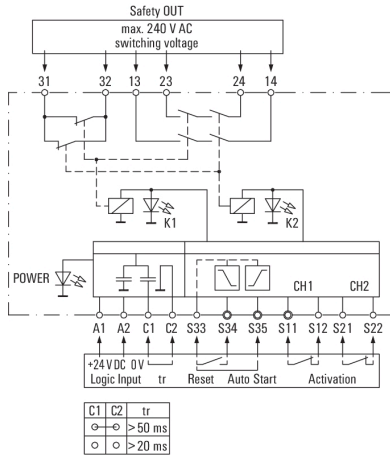
Approval/Certificate/Document of Conformity	TUV Safety Approved certificate EG-Baumusterprüfbescheinigung / EC type-examination certificate EU Konformitätserklärung / EU Declaration of Conformity
Brochure/Catalogue	CAT 4.2 ELECTR 18/19 EN
Engineering Data	EPLAN.WSCAD
Engineering Data	STEP
User Documentation	Beipackzettel / Package Insert - multilingual Sicherheitshandbuch – Deutsch Safety manual – English

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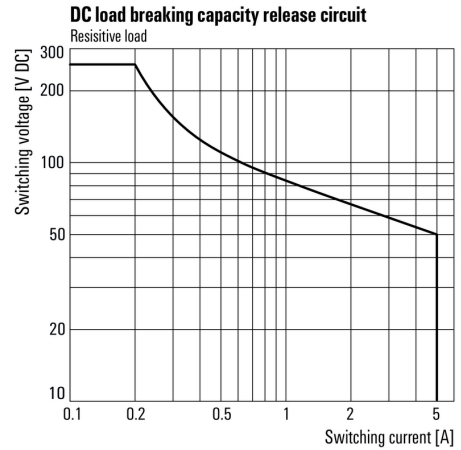
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Drawings

Wiring diagram



DC load limit curve



Dimensioned drawing

