



PROTECT-SELECT-SK

- Simple and flexible parameter setting
- No programming skills required
- 18 safe inputs for the redundant inquiry of all common safety sensors
- 4 safety semi-conductor outputs
- 2 safety relay outputs
- 4 optional signalling outputs
- Replaces up to 8 safety-monitoring modules up to PL e / SIL 3
- Error and status messages in plain text
- Multilingual menu navigation via colour display

Data

Ordering data

Note (Delivery capacity)	Not available!
EAN (European Article Number)	4030661445397
eCl@ss number, Version 9.0	27-37-18-19
eCl@ss number, Version 11.0	27-37-18-19
ETIM number, version 6.0	EC001449

Approval - Standards

Certificates	TÜV cULus CCC EAC
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General data

Standards	EN ISO 13849-1 IEC 61508 EN 60947-5-1 EN 60204-1 EN 62061
Climatic stress	EN 60068-2-1 EN 60068-2-2 EN 61496
Terminal (mechanical)	Removable screw terminals
Enclosure material	Polyamide / V0
Material of the contacts, electrical	Tin
Gross weight	300 g

General data - Features

Short circuit detection	Yes
Wire breakage detection	Yes
Short-circuit recognition	Yes
Removable Terminals	Yes
Start input	Yes
Feedback circuit	Yes
Automatic reset function	Yes
Reset edge detection	Yes
Start-up test	Yes
Earth connection detection	Yes
Integral System Diagnostics, status	Yes
Integrated Display, Supply Voltage	Yes
Number of pulse outputs (test pulse output)	3
Number of relay outputs (1-channel)	2
Number of fail-safe analogue inputs	2
Number of digital fail-safe inputs	14
Number of digital fail-safe in-/outputs	4
Number of fail-safe digital outputs	4

Number of signalling outputs	4
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Safety appraisal

Standards	EN 60947-5-1 EN 62061 IEC 61508 EN ISO 13849-1
Performance level, up to	e
Control category to EN13849	4
Diagnostic Coverage (DC) Level	90
PFH-value	1.78×10^{-8} /h
Safety Integrity Level (SIL), suitable for applications in	3
Mission Time	20 Year(s)
Common Cause Failure (CCF), minimum	65
Hardware fault tolerance (HFT)	1
Demand rate	high or continuous
Safe Failure Fraction (SFF), minimum	90

Safety appraisal - Relay outputs

Performance Level, up to	e
Control category to EN13849	4
Notice	Valid for dual channel and 60% relay load
Safety Integrity Level (SIL), suitable for applications in	3

Safety appraisal - Safety inputs 2-channels

Performance level, up to	e
Control category	4
Safety Integrity Level (SIL), suitable for applications in	3

Safety appraisal - Safety inputs 1-channel

Performance level, up to	d
Control category	2
Safety Integrity Level (SIL), suitable for applications in	2

Safety appraisal - Safety outputs 1-channel

Performance level, up to	d
Control category	2
Safety Integrity Level (SIL), suitable for applications in	2

Safety appraisal - Safety outputs 2-channels

Performance level, up to	e
Control category	4
Safety Integrity Level (SIL), suitable for applications in	3

Mechanical data

Mechanical life, minimum	10,000,000 Operations
Mounting	Snap onto standard DIN rail to EN 60715

Mechanical data - Connection technique

Terminal Connector	rigid or flexible
Terminal designations	IEC 61131-2 IEC/EN 60947-1
Cable section, minimum	0.25 mm ²
Cable section, maximum	2.5 mm ²
Tightening torque of Clips	0.6 Nm

Mechanical data - Dimensions

Width	52.5 mm
Height	100 mm
Depth	118 mm

Ambient conditions

Degree of protection	IP20
Degree of protection of the mounting space	IP54
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+55 °C
Storage and transport temperature, minimum	-25 °C
Storage and transport temperature, maximum	+75 °C
Relative humidity, minimum	15 %
Relative humidity, maximum	90 %
Note (Relative humidity)	non-condensing
Resistance to vibrations to EN 60068-2-6	10 ... 57 Hz, amplitude 0.75 mm
Resistance to shock	30 g / 11 ms

Ambient conditions - Insulation value

Overvoltage category	III
Degree of pollution to VDE 0100	2

Electrical data

Voltage type	DC (direct current)
Operating voltage	24 V
Operating voltage, minimum	21.6 VDC
Operating voltage, maximum	26.4 VDC
Current consumption at 24V, maximum	500 mA

No-load supply current I_0	500 mA
Required rated short-circuit current to EN 60947-5-1	1,000 A
Switching frequency, maximum	0.1 Hz

Electrical data - Fail-safe digital inputs

Switching thresholds	-3 V ... 2 V (LOW) 18 V ... 28.8 V
Current consumption at 24V	6 mA

Electrical data - Fail-safe digital outputs

Rated operating current (safety outputs)	700 mA
Versions	short-circuit proof, p-type / n-type (Q0/0N and Q1/1N) short-circuit proof, p-type (Q2 und Q3)
Current leakage I_r	2 mA

Electrical data - Safe relay outputs

Voltage, Utilisation category AC1	250 VAC
Current, Utilisation category AC-1	4 A
Voltage, Utilisation category DC1	24 VDC
Current, Utilisation category DC1	4 A
Voltage, Utilisation category AC15	230 VAC
Current, Utilisation category AC-15	3 A
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	4 A

Electrical data - Diagnostic output

Operating current	100 mA
Versions	Limited short-circuit protection, p-type

Electrical data - Electromagnetic compatibility (EMC)

EMC rating

EMC-Directive

Other data

Note (applications)

Safety sensor
Guard system
Emergency-Stop button
Pull-wire emergency stop switches
Safety light curtain

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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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