



PROTECT-IE-02-SK

- Input for up to 4 sensors per interface e.g.: magnetic safety switches type BNS, emergency stop devices, interlocking devices and others
- 2 safety contacts

Data

Ordering data

Product type description	PROTECT-IE-02-SK
Article number (order number)	101189096
EAN (European Article Number)	4250116202225
eCl@ss number, version 12.0	27-37-18-19
eCl@ss number, version 11.0	27-37-18-19
eCl@ss number, version 9.0	27-37-18-19
ETIM number, version 7.0	EC001449
ETIM number, version 6.0	EC001449
Available until	31.12.2024

Approvals - Standards

Certificates	cULus
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General data

Standards	EN IEC 62061 EN ISO 13849-1 EN IEC 60947-5-1 EN IEC 60947-5-3 EN IEC 60947-5-5 EN IEC 61508 EN IEC 60204-1 EN IEC 60947-1
Climatic stress	EN 60068-2-78
Enclosure material	Glass-fibre reinforced thermoplastic, ventilated
Gross weight	140 g

General data - Features

Stop-Category	0
Electronic Fuse	Yes
Wire breakage detection	Yes
Cross-circuit detection	Yes
Removable Terminals	Yes
Automatic reset function	Yes
Earth connection detection	Yes
Integral system diagnostics, general	Yes
Number of auxiliary contacts	1
Number of LEDs	5
Number of normally closed (NC)	2
Number of safety contacts	2

Safety classification

Standards	EN IEC 60947-5-1 EN IEC 61508
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Safety classification - Relay outputs

Performance Level, up to	d
Category	3
Diagnostic Coverage (DC) Level	60 %
PFH value	2.00×10^{-7} /h
Notice	for max. 36,500 switching cycles/year and max. 60% contact load
Safety Integrity Level (SIL), suitable for applications in	2
Mission time	20 Year(s)
Common Cause Failure (CCF), minimum	65

Mechanical data

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

Mechanical data - Connection technique

Termination	Screw connection, plug-in
Terminal designations	IEC/EN 60947-1
Cable section, minimum	0.14 mm ²
Cable section, maximum	1.5 mm ²

Mechanical data - Dimensions

Width	48 mm
Height	126 mm
Depth	61 mm

Ambient conditions

Degree of protection of the enclosure	IP20
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Degree of protection of the mounting space	IP20
Degree of protection of clips or terminals	IP20
Ambient temperature	-25_+55
Storage and transport temperature, minimum	-40 °C
Storage and transport temperature, maximum	+85 °C
Resistance to vibrations	10...55 Hz, Amplitude 0.35 mm, ± 15 %
Resistance to shock	30 g / 11 ms

Ambient conditions - Insulation values

Rated impulse withstand voltage U_{imp}	0.8 kV
Overvoltage category	III
Degree of pollution	2

Electrical data

Operating voltage	24 VDC -15 % / +20 %
Ripple voltage	10 %
Rated operating voltage	24 VDC
Rated AC voltage for controls at DC minimum	20.4 VDC
Rated control voltage at DC, maximum	28.8 VDC
Electrical power consumption	1.7 W
Input resistance at U_e	2,900 Ω
Contact resistance, maximum	0.1 Ω
Note (Contact resistance)	in new state
Drop-out delay in case of "emergency stop", maximum	20 ms
Pull-in delay at automatic start, maximum	20 ms

Electrical data - Safe relay outputs

Voltage, Utilisation category DC-13	24 VDC
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Current, Utilisation category DC-13	2 A
Switching capacity, minimum	10 VDC
Switching capacity, minimum	10 mA
Switching capacity, maximum	24 VAC
Switching capacity, maximum	2 A

Electrical data - Digital inputs

Input signal, HIGH Signal "1"	19 - 28,8 VDC
Input signal, LOW Signal "0"	0 - 1 VDC
Conduction resistance, maximum	40 Ω

Electrical data - Digital Output

Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	0.1 A

Electrical data - Relay outputs (auxiliary contacts)

Switching capacity, maximum	24 VDC
Switching capacity, maximum	0.1 A

Electrical data - Electromagnetic compatibility (EMC)

EMC rating	EMC-Directive
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Status indication

Indicated operating states	Position relay K2
	Position relay K1
	Position relay K3
	Position relay K3

Other data

Note (applications)

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

Ordering code

Product type description:
PROTECT-IE-(1)-(2)

(1)

02

2 NC contact

11

1 NO contacts/1 NC contact

(2)

without

Cage clamps

SK

Screw connection, plug-in

Pictures

Product picture (catalogue individual photo)

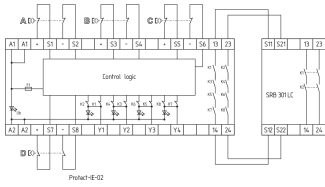


ID: kprief01

| 582.4 kB | .jpg | 272.344 x 408.517 mm - 772 x 1158 px - 72 dpi

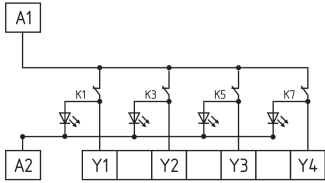
| 62.1 kB | .png | 73.731 x 110.772 mm - 209 x 314 px - 72 dpi

Wiring example



ID: kpriel01
 | 35.4 kB | .cdr |
 | 116.3 kB | .jpg | 352.778 x 192.969 mm - 1000 x 547 px - 72 dpi

Wiring example



ID: kpriel02
 | 20.2 kB | .cdr |
 | 72.5 kB | .jpg | 352.778 x 195.792 mm - 1000 x 555 px - 72 dpi

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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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