



PROTECT-IE-11

- 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

EAN (European Article Number)	4250116202133
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
Available until	31.12.2022

Approval - Standards

Certificates	cULus EAC
--------------	--------------

General data

Standards	IEC 61508 IEC/EN 60204-1 EN 60947-5-1 EN ISO 13849-1
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
Short-circuit recognition	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 openers	1
Number of shutters	1
Number of safety contacts	2

Safety appraisal

Standards	EN 60947-5-1 IEC 61508
-----------	---------------------------

Safety appraisal - Relay outputs

Performance Level, up to	d
Control category to EN13849	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	Snap onto standard DIN rail to EN 60715

Mechanical data - Connection technique

Terminal Connector	Cage clamps
Terminal designations	IEC/EN 60947-1
Cable section, minimum	0.2 mm ²
Cable section, maximum	2.5 mm ²

Mechanical data - Dimensions

Width	48 mm
Height	126 mm
Depth	61 mm

Ambient conditions

Degree of protection of the enclosure	IP20
Degree of protection of the mounting space	IP20
Degree of protection of clips or terminals	IP20
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+55 °C
Storage and transport temperature, minimum	-40 °C
Storage and transport temperature, maximum	+85 °C
Resistance to vibrations to EN 60068-2-6	10...55 Hz, Amplitude 0.35 mm, ± 15 %
Resistance to shock	30 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand voltage U_{imp}	0.8 kV
Overvoltage category	III
Degree of pollution to VDE 0110	2

Electrical data

Rated operating voltage	24 VDC -15% / +20%, residual ripple max. 10 %
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 DC13	24 VDC
Current, Utilisation category DC13	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 DC12	24 VDC
Current, Utilisation category DC12	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
------------	---------------

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
---------------------	---

Schmersal, Inc., 15 Skyline Drive, Hawthorne, NY 10532

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.

Generated on: 11/9/2021, 9:08 AM