

EMC rating 10 V/m

Electrical data

| | |
|---------------------------------------------|------------------|
| Rated DC voltage for controls | |
| - Min. rated DC voltage for controls | 20.4 V |
| - Max. rated DC voltage for controls | 27.6 V |
| Rated AC voltage for controls, 50 Hz | |
| - Min. rated AC voltage for controls, 50 Hz | - |
| - Max. rated AC voltage for controls, 50 Hz | - |
| Rated AC voltage for controls, 60 Hz | |
| - Min. rated AC voltage for controls, 60 Hz | - |
| - Max. rated AC voltage for controls, 60 Hz | - |
| Contact resistance | max. 100 mΩ |
| Power consumption | < 5 W |
| Type of actuation | DC |
| Switch frequency | 1 Hz |
| Rated insulation voltage U_i | 250 V |
| Rated operating voltage U_e | 24 VDC \pm 15% |
| Thermal test current I_{the} | 6 A |
| Operating current I_e | 0,2 A |
| Electronic protection (Y/N) | No |

Inputs

Monitored inputs

| | |
|------------------------------------|------------------------------------------------------|
| - Short-circuit recognition (Y/N) | optional |
| - Wire breakage detection (Y/N) | Yes |
| - Earth connection detection (Y/N) | Yes |
| Number of shutters | adjustable 1 piece -> 0 piece |
| Number of openers | adjustable 1 piece -> 2 piece |
| Input resistance | approx. 4000 Ω at GND |
| Input signal "1" | 10 ... 30 VDC |
| Input signal "0" | 0 ... 2 VDC |
| Cable length | 1000 m with 0,75 mm ² (for Rated voltage) |

Outputs

| | |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Stop category | 0 |
| Number of safety contacts | 1 piece |
| Number of auxiliary contacts | 0 piece |
| Number of signalling outputs | 2 piece |
| Switching capacity | |
| - Switching capacity of the safety contacts | min. 10 mA, max. 6 A |
| - Switching capacity of the signaling/diagnostic outputs | Y1-Y2 = 100 mA |
| Fuse rating | |
| - Protection of the safety contacts | 6 A gG D-fuse |
| - Fuse rating for the signaling/diagnostic outputs | short-circuit proof |
| Signalling output | Y1: Authorized operation, safety contacts on; Y2: No authorised operation, safety contacts off |
| Utilisation category To EN 60947-5-1 | AC-15: 230 V / 3 A DC-13: 24 V / 2 A |
| Number of undelayed semi-conductor outputs with signaling function | 2 piece |
| Number of undelayed outputs with signaling function (with | |

| | |
|----------------------------------------------------------------------------|---------|
| contact) | 0 piece |
| Number of delayed semi-conductor outputs with signaling function. | 0 piece |
| Number of delayed outputs with signalling function (with contact). | 0 piece |
| Number of secure undelayed semi-conductor outputs with signaling function | 0 piece |
| Number of secure, undelayed outputs with signaling function, with contact. | 0 piece |
| Number of secure, delayed semi-conductor outputs with signaling function | 0 piece |
| Number of secure, delayed outputs with signaling function (with contact). | 0 piece |

LED switching conditions display

| | |
|----------------------------------------|---------|
| LED switching conditions display (Y/N) | Yes |
| Number of LED's | 1 piece |

Integral system diagnosis ISD

Integral system diagnosis ISD

- The following faults are registered by the safety monitoring modules and indicated by ISD
- Failure of door contacts to open or close
- Cross-wire or short-circuit monitoring of the switch connections
- Interruption of the switch connections
- Failure of the safety relay to pull-in or drop-out
- Fault on the input circuits or the relay control circuits of the safety monitoring module

Miscellaneous data

Applications



Safety sensor



Guard system

Dimensions

Dimensions

- Width 22.5 mm
- Height 100 mm
- Depth 121 mm

notice

Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.

notice - Wiring example

To secure a guard door up to PL 3 and Category #03#

Monitoring 1 guard door(s), each with a magnetic safety sensor of the BNS range

If one or two external relays or contactors are used to switch the load, the system can then only be classified in Category 3 to EN 954-1, if exclusion of the fault "Failure of the external contactors" can be substantiated and is documented, e.g. by using reliable down-rated contactors. A second contactor leads to an increase in the level of security by redundant switching to switch the load off.

Modification for 2 NC contacts:

The safety monitoring module can be modified to monitor two NC contacts by bridging the terminals A1 and X1. The short-circuit recognition