



## AES 1112 24 VDC

- Monitoring of BNS range magnetic safety sensors
- 1 safety contact, STOP 0

## Data

### Ordering data

|                               |               |
|-------------------------------|---------------|
| EAN (European Article Number) | 4030661059259 |
| 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 | BG<br>cULus<br>EAC |
|--------------|--------------------|

### General data

|                 |   |
|-----------------|---|
| Standards       | IEC/EN 60204-1<br>IEC 60947-5-3<br>BG-GS-ET-14<br>BG-GS-ET-20<br>EN ISO 13849-1 |
| Climatic stress | EN 60068-2-3<br>BG-GS-ET-14   |

|                                      |  |
|--------------------------------------|--|
| Enclosure material                   | Glass-fibre reinforced thermoplastic, ventilated |
| Material of the contacts, electrical | AgCdO  |
| Gross weight                         | 122 g  |

## General data - Features

|   |     |
|---|-----|
| Stop-Category                               | 0   |
| Wire breakage detection                     | Yes |
| Automatic reset function                    | Yes |
| Reset after disconnection of supply voltage | Yes |
| Integral System Diagnostics, status         | Yes |
| Number of LEDs                              | 1   |
| Number of openers                           | 2   |
| Number of shutters                          | 1   |
| Number of safety contacts                   | 1   |

## Safety appraisal

|           |                             |
|-----------|-----------------------------|
| Standards | EN ISO 13849-1<br>IEC 61508 |
|-----------|-----------------------------|

## Safety appraisal - Relay outputs

|  |   |
|--|---|
| Performance Level, up to                                   | c   |
| Control category to EN13849                                | 1   |
| PFH-value  | $1.14 \times 10^{-6}$ /h  |
| Notice   | for max. 50,000 switching cycles/year and max. 80% contact load |
| Safety Integrity Level (SIL), suitable for applications in | 1   |
| Mission time   | 20 Year(s)  |

## Mechanical data

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

## Mechanical data - Connection technique

|                            |                                       |
|----------------------------|---------------------------------------|
| Terminal Connector         | Screw connection<br>rigid or flexible |
| Terminal designations      | IEC/EN 60947-1                        |
| Cable section, maximum     | 2.5 mm <sup>2</sup>                   |
| Tightening torque of Clips | 0.6 Nm                                |

## Mechanical data - Dimensions

|        |         |
|--------|---------|
| Width  | 22.5 mm |
| Height | 75 mm   |
| Depth  | 110 mm  |

## Ambient conditions

|  |                                       |
|--|---------------------------------------|
| Degree of protection of the enclosure      | IP40                                  |
| Degree of protection of the mounting space | IP54                                  |
| Degree of protection of clips or terminals | IP20                                  |
| Ambient temperature, minimum               | +0 °C                                 |
| Ambient temperature, maximum               | +55 °C                                |
| Storage and transport temperature, minimum | -25 °C                                |
| Storage and transport temperature, maximum | +70 °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  $U_{imp}$  4 kV

Overvoltage category III

Degree of pollution to IEC/EN 60664-1 2

### Electrical data

Frequency range 50 Hz  
60 Hz

Thermal test current 4 A

Rated operating voltage 24 VDC  $\pm$  15 %

Rated AC voltage for controls at DC minimum 20.4 VDC

Rated control voltage at DC, maximum 27.6 VDC

Electrical power consumption 2.4 W

Contact resistance, maximum 0.1  $\Omega$

Note (Contact resistance) in new state

Drop-out delay in case of power failure, typically 80 ms

Drop-out delay in case of emergency, typically 20 ms

Pull-in delay at automatic start, maximum, typically 100 ms

Pull-in delay at RESET, typically 20 ms

### Electrical data - Safe relay outputs

Voltage, Utilisation category AC15 230 VAC

Current, Utilisation category AC-15 3 A

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        | 250 VAC |
| Switching capacity, maximum        | 8 A     |

### Electrical data - Digital inputs

|                                |             |
|--------------------------------|-------------|
| Conduction resistance, maximum | 40 $\Omega$ |
|--------------------------------|-------------|

### 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 | 2 A    |

### Electrical data - Electromagnetic compatibility (EMC)

|            |               |
|------------|---------------|
| EMC rating | EMC-Directive |
|------------|---------------|

### Status indication

|                            |                      |
|----------------------------|----------------------|
| Indicated operating states | Authorised operation |
|----------------------------|----------------------|

### Other data

|                     |                               |
|---------------------|-------------------------------|
| Note (applications) | Safety sensor<br>Guard system |
|---------------------|-------------------------------|

## Notes

Note (General)

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

## Circuit example

Note (Wiring diagram)

The wiring diagram is shown with guard doors closed and in de-energised condition.

To secure 2 guard doors up to PL c and Category 1

Monitoring 2 guard door(s), each with a magnetic safety sensor of the BNS range

Monitoring one guard door: If only one magnetic safety sensor is connected to S1, the terminals S22, S32 and C of S2 must be bridged.

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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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