

Datasheet - BNS 16 ST2-AS D

AS interface safety at work / Safety switchgear / Safety sensors / BNS 16 AS



- Safety sensor
- Thermoplastic enclosure
- no mechanical wear
- 40 mm x 90 mm x 39 mm
- Integrated AS-Interface
- Concealed mounting possible
- Long life
- Insensitive to transverse misalignment
- Insensitive to soiling
- AS-Interface LED and status display
- connector plug M12, right, 4-pole

(Minor differences between the printed image and the original product may exist!)

Ordering details

| | |
|--------------------------|-----------------|
| Product type description | BNS 16 ST2-AS D |
| Article number | 101178189 |
| EAN Code | 4030661310084 |
| eCI@ss | 27-27-24-02 |

Approval


Approval



Classification

| | |
|------------------|--|
| Standards | EN ISO 13849-1, IEC 61508 |
| PL | up e |
| Control category | bis 4 |
| PFH | 7.42 x 10 ⁻⁹ / h |
| - notice | up to max. 500.000 switching cycles/year |
| SIL | up 3 |
| Mission time | 20 Years |

Global Properties

| | |
|--|--|
| Permanent light | BNS 16 AS |
| Standards | EN 50295, IEC 60947-5-3, EN ISO 13849-1, IEC 61508 |
| Compliance with the Directives (Y/N)  | Yes |
| Materials | |
| - Material of the housings | Plastic, glass-fibre reinforced thermoplastic |
| Weight | 150 |
| Coding available (Y/N) | Yes |
| Response time | < 100 |
| Recommended actuator | BPS 16 |

Mechanical data

| | |
|--------------------------------------|---|
| Design of electrical connection | connector plug M12, 4-pole |
| connector | right |
| mechanical installation conditions | quasi-flush |
| Active area | cover-side |
| Ensured switch distance ON S_{ao} | 8 mm |
| Ensured switch distance OFF S_{ar} | 18 mm |
| Repeat accuracy R_R | $R \leq 0,1 \times S_{ao}$ |
| Type of actuation | Magnet |
| Direction of motion | head-on with regard to the active surface |
| resistance to shock | 30 g / 11 ms |
| Resistance to vibration | 10 ... 55 HZ, Amplitude 1 mm |

Ambient conditions

| | |
|---|----------------------|
| Ambient temperature | |
| - Min. environmental temperature | -25 |
| - Max. environmental temperature | +60 |
| Storage and transport temperature | |
| - Min. Storage and transport temperature | -25 |
| - Max. Storage and transport temperature | +70 |
| Protection class | IP67 to IEC/EN 60529 |
| Air clearances and creepage distances To IEC/EN 60664-1 | |
| - Rated impulse withstand voltage U_{imp} | 0,8 kV |
| - Rated insulation voltage U_i | 32 VDC |
| - Overvoltage category | III |
| - Degree of pollution | 3 |

Electrical data - AS interface

| | |
|------------------------|---|
| AS-i Supply voltage | 26.5 ... 31.6 VDC, Protection against polarity reversal |
| AS-i operating current | ≤ 50 |
| AS-i Device insulation | internally short-circuit proof |
| AS-i Specification | |
| - version | V 2.1 |
| - Profile | S-0.B.F.E |
| - IO-Code | 0x0 |
| - ID-Code | 0xB |
| - ID-Code1 | 0xF |
| - ID-Code2 | 0xE |
| AS-i Inputs | |
| - Channel 1 | Data bits DI 0/DI 1= dynamic code transmission |

| | |
|--|--|
| - Channel 2 | Data bits DI 2/DI 3= dynamic code transmission |
| AS-i Outputs | DO 0 ... DO 3 not used |
| AS-i Parameter bits | P0 ... P3 not used |
| AS-i input module address | 0 |
| - Default on address 0, programmable via the AS-Interface Master or Hand-held programming device | |

LED switching conditions display

| | |
|--|---|
| LED switching conditions display (Y/N) | Yes |
| AS-i LED switching conditions display | |
| AS-i LED switching conditions display | |
| (1) green LED | Supply voltage |
| (2) red LED | Communication error / slave address = 0 |
| (3) yellow LED | Enabling status |

ATEX

| | |
|---|------|
| Explosion protection categories for gases | None |
| Explosion protected category for dusts | None |

Dimensions

| | |
|--------------------------|------|
| Dimensions of the sensor | |
| - Width of sensor | 40 |
| - Height of sensor | 90 |
| - Length of sensor | 38.5 |

Pin assignment

| | |
|---|--------|
| 1 | AS-i + |
| 2 | None |
| 3 | AS-i - |
| 4 | None |

Included in delivery

Actuators must be ordered separately.

Ordering code

BNS 16(1)-AS (2)

(1)

| | |
|-----|----------------------|
| ST1 | Connector bottom |
| ST2 | male connector right |
| ST3 | Connector left |

(2)

| | |
|---|----------------------|
| V | Actuation front side |
| D | Actuation cover-side |

Documents

Operating instructions and Declaration of conformity (jp) 831 kB, 09.08.2011

Code: mrl_bns16as_jp

Operating instructions and Declaration of conformity (de) 539 kB, 06.05.2010

Code: mrl_bns16as_de

Operating instructions and Declaration of conformity (es) 463 kB, 06.05.2010

Code: mrl_bns16as_es

Operating instructions and Declaration of conformity (en) 1 MB, 19.01.2010

Code: mrl_bns16as_en

Operating instructions and Declaration of conformity (nl) 485 kB, 19.08.2011

Code: mrl_bns16as_nl

Operating instructions and Declaration of conformity (fr) 791 kB, 25.01.2010

Code: mrl_bns16as_fr

Operating instructions and Declaration of conformity (pt) 264 kB, 08.05.2017

Code: mrl_bns16as_pt

Operating instructions and Declaration of conformity (fr) 276 kB, 22.12.2017

Code: mrl_bns16as-v2_fr

Operating instructions and Declaration of conformity (es) 280 kB, 22.12.2017

Code: mrl_bns16as-v2_es

Operating instructions and Declaration of conformity (pl) 274 kB, 02.12.2014

Code: mrl_bns16as-v2_pl

Operating instructions and Declaration of conformity (de) 263 kB, 16.11.2017

Code: mrl_bns16as-v2_de

Operating instructions and Declaration of conformity (pt) 264 kB, 08.05.2017

Code: mrl_bns16as-v2_pt

Operating instructions and Declaration of conformity (da) 258 kB, 14.10.2015

Code: mrl_bns16as-v2_da

Operating instructions and Declaration of conformity (jp) 441 kB, 20.12.2011

Code: mrl_bns16as-v2_jp

Operating instructions and Declaration of conformity (en) 277 kB, 16.11.2017

Code: mrl_bns16as-v2_en

Operating instructions and Declaration of conformity (nl) 277 kB, 03.08.2018

Code: mrl_bns16as-v2_nl

Operating instructions and Declaration of conformity (it) 274 kB, 22.12.2017

Code: mrl_bns16as-v2_it

BG-test certificate (de, en) 1 MB, 24.11.2017

Code: z_bnsp01

BG-test certificate (de, en) 463 kB, 03.05.2005

Code: z_bn1p01

System components

Actuator

101172566 - BPS 16



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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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