

## Datasheet - BNS 36-02Z-ST-R

Safety sensors / BNS 36



Preferred typ



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

- Thermoplastic enclosure
- Long life
- no mechanical wear
- 88 mm x 25 mm x 13 mm
- Concealed mounting possible
- Insensitive to transverse misalignment
- Insensitive to soiling
- Connector M8, 4-pole, Latching interlocking

### Ordering details

Product type description	BNS 36-02Z-ST-R
Article number	101189905
EAN Code	4030661359984
eCl@ss	27-27-24-02

### Approval

Approval



### Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact (NC)	25.000.000
- notice	at max. 20% contact load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Permanent light	BNS 36
Standards	IEC 60947-5-3, BG-GS-ET-14
Compliance with the Directives (Y/N)	Yes
Category safety pursuant to EN ISO 13849-1	up 4 - Only in combination with safety monitoring module
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
Weight	30
Coding available (Y/N)	Yes

Monitoring function of downstream devices (Y/N)	No
Prerequisite evaluation unit	
Recommended safety-monitoring module	
Recommended actuator	BPS 36-1, BPS 36-2

## Mechanical data

---

Design of electrical connection	Connector M8, 4-pole, Latching interlocking
AWG-Number	
mechanical installation conditions	quasi-flush
Active area	
Ensured switch distance ON $S_{ao}$	7 mm
Ensured switch distance OFF $S_{ar}$	17 mm
notice	<b>Axial misalignment</b> The safety sensor and the actuator tolerate a horizontal and vertical misalignment to each other. The possible misalignment depends on the distance of the active surfaces of the sensor and the actuator. The sensor is active in the tolerance range.
Type of actuation	Magnet
Direction of motion	head-on with regard to the active surface
restistance to shock	30 g / 11 ms
Resistance to vibration	10 ... 55 HZ, Amplitude 1 mm
Door hinge	right

## Ambient conditions

---

Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+70 °C
Storage and transport temperature	
- Min. Storage and transport temperature	-25 °C
- Max. Storage and transport temperature	+70 °C
Protection class	IP67

## Electrical data

---

Integrated Safety monitoring module available (Y/N)	No
Cross circuit/short circuit recognition possible (Y/N)	Yes
Voltage type	VDC
Switch frequency	max. 5 HZ
Switching voltage	max. 75 VDC
Switching current	max. 400 mA
Switching capacity	max. 10 W

## Outputs

---

Design of control output	
Number of shutters	0
Number of openers	2
Design of output signal switching device	

## Electrical data - Safety outputs

---

Number of secure semi-conductor outputs	0
Number of secure outputs with contact	2

## Electrical data - Diagnostic output

---

Number of semi-conductor outputs with signaling function	0
Number of outputs with signaling function that already have a contact	0

## LED switching conditions display

---

LED switching conditions display (Y/N)	No
--	----

## ATEX

---

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

## Dimensions

---

Dimensions of the sensor	
- Width of sensor	88 mm
- Height of sensor	25 mm
- Length of sensor	13 mm

## notice

---

The number in brackets indicate the PIN number of the connector.  
Contact symbols shown for the closed condition of the guard device.  
The contact configuration for versions with or without LED is identical.

## Included in delivery

---

Actuators must be ordered separately.

## Diagram

---



Note Diagram

- positive break NC contact
- active
- no active
- Normally-open contact
- Normally-closed contact

## Ordering code

---

BNS 36-(1)(2)Z(3)-(4)-(5)

(1)	
11	1 Normally open contact (NO) / 1 Opener (NC)
02	2 Opener (NC)
(2)	

<i>without</i>	without Diagnostic output
<b>/01</b>	1 Opener (NC)
<b>(3)</b>	
<i>without</i>	without LED switching conditions display
<b>G</b>	with LED switching conditions display
<b>(4)</b>	
<i>without</i>	Pre-wired cable
<b>ST</b>	with connector
<b>(5)</b>	
<b>L</b>	Door hinge on left-hand side
<b>R</b>	Door hinge on right-hand side

## Documents

---

**Operating instructions and Declaration of conformity** (nl) 324 kB, 24.09.2018

Code: mrl\_bns36\_nl

**Operating instructions and Declaration of conformity** (en) 296 kB, 24.09.2018

Code: mrl\_bns36\_en

**Operating instructions and Declaration of conformity** (es) 294 kB, 24.09.2018

Code: mrl\_bns36\_es

**Operating instructions and Declaration of conformity** (sv) 318 kB, 16.04.2012

Code: mrl\_bns36\_sv

**Operating instructions and Declaration of conformity** (pt) 297 kB, 24.09.2018

Code: mrl\_bns36\_pt

**Operating instructions and Declaration of conformity** (fr) 295 kB, 24.09.2018

Code: mrl\_bns36\_fr

**Operating instructions and Declaration of conformity** (de) 290 kB, 24.09.2018

Code: mrl\_bns36\_de

**Operating instructions and Declaration of conformity** (da) 282 kB, 22.08.2013

Code: mrl\_bns36\_da

**Operating instructions and Declaration of conformity** (pl) 331 kB, 24.09.2018

Code: mrl\_bns36\_pl

**Operating instructions and Declaration of conformity** (it) 287 kB, 24.09.2018

Code: mrl\_bns36\_it

**Operating instructions and Declaration of conformity** (cs) 322 kB, 04.06.2012

Code: mrl\_bns36\_cs

**Operating instructions and Declaration of conformity** (jp) 555 kB, 24.09.2018

Code: mrl\_bns36\_jp

**Operating instructions and Declaration of conformity** (cn) 381 kB, 02.04.2015

Code: mrl\_bns36\_cn

**Operating instructions and Declaration of conformity** (br) 289 kB, 18.12.2018

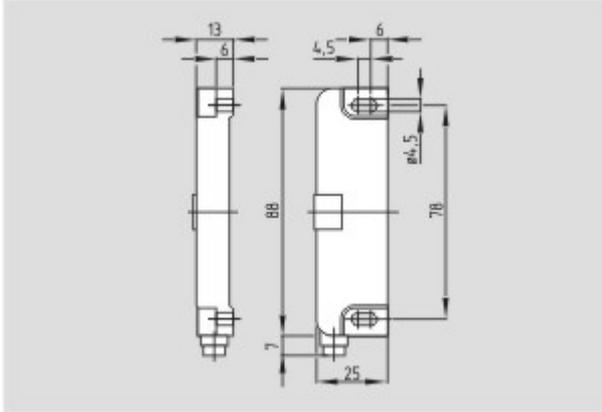
Code: mrl\_bns36\_br

EAC certification (ru) 782 kB, 05.10.2015

Code: q\_6044p17\_ru

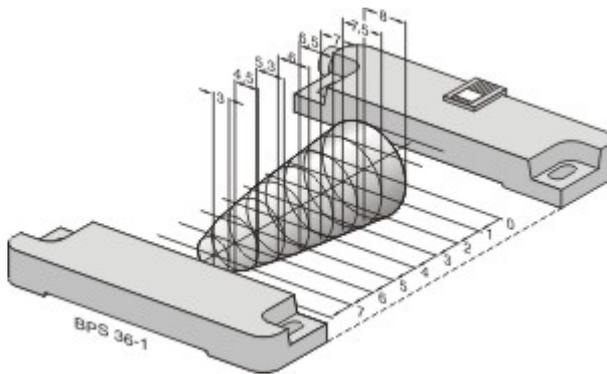
## Images

---



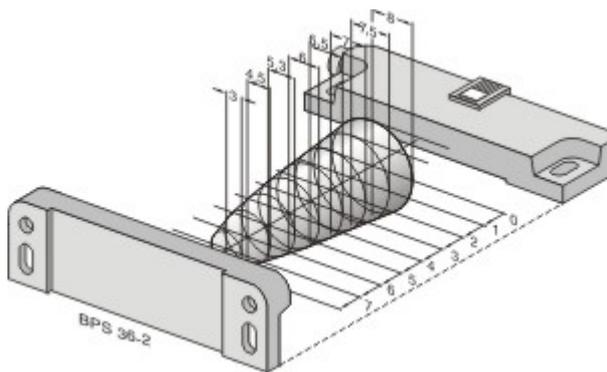
Dimensional drawing (basic component)

---



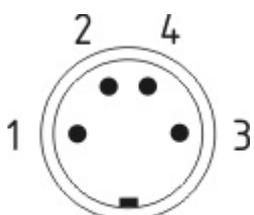
Characteristic curve

---



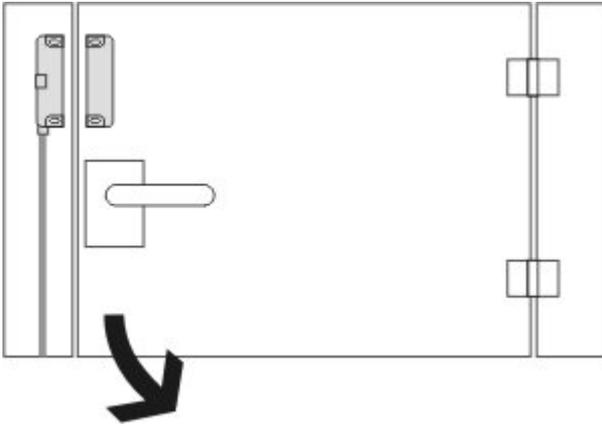
Characteristic curve

---



Contact arrangement

---



Operating principle

## System components

### Actuator

#### 101190052 - BPS 36-1

- Actuator and sensor on a mounting level



#### 101191859 - BPS 36-2

- Actuator 90 ° attached to the sensor



### Accessories

#### 101188624 - SPACER BNS 36

- to mount the magnetic safety sensor and actuator on ferromagnetic material



### Connector

#### 101194060 - BNS-Y-02

- enables the interconnection and the connection of BNS safety sensors to a common safety monitoring module
- for BNS 33, BNS 36, BNS 260 (with 2 NC)

