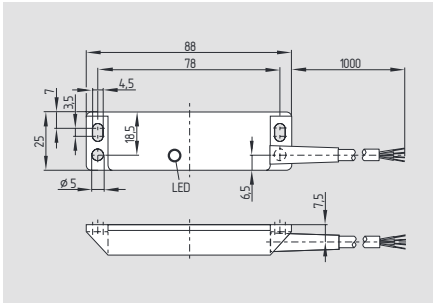


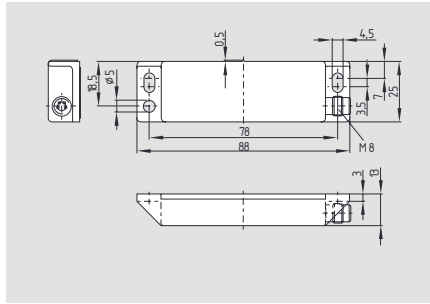
# Safety sensors

## BNS 33



- Thermoplastic enclosure
- Coded
- Long life, no mechanical wear
- Protection class IP67
- Actuation only possible with BPS 33
- Insensitive to lateral misalignment
- Concealed mounting possible
- Insensitive to soiling
- AS-Interface Safety at Work available, see chapter 5
- EX version available

## BNS 33- ... ST- ...



- With connector M8

## Technical data

Standards:	IEC 60947-5-3, BG-GS-ET-14
Design:	rectangular
Enclosure:	glass-fibre reinforced thermoplastic
Protection class:	IP67 to EN 60529
Connection:	Boflex cable, connector M8
- ordering suffix -ST:	connector M8
Cable section:	4 x 0.25 mm <sup>2</sup>
Mode of operation:	magnetic
Actuating magnet:	BPS 33, BPS 33-2326, coded
S <sub>ao</sub> :	5 mm (BPS 33) 8 mm (BPS 33-2326)
S <sub>ar</sub> :	15 mm (BPS 33) 15 mm (BPS 33-2326)
Switching conditions indicator:	LED only for ordering suffix G
Switching voltage	
- without LED:	max. 100 VAC/DC
- with LED:	max. 24 VDC
- with connector:	max. 60 VAC/DC
Switching current	
- without LED:	max. 400 mA
- ordering suffix -2187:	max. 250 mA
- with LED:	max. 10 mA
Switching capacity	
- without LED:	max. 10 W
- ordering suffix -2187:	max. 3 W
- with LED:	max. 240 mW
Ambient temperature:	-25 °C ... +70 °C
Storage and transport temperature:	-25 °C ... +70 °C
Repeat accuracy R:	≤ 0.1 x S <sub>ao</sub>
Switching frequency:	max. 5 Hz
Resistance to shock:	30 g / 11 ms
Resistance to vibration:	10 ... 55Hz, amplitude 1 mm

### Classification:

Standards:	EN ISO 13849-1
B <sub>10d</sub> (NC/NO):	25.000.000 for 20% contact load
Mission time:	20 years
MTTF <sub>d</sub> = $\frac{B_{10d}}{0,1 \times n_{op}}$	n <sub>op</sub> = $\frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

### Approvals



### Approvals



## Ordering details

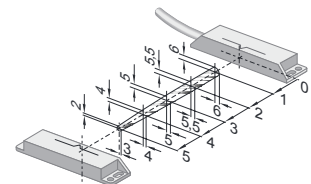
### BNS 33-1Z②-③-④

No.	Option	Description
①	02	2 NC
	11	1 NO / 1 NC
	12	1 NO / 2 NC
②		Without LED
	G	With LED
③		With cable
	ST	With connector M8
④	2187	Individual contact outlet
	2187-10	Individual contact outlet, LED in NO path
	2237	Actuation from cable direction

## Ordering details

The actuating magnet must be ordered separately.

## Note



Enabling zone

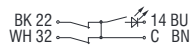
# Safety sensors

## Contact variants

### 1 NO / 1 NC

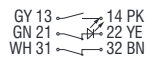


### 1 NO / 2 NC

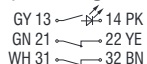


### 1 NO / 2 NC

(Ordering suffix -2187)



(Ordering suffix -2187-10)



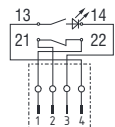
### 2 NC

(Ordering suffix -2187)

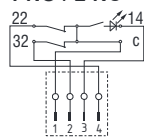


### Connector

#### 1 NO / 1 NC

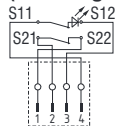


#### 1 NO / 2 NC

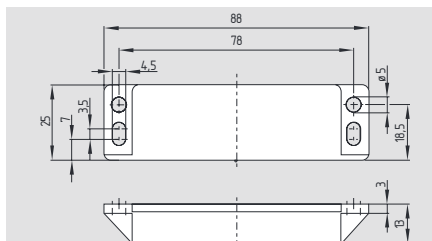


#### 2 NC

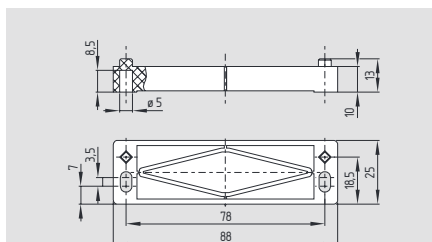
(Ordering suffix -2187)



## System components



BPS 33



Spacer BN 31/BNS 33

## System components



Cable with connector



Y-adapter

## Note

Contact symbols shown for the closed condition of the guard device.

The contact configuration for versions with or without LED is identical.

## Ordering details

### Actuating magnet

for  $S_{a0}/S_{ar} = 5/15$  mm  
for  $S_{a0}/S_{ar} = 8/15$  mm

Spacer BN 31/BNS 33

**BPS 33**  
**BPS 33-2326**

**101158893**

## Ordering details

### Cable with connector M8, 4-pole

with screw terminal, PUR

with cable 2 m

with snap fitting, PVC

with cable 5 m

**101209947**

**101209943**

### Y-adapter for BNS

with 1 NC/1 NO

with 2 NC

**BNS-Y-11**

**BNS-Y-02**