

## Datasheet - BN 310-10Z

Magnetic reed switch / BN 310



☒ Preferred typ



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

- Non-contact principle
- 1 Reed kontakts
- Actuation from side
- Flat design
- Actuating surface and direction of actuation marked by switch symbol
- 88 mm x 25 mm x 13 mm
- Thermoplastic enclosure
- Actuating distance up to 60 mm depending on actuating magnet and version

### Ordering details


Product type description	BN 310-10Z
Article number	101133842
EAN code	4030661059419
eCl@ss	27-27-01-04

### Approval

Approval



### Global Properties

Product name	BN 310
Standards	-
Compliance with the Directives (Y/N) 	Yes
suitable for elevators (Y/N)	Yes
Mounting	Enclosure with mounting slots
Active principle	Magnetic drive
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
- Material of the cable mantle	H03VV-F
Housing construction form	rectangular, flat
Weight	65 g
Recommended actuator	BP 10, 2 x BP 10, BP 15, 2 x BP 15, 2 x BP 15/2, BP 34, BP 20, BP 31, BP 11, BP 12, BP 21, BE 20
- Lift switchgear	BP 10, 2 x BP 10, 2 x BP 15/2, BP 15, 2 x BP 15, BP 34

### Mechanical data

Design of electrical connection	Cable
Cable length	1 m
Conductors	2 x 0,75 mm <sup>2</sup>
AWG-Number	18

Mechanical life	1.000.000.000 operations
Electrical lifetime	1.000.000 ... 1.000.000.000 operations
Actuating planes	Actuation from side
Switch distance S <sub>n</sub>	5 mm ... 50 mm BP 10 = 5 mm 2 x BP 10 = 17 mm BP 15 = 6 mm 2 x BP 15 = 17 mm 2 x BP 15/2 = 17 mm BP 34 = 5 ... 20 mm BP 20 = 20 mm BP 31 = 20 mm BP 11 = 8 ... 20 mm BP 12 = 10 ... 30 mm BP 21 = 25 ... 50 mm BE 20 = 20 mm mm
- notice	Actuating distance up to 50 mm depending on actuating magnet and version  The specifications with regard to the switching distances apply to the actuation of the individually mounted devices without ferromagnetic influence. Any change of the distance, positive either negative, is possible due to ferromagnetic interference. When multiple actuating magnets are used, the mutual interference must be observed.
Type of actuation	Magnet
restistance to shock	30 g / 11 ms
Resistance to vibration	10 ... 55 Hz, Amplitude 1 mm
Bounce duration	0,3 ms ... 0,6 ms
Latching (Y/N)	No
Actuating speed	max. 18 m/s
Switching point accuracy	± 0,25 mm

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+75 °C
Protection class	IP67 to IEC/EN 60529

## Electrical data

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Design of control element	Normally open contact (NO)
Number of shutters	1 piece
Number of openers	0 piece
Switching time - Close	0,3 ms ... 1.5 ms
Switching time - Open	-
Switch frequency	< 300 Hz
Dielectric strength	> 600 VAC (50 Hz)
Switching voltage	max. 250 VAC/DC
Switching current	max. 3 A
Switching capacity	max. 120 VA / W

## Outputs

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Design of control output	Reed kontakts
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## LED switching conditions display

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LED switching conditions display (Y/N)	No
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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 opening and closing functions depend on the direction of actuation, the actuating magnets and the polarity of the actuating magnets.

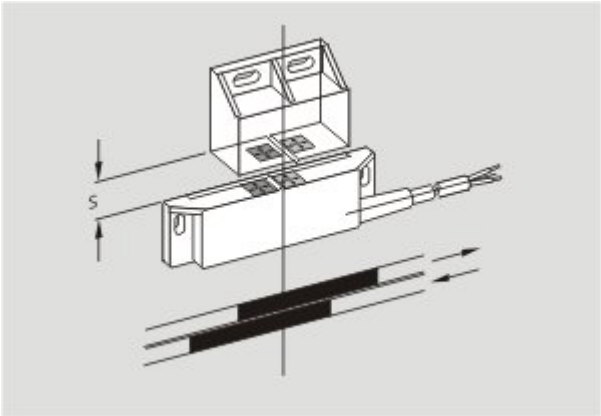
When the switches and actuators come together, the colours must coincide: Red (S) to red (S) and green (N) to green (N). This does not apply to the bistable contact.

The switch is to be mounted on iron with a non-magnetic layer of at least 20 mm.






Included in delivery

Actuators must be ordered separately.

Diagram



Note Diagram





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

Switch travel diagram



Notes Switch travel diagram

-  Contact closed

-  Contact open
  -  Setting range
  -  Break point
  -  Positive opening sequence/- angle
- VS** adjustable range of NO contact  
**VÖ** adjustable range of NC contact  
**N** after travel

**Ordering suffix**

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*The applicable ordering suffix is added at the end of the part number of the safety switch.*  
Order example: BN 310-10Z-**10M**

...-**10M** Cable length 10 m

...-**2M**

**Documents**

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**Mounting and wiring instructions** (fr, de, en) 91 kB, 03.01.2008  
Code: m\_bn3p01

**Declaration of conformity** (en) 118 kB, 26.02.2014  
Code: \_\_bn\_p01\_en

**Declaration of conformity** (de) 102 kB, 08.06.2016  
Code: \_\_bn\_p01

**notice - Switch distance** (de) 36 kB, 07.08.2009  
Code: s\_bnsp01

**notice - Switch distance** (nl) 39 kB, 07.08.2009  
Code: s\_bnsp04

**notice - Switch distance** (en) 42 kB, 07.08.2009  
Code: s\_bnsp02

**notice - Switch distance** (fr) 41 kB, 07.08.2009  
Code: s\_bnsp03

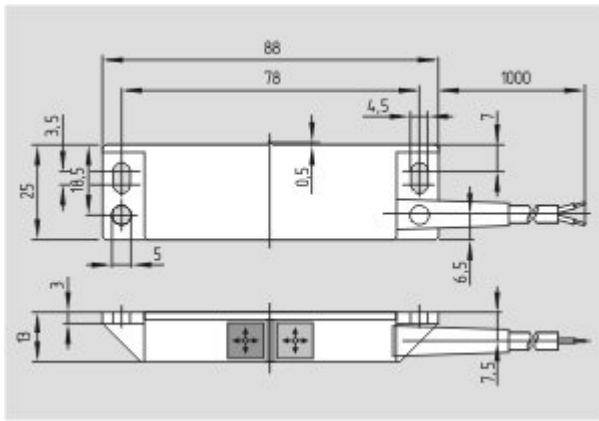
**notice - Switch distance** (pt) 39 kB, 07.08.2009  
Code: s\_bnsp10

**notice - Switch distance** (it) 40 kB, 07.08.2009  
Code: s\_bnsp05

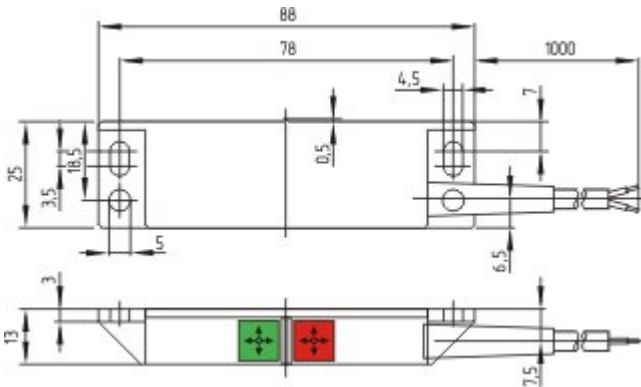
**notice - Switch distance** (es) 38 kB, 07.08.2009  
Code: s\_bnsp09

**Images**

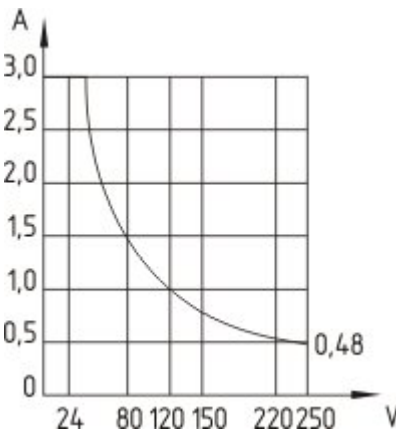
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Dimensional drawing (basic component)



Dimensional drawing (basic component)



Characteristic curve