Datasheet - BN 65-RZ

Magnetic reed switch / BN 65

☒ Preferred typ

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

- With pre-wired cable
- Non-contact principle
- Actuation from side
- Long life
- with bias magnet
- Actuating surface and direction of actuation marked by switch symbol
- Construction form Ø 13 mm
- Thermoplastic enclosure
- Actuating distance up to 60 mm depending on actuating magnet and version
- with central mounting

Ordering details

Product type description	BN 65-RZ
Article number	101055800
EAN code	4030661009490

Approval

Approval	cULus USA/CAN

Global Properties

Product name	BN 65
Standards	-
Compliance with the Directives (Y/N) CE	Yes
suitable for elevators (Y/N)	Yes
Mounting	central with threated flange
Active principle	Magnetic drive
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
- Material of the cable mantle	H03VV-F
Housing construction form	cylinder smooth
Weight	70 g
Recommended actuator	BP 10N, BP 10S, 2 x BP 10N, 2 x BP 10S, BP 15N, BP 15S, 2 x BP 15/2N, 2 x BP 15/2S, BP 34N, BP 34S, BP 20N, BP 20S, BP 31N, BP

	31S, BP 11N, BP 11S, 2 x BP 11N, 2 x BP 11S, BP 12N, BP 12S, 2 x BP 12N, 2 x BP 12S, BP 21N, BP 21S, 2 x BP 21N, 2 x BP 21S, BE 20N, BE 20S
- 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 mm²
AWG-Number	18
Mechanical life	1.000.000.e+9 operations
Electrical lifetime	1.000.000 operations … 1.000.000.e+9 operations operations
Switching frequency	max. 300/s
Actuating planes	Actuation from side
Switch distance S_n	15 mm … 60 mm BP 10N = 15 mm BP 10S = 15 mm 2 x BP 10N = 20 mm 2 x BP 10S = 20 mm BP 15N = 17 mm BP 15S = 17 mm 2 x BP 15/2N = 22 mm 2 x BP 15/2S = 22 mm BP 34N = 10 ... 30 mm BP 34S = 15 ... 30 mm BP 20N = 25 mm BP 20S = 25 mm BP 31N = 25 mm BP 31S = 25 mm BP 11N = 15 mm BP 11S = 15 mm 2 x BP 11N = 25 mm 2 x BP 11S = 25 mm BP 12N = 20 mm BP 12S = 20 mm 2 x BP 12N = 10 ... 30 mm 2 x BP 12S = 10 ... 30 mm BP 21N = 15 ... 45 mm BP 21S = 15 ... 45 mm 2 x BP 21N = 20 ... 60 mm 2 x BP 21S = 20 ... 60 mm BE 20N = 20 mm BE 20S = 20 mm
- notice	Actuating distance up to 60 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, on sine wave oscillation
resistant to vibration	30 g, on sine wave oscillation
Resistance to vibration	10 … 55 Hz, Amplitude 1 mm
Bounce duration	0,3 ms … 0,6 ms; max. 3 ms
Latching (Y/N)	Yes
bias magnet (Y/N)	Yes
Tightening torque for nuts	A/F 22 max. 300 Ncm
Actuating speed	max. 18 m/s
Switching point accuracy	± 0,25 mm

Ambient conditions

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

Electrical data

Design of control element	bistable contact
Number of snap-in contacts	1
Switching time - Close	0,3 ms … 1.5 ms
Switching time - Open	max. 0,5 ms
Switch frequency	< 300 Hz
Dielectric strength	> 600 VAC (50 Hz)
Switching voltage	max. 250 VAC
Switching current	max. 3 A
Switching capacity	max. 120 W

Outputs

Design of control output	Reed contakts

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	
- Length of sensor	103 mm
- Diameter of sensor	13 mm

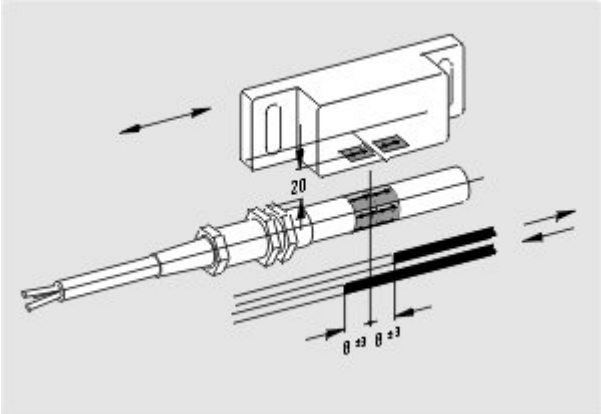
notice

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.

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

The applicable ordering suffix is added at the end of the part number of the safety switch.
Order example: BN 65-RZ-**2M**

...**-2M**

Documents

Declaration of conformity (en) 118 kB, 26.02.2014

Code: __bn_p01_en

Declaration of conformity (de) 188 kB, 10.07.2012

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

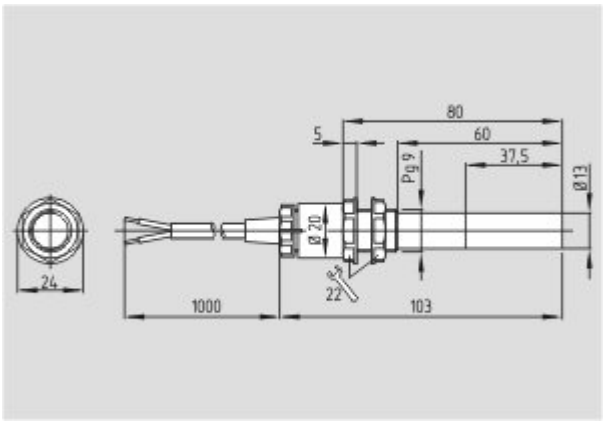
notice - Switch distance (fr) 41 kB, 07.08.2009
Code: s_bnsp03

notice - Switch distance (pt) 39 kB, 07.08.2009
Code: s_bnsp10

notice - Switch distance (it) 40 kB, 07.08.2009
Code: s_bnsp05

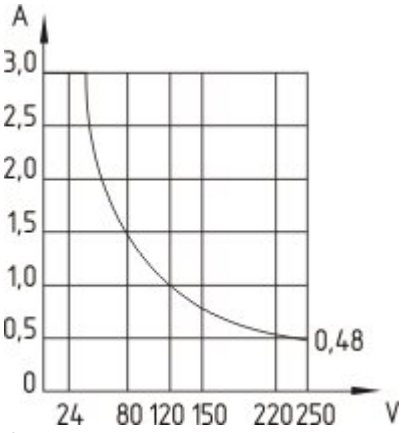
notice - Switch distance (es) 38 kB, 07.08.2009
Code: s_bnsp09

Images

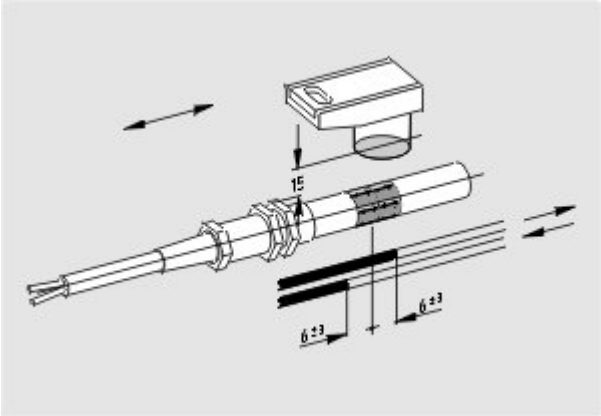


Dimensional drawing (basic component)


Switch travel diagram



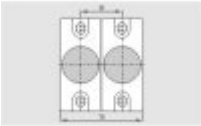
Characteristic curve



Diagram

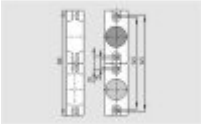
System components

Actuator



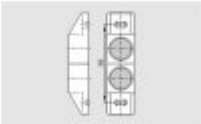
101057546 - BP 2x22/2 N(S)

- Zn-metal housing
- N-pole marked green
- S-pole marked red
- 33% magnetic force
- Suitable for mounting on ferrous material
- Can be used as N or S magnet



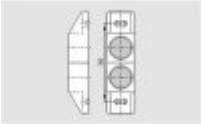
101057432 - BP 22 N (S)

- Zn-metal housing
- S-pole marked red
- N-pole marked green
- Suitable for mounting on ferrous material
- Can be used as N or S magnet



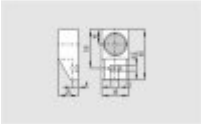
101059927 - BP 2x21 S

- Al-metal housing
- S-pole marked red
- Suitable for mounting on ferrous material



101059928 - BP 2x21 N

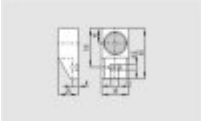
- Al-metal housing
- N-pole marked green
- Suitable for mounting on ferrous material



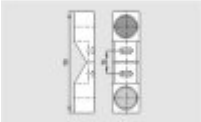
101057534 - BP 21 S

- Al-metal housing
- S-pole marked red
- Suitable for mounting on ferrous material

101057536 - BP 21 N

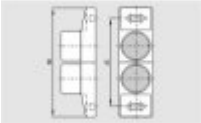


- Al-metal housing
- N-pole marked green
- Suitable for mounting on ferrous material



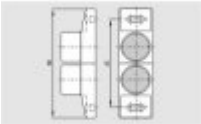
101059921 - BP 21

- Al-metal housing
- S-pole marked red
- N-pole marked green
- Suitable for mounting on ferrous material



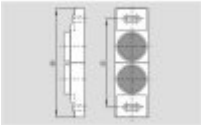
101059926 - BP 2x12 S

- Al-metal housing
- S-pole marked red
- Suitable for mounting on ferrous material



101059925 - BP 2x12 N

- Al-metal housing
- N-pole marked green
- Suitable for mounting on ferrous material

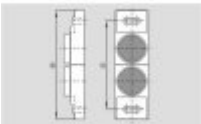


101059917 - BP 12 N

- Al-metal housing
- N-pole marked green
- Suitable for mounting on ferrous material

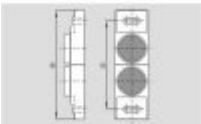
101059916 - BP 12

- Al-metal housing
- S-pole marked red
- N-pole marked green
- Suitable for mounting on ferrous material



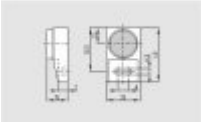
101059930 - BP 2x11 S

- Al-metal housing
- S-pole marked red
- Suitable for mounting on ferrous material



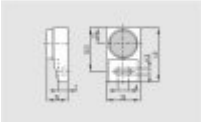
101059929 - BP 2x11 N

- Al-metal housing
- N-pole marked green
- Suitable for mounting on ferrous material



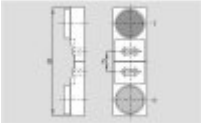
101057533 - BP 11 S

- Al-metal housing
- S-pole marked red
- Suitable for mounting on ferrous material



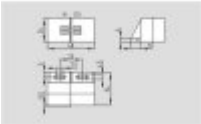
101059923 - BP 11 N

- Al-metal housing
- N-pole marked green
- Suitable for mounting on ferrous material



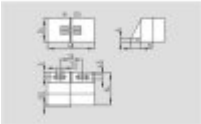
101059922 - BP 11

- Al-metal housing
- S-pole marked red
- N-pole marked green
- Suitable for mounting on ferrous material



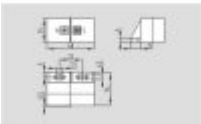
101057521 - BP 31 S

- thermoplastic enclosure
- S-pole marked red
- Suitable for mounting on ferrous material with a distance of 20 mm



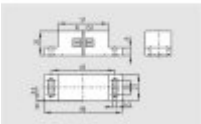
101057520 - BP 31 N

- thermoplastic enclosure
- N-pole marked green
- Suitable for mounting on ferrous material with a distance of 20 mm



101057530 - BP 31

- thermoplastic enclosure
- S-pole marked red
- N-pole marked green
- Suitable for mounting on ferrous material with a distance of 20 mm

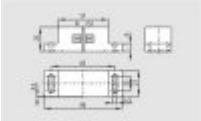


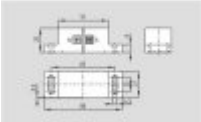
101057541 - BP 20 S

- Al-metal housing
- S-pole marked red
- Suitable for mounting on ferrous material with a distance of 20 mm

101057538 - BP 20 N

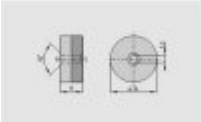
- Al-metal housing
- N-pole marked green
- Suitable for mounting on ferrous material with a distance of 20 mm





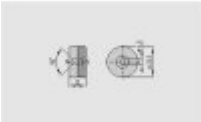
101057549 - BP 20

- Al-metal housing
- S-pole marked red
- N-pole marked green
- Suitable for mounting on ferrous material with a distance of 20 mm



101057553 - BP 34

- thermoplastic enclosure
- S-pole marked red
- N-pole marked green
- Suitable for mounting on ferrous material with a distance of 25 mm



101060163 - BP 15

- thermoplastic enclosure
- N-pole marked green
- S-pole marked red
- Suitable for mounting on ferrous material with a distance of 18 mm

101057531 - BP 10

- Unenclosed
- Colour coding of poles by lables

Image

Image
et=sS