

Datasheet - BN 20-RZ

Magnetic reed switch / BN 20



Preferred typ



- With pre-wired cable
- Non-contact principle
- 1 Reed kontakts
- Long life
- 104 mm x 52 mm x 47 mm
- Aluminium enlosure
- Actuating distance up to 50 mm depending on actuating magnet and version
- Screw connection
- Highly resistant to vibration
- Available for actuation from front or side

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


Ordering details

Product type description	BN 20-RZ
Article number	101168090
EAN Code	4030661220567
eCl@ss	27-27-01-04

Approval

Approval	-
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Global Properties

Permanent light	BN 20
Standards	EN 60947-5-1
Compliance with the Directives (Y/N) 	Yes
suitable for elevators (Y/N)	No
Active principle	Magnetic drive
Materials	
- Material of the housings	Aluminium
- Material of the active surface	Metal film
Housing construction form	rectangular
Weight	290 g
Recommended actuator	BP 10 N, BP 10 S, 2 x BP 10 N, 2 x BP 10 S, BP 15 N, BP 15 S, 2 x BP

15/2 N, 2 x BP 15/2 S, BP 34 N, BP 34 S, BP 20 N, BP 20 S, BP 31 N, BP 31 S, BP 11 N, BP 11 S, 2 x BP 11 N, 2 x BP 11 S, BP 12 N, BP 12 S, 2 x BP 12 N, 2 x BP 12 S, BP 21 N, BP 21 S, 2 x BP 21 N, 2 x BP 21 S, BE 20 N, BE 20 S

Mechanical data

Design of electrical connection	Screw connection
Mechanical life	1.000.000.000 operations
Electrical lifetime	1.000.000 ... 1.000.000.000 operations
Switching frequency	max. 300/s
Actuating planes	Actuation from side
Active area	lateral
Switch distance S_n	5 mm ... 50 mm BP 10N = 5 mm BP 10S = 5 mm 2 x BP 10N = 10 mm 2 x BP 10S = 10 mm BP 15N = 7 mm BP 15S = 7 mm 2 x BP 15/2N = 15 mm 2 x BP 15/2S = 15 mm BP 34N = 10 ... 25 mm BP 34S = 10 ... 25 mm BP 20N = 15 mm BP 20S = 15 mm BP 31N = 15 mm BP 31S = 15 mm BP 11N = 5 mm BP 11S = 5 mm 2 x BP 11N = 15 mm 2 x BP 11S = 15 mm BP 12N = 10 mm BP 12S = 10 mm 2 x BP 12N = 5 ... 20 mm 2 x BP 12S = 5 ... 20 mm BP 21 N = 10 ... 35 mm BP 21 S = 10 ... 35 mm 2 x BP 21N = 15 ... 50 mm 2 x BP 21S = 15 ... 50 mm BE 20N = 10 mm BE 20S = 10 mm mm
- notice	Actuating distance up to 50 mm depending on actuating magnet and version
Type of actuation	Magnet
resistance to shock	-
resistant to vibration	50 g, on sine wave oscillation
Bounce duration	0,3 ms ... 0,6 ms
Latching (Y/N)	Yes
bias magnet (Y/N)	Yes
Actuating speed	max. 18 m/s
Switching point accuracy	± 0,25 mm

Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+90 °C
Protection class	IP67

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
Voltage type	VAC
Dielectric strength	> 600 VAC (50 HZ)
Switching voltage	max. 250 VAC
Switching current	max. 3 A
Switching capacity	max. 120 VA / W

Outputs

Design of control output	Reed kontakts
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LED switching conditions display

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	104 mm
- Height of sensor	52 mm
- Length of sensor	47 mm

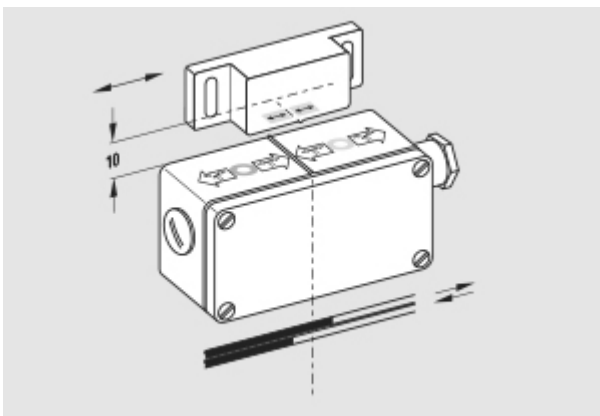
notice

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).






Included in delivery

Actuators must be ordered separately.

Diagram



Note Diagram

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

Documents

Operating instructions (fr) 185 kB, 05.12.2018

Code: mrl_bn20_fr

Operating instructions (es) 172 kB, 13.09.2018

Code: mrl_bn20_es

Operating instructions (de) 161 kB, 31.08.2018

Code: mrl_bn20_de

Operating instructions (en) 168 kB, 31.08.2018

Code: mrl_bn20_en

Operating instructions (pt) 171 kB, 14.09.2018

Code: mrl_bn20_pt

Operating instructions (nl) 173 kB, 08.11.2018

Code: mrl_bn20_nl

Operating instructions (pl) 207 kB, 05.12.2018

Code: mrl_bn20_pl

Declaration of conformity (en) 186 kB, 12.07.2018

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_bnbsp01

notice - Switch distance (nl) 39 kB, 07.08.2009

Code: s_bnbsp04

notice - Switch distance (fr) 41 kB, 07.08.2009

Code: s_bnbsp03

notice - Switch distance (pt) 39 kB, 07.08.2009

Code: s_bnbsp10

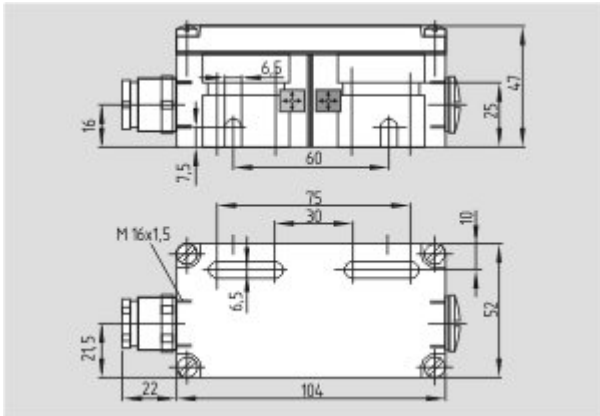
notice - Switch distance (it) 40 kB, 07.08.2009

Code: s_bnbsp05

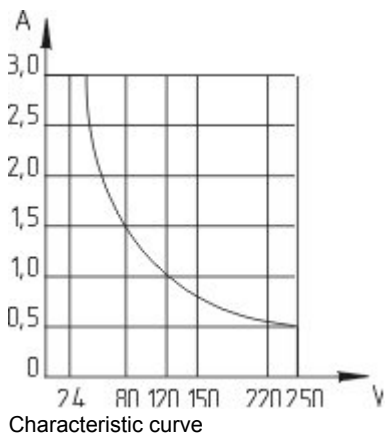
notice - Switch distance (es) 38 kB, 07.08.2009

Code: s_bnbsp09

Images



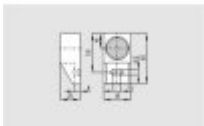
Dimensional drawing (basic component)



Characteristic curve

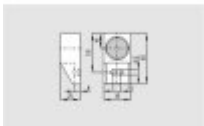
System components

Actuator



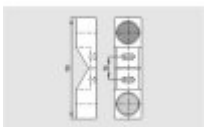
101057534 - BP 21 S

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



101057536 - BP 21 N

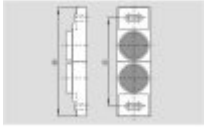
- -metal housing
- N-pole marked green
- Suitable for mounting on ferrous material



101059921 - BP 21

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

101059917 - BP 12 N

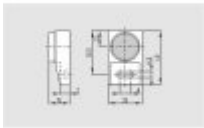


- -metal housing
- N-pole marked green
- Suitable for mounting on ferrous material



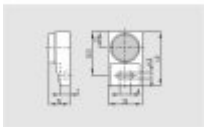
101059916 - BP 12

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



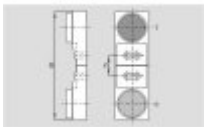
101057533 - BP 11 S

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



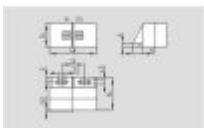
101059923 - BP 11 N

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



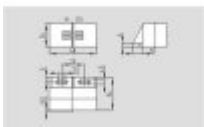
101059922 - BP 11

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



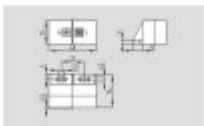
101057521 - BP 31 S

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



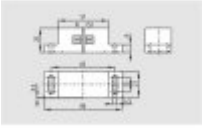
101057520 - BP 31 N

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



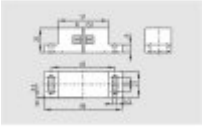
101057530 - BP 31

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



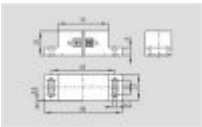
101057541 - BP 20 S

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



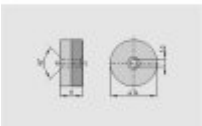
101057538 - BP 20 N

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



101057549 - BP 20

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



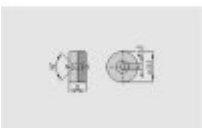
101057553 - BP 34

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



101060165 - BP 15/2

- Unenclosed
- Polarity stamped in
- Suitable for mounting on ferrous material with a distance of 18 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 labels