



### Basic features

Approval/Conformity	CE EAC cULus WEEE
Base type deviation	Tube, nut set PTFE coated
Basic standard	IEC 60947-5-2

### Display/Operation

Function indicator	yes
Power indicator	no

### Electrical connection

Connection	M8x1-Male, 3-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Min. operating current $I_m$	0 mA
No-load current $I_o$ max., damped	20 mA
No-load current $I_o$ max., undamped	20 mA
Operating voltage $U_b$	10...36 VDC
Protection class	II
Rated insulation voltage $U_i$	60 V DC
Rated operating current $I_e$	100 mA
Rated operating voltage $U_e$ DC	24 V
Ready delay $t_v$ max.	300 ms
Residual current $I_r$ max.	100 $\mu$ A
Ripple max. (% of $U_e$ )	10 %
Switching frequency	100 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

### Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

### Functional safety

MTTF (40 °C)	1985 a
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### Interface

Switching output	PNP normally open (NO)
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**Inductive Sensors**  
**BES M08EE1-PSC20B-S49G-S01**  
**Order Code: BES054M**



**Material**

<b>Housing material</b>	Stainless steel (1.4404), PTFE coated
<b>Material sensing surface</b>	Stainless steel (1.4404)

**Mechanical data**

<b>Dimension</b>	Ø 8 x 50 mm
<b>Installation</b>	for flush mounting
<b>Pressure rating max.</b>	80 bar
<b>Pressure rating, note</b>	Pressure-resistant
<b>Size</b>	M8x1
<b>Tightening torque</b>	3.5 Nm ±10 %

**Range/Distance**

<b>Assured operating distance Sa</b>	1.6 mm
<b>Hysteresis H max. (% of Sr)</b>	20.0 %
<b>Rated operating distance Sn</b>	2 mm
<b>Real switching distance sr</b>	2 mm
<b>Repeat accuracy max. (% of Sr)</b>	10.0 %
<b>Switching distance marking</b>	■ ■
<b>Temperature drift max. (% of Sr)</b>	10 %
<b>Tolerance Sr</b>	±10 %

**Remarks**

The sensor is functional again after the overload has been eliminated.

When installing in non-ferromagnetic metals, the distance x must be considered. This dimension x is described in the document "BES 2SN STEELFACE". Since the nuts supplied are made of non-ferromagnetic metal, the specified dimension x also applies here. Mounting, where the nuts are close to the active surface, is not intended.

For more information about MTTf and B10d see MTTf / B10d Certificate

Indication of the MTTf- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

**Connector Drawings**



**Wiring Diagrams**

