



### Basic features

<b>Additional features</b>	Factor 1 Extended temperature range weld-immune (magnetic field 100kA/m) Housing resistant to weld spatter
<b>Approval/Conformity</b>	CE UKCA cULus WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Scope of delivery</b>	Nut (2x)

### Display/Operation

<b>Function indicator</b>	yes
<b>Power indicator</b>	no

### Electrical connection

<b>Connection</b>	M12x1-Male, 3-pin, A-coded
<b>Electrical version</b>	3-wire
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

### Electrical data

<b>Load capacitance max. at Ue</b>	1 µF
<b>Magnetic field strength, interference field</b>	100 kA/m
<b>Min. operating current I<sub>m</sub></b>	0 mA
<b>No-load current I<sub>o</sub> max., damped</b>	15 mA
<b>No-load current I<sub>o</sub> max., undamped</b>	5 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Output resistance R<sub>a</sub></b>	33.0 kOhm + D
<b>Protection class</b>	II
<b>Rated insulation voltage U<sub>i</sub></b>	250 V AC
<b>Rated operating current I<sub>e</sub></b>	200 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay t<sub>v</sub> max.</b>	2 ms
<b>Ripple max. (% of U<sub>e</sub>)</b>	15 %
<b>Switching frequency</b>	1000 Hz
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	2 V

### Environmental conditions

<b>Ambient temperature</b>	-40...85 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 g <sub>n</sub> , 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67, IP68, according to BWN Pr 20
<b>Magnetic field immune</b>	magnetic field immune (AC/DC)

### Functional safety

<b>MTTF (40 °C)</b>	400.5 a
---------------------	---------

Inductive Sensors  
**BES M18MI-PSC50A-S04G-W09**  
Order Code: BES05Y1

**BALLUFF**

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material Brass, PTFE coated  
Material sensing surface PBT, PTFE coated

**Mechanical data**

Dimension Ø 18 x 66 mm  
Installation for flush mounting  
Size M18x1  
Tightening torque 15 Nm

**Range/Distance**

Assured operating distance Sa 4 mm  
Hysteresis H max. (% of Sr) 15.0 %  
Rated operating distance Sn 5 mm  
Real switching distance sr 5 mm  
Repeat accuracy max. (% of Sr) 5.0 %  
Switching distance marking ■  
Temperature drift max. (% of Sr) 10 %  
Tolerance Sr 10 %

**Remarks**

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

