



#### Basic features

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

#### Display/Operation

Function indicator	yes
Power indicator	no

#### Electrical connection

Connection	M12x1-Male, 3-pin, A-coded
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

#### Electrical data

Load capacitance max. at Ue	1 µF
No-load current I <sub>o</sub> max., damped	8.5 mA
No-load current I <sub>o</sub> max., undamped	4.5 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
Protection class	II
Rated insulation voltage U <sub>i</sub>	250 V AC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	3 ms
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	1500 Hz Measured at 2 mm, 24 V, 100 mA
Utilization category	DC -13
Voltage drop static max.	1.5 V

#### Environmental conditions

Ambient temperature	-30...85 °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	IP68
Magnetic field immune	magnetic field immune (AC/DC)

#### Functional safety

MTTF (40 °C)	379 a
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#### Interface

Switching output	PNP normally open (NO)
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Inductive Sensors  
BES M12MI-PSC30A-S04G-W09  
Order Code: BES05Y2



Material

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

Mechanical data

Dimension	Ø 12 x 65 mm
Installation	for flush mounting
Mounting length	49.5 mm
Size	M12x1
Tightening torque	12 Nm

Range/Distance

Assured operating distance Sa	2.4 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	3 mm
Real switching distance sr	3 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

