



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Base type deviation	Ceramic coating
Basic standard	IEC 60947-5-2

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M12x1-Male, 4-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
Magnetic field strength, interference field	100 kA/m
Min. operating current I _m	0 mA
No-load current I _o max., damped	15 mA
No-load current I _o max., undamped	10 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	33.0 kOhm
Protection class	II
Rated insulation voltage U _i	250 V AC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Rated short circuit current	100 A
Ready delay t _v max.	15 ms
Residual current I _r max.	80 µA
Ripple max. (% of U _e)	10 %
Switching frequency	2000 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 _n , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67
Magnetic field immune	magnetic field immune (AC/DC)

Functional safety

MTTF (40 °C)	320 a
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Inductive Sensors
BES M12MD1-PSC80E-S04G-W01
Order Code: BES02JY



Interface

Switching output PNP normally open (NO)

Material

Housing material Brass, PTFE coated
 Material sensing surface ceramic coated

Mechanical data

Dimension Ø 12 x 50 mm
 Installation non-flush
 Size M12x1
 Tightening torque 8 Nm

Range/Distance

Assured operating distance Sa 6.3 mm
 Hysteresis H max. (% of Sr) 15.0 %
 Rated operating distance Sn 8 mm
 Real switching distance sr 8 mm
 Repeat accuracy max. (% of Sr) 5.0 %
 Switching distance marking ■■
 Temperature drift max. (% of Sr) 10 %
 Tolerance Sr ±10 %

Remarks

Sn: reduced by the coating thickness of 0.2 mm.
 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

