



### Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2

### 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 $U_e$	1.5 $\mu$ F
Min. operating current $I_m$	0 mA
No-load current $I_o$ max., damped	11 mA
No-load current $I_o$ max., undamped	7 mA
Operating voltage $U_b$	10...30 VDC
Output resistance $R_a$	47.0 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.	35 ms
Residual current $I_r$ max.	100 $\mu$ A
Ripple max. (% of $U_e$ )	15 %
Switching frequency	500 Hz
Utilization category	DC -13
Voltage drop static max.	1.3 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	IP68, according to BWN Pr 20

### Functional safety

MTTF (40 °C)	625 a
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### Interface

Switching output	PNP normally open (NO)
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Inductive Sensors  
**BES M12MG1-PSC80B-S04G**  
**Order Code: BES05KH**



**Material**

<b>Housing material</b>	Brass, Nickel-free coated
<b>Material sensing surface</b>	PBT

**Mechanical data**

<b>Dimension</b>	Ø 12 x 60 mm
<b>Installation</b>	quasi-flush
<b>Tightening torque</b>	10 Nm

**Range/Distance**

<b>Assured operating distance Sa</b>	6.1 mm
<b>Hysteresis H max. (% of Sr)</b>	20 %
<b>Rated operating distance Sn</b>	8 mm
<b>Real switching distance sr</b>	8 mm
<b>Repeat accuracy max. (% of Sr)</b>	10 %
<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.

Quasi-flushed: See installation instructions for inductive sensors with extended range 825356.

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**

