



### Basic features

Additional features	Selective ferrous
Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Target material	Selective ferrous

### Display/Operation

Function indicator	yes
Power indicator	yes

### Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	yes
Protection against device mix-ups	no
Short-circuit protection	yes

### Electrical data

Min. operating current $I_m$	0 mA
No-load current $I_o$ max., damped	14 mA
No-load current $I_o$ max., undamped	14 mA
Operating voltage $U_b$	10...30 VDC
Rated insulation voltage $U_i$	75 V DC
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.	20 ms
Residual current $I_r$ max.	10 $\mu$ A
Ripple max. (% of $U_e$ )	15 %
Switching frequency	100 Hz
Utilization category	DC -13
Voltage drop static max.	2 V

### Environmental conditions

Ambient temperature	-40...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)	990 a
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### Interface

Switching output	PNP normally closed (NC)
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Inductive Sensors  
**BES M12EG1-POC20S-S04G-S**  
**Order Code: BES02Z1**



**Material**

<b>Housing material</b>	Stainless steel
<b>Material sensing surface</b>	Stainless steel

**Mechanical data**

<b>Dimension</b>	Ø 12 x 65 mm
<b>Installation</b>	for flush mounting
<b>Size</b>	M12x1
<b>Tightening torque</b>	15 Nm

**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>	5.0 %
<b>Temperature drift max. (% of Sr)</b>	10 %
<b>Tolerance Sr</b>	±10 %

**Remarks**

EMC: Per EN60947-5-2:1998+A1:1999+A2:2004 Section 7.2.6. only when used with connector BKS S19-14-.. Shield connected at both ends.

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

Ferrous - Detects ferromagnetic steel

Non-Ferrous metals (such as aluminum, copper, brass) and austenitic steel are ignored.

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**

