



### Basic features

Additional features	Selective ferrous
Approval/Conformity	CE EAC 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	10 mA
No-load current $I_o$ max., undamped	10 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	15 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 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67

### Functional safety

MTTF (40 °C)	990 a
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### Material

Housing material	Stainless steel
Material sensing surface	Stainless steel

Inductive Sensors  
**BES M18EG1-PSC50S-S04G-S**  
Order Code: BES02Z9

**BALLUFF**

**Mechanical data**

Dimension	Ø 18 x 65 mm
Installation	for flush mounting
Size	M18x1
Tightening torque	30 Nm

**Range/Distance**

Assured operating distance Sa	4.1 mm
Hysteresis H max. (% of Sr)	10.0 %
Rated operating distance Sn	5 mm
Real switching distance sr	5 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**Output/Interface**

Switching output	PNP normally open (NO)
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**Remarks**

EMC: Achieves severity level only with shielded connector BKSS19-14-... Connect shield to 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**

