



## Basic features

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

## 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 $\mu$ F
Magnetic field strength, interference field	100 kA/m
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	21 mA
No-load current I <sub>o</sub> max., undamped	17 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
Rated insulation voltage U <sub>i</sub>	75 V DC
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.	30 ms
Residual current I <sub>r</sub> max.	10 $\mu$ A
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	110 Hz
Utilization category	DC -13
Voltage drop static max.	2 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 30 g, 10...2000 Hz
IP rating	IP68
Magnetic field immune	magnetic field immune (AC/DC)

## Functional safety

MTTF (40 °C)	365 a
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Inductive Sensors  
**BES M18EG1-PSC80S-S04G-S**  
Order Code: BES05K8

**BALLUFF**

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material Stainless steel  
Material sensing surface Stainless steel

**Mechanical data**

Dimension Ø 18 x 56 mm  
Installation for flush mounting  
Size M18x1  
Tightening torque 30 Nm

**Range/Distance**

Assured operating distance Sa 6.4 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**

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**

