



Basic features

Additional features	Factor 1 Extended temperature range Housing resistant to weld spatter
Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Scope of delivery	2x nut M18x1
Trademark	Factor 1

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M12x1-Male, 3-pin, A-coded
Electrical version	3-wire
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	30 mA
No-load current I <sub>o</sub> max., undamped	25 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	100.0 kOhm
Protection class	II
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.	50 ms
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	2000 Hz
Utilization category	DC -13
Voltage drop static max.	2 V

Environmental conditions

Ambient temperature	-40...85 °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, IP68, according to BWN Pr 20
Magnetic field immune	magnetic field immune (AC/DC)

Functional safety

MTTF (40 °C)	240 a
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Inductive Sensors  
BES M18MI-PSC80A-S04G-W10  
Order Code: BES05PP

**BALLUFF**

Interface

Switching output PNP normally open (NO)

Material

Housing material Brass, PTFE coated  
Material sensing surface PBT

Mechanical data

Dimension Ø 18 x 66 mm  
Installation for flush mounting  
Mounting length 50 mm  
Size M18x1  
Tightening torque 15 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.  
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 (Schematic)

