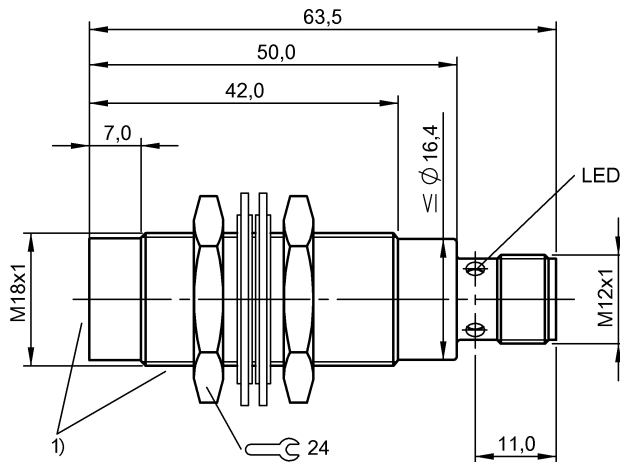


Inductive Sensors  
**BES M18EF1-PSC20F-S04G-S**  
 Order Code: BES02Y1

**BALLUFF**



1) Pressure resistant area



**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, 4-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 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>0</sub> max., damped	16 mA
No-load current I <sub>0</sub> max., undamped	9 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	47.0 kOhm
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.	10 ms
Residual current I <sub>r</sub> max.	100 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	200 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
IP rating	IP67

**Functional safety**

MTTF (40 °C)	375 a
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**BALLUFF**

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material Stainless steel  
Material sensing surface Stainless steel

**Mechanical data**

Dimension Ø 18 x 63.5 mm  
Installation non-flush  
Pressure rating max. 60 bar  
Pressure rating, note Pressure-resistant  
Size M18x1  
Tightening torque 50 Nm ±10 %

**Range/Distance**

Assured operating distance Sa 16.2 mm  
Hysteresis H max. (% of Sr) 15.0 %  
Rated operating distance Sn 20 mm  
Real switching distance sr 20 mm  
Repeat accuracy max. (% of Sr) 5.0 %  
Switching distance marking ■■  
Temperature drift max. (% of Sr) 10 %

**Remarks**

The sensor is functional again after the overload has been eliminated.  
Installation permitted only in clamp without positive stop.  
When installing in metal see Installation Instructions 939231.  
LED flashes between 100% and approx. 70% of Sr  
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**

