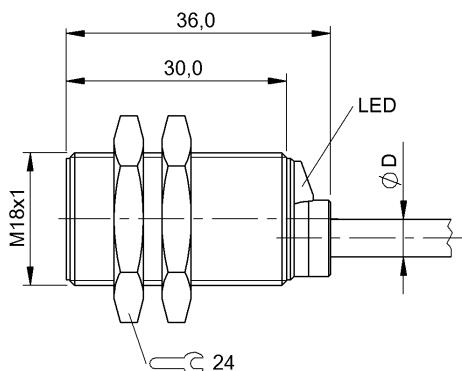


Inductive Sensors

BES M18MD-PSC80B-BP05-003

Order Code: BES04F1

**BALLUFF**

#### Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Trademark	Global

#### Display/Operation

Function indicator	yes
Power indicator	no

#### Electrical connection

Cable diameter D	4.60 mm
Cable length L	5 m
Conductor cross-section	0.34 mm <sup>2</sup>
Connection type	Cable, 5.00 m, PUR
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

#### Electrical data

Load capacitance max. at Ue	1 $\mu$ F
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>0</sub> max., damped	25 mA
No-load current I <sub>0</sub> max., undamped	12 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	2.0 kOhm + D + LED
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	130 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.	80 $\mu$ A
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	150 Hz
Utilization category	DC -13
Voltage drop static max.	3.8 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)	1620 a
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#### Interface

Switching output	PNP normally open (NO)
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Material

Housing material	Brass, nickel-plated
Material jacket	PUR
Material sensing surface	PBT

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 %

Mechanical data

Dimension	Ø 18 x 36 mm
Installation	for flush mounting
Mounting length	30.00 mm
Size	M18x1
Tightening torque	25 Nm

Remarks

Flush: See installation instructions for inductive sensors with extended range 825357.

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.

Wiring Diagrams

