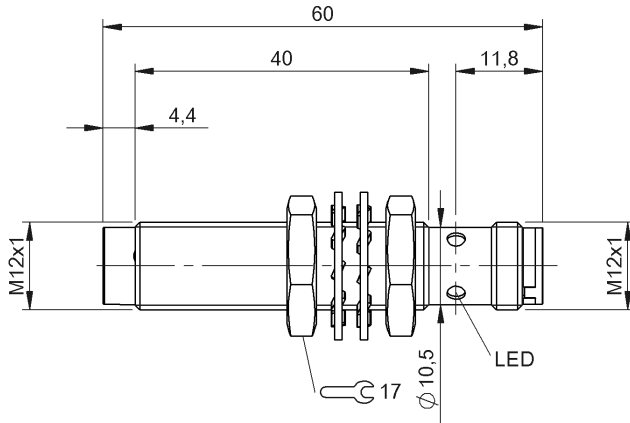


Inductive Sensors
BES M12MF1-YIC10F-S04G
 Order Code: BES05T8

BALLUFF



Basic features

Application	Object detection
Approval/Conformity	CE UKCA cULus EAC WEEE
Basic standard	IEC 60947-5-2
Operating mode	SIO Mode IO-Link Mode

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_m	0 mA
No-load current I_o max., damped	20 mA
No-load current I_o max., undamped	16 mA
Operating voltage U_b	18...30 VDC
Output resistance R_a	33.0 kOhm + D
Protection class	II
Rated insulation voltage U_i	250 V AC
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Ready delay t_v max.	80 ms
Residual current I_r max.	10 µA
Ripple max. (% of U_e)	15 %
Switching frequency	500 Hz
Utilization category	DC -13
Voltage drop static max.	1.2 V

Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68, according to BWN Pr 20

Functional safety

MTTF (40 °C)	304 a
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Interface

Interface	IO-Link 1.1
Interface setting option	Factory setting (Reset) SIO mode/IO-Link mode Teach-In of switchpoints
Process data IN	Teaching successfully reply 1 byte Switching state Target too close/far
Switching output	2x PNP/NPN/push-pull NO/NC

Material

Housing material	Brass, Nickel-free coated
Material sensing surface	PBT

Mechanical data

Dimension	Ø 12 x 60 mm
Installation	non-flush
Size	M12x1
Tightening torque	10 Nm

Range/Distance

Hysteresis H max. (% of Son)	15 %
Hysteresis H max. (% of Sr)	15 %
Measuring range	7...11 mm
Rated operating distance Sn	10 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■■■

Remarks

The sensor is functional again after the overload has been eliminated.
 Sensors with IO-Link function are not suitable for series or parallel wiring.
 Quasi-flushed: See installation instructions for inductive sensors with extended range 825356.
 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

