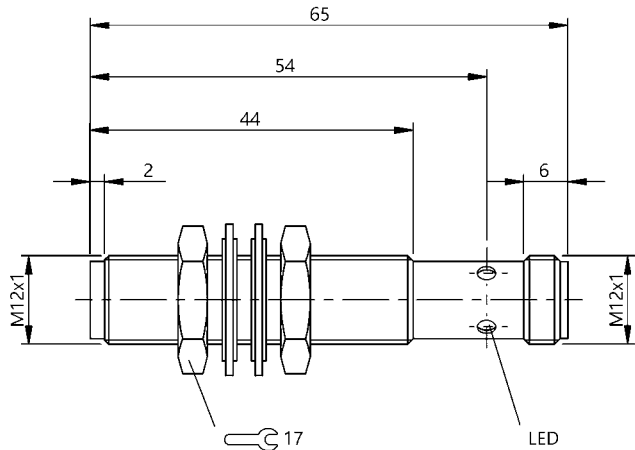


Inductive Sensors

BES M12EG1-NSC20S-S04G-S

Order Code: BES02Z0

BALLUFF



Basic features

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

Display/Operation

Function indicator	yes
Power indicator	yes

Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	yes
Protection against device mix-ups	no
Short-circuit protection	yes

Electrical data

Min. operating current I_m	0 mA
No-load current I_o max., damped	14 mA
No-load current I_o max., undamped	14 mA
Operating voltage U_b	10...30 VDC
Rated insulation voltage U_i	75 V DC
Rated operating current I_e	200 mA
Rated operating voltage U_e DC	24 V
Rated short circuit current	100 A
Ready delay t_v max.	20 ms
Residual current I_r max.	10 μ A
Ripple max. (% of U_e)	15 %
Switching frequency	100 Hz
Utilization category	DC -13
Voltage drop static max.	2 V

Environmental conditions

Ambient temperature	-40...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	IP67

Functional safety

MTTF (40 °C)	990 a
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Interface

Switching output	NPN normally open (NO)
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Material

Housing material	Stainless steel
Material sensing surface	Stainless steel

Mechanical data

Dimension	Ø 12 x 65 mm
Installation	for flush mounting
Mounting length	44.00 mm
Size	M12x1
Tightening torque	15 Nm

Range/Distance

Assured operating distance Sa	1.6 mm
Hysteresis H max. (% of Sr)	20.0 %
Rated operating distance Sn	2 mm
Real switching distance sr	2 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

EMC: Per EN60947-5-2:1998+A1:1999+A2:2004 Section 7.2.6. only when used with connector BKS S19-14-.. Shield connected at both ends.

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

