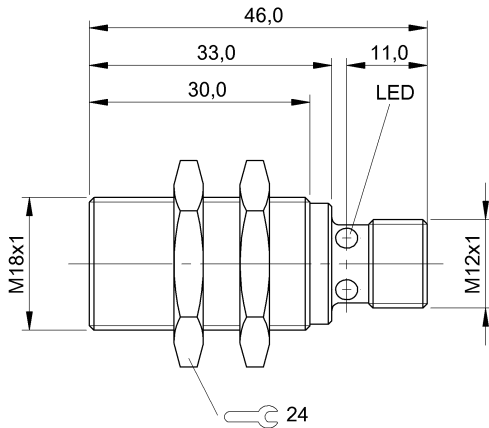


Inductive Sensors
BES M18ME1-GNX80B-S04G-EEX
 Order Code: **BES02ZW**

BALLUFF



Basic features

Approval/Conformity	CE ATEX IECEX FM cCSAus WEEE CCC Ex
Basic standard	EN IEC 60079-0 EN 60079-11 EN 60079-26 IEC 60079-0 IEC 60079-11 IEC 60079-26 IEC 60529 IEC 60947-5-6 CSA Class 258 04 CSA Class 258 84 FM Class 3600 FM Class 3610 FM Class 3810 Including Supplement 1 ANSI/NEMA 250
Ex marking	ATEX: Ex II 1G Ex ia IIC T6 Ga Ta: -20 ... 70 °C Ex II 1D Ex ia IIIC T90°C Da Ta: -20 ... 70 °C IECEX: Ex ia IIC T6 Ga Ta: -20... 70 °C Ex ia IIIC T90°C Da Ta: -20... 70 °C NEC: CSA/FM Class I, Division 1, Groups ABCD Class II, Division 1, Groups EFG Class III

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	no

Electrical data

Current consumption max., damped	1 mA
Current consumption min., undamped	2.1 mA
Internal capacitance Ci max.	200 nF
Internal inductance Li max.	0.19 nH
Operating voltage Ub	7.7...9 VDC
Rated insulation voltage Ui	75 V DC
Rated operating voltage Ue DC	8.2 V
Rated series resistance Rv	1000 Ohm
Ready delay tv max.	30 ms
Switching frequency	400 Hz

Environmental conditions

Ambient temperature	-20...70 °C
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	3387 a
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Interface

Interface NAMUR

Material

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

Range/Distance

Assured operating distance Sa 6.4 mm
 Rated operating distance Sn 8 mm
 Real switching distance sr 8 mm
 Repeat accuracy max. (% of Sr) 5.0 %
 Temperature drift max. (% of Sr) 10 %
 Tolerance Sr ±10 %

Mechanical data

Dimension Ø 18 x 46 mm
 Installation for flush mounting
 Size M18x1
 Tightening torque 35 Nm

Remarks

Operating manual must be followed.
 Operate only with suitable approved switching amplifier.
 Use only in approved intrinsically safe circuits with max. values $U_i = 15\text{ V}$, $I_i = 50\text{ mA}$, $P_i = 120\text{ mW}$.
 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

