



Basic features

Approval/Conformity	CE EAC ATEX cCSAus FM
Basic standard	WEEE EN 60079-0 EN 60079-11 IEC 60947-5-6
Ex marking	ATEX: Ex II 1G Ex ia IIC T6 Ga Ta: -20 ... 55 °C Ex II 2G Ex ia IIC T6 Gb Ta: -20 ... 70 °C Ex 1D Ex ia IIIC T90°C Ta: -20 ... 70 °C NEC: CSA/FM Class I, Division 1, Groups ABCD Class II, Division 1, Groups EFG Class III ATEX: II 2G Ex ia IIC T6 Gb Ta: -20 °C ≤ Ta ≤ +70 °C II 1D Ex ia IIIC T 90 °C Da Ta: -20 °C ≤ Ta ≤ +70 °C NEC: Class I, Division 1, Groups ABCD Class II, Division 1, Groups EFG Class III
Explosion protection	BVS 05 ATEX E 163 Ex II 1 D Ex ia IIIC T 90 °C Da Ta: -20 °C up to +70 °C PTB 05 ATEX 2075 Ex II 1G Ex ia IIC T6 Ga Ta: -20 °C up to +70 °C

Display/Operation

Function indicator	no
Power indicator	no

Electrical connection

Cable length L	2 m
Conductor cross-section	0.14 mm ²
Connection type	Cable, 2.00 m, PVC
Number of conductors	2
Polarity reversal protected	no

Electrical data

Current consumption max., damped	1 mA
Current consumption min., undamped	2.1 mA
Internal capacitance Ci max.	80 nF
Internal inductance Li max.	0.07 nH
Operating voltage Ub	7.7...9 VDC
Permiss. series resistance Rv	550...1100 Ohms
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.	1 ms
Switching frequency	2000 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
Protection degree	IP67

Inductive Sensors
BES M08MD-GNX10B-EV02-EEX
Order Code: **BES02ZT**

BALLUFF

Functional safety

MTTF (40 °C) 2750 a

Material

Housing material Brass
Material jacket PVC
Material sensing surface PBT
Surface protection Nickel-free coated

Mechanical data

Dimension Ø 8 x 30 mm
Installation for flush mounting
Size M8x1
Tightening torque 2.5 Nm

Output/Interface

Interface NAMUR

Range/Distance

Assured operating distance Sa 0.8 mm
Rated operating distance Sn 1 mm
Real switching distance sr 1 mm
Repeat accuracy max. (% of Sr) 5.0 %
Temperature drift max. (% of Sr) 10 %
Tolerance Sr ±10 %

Remarks

The operating guide document number 844835 must be observed.
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.

Wiring Diagrams

