



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
 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

Inductive Sensors
BES M12ME-GNX40B-S04G-EEX
 Order Code: BES02ZU



Electrical data

Current consumption max., damped	1 mA
Current consumption min., undamped	2.1 mA
Internal capacitance Ci max.	210 nF
Internal inductance Li max.	0.115 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	700 Hz

Environmental conditions

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

Functional safety

MTTF (40 °C)	3119 a
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Interface

Interface	NAMUR
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Material

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

Mechanical data

Dimension	Ø 12 x 45 mm
Installation	for flush mounting
Mounting length	32.00 mm
Size	M12x1
Tightening torque	11 Nm

Range/Distance

Assured operating distance Sa	3.2 mm
Rated operating distance Sn	4 mm
Real switching distance sr	4 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

Operating manual must be followed.
 Operate only with suitable approved switching amplifier.
 Use only in approved intrinsically safe circuits with max. values Ui = 15 V, li = 50 mA, Pi = 120 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

