

1) Sensing surface



Basic features

Approval/Conformity	CE EAC cCSAus FM WEEE
Basic standard	EN 60079-0 EN 60079-11 IEC 60079-0 IEC 60079-11 IEC 60079-26 IEC 60947-5-6
Ex marking	ATEX: II 1D Ex ia IIIC T90°C Da Ta: -20 °C ≤ Ta ≤ +70 °C II 2G Ex ia IIB T6 Gb Ta: -20 °C ≤ Ta ≤ +70 °C IECEX: Ex ia IIIC T90°C Da Ex ia IIB T6 Gb NEC: Class I, Division 1, Groups ABCD Class II, Division 1, Groups EFG Class III

Explosion protection

BVS 05 ATEX E 162 X
 IECEx BVS 11.0021.X
 II 1 D Ex ia IIIC T90°C Da Ta: -20 °C up to +70 °C
 II 2G Ex ia IIB T6 Gb Ta: -20 °C bis +70 °C

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M12x1-Male
Polarity reversal protected	no

Inductive Sensors
BES Q40KFU-GNX20B-S92G-EEX
 Order Code: BES02ZZ



Electrical data

Current consumption max., damped	1 mA
Current consumption min., undamped	2.1 mA
Internal capacitance Ci max.	250 nF
Internal inductance Li max.	0.45 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	200 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

Functional safety

MTTF (40 °C)	2915 a
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Material

Housing material	PPE PPS
Material sensing surface	PPE

Mechanical data

Dimension	40 x 40 x 66 mm
Installation	for flush mounting
Size	40x40

Output/Interface

Interface	NAMUR
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Range/Distance

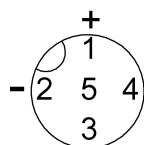
Assured operating distance Sa	16 mm
Rated operating distance Sn	20 mm
Real switching distance sr	20 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

The operating guide document number 844836 must be observed.
 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

