



1) O-Ring with thrust ring



Basic features

Approval/Conformity	CE UKCA CCC Ex IECEX ATEX WEEE
Base type deviation	Housing Pin assignment
Basic standard	EN 60079-0 EN 60079-11 IEC 60079-0 IEC 60079-11 IEC 60947-5-6
Ex marking	ATEX: II 2G Ex ia IIC T4 Gb IECEX: II 2G Ex ia IIC T4 Gb CCC: II 2G Ex ia IIC T4 Gb
Principle of operation	Inductive sensor

Display/Operation

Function indicator	no
Power indicator	no

Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	to 9 V

Electrical data

Current consumption max., damped	1 mA
Current consumption min., undamped	4 mA
Internal capacitance Ci max.	30 nF
Internal inductance Li max.	0.5 nH
Operating voltage Ub	7.7...9 VDC
Permiss. series resistance Rv	550...1100 Ohm
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.	10 ms
Switching frequency	1000 Hz
Utilization category	DC -12

Environmental conditions

Ambient temperature	-45...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
IP rating	IP68

Functional safety

MTTF (40 °C)	9720 a
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Interface

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Material

Housing material	Stainless steel
Material sensing surface	POM
Support ring material	PTFE

Range/Distance

Assured operating distance Sa	1.1 mm
Rated operating distance Sn	1.5 mm
Real switching distance sr	1.5 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	-10 %/20 %
Tolerance Sr	-20 %

Mechanical data

Dimension	Ø 12 x 56 mm
Installation	for flush mounting
Mounting length	12.00 mm
Mounting part	M12x1
Pressure rating max.	500 bar
Pressure rating, note	oil pressure rated
Sealing ring, size	5.85 x 2.4 mm
Size	M12x1
Tightening torque	20 Nm ±10 %

Remarks

Use only in approved intrinsically safe circuits with max. values $U_i = 15\text{ V}$, $I_i = 50\text{ mA}$, $P_i = 120\text{ mW}$.
 The specified parameters apply to the temperature range of down to -25 °C . The switching function is also assured down to -45 °C .
 Effective operating distance measured at 1.55 mA.
 The operating guide document number 897278 must be observed.
 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 (Schematic)

