



Made in Germany

Product characteristics

Inductive sensor

Metal thread M12 x 1

Cable

Increased sensing range

e1 type approval

Sensing range 4 mm; [f] flush mountable

Electrical data

Electrical design

3-wire DC PNP; 2-wire DC PNP/NPN

Operating voltage [V]

10...36 DC

Current consumption [mA]

< 10; only in 3-wire operation

Protection class

II

Reverse polarity protection

yes

Outputs

Output function

normally open

Voltage drop [V]

< 2.5

Minimum load current [mA]

> 2; only in 2-wire operation

Leakage current [mA]

< 0.5

Current rating [mA]

100

Short-circuit protection

pulsed

Overload protection

yes

Switching frequency [Hz]

400

Range

Sensing range [mm]

4

Operating distance [mm]

0...3.24

Accuracy / deviations

Correction factors

mild steel = 1 / stainless steel approx. 0.7 / brass approx. 0.5 / Al approx. 0.5 / Cu approx. 0.4

Hysteresis [% of Sr]

1...20

Environment

Ambient temperature [°C]

-40...85

Protection

IP 67 / IP 69K

Tests / approvals

EMC

Automotive area

Noise emission and noise

interference according to the

automotive directive 95/54/EC (e1 type approval)

Noise interference according to DIN

ISO 11452-2: 100 V/m

Conducted interference according

to ISO 7637-2

Pulse

1 2 3a 3b 4 5

Severity level

IV IV IV IV IV IV

Failure criterion

C C A A A C

EN 61000-4-2 ESD:

4 kV CD / 8 kV AD

IFM207 - Inductive sensor - eclass: 27270101 / 27-27-01-01

		EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5 kV (line to line, Ri: 20hm) EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
Environmental Inspection Rating		Vibration Test (EN 60068-2-6 Fc): 20 g acceleration; from 10 to 3000 Hz at -20 °C and 50 °C; 50 cycles per frequency; 1 octave per minute in each of 3 mutually perpendicular axes. Shock Test (EN 60068-2-27 Ea): 100 g acceleration; 11 ms half sine wave pulse shape with 3 shocks in each direction along the three coordinate axis at -40 °C and 85 °C. Continuous Shock Test (EN 60068-2-29 Eb): 40 g acceleration; 6 ms with 4000 shocks in any direction along the 3 coordinate axis at -20 °C and 50 °C. Rapid Temperature Change Test (EN 60068-2-14 Na): Sensor is alternately put in -40 °C environment for 30 minutes and 85 °C environment for 30 min. The transfer between environments must occur in less than 10 seconds. Test is repeated for 50 cycles. Salt Spray Test (EN 60068-2-52 Kb): Severity level 5 (4 test cycles)
MTTF	[Years]	1164
Mechanical data		
Mounting		flush mountable
Housing materials		housing: stainless steel; active face: PBT; lock nuts: Brass
Weight	[kg]	0.256
Displays / operating elements		
Output status indication	LED	yellow (4 x 90°)
Electrical connection		
Connection		PUR cable / 6 m; 3 x 0.5 mm²; Ø 5.4 mm
Wiring Core colours BK black BN brown BU blue		
Accessories		
Accessories (included)		2 lock nuts
Remarks		
Pack quantity	[piece]	1