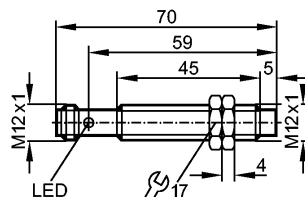


IFM204

IFKC007-ASKG/M/US-104-DRS

Inductive sensors


Made in Germany

Product characteristics

Inductive sensor

Metal thread M12 x 1

Connector

Increased sensing range

Gold-plated contacts

e1 type approval

Sensing range 7 mm; [nf] non-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]	300

Range

Sensing range [mm]	7
Real sensing range (Sr) [mm]	7 ± 10 %
Operating distance [mm]	0...5.67

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
Switch-point drift [% of Sr]	-10...10

Environment

Ambient temperature [°C]	-40...85
Protection	IP 67 / IP 69K

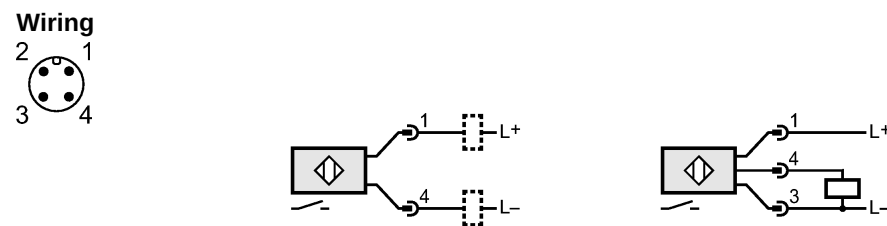
Tests / approvals

EMC	Automotive area
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Inductive sensors

		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 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: 20Ω) 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		non-flush mountable
Housing materials		housing: high-grade stainless steel; active face: PBT; lock nuts: Brass
Weight	[kg]	0.03
Displays / operating elements		
Output status indication	LED	yellow (4 x 90°)
Electrical connection		
Connection		M12 connector; Gold-plated contacts
Wiring 		
Accessories		
Accessories (included)		2 lock nuts
Remarks		



IFM204

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Inductive sensors

Pack quantity	[piece]	1
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