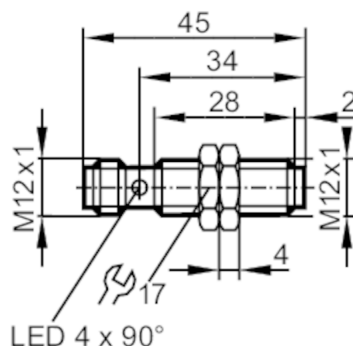


IFT259



Inductive full-metal sensor

IFB3005QBPKG/AM/P/US-104



Product characteristics

Electrical design	PNP
Output function	normally open
Sensing range [mm]	5
Dimensions [mm]	M12 x 1 / L = 45

Application

System	gold-plated contacts; Increased sensing range; Full-metal housing
Application	constant cleaning with aggressive cleaning agents; regular cleaning processes
Pressure rating	100 bar 10 MPa
Note on pressure rating	sensing face

Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	20
Protection class	III
Reverse polarity protection	yes

Outputs

Electrical design	PNP
Output function	normally open
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	250
Short-circuit protection	yes
Overload protection	yes

Monitoring range

Sensing range [mm]	5
Real sensing range Sr [mm]	5; ($\pm 10\%$)
Operating distance [mm]	0...4.05
Increased sensing range	yes

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 1 / brass: 0.3 / aluminum: 0.3 / copper: 0.2
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Hysteresis	[% of Sr]	3...15
Switch-point drift	[%]	-10...10

Operating conditions

Ambient temperature	[°C]	0...100
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K

Tests / approvals

EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	10 V
	EN 55011	class B
Impact resistance		1 J
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles per frequency; 1 octave per minute in 3 axes
Shock resistance	EN 60068-2-27 Ea	100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes
Continuous shock resistance	EN 60068-2-27	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
Fast temperature changes	EN 60068-2-14 Nc	TA = 0°C; TB = 100°C; t1 = 30 min; t2 = < 10 s 50 cycles
MTTF	[years]	1386
Embedded software included		yes
UL approval	Ta	0...70 °C
	Enclosure type	Type 1
	voltage supply	Unlimited Voltage
	UL approval number	A012
	File number UL	E174191

Mechanical data

Weight	[g]	24.7
Mounting		quasi flush
Dimensions	[mm]	M12 x 1 / L = 45
Thread designation		M12 x 1
Material		stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	15
Full-metal housing		yes

Displays / operating elements

Display	Switching status	4 x LED, yellow
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Accessories

Items supplied	lock nuts: 2
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Remarks

Pack quantity	1 pcs.
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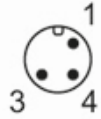
IFT259



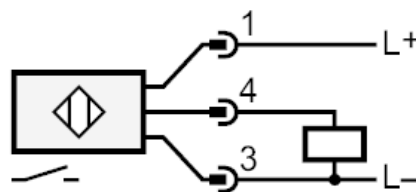
Inductive full-metal sensor

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Electrical connection



Connection

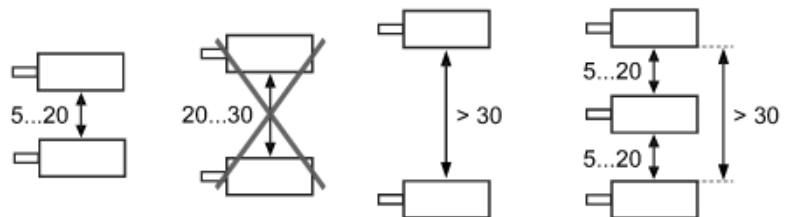


Electrical connection - plug

Connector: 1 x M12; Contacts: gold-plated

Diagrams and graphs

Installation



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Inductive full-metal sensor

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