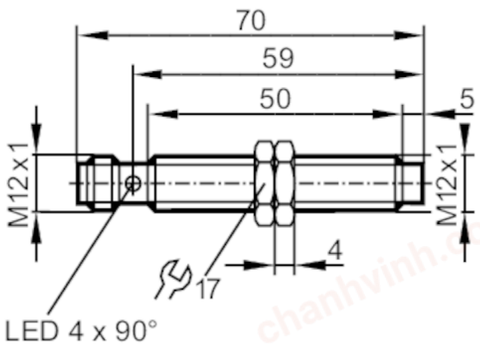
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IF6031

Inductive analogue sensor with IO-Link

IFK4004A2PKG/IO/US



Product characteristics		
Electrical design		PNP/NPN; (parameterisable)
Output function		normally open / normally closed; (parameterisable)
Communication interface		IO-Link
Housing		threaded type
Dimensions	[mm]	M12 x 1 / L = 70
Electrical data		
Operating voltage	[V]	15...30 DC
Current consumption	[mA]	< 30
Protection class		II
Reverse polarity protection		yes
Outputs		
Electrical design		PNP/NPN; (parameterisable)
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	200
Analogue voltage output	[V]	0...10; (linear; gradient: 2,778 V/mm; for frontal approach and for target made of mild steel: 12 x 12 x 1 mm)
Min. load resistance	[Ω]	2000
Short-circuit protection		yes
Overload protection		yes
Detection zone		
Measuring range	[mm]	0.4...4
Switch point IO-Link	[mm]	0.75...3.74
Accuracy / deviations		
Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.4 / aluminium: 0.4 / copper: 0.3
Hysteresis	[% of Sr]	3...15
Note on hysteresis		parameterisable
Linearity error of analogue output	[%]	± 1; (of the final value of the measuring range)

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Repeatability analogue output [%]	± 1; (of the final value of the measuring range)		
Temperature coefficient [%/K vom MEW]	±0,15		
Temperature drift	± 5 %; (of the final value of the measuring range)		
Response times			
Response time [ms]	< 10		
Interfaces			
Communication interface	IO-Link		
Transmission type	COM2 (38,4 kBaud)		
IO-Link revision	1.1		
SDCI standard	IEC 61131-9		
Profiles	Smart Sensor: Identification and diagnosis; Multi-channel, two setpoint switching sensor, type 0 Generic Profiled Sensor; Teach Channel		
SIO mode	yes		
Required master port type	A		
Min. process cycle time [ms]	3.2		
IO-Link process data (cyclical)	function	bit length	
	process value	16	
	device status	4	
	binary switching information	2	
IO-Link functions (acyclical)	switching cycles counter; switch-on cycle counter; operating hours counter; internal temperature; application specific tag		
Supported DeviceIDs	Type of operation	DeviceID	
	Default	1206	
Note	For further information please see the IODD PDF file under "Downloads"		
Operating conditions			
Ambient temperature [°C]	-25...80		
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	
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles, 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 change	EN 60068-2-14 Na	TA = -25°C; TB = 80°C; t1 = 30 min; t2 = < 10 s 50 cycles	
MTTF [years]	220		
Embedded software included	yes		

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UL approval		Ta	-25...60 °C
		Enclosure type	Type 1
		power supply	Limited Voltage/Current
		UL Approval no.	A024
		File number UL	E174191
Mechanical data			
Weight	[g]	44.5	
Housing		threaded type	
Mounting		non-flush mountable	
Dimensions	[mm]	M12 x 1 / L = 70	
Thread designation		M12 x 1	
Materials		housing: brass white bronze coated; sensing face: PBT orange; LED window: PEI; lock nuts: brass white bronze coated	
Tightening torque	[Nm]	7	
Displays / operating elements			
Display		target in measuring range	4 x LED, yellow lights
		target outside measuring range	4 x LED, yellow flashing
Accessories			
Items supplied		lock nuts: 2	
Remarks			
Pack quantity		1 pcs.	
Electrical connection - plug			

Connector: 1 x M12; coding: A



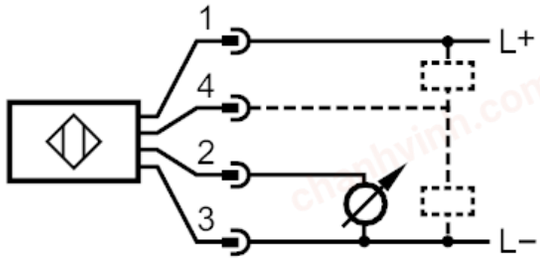
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Connection



1	L +
2	OUT
3	L -
4	OUT / IO-Link