

Inductive sensor with IO-Link

IFK4007-FRKG/IO/US-104



Product characteristics

Electrical design	PNP/NPN; (configurable)
Output function	normally open / closed; (configurable)
Communication interface	IO-Link
Housing	Threaded type
Dimensions [mm]	M12 x 1 / L = 60

Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 15
Protection class	III
Reverse polarity protection	yes

Outputs

Electrical design	PNP/NPN; (configurable)
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	600
Notes on switching frequency [Hz]	IO-Link mode: 100
Short-circuit protection	yes
Overload protection	yes

Monitoring range

Switch point IO-Link [mm]	1.3...6.5; (configurable)
Measuring range IO-Link [mm]	0.7...7

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.5 / copper: 0.4
Hysteresis [% of Sr]	3...15
Note on hysteresis	configurable
Linearity error IO-Link [%]	± 2; (of the final value of the measuring range)
Repeatability analog output [%]	± 1; (of the final value of the measuring range)
Temperature coefficient	± 0,3



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	[%/K vom MEW]	
Temperature drift	± 10 %; (of the final value of the measuring range)	
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 class	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	1344
Note	For further information please see the IODD PDF file at "Downloads"	
Operating conditions		
Ambient temperature [°C]	-40...85	
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 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 Ea	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
Fast temperature changes	EN 60068-2-14 Na	TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles
MTTF [years]	605	
Embedded software included	yes	
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A034
	File number UL	E174191
Mechanical data		
Weight [g]	27.5	
Housing	Threaded type	

IF6138



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Mounting	non-flush mountable
Dimensions [mm]	M12 x 1 / L = 60
Thread designation	M12 x 1
Material	brass white bronze coated; sensing face: PBT orange; LED window: PEI; lock nuts: brass white bronze coated

Displays / operating elements

Display	Switching status	4 x LED, yellow lights
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Accessories

Items supplied	lock nuts: 2
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Remarks

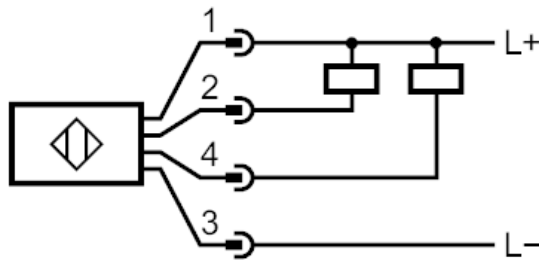
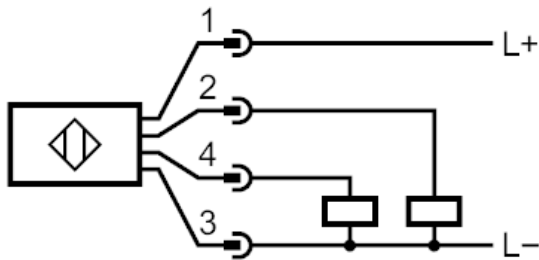
Pack quantity	1 pcs.
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Electrical connection - plug

Connector: 1 x M12; coding: A



Connection



2: OUT 2
4: OUT / IO-Link 1