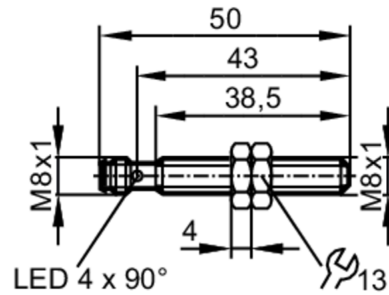


IE5457



Inductive sensor with IO-Link

IEK3003-FRKG/IO/AS



Product characteristics

Electrical design	PNP/NPN; (parameterisable)
Output function	normally open / normally closed; (parameterisable)
Communication interface	IO-Link
Housing	threaded type
Dimensions [mm]	M8 x 1 / L = 50

Application

Special feature	Gold-plated contacts
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Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 15
Protection class	III
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]	600
Short-circuit protection	yes
Overload protection	yes

Detection zone

Switch point IO-Link [mm]	0.56...2.8; (parameterisable)
Measuring range IO-Link [mm]	0.3...3

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 IO-Link [%]	± 3; (of the final value of the measuring range)
Repeatability IO-Link [%]	± 2; (of the final value of the measuring range)

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Temperature drift	± 10 %; (of the final value of the measuring range)
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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	1274
Note	For further information please see the IODD PDF file under "Downloads"	

Operating conditions

Ambient temperature [°C]	-40...75
Protection	IP 65; IP 66; IP 67; IP 68; IP 69K; (with ifm socket duly screwed on)

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 Eb	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
Fast temperature change	EN 60068-2-14 Na	TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles
Salt spray test	EN 60068-2-52 Kb	severity level 5 (4 test cycles)
MTTF [years]		778
Embedded software included		yes
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	A031
	File number UL	E174191

Mechanical data

Weight [g]	16.2
Housing	threaded type

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Mounting	flush mountable
Dimensions [mm]	M8 x 1 / L = 50
Thread designation	M8 x 1
Materials	stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)
Tightening torque [Nm]	A = 5 mm: < 3 Nm; B: < 5 Nm

Displays / operating elements

Display	switching status	4 x LED, yellow lights
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Accessories

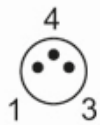
Items supplied	lock nuts: 2
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Remarks

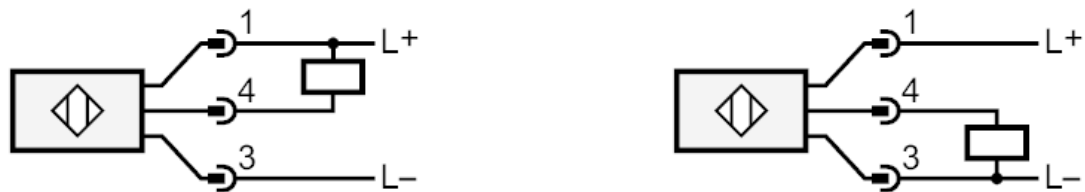
Pack quantity	1 pcs.
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Electrical connection - plug

Connector: 1 x M8; coding: A; Contacts: gold-plated



Connection



4

OUT / IO-Link

IE5457

Inductive sensor with IO-Link

IEK3003-FRKG/IO/IAS



Diagrams and graphs

Installation

