



Inductive sensor with IO-Link

IQ23007BFRKG/IO/0.3M/PUR/US



- 1 LED yellow
- 2 LED green



Product characteristics		
Electrical design		PNP/NPN; (configurable)
Output function		normally open / closed; (configurable)
Communication interface		IO-Link
Housing		rectangular
Dimensions	[mm]	20 x 8 x 32
Electrical data		
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 30
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



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Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	300
Short-circuit protection		yes
Overload protection		yes

Monitoring range		
Switch point IO-Link	[mm]	1.4...7; (configurable)
Measuring range IO-Link	[mm]	0.75...7.5

Accuracy / deviations		
Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.4 / copper: 0.3
Hysteresis	[% of Sr]	3...15
Note on hysteresis		configurable
Linearity error IO-Link	[%]	± 2; (of the final value of the measuring range)
Repeatability IO-Link	[%]	± 1; (of the final value of the measuring range)
Temperature coefficient		± 0,6; (-25...70 °C: ± 0,3)
	[%/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 CDV
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)		application specific tag; operating hours counter
Supported DeviceIDs	Type of operation	DeviceID
	default	1106
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

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



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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 Na	TA = -40°C; TB = 85°C; t1 = 30 min; t2 = < 10 s 50 cycles
MTTF [years]	787	
Embedded software included	yes	
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A016
	File number UL	E174191

Mechanical data

Weight [g]	42.7
Housing	rectangular
Mounting	flush mountable
Dimensions [mm]	20 x 8 x 32
Material	diecast zinc special coating; sensing face: PBT orange; LED window: TPU (urethane); potting: PUR

Displays / operating elements

Display	Display operation	1 x LED, green
	Switching status	1 x LED, yellow

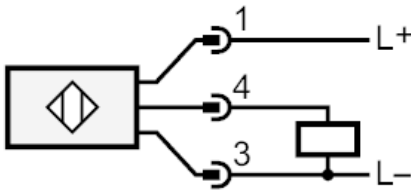
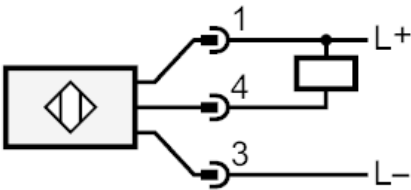
Remarks

Pack quantity	1 pcs.
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Electrical connection

Cable: 0.3 m, PUR, Ø 4.9 mm; 3 x 0.34 mm²

Connection



IQ2009



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Connector: 1 x M12; coding: A

