

IM5183



Inductive sensor with IO-Link

IMC4020BFRKG/IO/US-100



- 1 LED yellow
- 2 LED green



Product characteristics		
Electrical design		PNP/NPN; (parameterisable)
Output function		normally open / normally closed; (parameterisable)
Communication interface		IO-Link
Housing		rectangular
Dimensions	[mm]	40 x 40 x 54
Electrical data		
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 17
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]	100



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Short-circuit protection		yes
Overload protection		yes
Detection zone		
Switch point IO-Link	[mm]	3.9...19.6; (parameterisable)
Measuring range IO-Link	[mm]	2.1...21
Accuracy / deviations		
Correction factor	steel: 1 / stainless steel: 0.8 / brass: 0.4 / aluminium: 0.4 / copper: 0.3	
Hysteresis	[% of Sr]	3...15
Note on hysteresis	parameterisable	
Linearity error IO-Link	[%]	± 2; (of the final value of the measuring range)
Repeatability analogue output	[%]	± 1; (of the final value of the measuring range)
Temperature coefficient	± 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	
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	1344
Note	For further information please see the IODD PDF file under "Downloads"	
Operating conditions		
Ambient temperature	[°C]	-25...80
Protection	IP 67	
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



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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 change	EN 60068-2-14 Na	TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles
MTTF [years]	580	
Embedded software included	yes	
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	A035
	File number UL	E174191

Mechanical data

Weight [g]	145.4
Housing	rectangular
Mounting	flush mountable
Dimensions [mm]	40 x 40 x 54
Materials	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

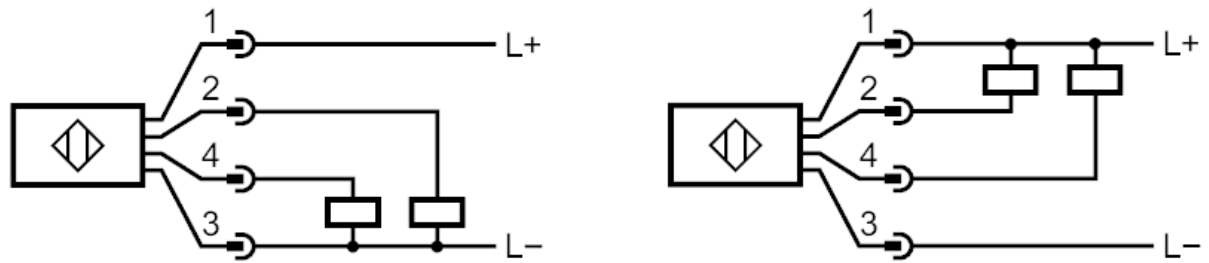
Connector: 1 x M12; coding: A



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Connection



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