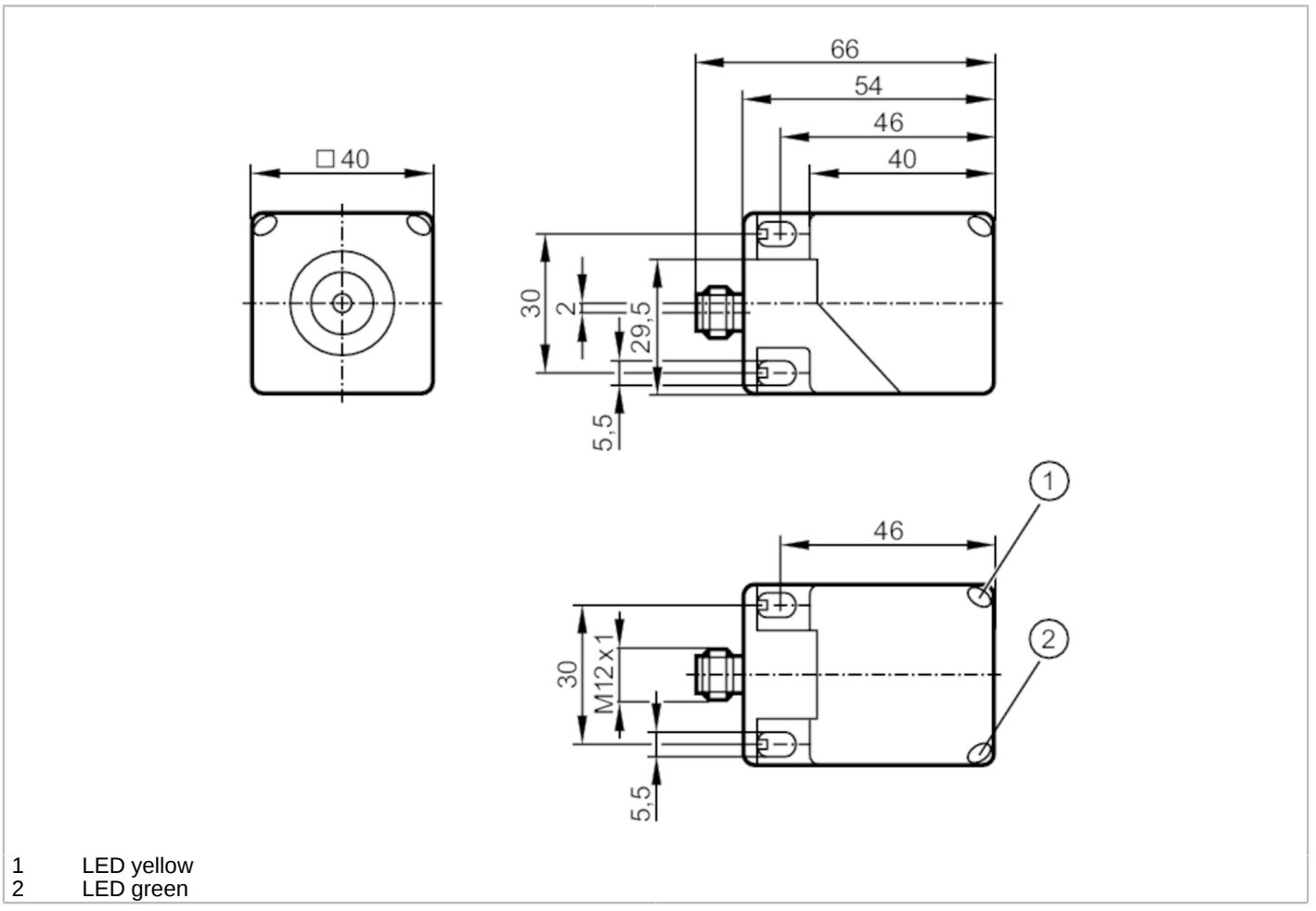
IM5172

Inductive sensor with IO-Link

IMC3020BFRKG/IO/US-100



1 LED yellow
2 LED green

Product characteristics		
Electrical design		PNP/NPN; (parameterisable)
Output function		normally open / normally closed; (selectable)
Communication interface		IO-Link
Housing		rectangular
Dimensions	[mm]	40 x 40 x 54
Application		
Special feature		Gold-plated contacts
Electrical data		
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	10
Protection class		III
Reverse polarity protection		yes
Outputs		
Electrical design		PNP/NPN; (parameterisable)
Output function		normally open / normally closed; (selectable)
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]	100	
Short-circuit protection		yes	
Overload protection		yes	
Detection zone			
Switch point IO-Link	[mm]	3.9...19.5; (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	
Linearity error of analogue output	[%]	± 2 %; (of the final value of the measuring range)	
Repeatability analogue output	[%]	± 1 %; (of the final value of the measuring range)	
Temperature coefficient		± 0,2 %/K; (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: Device Identification; Device Diagnosis; Device Teach Channel; Binary Data Channel; Process Data Variable	
SIO mode		yes	
Required master port type		A	
Min. process cycle time	[ms]	3	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	791
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
MTTF	[years]	632	
UL approval		Ta	-25...70 °C
		Enclosure type	Type 1
		power supply	Limited Voltage/Current
		UL Approval no.	A009
		File number UL	E174191
Mechanical data			
Weight	[g]	147	
Housing		rectangular	

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Sensing face		5 positions selectable
Mounting		flush mountable
Dimensions	[mm]	40 x 40 x 54
Materials		housing: PA; sensing face: PA black; end cap: PA; clamp: orange; screw: stainless steel (1.4567 / 304Cu)

Displays / operating elements

Display	operation	LED, green
	SIO mode	
	output stage supplied with current	LED, yellow lights
	IO-Link mode	
	target in measuring range	LED, yellow lights

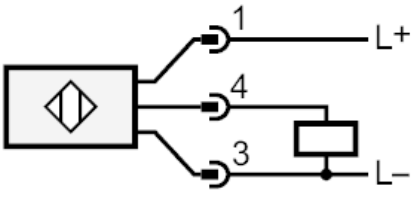
Remarks

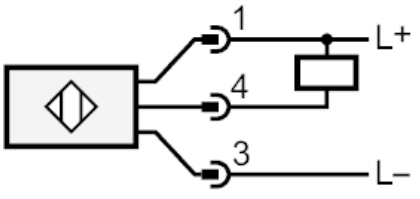
Pack quantity	1 pcs.

Electrical connection - plug

Connector: 1 x M12; coding: A; Locking: stainless steel (316L/1.4404); Contacts: gold-plated

Connection





4: OUT / IO-Link
Factory setting : PNP / normally open