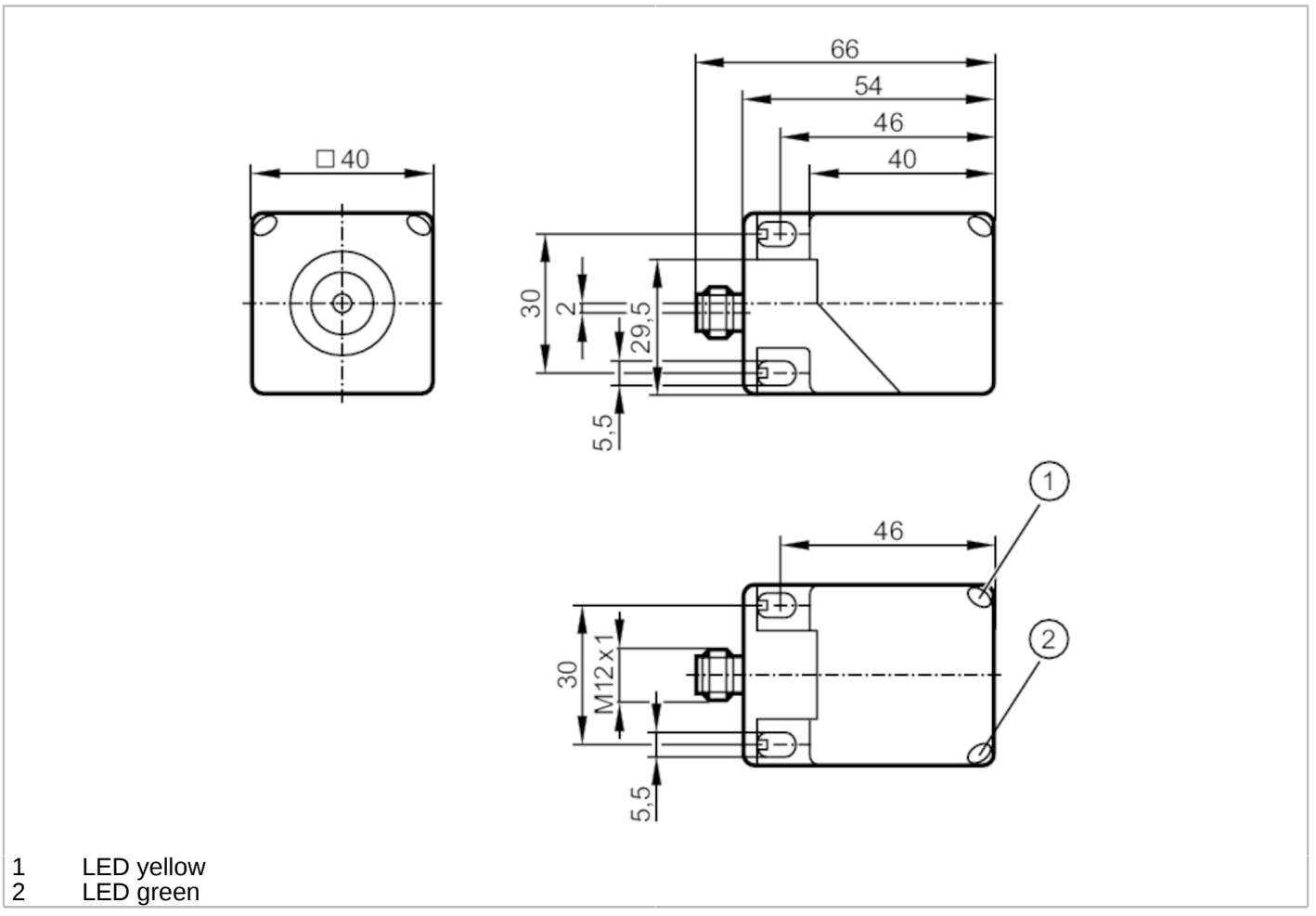
IM5172

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

IM5172

Inductive sensor with IO-Link

IMC3020BFRKG/IO/US-100

Outputs		
Electrical design		PNP/NPN; (parameterisable)
Output function		normally open / normally closed; (selectable)
Max. voltage drop switching output DC	[V]	2.5
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

IM5172

Inductive sensor with IO-Link

IMC3020BFRKG/IO/US-100

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
		voltage supply	Limited Voltage/Current
		UL Approval no.	A009
		File number UL	E174191

Mechanical data		
Weight	[g]	147
Housing		rectangular
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 (1.4404 / 316L); Contacts: gold-plated

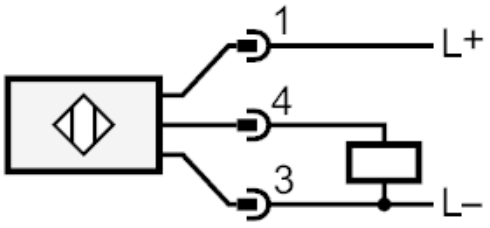


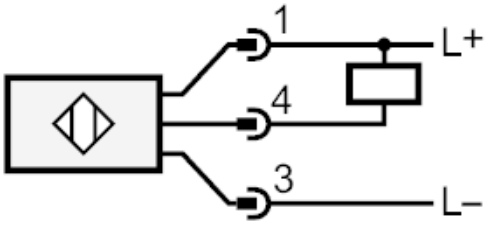
IM5172

Inductive sensor with IO-Link

IMC3020BFRKG/IO/US-100

Connection





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