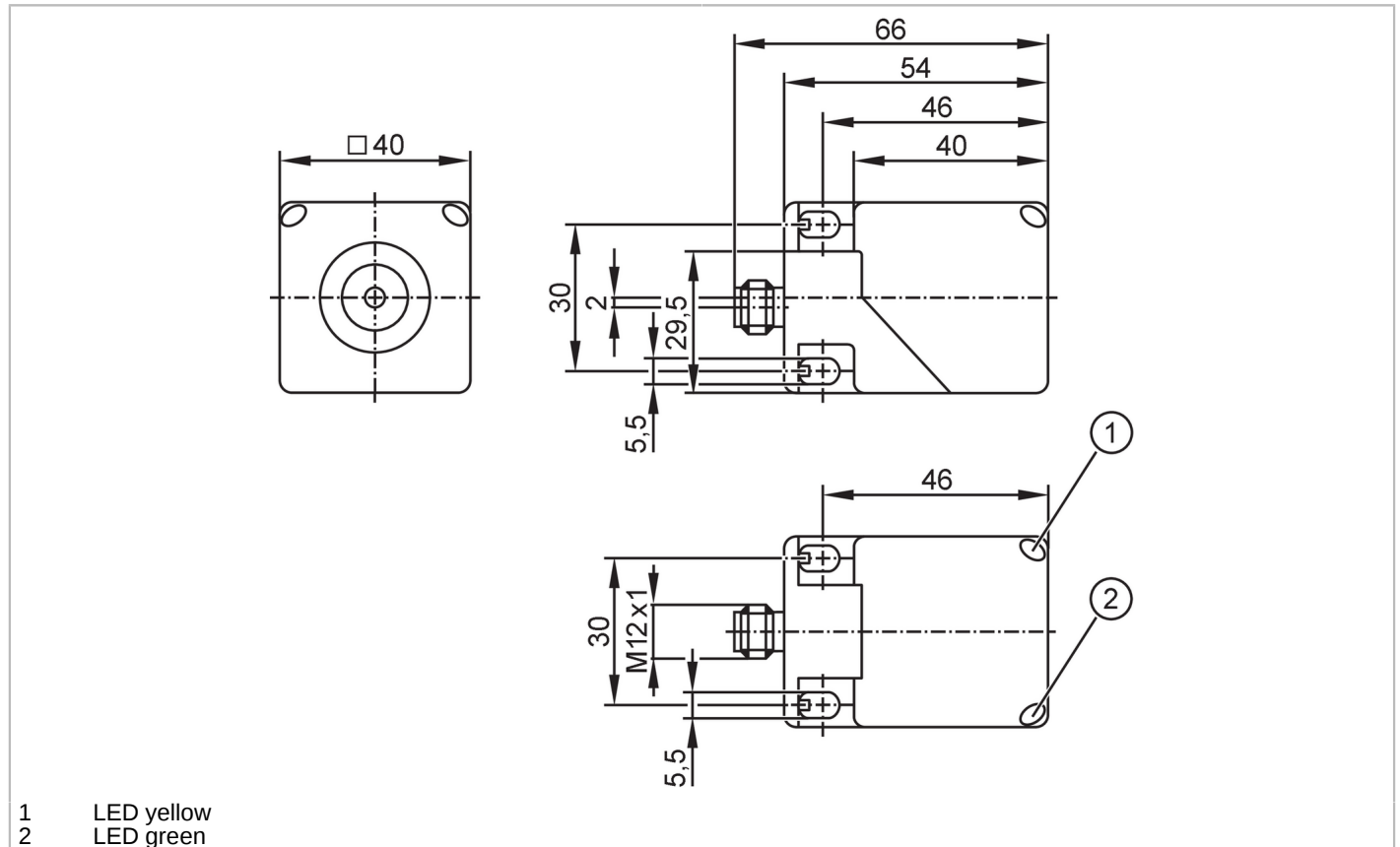


# IM5172



## Inductive sensor with IO-Link

IMC3020BFRKG/IO/US-100



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
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...19.5; (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 - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Multiple switching signal
	Function	Process data variable
	Function	Device diagnosis
	Function	Teach channel
SIO mode	yes	
Required master port type	A	
Min. process cycle time [ms]	3	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	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
	voltage 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; bevelled housing part: PA; clamp: orange; screw: stainless steel (304CU/1.4567)

### 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.
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### Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated; Locking: stainless steel (316L/1.4404)



### Connection



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