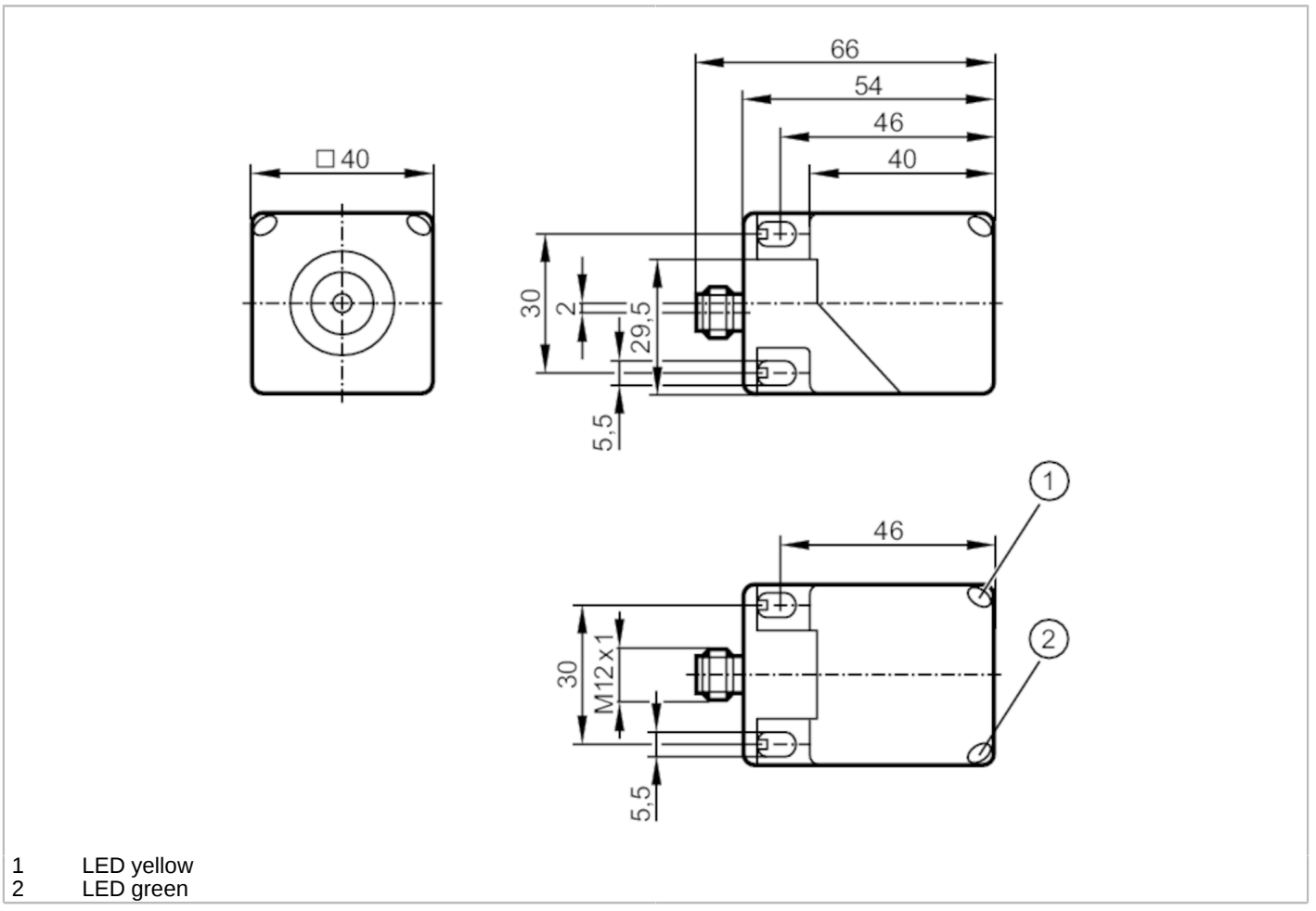
IM5183

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

IM5183

Inductive sensor with IO-Link

IMC4020BFRKG/IO/US-100

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	[%/K vom MEW]	± 0,3	
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

IM5183

Inductive sensor with IO-Link

IMC4020BFRKG/IO/US-100

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
Accessories			
Items supplied		lock nuts: 2	
Remarks			
Pack quantity		1 pcs.	
Electrical connection - plug			

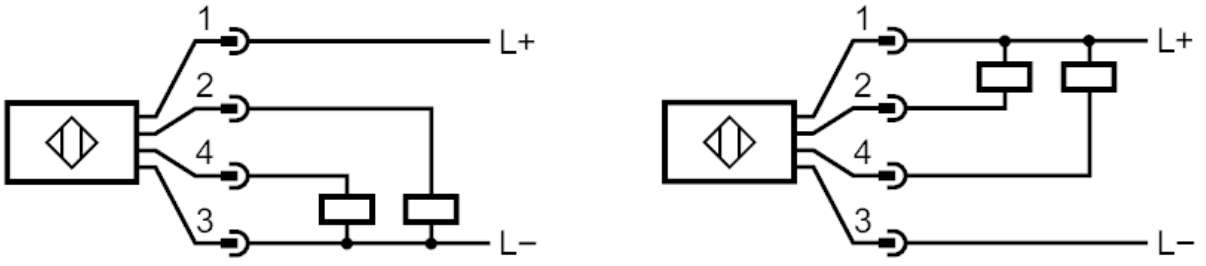
Connector: 1 x M12; coding: A

IM5183

Inductive sensor with IO-Link

IMC4020BFRKG/IO/US-100

Connection



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