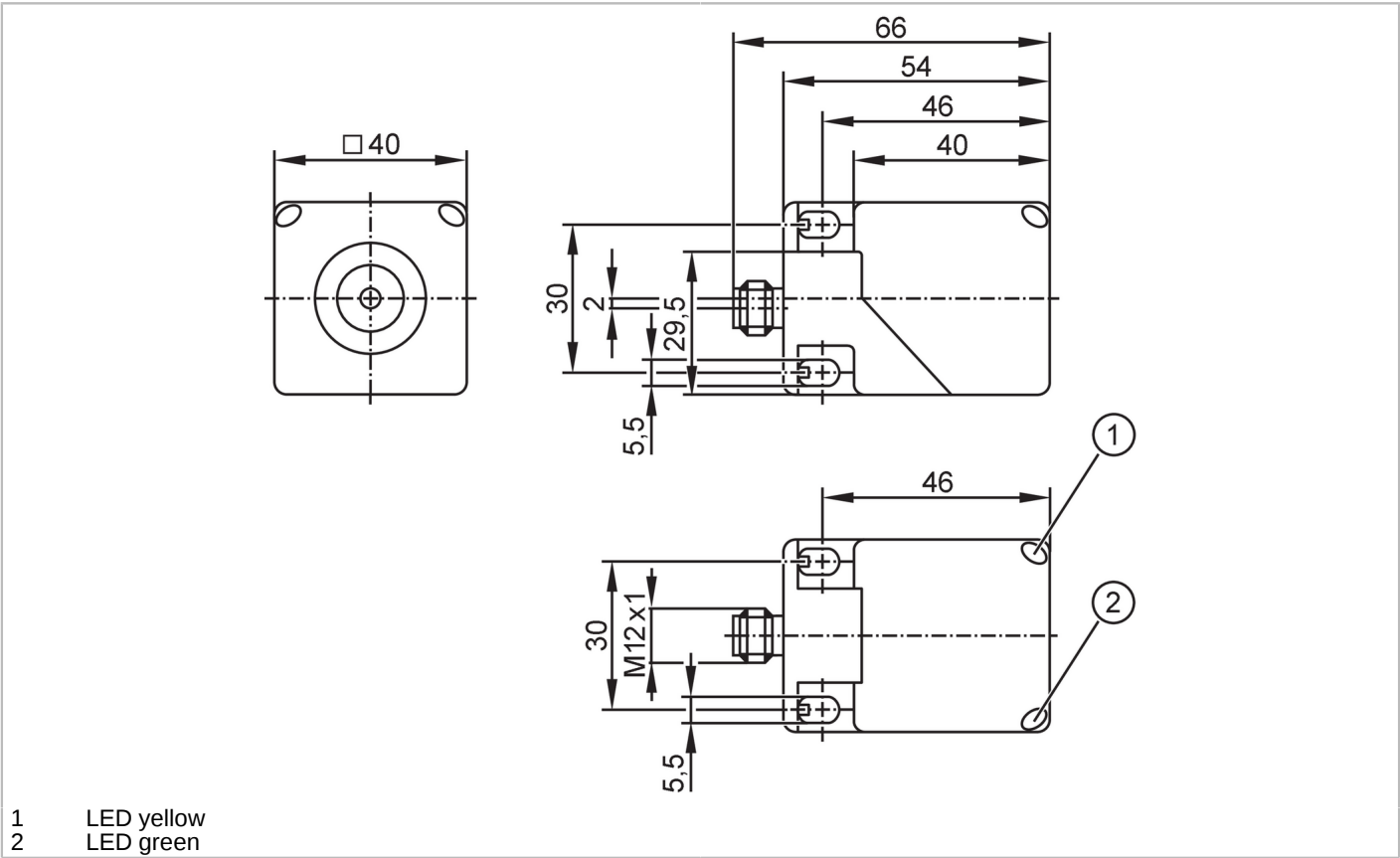


IM5139



Inductive analog sensor with IO-Link

IMC4015A1PKG/IO/US



Product characteristics		
Electrical design		PNP/NPN; (configurable)
Output function		normally open / closed; (configurable)
Communication interface		IO-Link
Housing		rectangular
Dimensions	[mm]	40 x 40 x 54
Electrical data		
Operating voltage	[V]	15...30 DC
Current consumption	[mA]	< 33
Protection class		II
Reverse polarity protection		yes
Outputs		
Electrical design		PNP/NPN; (configurable)
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	100
Analog current output	[mA]	4...20; (linear; gradient: 1,143 mA/mm; for frontal approach and for target made of mild steel: 45 x 45 x 1 mm)



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Max. load	[Ω]	500; (U _b ≤ 18 V;; Max. load ≤ 400 Ω)
Short-circuit protection		yes
Overload protection		yes
Monitoring range		
Measuring range	[mm]	1...15
Switch point IO-Link	[mm]	2.37...13.99
Accuracy / deviations		
Correction factor		steel: 1 / stainless steel: 0.9 / brass: 0.4 / aluminum: 0.4 / copper: 0.3
Hysteresis	[% of Sr]	3...15
Note on hysteresis		configurable
Linearity error of analog output	[%]	± 2; (of the final value of the measuring range)
Repeatability analog output	[%]	± 2; (of the final value of the measuring range)
Temperature coefficient		±0,15
	[%/K vom MEW]	
Temperature drift		± 5 %; (of the final value of the measuring range)
Reaction times		
Response time	[ms]	< 20
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Common - I&D	Identification and Diagnosis
	Function	Multiple switching signal
	Function	Teach channel
SIO mode		yes
Required master port class		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	1205
Note		For further information please see the IODD PDF file at "Downloads"
Operating conditions		
Ambient temperature	[°C]	-25...80
Protection		IP 67

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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]		231
Embedded software included		yes
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A025
	File number UL	E174191
Mechanical data		
Weight [g]		190
Housing		rectangular
Sensing face		5 positions selectable
Mounting		flush mountable
Dimensions [mm]		40 x 40 x 54
Material		PA; brass white bronze coated
Displays / operating elements		
Display	target in measuring range	1 x LED, yellow lights
	target outside measuring range	1 x LED, yellow flashing
	Power	LED, green
Remarks		
Pack quantity		1 pcs.
Electrical connection - plug		
Connector: 1 x M12; coding: A; Contacts: 4		

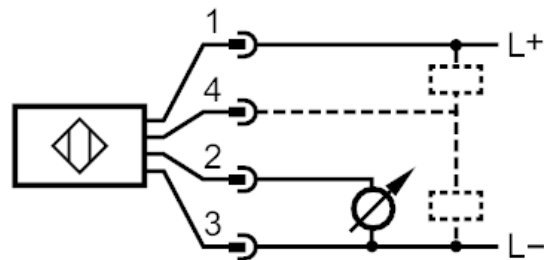
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Connection



1	L +
2	OUT
3	L -
4	OUT / IO-Link