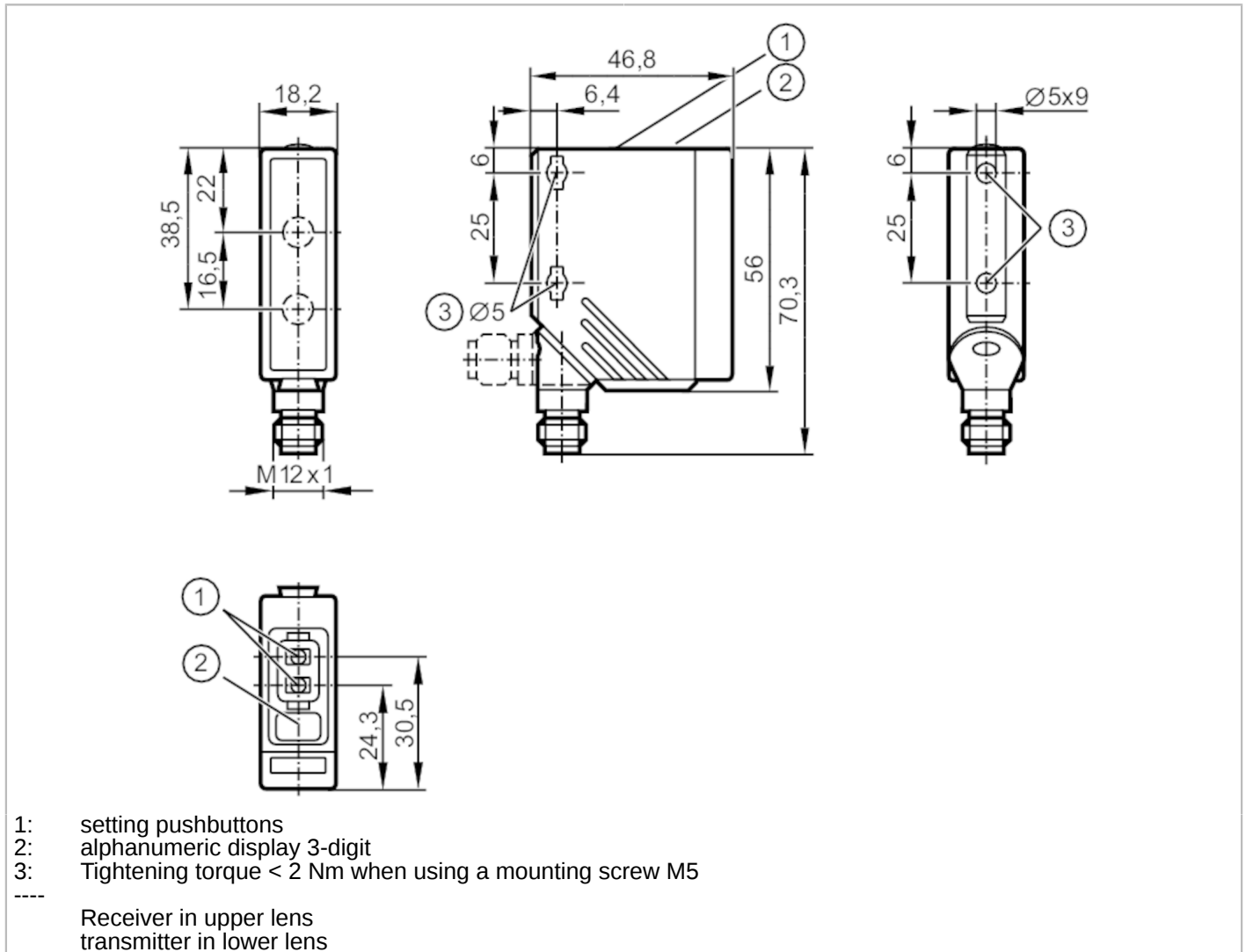


O5D100



Photoelectric distance sensor

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Product characteristics

Type of light	red light
Laser protection class	2
Housing	rectangular

Application

System	Background suppression
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Electrical data

Operating voltage	[V]	10...30 DC; (cULus - Class 2 source required)
Current consumption	[mA]	75; (24 V)
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	650
Typ. lifetime	[h]	50000

O5D100



Photoelectric distance sensor

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Inputs / outputs					
Number of inputs and outputs	Number of digital outputs: 2				
Outputs					
Total number of outputs	2				
Electrical design	PNP				
Number of digital outputs	2				
Output function	normally open / closed; (complementary)				
Max. current load per output [mA]	100				
Switching frequency DC [Hz]	11				
Short-circuit protection	yes				
Type of short-circuit protection	yes (non-latching)				
Overload protection	yes				
Monitoring range					
Max. light spot diameter [mm]	5				
Light spot dimensions refer to	2 m				
Detection range hysteresis [%]	< 2.5				
Note on monitoring range hysteresis	black 6 % remission				
Background suppression available	yes				
Background suppression [m]	< 20				
Measuring/setting range					
Measuring range [m]	0.03...2				
Sampling rate [Hz]	33				
Interfaces					
Communication interface	IO-Link				
Transmission type	COM2 (38,4 kBaud)				
IO-Link revision	1.1				
SDCI standard	IEC 61131-9				
Profiles	Smart Sensor: Sensor Identification; Binary Data Channel; Process Value; Sensor Diagnosis				
SIO mode	yes				
Process data analog	1				
Process data binary	1				
Min. process cycle time [ms]	6.6				
Supported DeviceIDs	<table border="1"><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>372</td></tr></tbody></table>	Type of operation	DeviceID	default	372
Type of operation	DeviceID				
default	372				
Operating conditions					
Ambient temperature [°C]	-25...60				
Note on ambient temperature	at $t_a < -10$ °C warm-up is necessary, laser is off				
Protection	IP 65; IP 67				
Max. immunity to extraneous light [klx]	10; (on the object)				

O5D100



Photoelectric distance sensor

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Tests / approvals		
EMC	EN 60947-5-2	
Laser protection class		2
Notes on laser protection	Caution:	Laser light
	Power:	<= 4,0 mW
	Wave length:	650 nm
	pulse:	1,3 ns
	Do not stare into beam.	
	Avoid exposure to the laser light.	
	laser class:	2
		EN / IEC60825-1:2007
		EN / IEC60825-1:2014
		Complies with 21 CFR 1040 except for deviations pursuant to Laser Notice No. 50, dated June 2007.
MTTF [years]		151

Mechanical data		
Weight [g]		85.5
Housing		rectangular
Dimensions [mm]		56 x 18.2 x 46.8
Material		housing: PA; Front framework: stainless steel; operator interface: TPU (urethane); lens: PMMA
Lens alignment		Side sensing

Displays / operating elements		
Display	Switching status	LED, yellow Switching output PIN 4
	Power	LED, green
	Display	alphanumeric display, 3-digit
Display unit		cm

Remarks		
Pack quantity		1 pcs.

Electrical connection

Connector: 1 x M12; coding: A



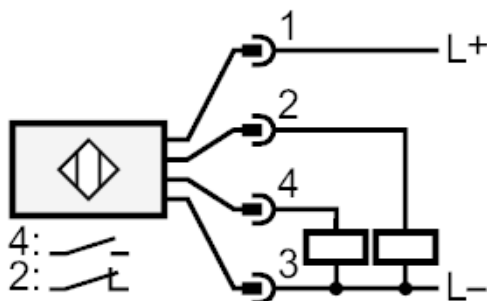
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Connection



4: OUT / IO-Link

Other data

Accuracy

	Accuracy			
distance	black (6 % remission)	white (90 % remission)		
0 mm	± 15 mm	± 15 mm		
500 mm	± 15 mm	± 15 mm		
1000 mm	± 15 mm	± 15 mm		
1500 mm	± 20 mm	± 20 mm		
2000 mm	± 30 mm	± 20 mm		
Extraneous light on the object		< 10 klx		

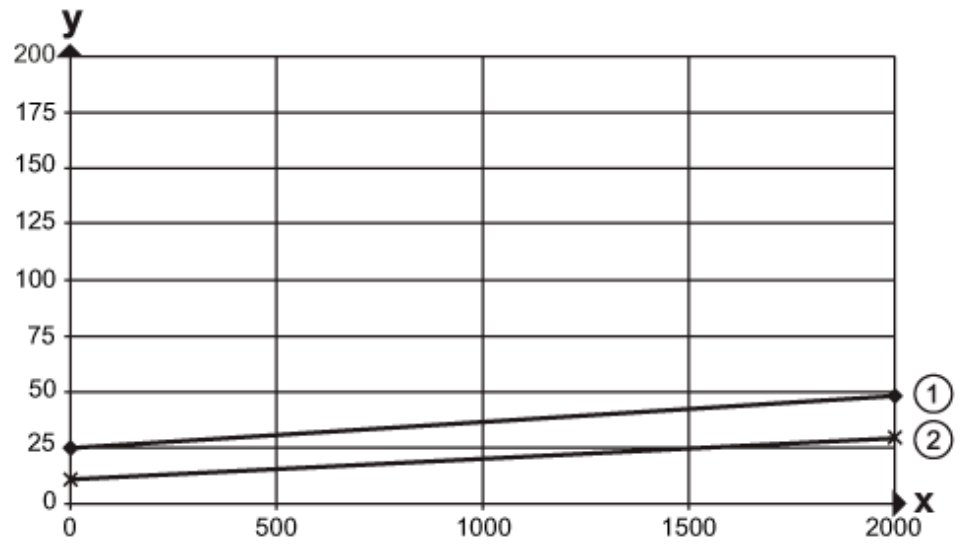


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Diagrams and graphs

Hysteresis graph



x: distance [mm]

y: Hysteresis [mm]

1 = background black 6 % remission

2 = background white 90 % remission