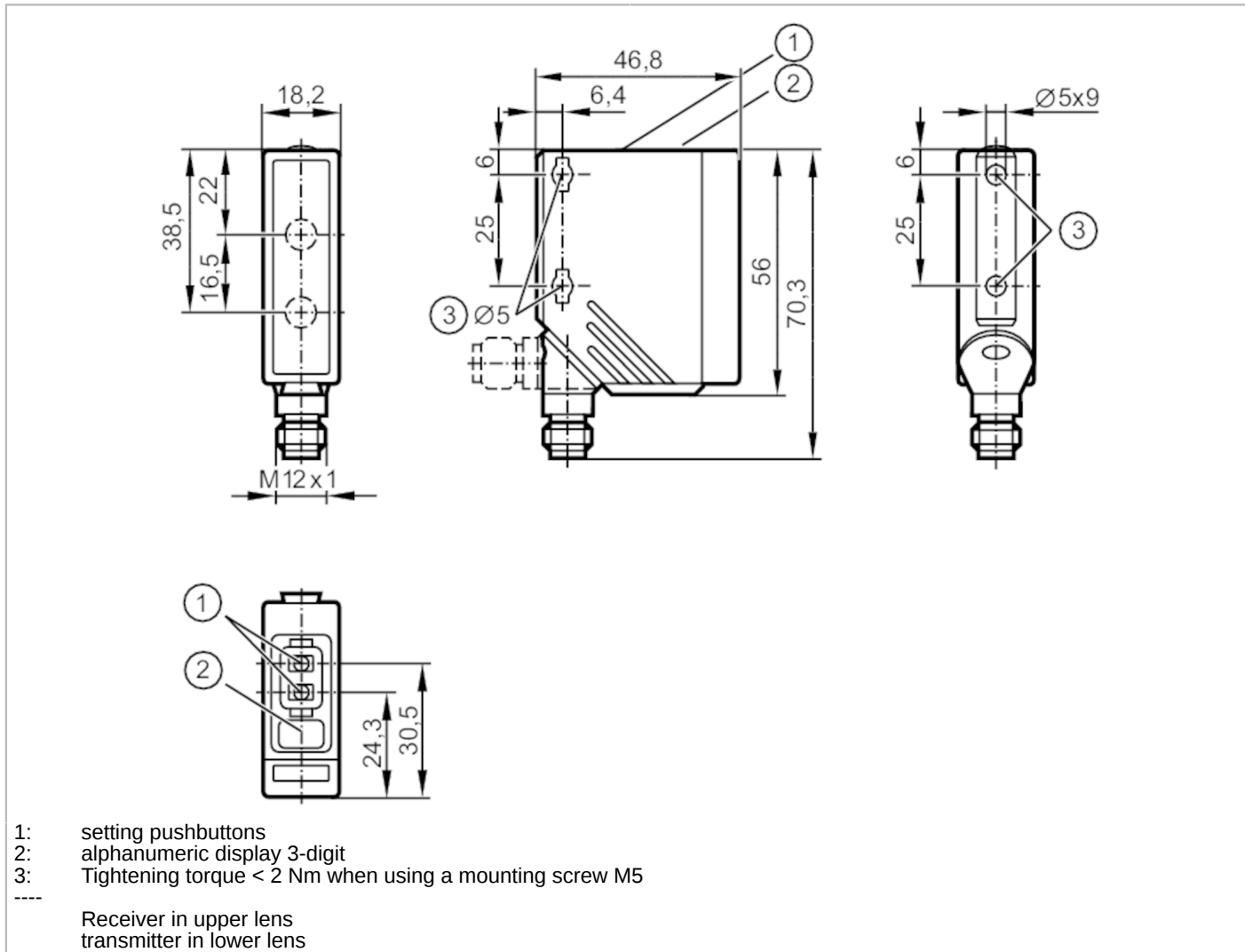


O5D102



Photoelectric distance sensor

O5DLCNKG/US



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



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	NPN
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	Type of operation DeviceID default 372
Operating conditions	
Ambient temperature [°C]	-25...60
Note on ambient temperature	at ta < -10 °C warm-up is necessary, laser is off
Protection	IP 65; IP 67
Max. immunity to extraneous light [klx]	10; (on the object)

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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]		84.8
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

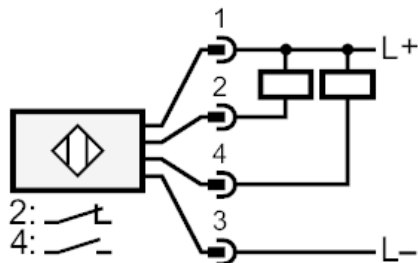




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Connection



4: OUT / IO-Link

Other data

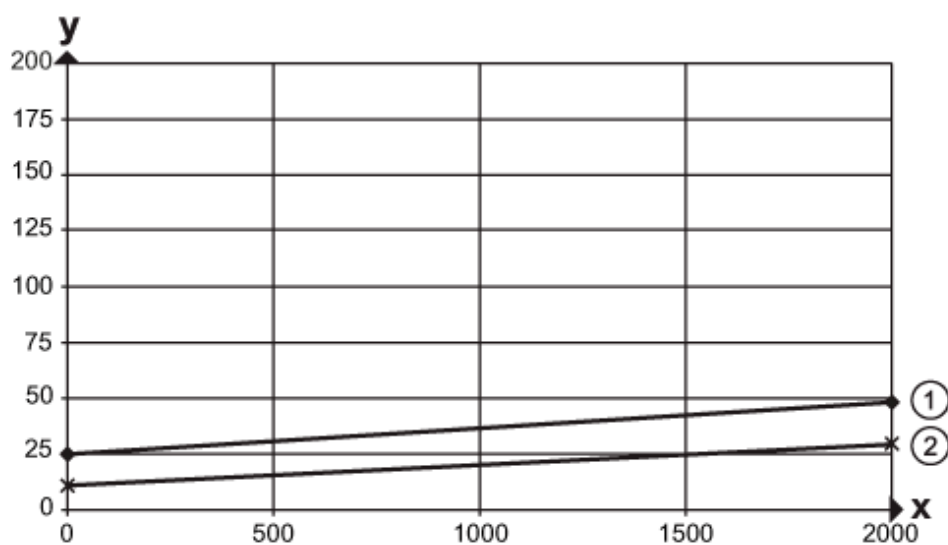
Accuracy

	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

Diagrams and graphs

Hysteresis graph



x: distance [mm]

y: Hysteresis [mm]

1 = background black 6 % remission

2 = background white 90 % remission