

O5D159



Photoelectric distance sensor

O5DLCPKG/IR/US



- 1: setting pushbuttons
2: alphanumeric display 3-digit
3: Tightening torque < 2 Nm when using a mounting screw M5



Product characteristics

Type of light	infrared light
Laser protection class	1
Housing	rectangular

Application

Special feature	Background suppression
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Electrical data

Operating voltage	[V]	10...30 DC; ("supply class 2" to cULus)
Current consumption	[mA]	< 75; (24 V)
Protection class		III
Reverse polarity protection		yes
Type of light		infrared light
Wave length	[nm]	850
Typ. lifetime	[h]	50000

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2
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Outputs		
Total number of outputs		2
Electrical design		PNP
Number of digital outputs		2
Output function		normally open / normally closed; (complementary)
Max. current load per output [mA]		100
Switching frequency DC [Hz]		11
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
Detection zone		
Max. light spot diameter [mm]		5
Light spot dimensions refer to		2 m
Detection range hysteresis [%]		< 16
Note on monitoring range hysteresis		black 6% remission
Background suppression available		yes
Background suppression [m]		< 19.2
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 analogue		1
Process data binary		1
Min. process cycle time [ms]		6.6
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]		8; (on the object)
Tests / approvals		
EMC	EN 60947-5-2	
Vibration resistance	DIN EN 60068-2-6	10 g (10...55 Hz) / 120 min. per axis (x, y, z)
Shock resistance	DIN EN 60068-2-27	50 g 6 shocks / 11 ms half-sine (x, y, z)
Laser protection class		1

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Notes on laser protection	Caution:	laser light
	laser class:	1
		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]	203
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	power supply	Class 2
	File number UL	E174191

Mechanical data		
Weight	[g]	84.4
Housing		rectangular
Dimensions	[mm]	56 x 18.2 x 46.8
Materials		housing: PA; bezel: stainless steel; operator interface: TPU; lens: PMMA
Lens alignment		side lens

Displays / operating elements		
Display	switching status	LED, yellow
	operation	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



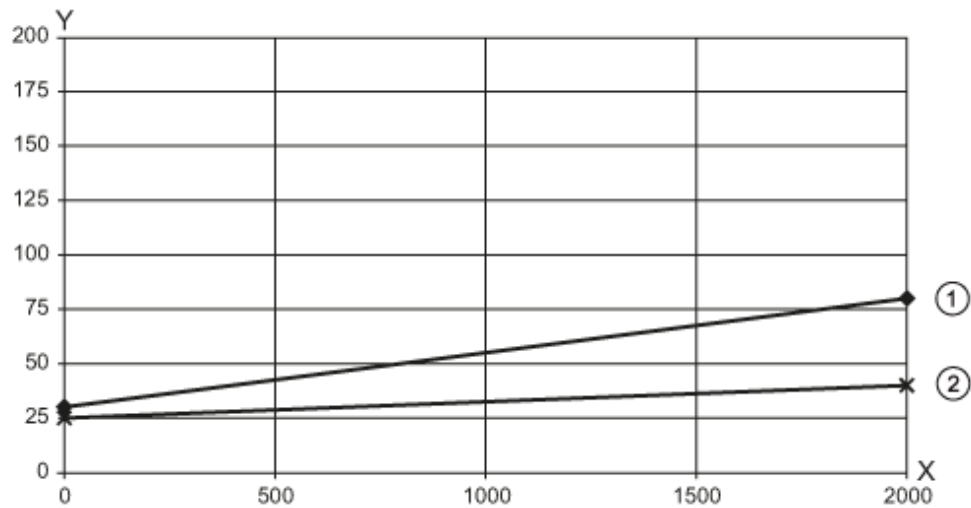
4: OUT / IO-Link

Other data

	accuracy			
distance	black (6 % remission)	white (90 % remission)		
0 mm	± 25 mm	± 25 mm		
500 mm	± 25 mm	± 25 mm		
1000 mm	± 25 mm	± 25 mm		
1500 mm	± 40 mm	± 30 mm		
2000 mm	± 50 mm	± 30 mm		

Diagrams and graphs

hysteresis graph



x: distance [mm]
y: Hysteresis [mm]
1 = background black 6% remission
2 = background white 90% remission