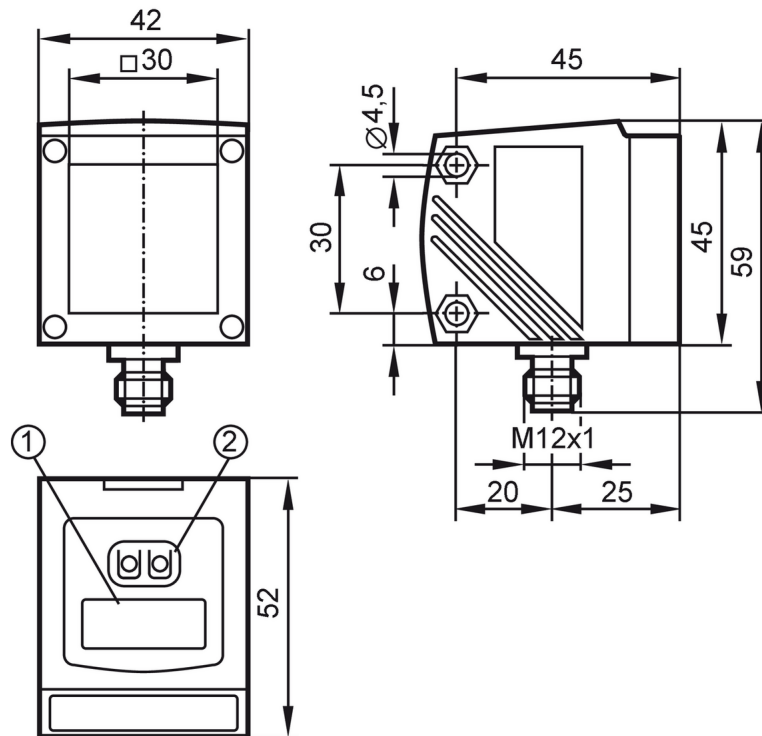


O1D105

Laser distance sensor

O1DLF3KG/IO-LINK



- 1 alphanumeric display 4-digit
2 Programming buttons



Product characteristics

Laser protection class	2
Housing	rectangular

Application

Application	Industrial applications
-------------	-------------------------

Electrical data

Operating voltage [V]	18...30 DC
Current consumption [mA]	< 150
Protection class	III
Reverse polarity protection	yes
Typ. lifetime [h]	50000

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1
------------------------------	---

Outputs

Total number of outputs	2
Electrical design	PNP
Number of digital outputs	2
Output function	normally open / closed; (programmable)
Max. current load per output [mA]	200
Number of analog outputs	1
Analog current output [mA]	4...20; (scalable IEC 61131-2)

O1D105



Laser distance sensor

O1DLF3KG/IO-LINK

Max. load	[Ω]	250
Analog voltage output	[V]	0...10; (scalable IEC 61131-2)
Min. load resistance	[Ω]	5000
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes
Monitoring range		
Max. light spot diameter	[mm]	25
Light spot dimensions refer to		10 m
Background suppression	[m]	10...100
Measuring/setting range		
Measuring range	[m]	0.2...10; (white paper 200 x 200 mm 90 % remission)
Sampling rate	[Hz]	1...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 - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	Device diagnosis
	Function	Teach channel
SIO mode		yes
Required master port class		A
Process data analog		2
Process data binary		2
Min. process cycle time	[ms]	5
Supported DeviceIDs	Type of operation	DeviceID
	default	809
Operating conditions		
Ambient temperature	[°C]	-10...60
Protection		IP 67
Tests / approvals		
EMC	EN 60947-5-2	
Laser protection class		2

O1D105



Laser distance sensor

O1DLF3KG/IO-LINK

Notes on laser protection	Caution:	Laser light
	Power:	$\leq 4,0 \text{ mW}$
	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
MTTF [years]		EN / IEC60825-1:2014
		Complies with 21 CFR 1040.10 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
		107

Mechanical data		
Weight [g]		244.5
Housing		rectangular
Dimensions [mm]		59 x 42 x 52
Material		housing: diecast zinc; front lens: glass; LED window: PC
Lens alignment		Side sensing

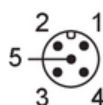
Displays / operating elements		
Display	Switching status	2 x LED, yellow
	Power	LED, green
	Distance, programming	alphanumeric display, 4-digit

Accessories	
Accessories (optional)	Protective cover, E21133

Remarks	
Remarks	cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 5



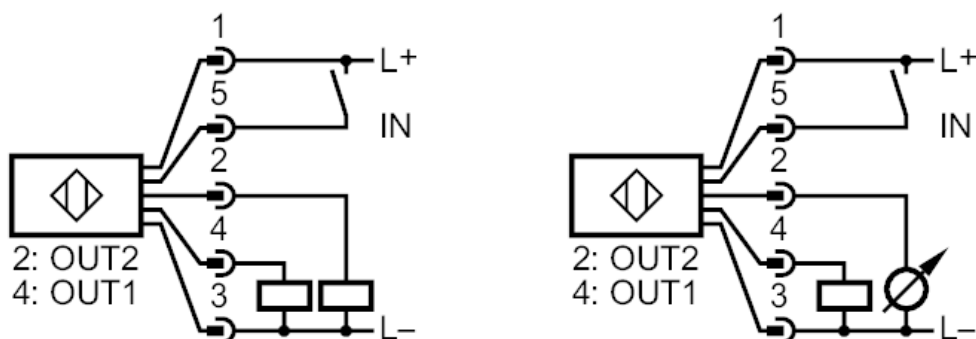
O1D105



Laser distance sensor

O1DLF3KG/IO-LINK

Connection



- 2: switching output or analog output 4...20 mA / 0...10 V
 4: switching output or IO-Link
 5: IN1 Laser On/ Off

Other data

Parameter	Setting range	Factory setting
Uni	mm, m, inch	mm
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1	200...9999	1000
nSP1	200...9999	800
FSP1	200...9999	1200
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2	200...9999	2000
nSP2	200...9999	1800
FSP2	200...9999	2200
ASP	0...9999	0
AEP	0...9999	9999
rATE [Hz]	1...33	15
dS1	0...0.1...5	0
dr1	0...0.1...5	0
dS2	0...0.1...5	0
dr2	0...0.1...5	0
dFo	0...0.1...5	0
dIS	d1...3; rd1...3; OFF	d3

O1D105



Laser distance sensor

O1DLF3KG/IO-LINK

Repeatability / Accuracy

distance	Repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 4.5 mm	± 6.0 mm	± 15.0 mm	± 16.0 mm
1000...2000 mm	± 5.0 mm	± 8.0 mm	± 15.0 mm	± 18.0 mm
2000...4000 mm	± 16.0 mm	± 19.0 mm	± 25.0 mm	± 30.0 mm
4000...6000 mm	± 24.0 mm	± 33.0 mm	± 35.0 mm	± 45.0 mm
6000...10000 mm	± 50.0 mm	-	± 65.0 mm	-
Sampling rate	15 Hz			
Extraneous light on the object	< 40 klx			

Repeatability / Accuracy

distance	Repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...2000 mm	± 14.0 mm	± 14.0 mm	± 24.0 mm	± 24.0 mm
2000...4000 mm	± 25.0 mm	± 30.0 mm	± 35.0 mm	± 40 mm
4000...6000 mm	± 31.0 mm	± 45.0 mm	± 41.0 mm	± 55.0 mm
6000...10000 mm	± 60.0 mm	-	± 70.0 mm	-
Sampling rate	15 Hz			
Extraneous light on the object	< 40...100 klx			
Range on black object (6 % remission)	<= 4000 klx			
The values apply at				
constant ambient conditions	23 °C / 960 hPa			
minimum power-on time in minutes	10			