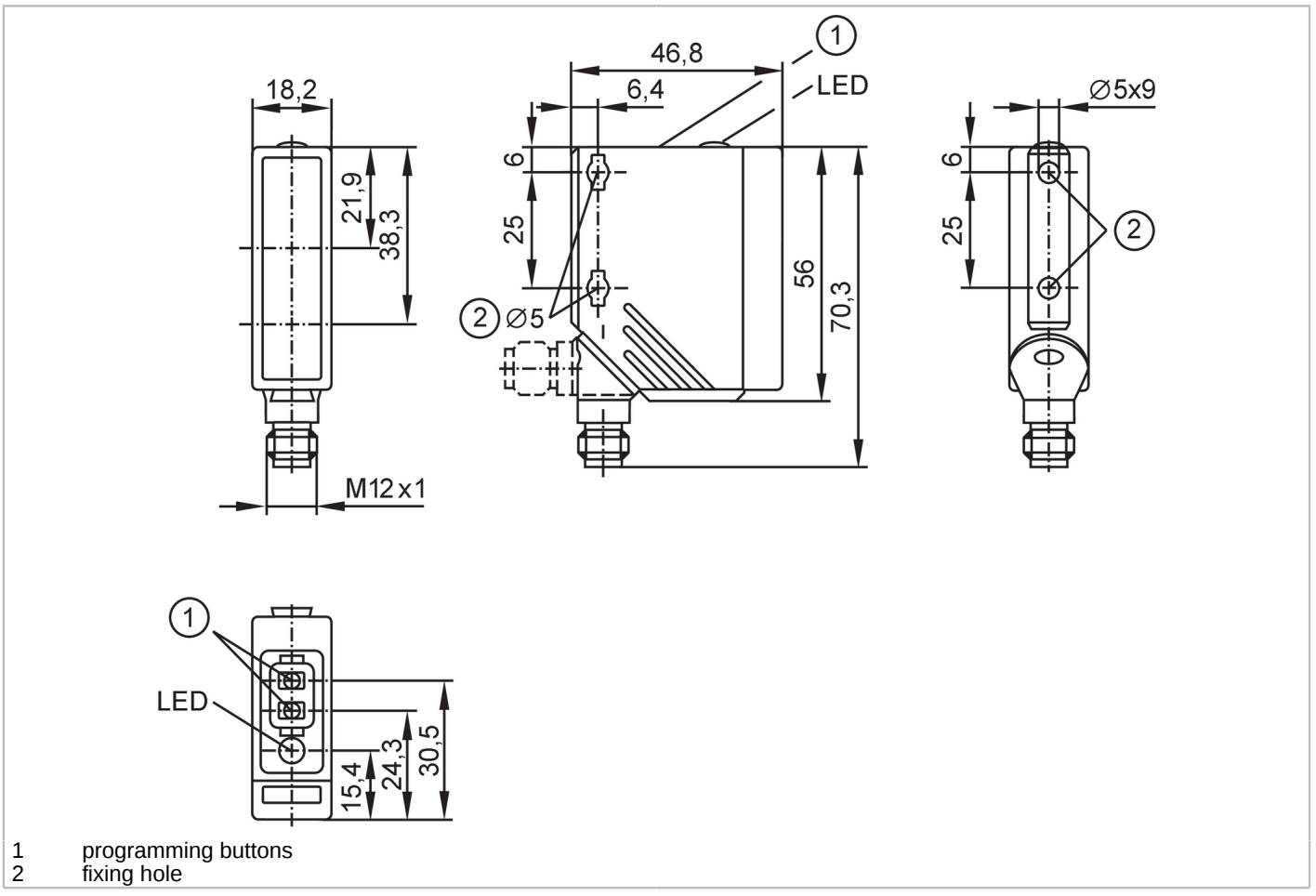
O5H700

Laser diffuse reflection sensor

O5HLFPKG/US100



1 programming buttons
2 fixing hole

Product characteristics		
Type of light		red light
Laser protection class		1
Housing		rectangular
Application		
Special feature		Background suppression
Function principle		Diffuse reflection sensor
Application		Industrial applications / factory automation
Electrical data		
Operating voltage	[V]	10...36 DC
Current consumption	[mA]	15
Protection class		II
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	655
Outputs		
Electrical design		PNP
Output function		light-on/dark-on mode; (programmable)

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Max. voltage drop switching output DC	[V]	2.5	
Permanent current rating of switching output DC	[mA]	200	
Switching frequency DC	[Hz]	1000	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Overload protection		yes	
Detection zone			
Range	[mm]	20...200; (white paper 200 x 200 mm 90% remission)	
Range on white object (90 % remission)	[mm]	20...200	
Range on grey object (18 % remission)	[mm]	20...160	
Range on black object (6 % remission)	[mm]	20...80	
Range adjustable		yes	
Diameter of the smallest detectable object	[mm]	1.5	
Max. light spot diameter	[mm]	1.2	
Background suppression available		yes	
Operating conditions			
Ambient temperature	[°C]	-10...60	
Protection		IP 67	
Tests / approvals			
EMC		EN 60947-5-2	
Laser protection class		1	
Notes on laser protection		Caution:	laser light
		laser class:	1
			EN / IEC60825-1:2007
			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.
MTTF	[years]	454	
Mechanical data			
Weight	[g]	68.5	
Housing		rectangular	
Dimensions	[mm]	56 x 18.2 x 46.8	
Materials		housing: PA; bezel: stainless steel; operator interface: TPU	
Lens material		front pane:PMMA	
Lens alignment		side lens	
Fixing hole			
Tightening torque	[Nm]	< 2; (when using a mounting screw M5)	

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Displays / operating elements

Display	switching status	1 x LED, yellow
Teach function	yes	
Electronic lock	yes	

Remarks

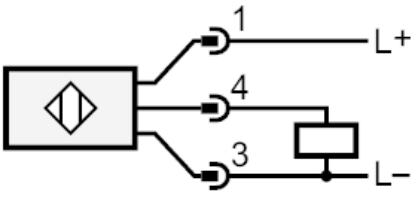
Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

Electrical connection

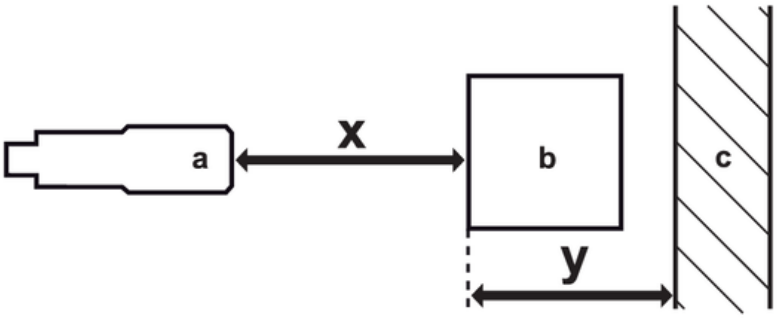
Connector: 1 x M12; coding: A; Contacts: 4



Connection



Diagrams and graphs



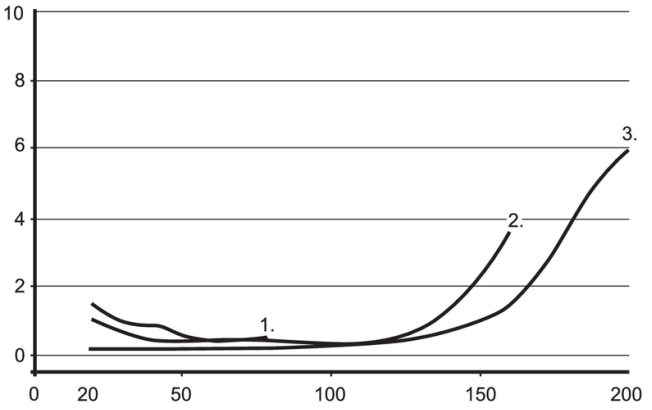
a: sensor
b: object
c: background
x: distance sensor/object [mm]
y: min. distance object/background [mm]

O5H700

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accuracy graph



x: distance sensor/object [mm]

y: min. distance object/background [mm]

1 = object black (6 % remission) , background white (90 % remission)

2 = object grey (18 % remission) , background white (90 % remission)

3 = object white (90 % remission) , background white (90 % remission)