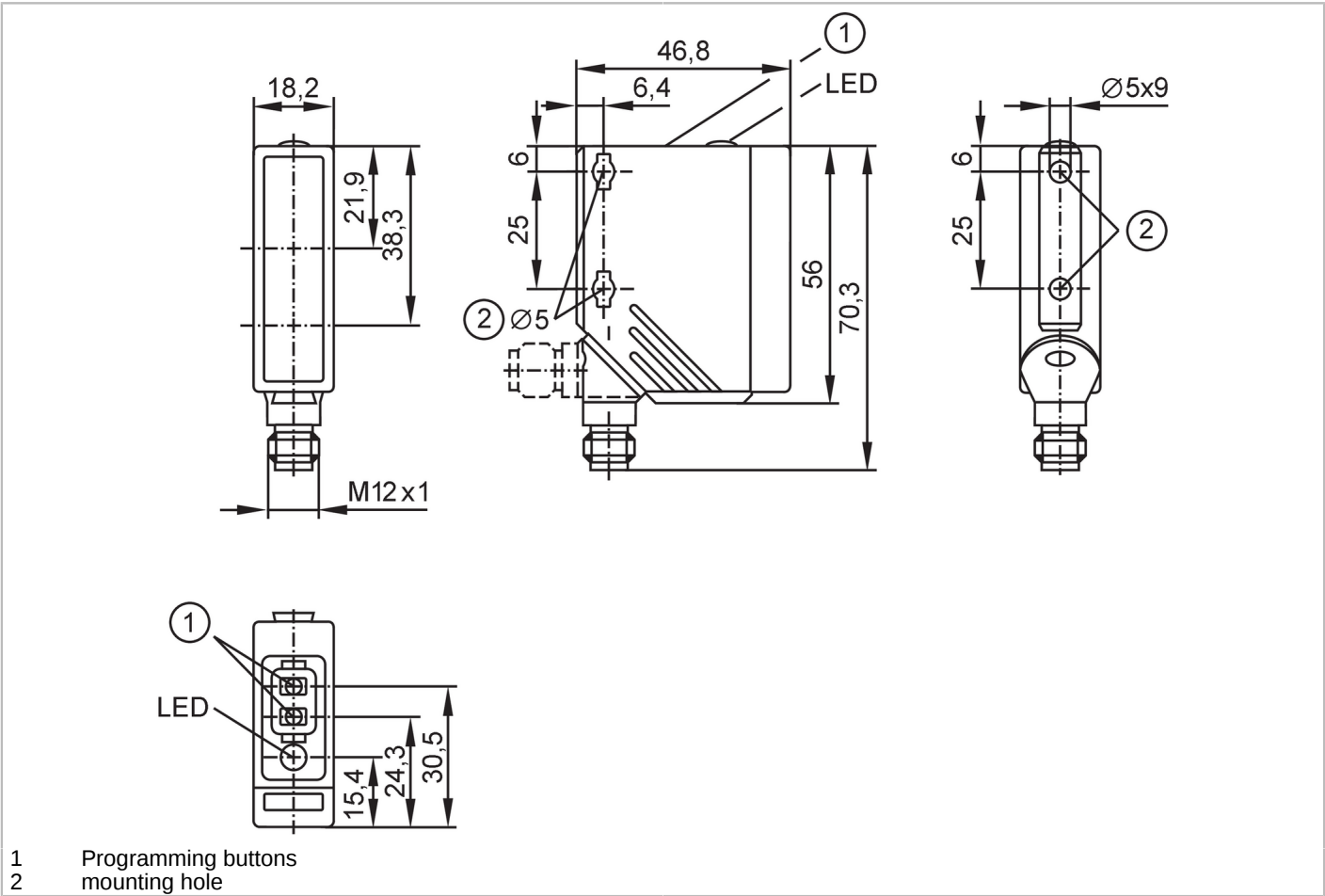


O5H700



LASER diffuse reflection sensor

O5HLFPKG/US100



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
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)

O5H700



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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		yes (non-latching)
Overload protection		yes

Monitoring range		
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
Material		housing: PA; Front framework: stainless steel; operator interface: TPU (urethane)
Lens material		front lens:PMMA
Lens alignment		Side sensing

Mounting hole		
Tightening torque	[Nm]	< 2; (when using a mounting screw M5)

O5H700



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Displays / operating elements

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

Remarks

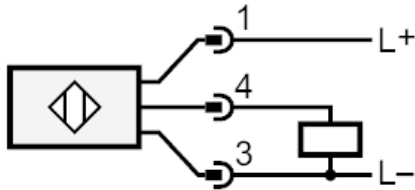
Remarks	cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

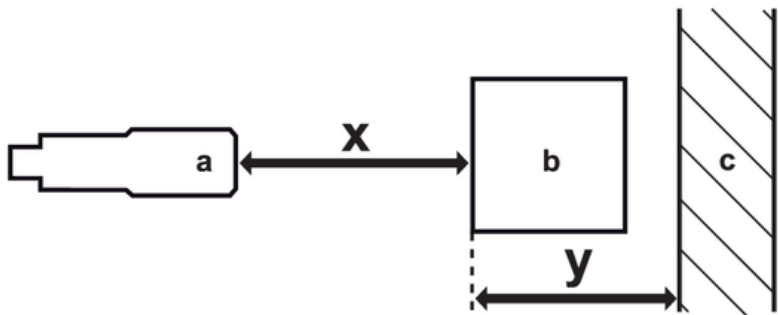
Connector: 1 x M12; coding: A; Contacts: 4



Connection



Diagrams and graphs



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

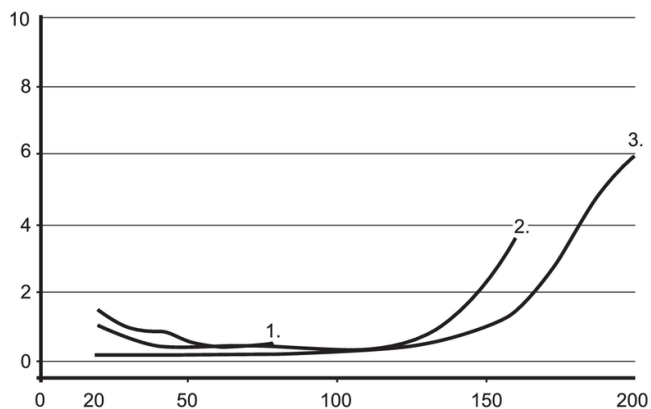
O5H700



LASER diffuse reflection sensor

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Background suppression chart



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)