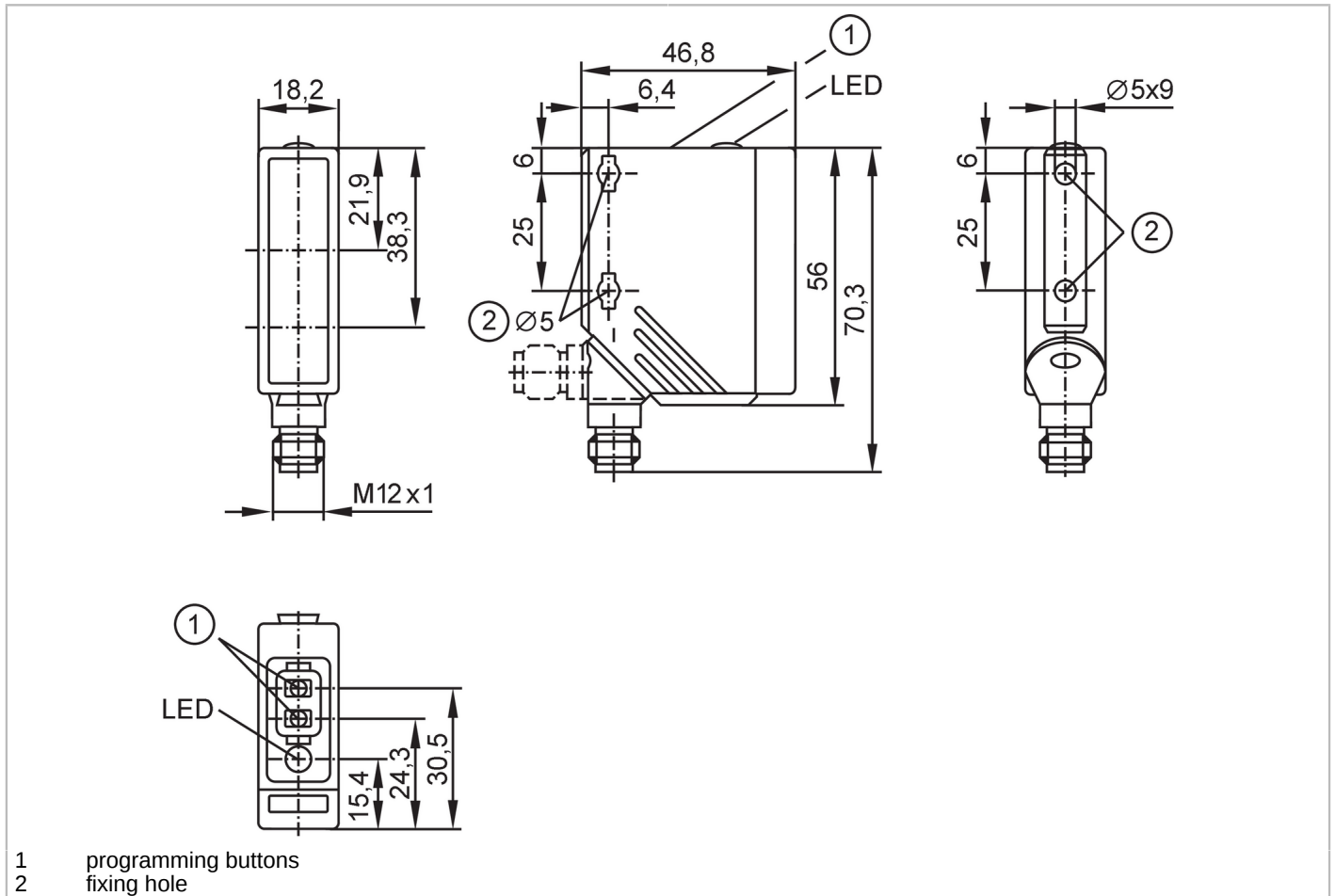


# O5H700



## 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 / 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)

# O5H700



## Laser diffuse reflection sensor

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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)

# O5H700



## Laser diffuse reflection sensor

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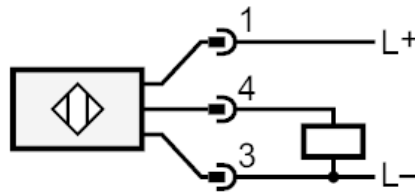
Displays / operating elements		
Display	switching status	1 x LED, yellow
Teach function		yes
Electronic lock		yes
Remarks		
Remarks	operating voltage "supply class 2" according to cULus	
Pack quantity	1 pcs.	

### Electrical connection

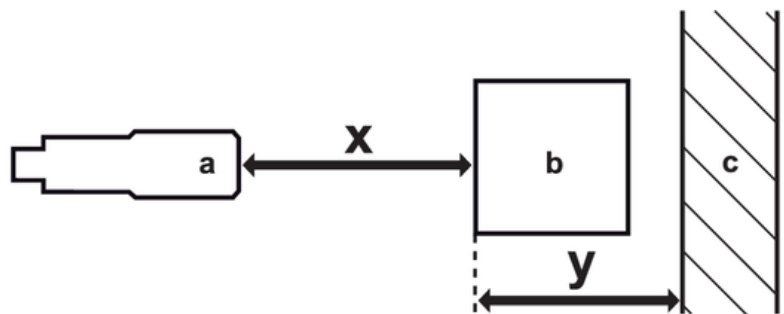
Connector: 1 x M12; coding: A; Contacts: 4



### Connection



### Diagrams and graphs



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

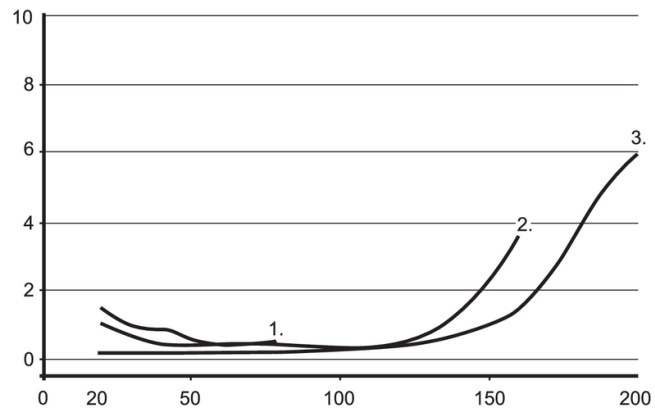
# O5H700



## Laser diffuse reflection sensor

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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)