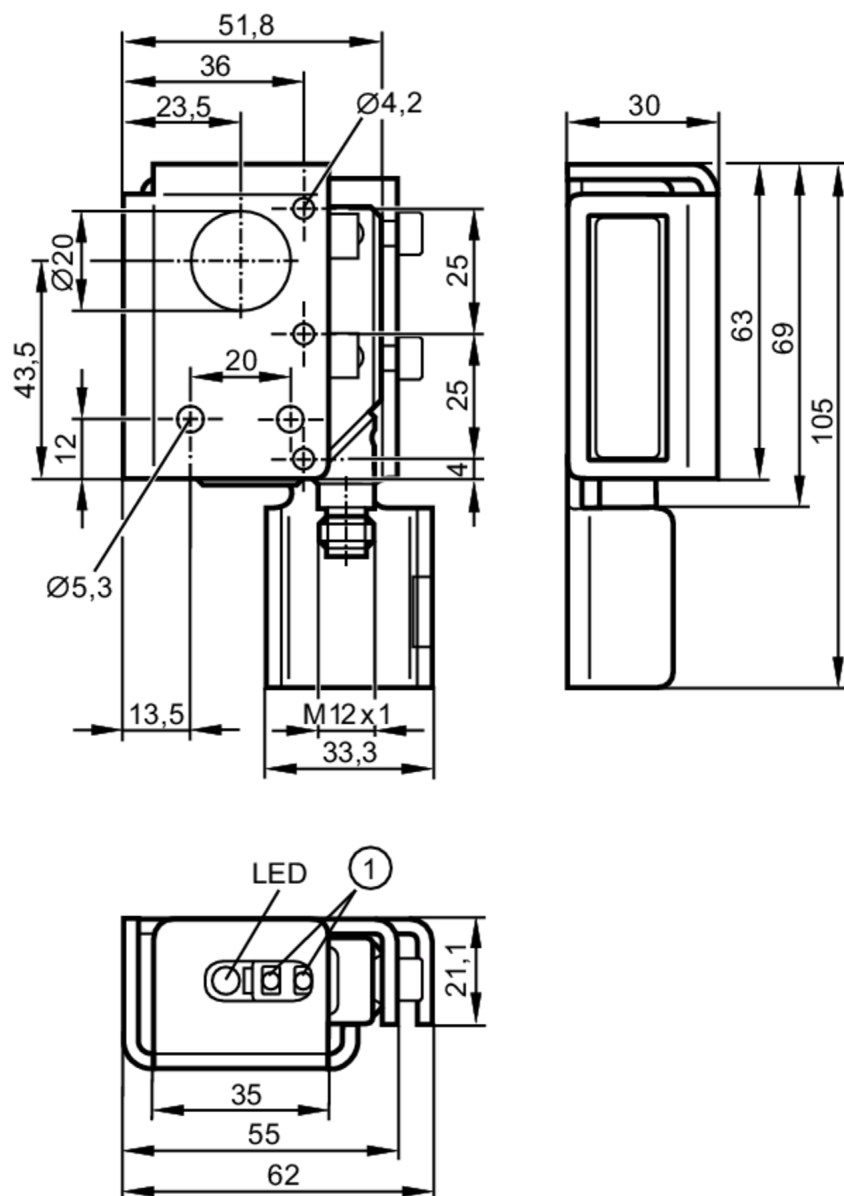


O5H51A



Diffuse reflection sensors with background suppression

O5H-FPKG/US100/3D



- 1 Programming buttons
Receiver in upper lens
transmitter in lower lens



Product characteristics

Type of light	red light
Housing	rectangular

Application

System	Background suppression
Function principle	Diffuse reflection sensor

Electrical data

Operating voltage	[V] 10...30 DC; (when used outside the hazardous area: 10...36)
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Diffuse reflection sensors with background suppression

O5H-FPKG/US100/3D

Current consumption [mA]	25
Protection class	III
Reverse polarity protection	yes
Type of light	red light

Outputs

Electrical design	PNP
Output function	light-on/dark-on mode; (programmable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100; (when used outside the hazardous area: 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]	50...1800; (white paper 200 x 200 mm 90 % remission)
Range on white object (90 % remission) [mm]	50...1800
Range on grey object (18 % remission) [mm]	50...900
Range on black object (6 % remission) [mm]	50...600
Range adjustable	yes
Max. light spot diameter [mm]	50
Background suppression available	yes

Operating conditions

Ambient temperature [°C]	-10...50
Note on ambient temperature	when used outside the hazardous area: -25...60 °C
Protection	IP 65

Tests / approvals

ATEX marking	Ex II 3D Ex tc IIIC T105°C Dc X
EMC	EN 60947-5-2
MTTF [years]	360

Mechanical data

Weight [g]	335
Housing	rectangular
Dimensions [mm]	105 x 30 x 62
Material	housing: PA; Front framework: stainless steel; operator interface: TPU (urethane); Protective cover: stainless steel
Lens material	PMMA
Lens alignment	Side sensing

Displays / operating elements

Display	Switching status	1 x LED, yellow
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Diffuse reflection sensors with background suppression

O5H-FPKG/US100/3D

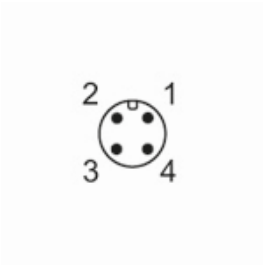
Teach function	yes
Electronic lock	yes

Remarks

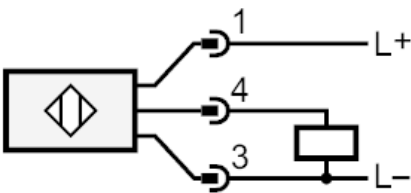
Pack quantity	1 pcs.
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Electrical connection

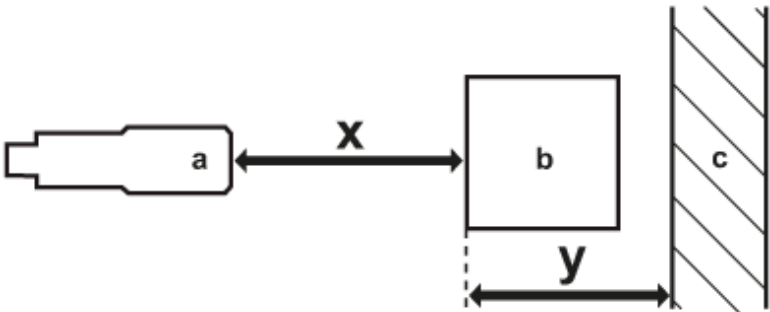
Connector: 1 x M12; coding: A



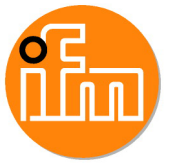
Connection



Diagrams and graphs



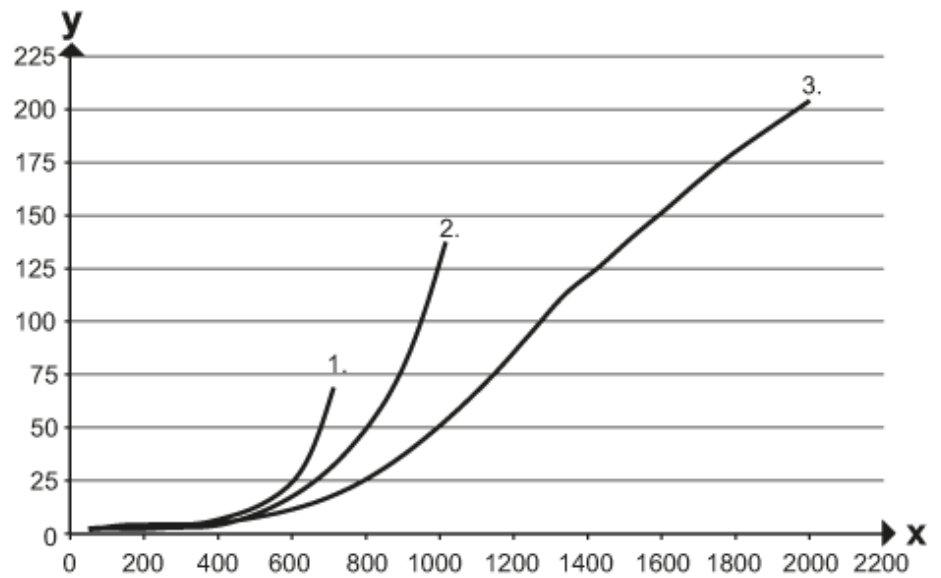
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



Diffuse reflection sensors with background suppression

O5H-FPKG/US100/3D

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)