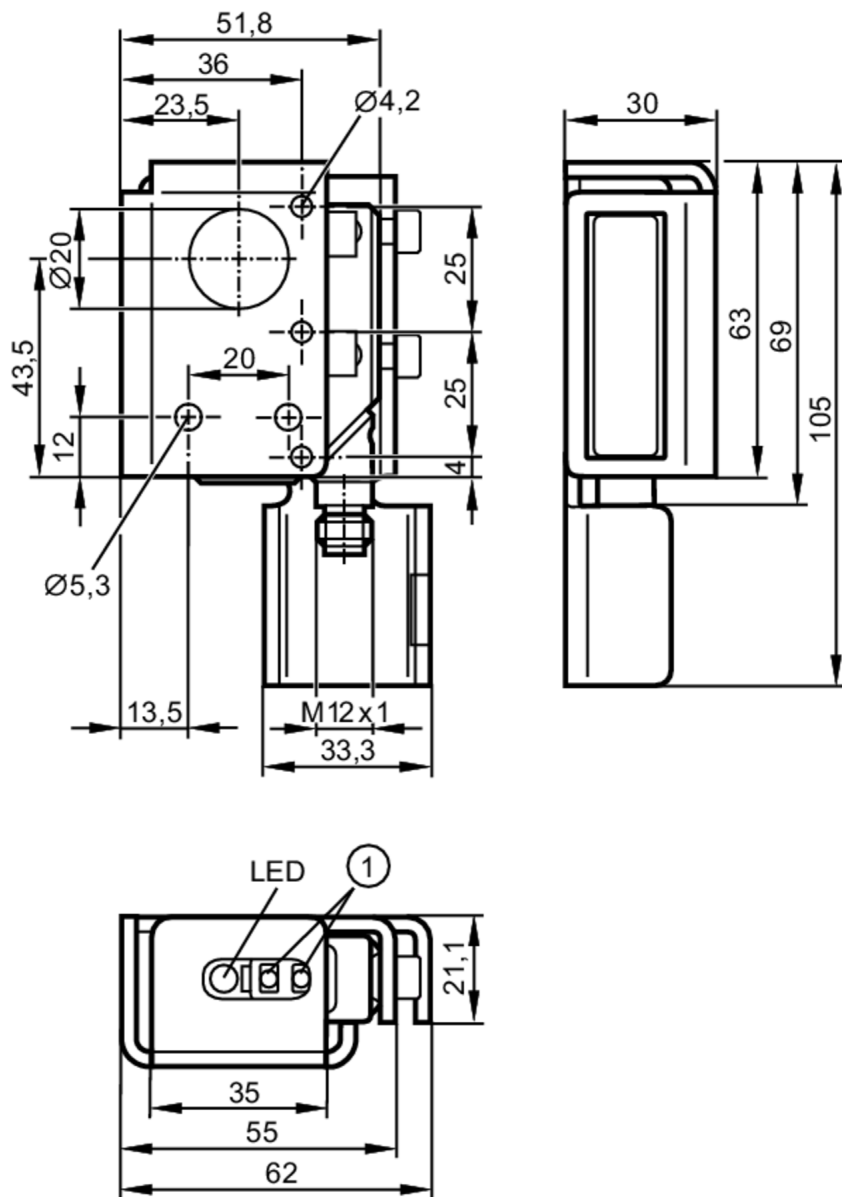


O5H51A



Diffuse reflection sensor 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
Dimensions [mm]	105 x 30 x 62

Application


Special feature	Background suppression
Function principle	Diffuse reflection sensor

O5H51A



Diffuse reflection sensor with background suppression

O5H-FPKG/US100/3D

Electrical data	
Operating voltage [V]	10...30 DC; (outside hazardous areas: 10...36)
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; (outside hazardous areas: 200)
Switching frequency DC [Hz]	1000
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes
Detection zone	
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	outside hazardous areas: -25...60
Protection	IP 65
Tests / approvals	
ATEX marking	 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
Materials	housing: PA; bezel: stainless steel; operator interface: TPU; Protective bracket: stainless steel
Lens material	PMMA
Lens alignment	side lens

O5H51A



Diffuse reflection sensor with background suppression

O5H-FPKG/US100/3D

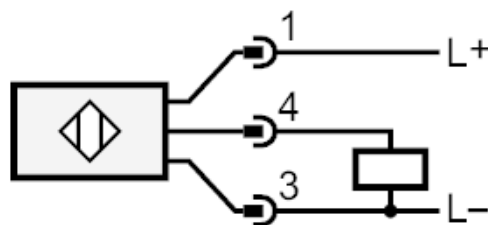
Displays / operating elements		
Display	switching status	1 x LED, yellow
Teach function		yes
Electronic lock		yes
Remarks		
Pack quantity		1 pcs.

Electrical connection

Connector: 1 x M12



Connection

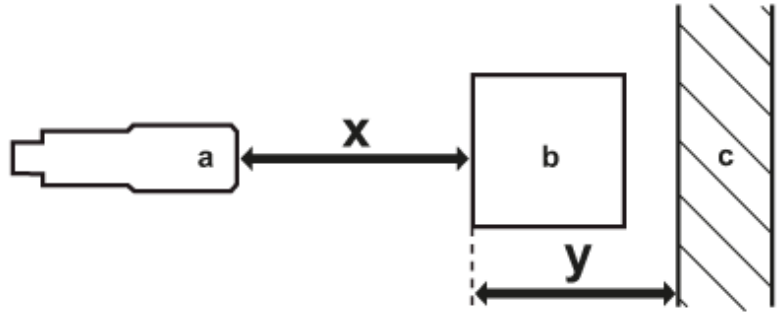




Diffuse reflection sensor with background suppression

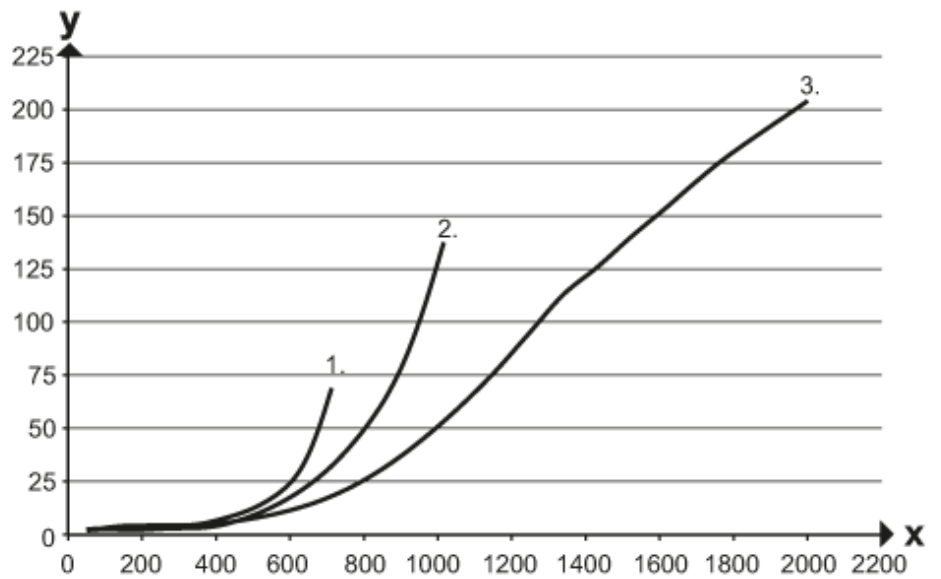
O5H-FPKG/US100/3D

Diagrams and graphs



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

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)