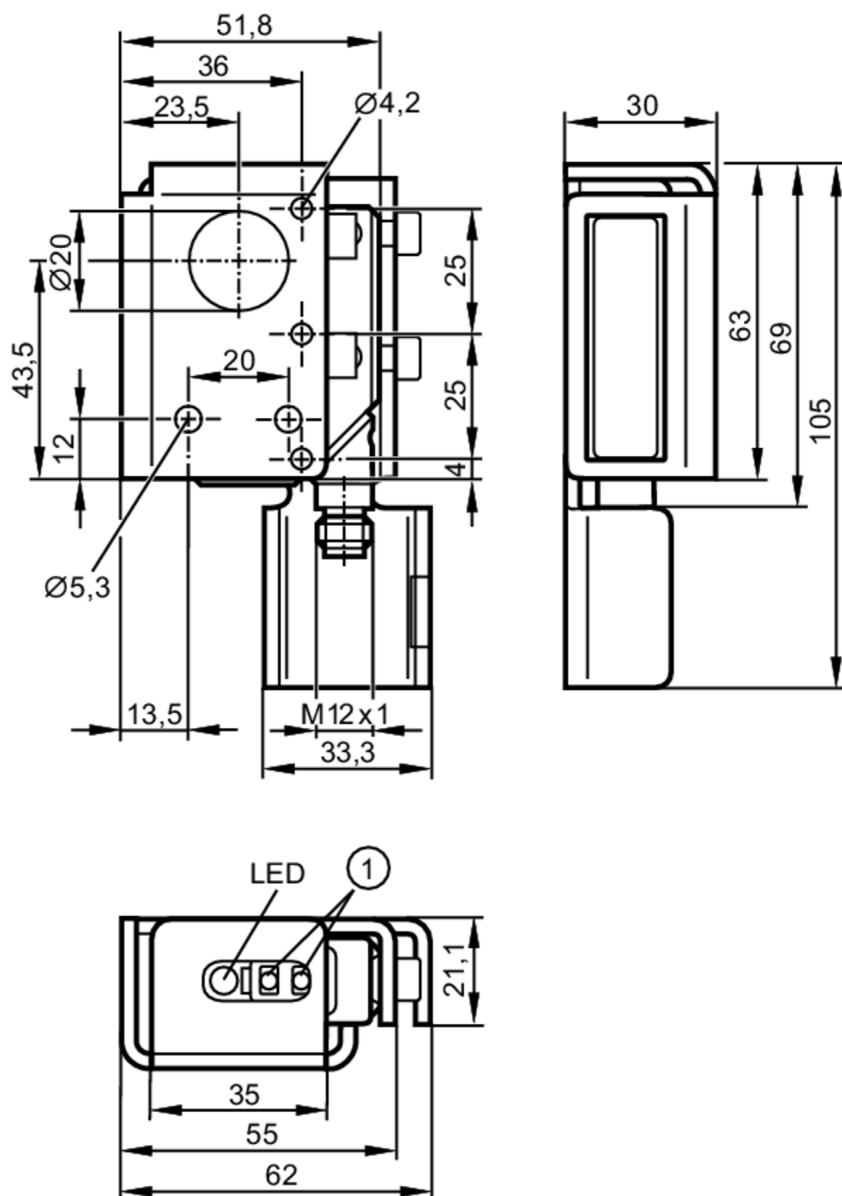


O5H51A



Diffuse reflection sensor with background suppression

O5H-FPKG/US100/3D



- 1 programming buttons
receiver in upper lens
transmitter in lower lens



Application

Function principle Diffuse reflection sensor

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

O5H51A



Diffuse reflection sensor with background suppression

O5H-FPKG/US100/3D

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]	334.2	
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	
Displays / operating elements		
Display	switching status	1 x LED, yellow
Teach function	yes	
Electronic lock	yes	
Remarks		
Pack quantity	1 pcs.	

Diffuse reflection sensor with background suppression

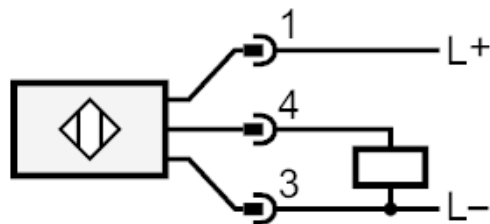
O5H-FPKG/US100/3D

Electrical connection

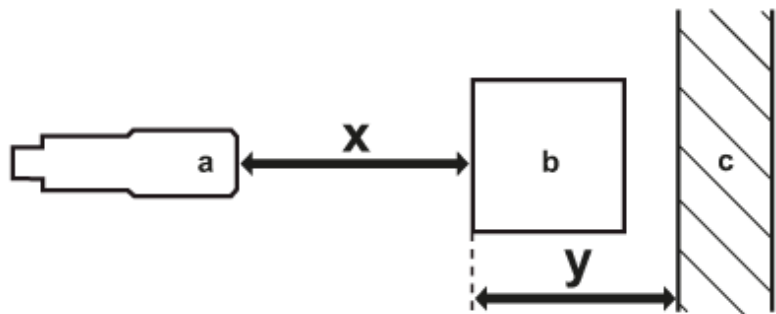
Connector: 1 x M12



Connection



Diagrams and graphs



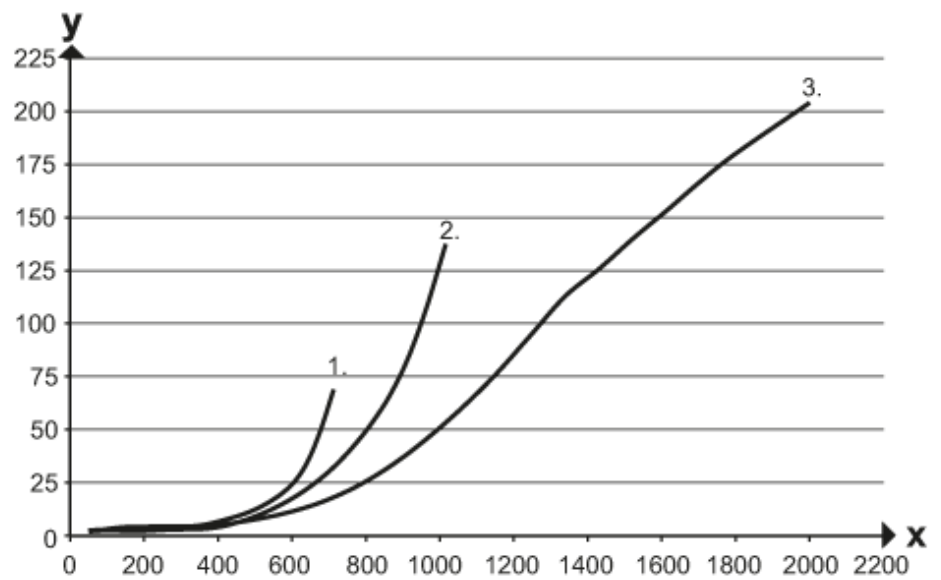
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



Diffuse reflection sensor with background suppression

O5H-FPKG/US100/3D

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)