



Diffuse reflection sensors with background suppression

OGH-FNKG/US100



1 Programming buttons



Product characteristics

Type of light	red light
Housing	Threaded type

Application

System	Background suppression
Function principle	Diffuse reflection sensor

Electrical data

Operating voltage	[V]	10...36 DC
Current consumption	[mA]	25
Protection class		II
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	624

Outputs

Electrical design		NPN
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]	150; (200 (...60 °C))
Switching frequency DC	[Hz]	1000
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

Monitoring range

Range	[mm]	15...300; (white paper 200 x 200 mm 90 % remission)
Range on white object (90 % remission)	[mm]	15...300
Range on grey object (18 % remission)	[mm]	15...290



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Range on black object (6 % remission) [mm]	15...190
Factory setting	light-on mode
Range adjustable	yes
Max. light spot diameter [mm]	25
Light spot dimensions refer to	at maximum range
Background suppression available	yes

Operating conditions

Ambient temperature [°C]	-25...80
Protection	IP 67

Tests / approvals

EMC	EN 60947-5-2
MTTF [years]	368

Mechanical data

Weight [g]	61.4
Housing	Threaded type
Dimensions [mm]	M18 x 1 / L = 72
Thread designation	M18 x 1
Material	stainless steel (1.4404 / 316L); PA; LCP; FKM; TPU (urethane)
Lens material	glass

Displays / operating elements

Display	Switching status	1 x LED, yellow
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Accessories

Items supplied	lock nuts: 2
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Remarks

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

Electrical connection

Connector: 1 x M12; coding: A



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Connection



Diagrams and graphs



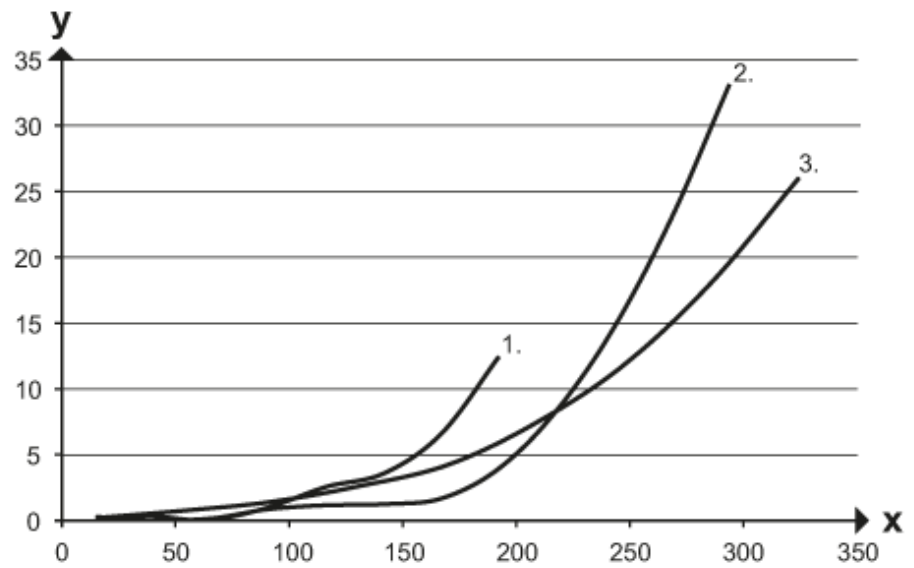
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



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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)