



Model Number

RLG28-55-4921/40a/73c/136

Retroreflective area sensor with 4-pin, M12 x 1 connector

Features

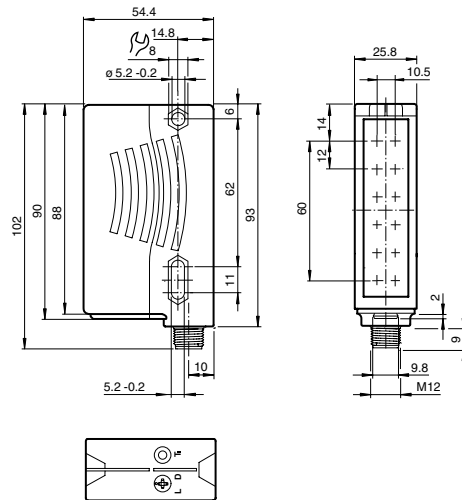
- Retro-reflective area sensor with 6 light beams in standard photoelectric-sensor enclosure
- Connection compatibly replaces single beam photoelectric sensor
- Reliable detection of the front edge of the object irrespective of its shape and position
- Constant object detection from 12 mm within the entire detection area
- Reliable detection of all surfaces irrespective of the object texture
- Switches when contrast difference 10%
- Bright, highly visible transmitter beams, guarantee convenient alignment of the sensor

Product information

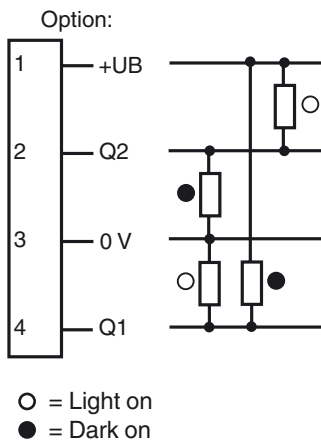
The RLG28 retro-reflective area sensor contains several transmitters and receivers in one housing and with a reflector positioned opposite forms a 60 mm detection area over a sensing range of 4 m.

When the light beams are interrupted by an object, the switching function is triggered. The smallest detectable object size is 12 mm. The RLG28 switches at a 10% contrast difference with a response time of 1 ms.

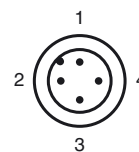
Dimensions



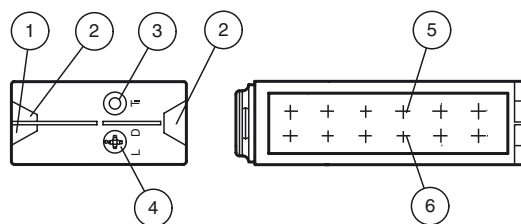
Electrical connection



Pinout



Indicators/operating means



1	Operating display	green
2	Signal display	yellow
3	TEACH-IN button	
4	Light/dark switch	
5	Emitter	
6	Receiver	

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Subject to modifications without notice

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411
fa-info@pepperl-fuchs.com

Copyright Pepperl+Fuchs
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

Technical data**General specifications**

Effective detection range	0 ... 4 m
Reflector distance	H60 reflector: 0.4 ... 4 m , H85-2 reflector: 0.2 ... 4 m , Foil reflector OFR-100/100: 0.4 ... 3 m
Threshold detection range	5.6 m
Sensing range	typical 60 mm Object has to cover the reflector completely in one dimension
Reference target	H60 reflector , H85-2 reflector , Foil reflector OFR-100/100
Light source	LED
Light type	modulated visible red light , 625 nm
Diameter of the light spot	approx. 220 mm at detection range 4 m
Angle of divergence	+/- 2.5 °
Ambient light limit	5000 Lux
Resolution	Effective operating range: 12†mm to 4†m / Detection/capture range: 60†mm (no foreground suppression) Effective operating range: 5†mm to 1†m / Detection/capture range: 55†mm (foreground suppression: 150†mm in front of the sensor; 50†mm in front of the reflector) Effective operating range: 5†mm to 1.5†m / Detection/capture range: 40†mm (foreground suppression: 150†mm in front of the sensor; 50†mm in front of the reflector)

Functional safety related parameters

MTTF _d	310 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operating display	LED green, statically lit Power on Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) short-circuit : LED green flashing (approx. 4 Hz)
Function display	2 LEDs yellow, light up when light beam is free, flash when falling short of the stability control, off when light beam is interrupted Teach-In : LED yellow/green; equiphase flashing; 2,5 Hz
Controls	rotary switch for light/dark , TEACH-IN key

Electrical specifications

Operating voltage	U _B	12 ... 30 V DC Power from Class 2 Power Source
Ripple		max. 10 %
No-load supply current	I ₀	max. 50 mA

Output

Switching type	light/dark on, switchable	
Signal output	2 push-pull (4 in 1) outputs, complementary, short-circuit proof, reverse polarity protected	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U _d	≤ 2.5 V DC
Switching frequency	f	230 Hz
Response time		1 ms

Ambient conditions

Ambient temperature	-10 ... 40 °C (14 ... 104 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Protection degree	IP67
Connection	connector M12 x 1, 4-pin
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	100 g

Compliance with standards and directives

Directive conformity	
Low Voltage Directive 2006/95/EC	EN 60947-5-2
EMC Directive 2004/108/EC	EN 60947-5-2

Approvals and certificates

Protection class	II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 , functional insulation acc. to DIN EN 50178
UL approval	cULus Listed, Class 2 Power Source
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

Note**Mounting:**

Ensure that the transmitted red light fully illuminates the reflector.

To ensure optimal detection, the entire 60 mm high light spot must appear on the reflector.

Accessories**OMH-05**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-07

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-21

Mounting bracket

OMH-RLK29-HW

Mounting bracket for rear wall mounting

OMH-K01

dove tail mounting clamp

REF-H60

Reflector, rectangular 40.5 mm x 60 mm, mounting holes

REF-H85-2

Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes

V1-G-2M-PVC

Cable socket, M12, 4-pin, PVC cable

V1-G-2M-PUR

Cable socket, M12, 4-pin, PUR cable

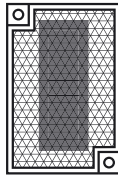
V1-W-2M-PUR

Cable socket, M12, 4-pin, PUR cable

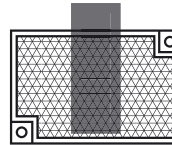
Additional accessories can be found in the Internet.

To check this illumination, look at the reflector from over the top of the the sensor housing.

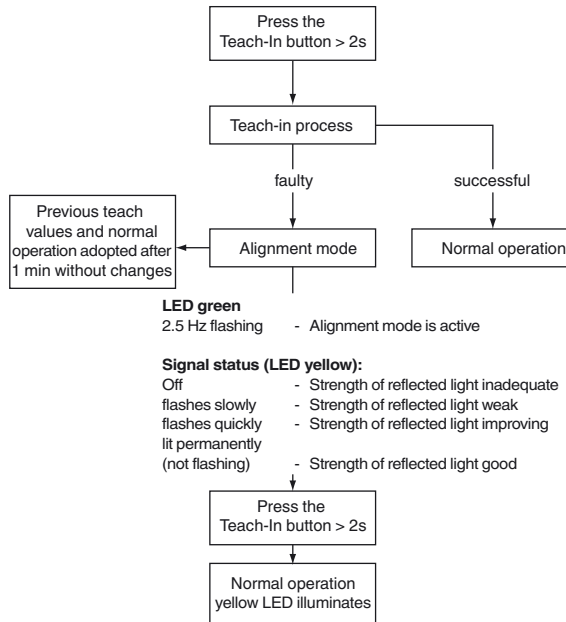
correct



incorrect



Teach-In:

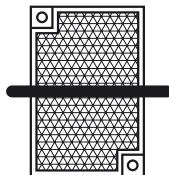


Object detection after successful Teach-In

The target should be large enough so that the reflector is always completely covered in one dimension!

optimal

target = correct coverage



not optimal

target > incorrect coverage

