



Model Number

RLG28-55-7462

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

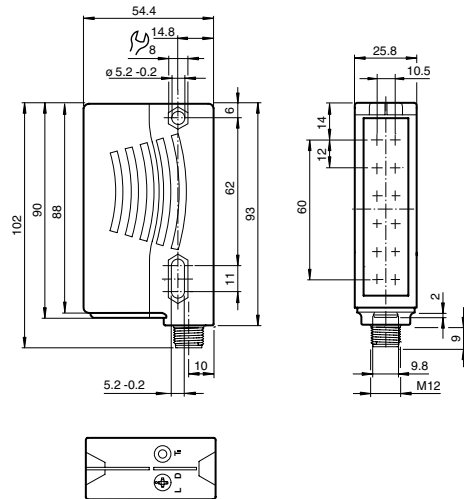
Features

- 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

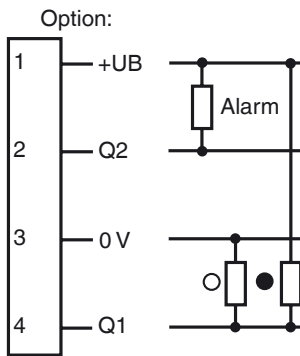
Product information

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.

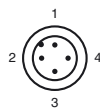
Dimensions



Electrical connection



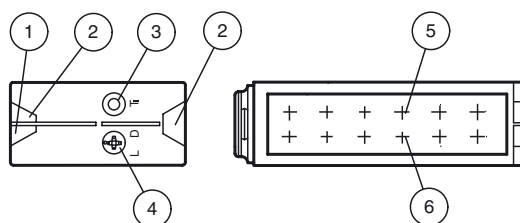
Pinout



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

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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Technical data**General specifications**

Effective detection range	0 ... 4 m
Reflector distance	Reflector A80: 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 redeflector completely in one dimension
Reference target	Reflector A80 H85-2 reflector Foil reflector OFR-100/100
Light source	LED
Light type	modulated visible red light , 625 nm
Polarization filter	yes
Number of beams	6
Diameter of the light spot	approx. 220 mm at detection range 4 m
Angle of divergence	+/- 2.5 °
Ambient light limit	5000 Lux
Resolution	12 mm
Readjustment	Receiver readjustment active after > 30 seconds

Functional safety related parameters

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

Indicators/operating means

Operation indicator	LED green, statically lit Power on Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) short-circuit : LED green flashing (approx. 4 Hz)
Function indicator	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
Control elements	rotary switch for light/dark , Teach-In key

Electrical specifications

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

Output

Pre-fault indication output	1 Push-pull output, active when there is sufficient operating reserve, inactive when there is not sufficient operating reserve, alternates for at least 10 seconds when the signal quality is poor (to check alignment and perform teach-in)	
Switching type	light/dark on, switchable	
Signal output	1 push-pull (4 in 1) output, short-circuit protected, 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

Conformity

Product standard	EN 60947-5-2
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Ambient conditions

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

Mechanical specifications

Housing width	25.8 mm
Housing height	88 mm
Housing depth	54.3 mm
Degree of protection	IP67
Connection	4-pin, M12 x 1 connector
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	100 g

Approvals and certificates

UL approval	E87056 , cULus Listed , class 2 power supply , type rating 1
CCC approval	CCC approval / marking not required for products rated ≤36 V

Notes**Mounting:**

Ensure that the red light transmitted by the sensor fully illuminates the reflector.
To ensure optimal detection, the entire 60 mm detection field 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-H85-2

Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes

V1-G-2M-PVC

Female cordset, M12, 4-pin, PVC cable

V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

REF-A80

Reflector, rectangular 80 mm x 50 mm, self-adhesive

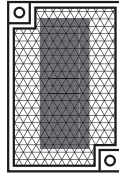
OFR-100/100

Reflective tape 100 mm x 100 mm

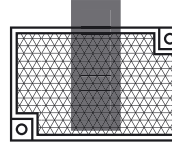
Additional accessories can be found in the Internet.

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

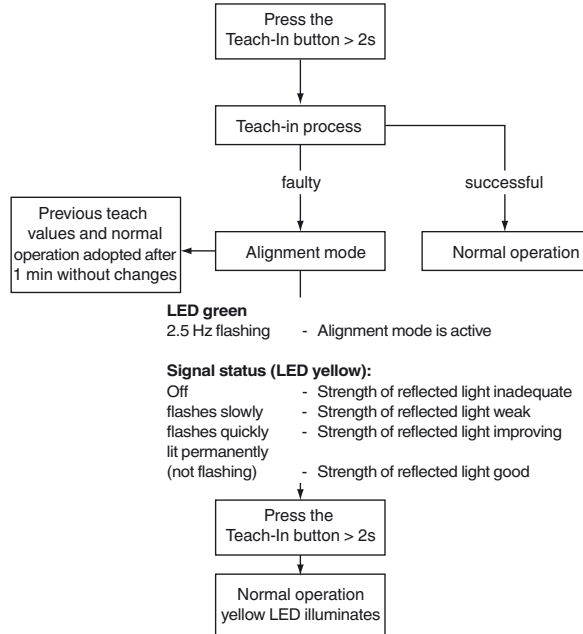
correct



incorrect



Teach-in:



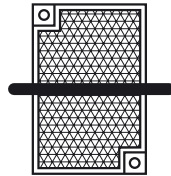
More stringent adjustment requirements: Ensure that the device is correctly aligned in the near range of 0.2 m ... 0.6 m.

Object detection after successful Teach-in

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

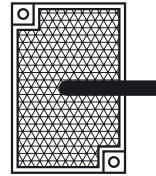
optimal

object = resolution



not optimal

object > resolution





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