Model Number

RLG28-55-7226

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 0,6 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. An intelligent gain control compensates for effects such as dirt, misalignment, and temperature.

Dimensions
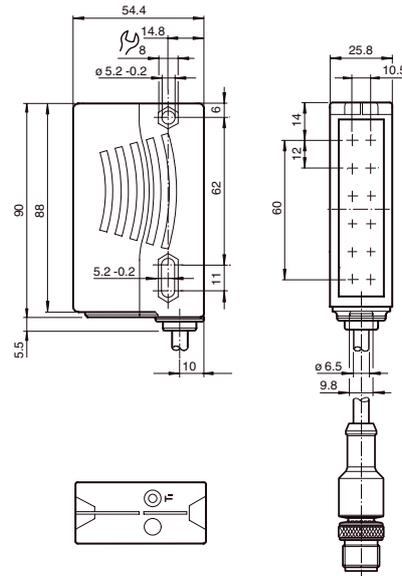
Electrical connection

Option:

1	+UB
2	Q2
3	0 V
4	Q1
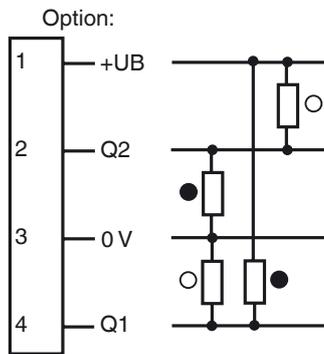
○ = Light on
● = Dark on

Pinout
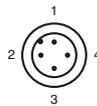
Wire colors in accordance with EN 60947-5-2

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

Indicators/operating means
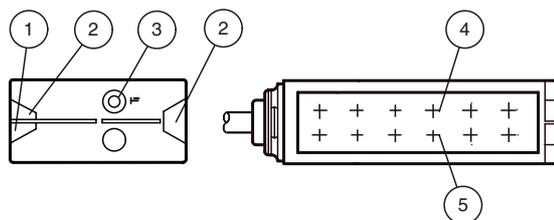
1	Operating display	green
2	Signal display	yellow
3	TEACH-IN button	
4	Emitter	
5	Receiver	

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical data

General specifications

Effective detection range	0 ... 0.6 m
Reflector distance	0.15 ... 0.6 m
Threshold detection range	1 m
Sensing range	typical 60 mm , Object has to cover the refelector completely in one dimension
Reference target	Reflector H50x100 , H85-2 reflector
Light source	LED
Light type	modulated visible red light , 625 nm
Polarization filter	yes
Number of beams	6
Angle of divergence	+/- 2.5 °
Ambient light limit	5000 Lux
Resolution	12 mm

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	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

Switching type		light/dark on
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

Conformity

Product standard	EN 60947-5-2

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	300 mm fixed cable with M12 x 1, 4-pin connector
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	100 g

Approvals and certificates

UL approval	cULus Listed, Class 2 Power Source
CCC approval	CCC approval / marking not required for products rated ≤36 V

Notes

Mounting:
Ensure that the red light emitted by the sensor fully illuminates the reflector.
To ensure detection in the sensor field, 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

REF-H50x100
Reflector, rectangular 122 mm x 49.5 mm, mounting holes

V1-G-2M-PUR
Female cordset, M12, 4-pin, PUR cable

V1-W-2M-PUR
Female cordset, M12, 4-pin, PUR cable

Other suitable accessories can be found at www.pepperl-fuchs.com

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

correct   **incorrect**

Teach-in:

Press the Teach-in button > 2 seconds

Teach-in procedure

Faulty   Successful
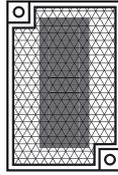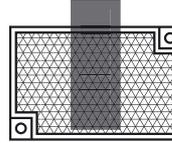
Fault indication → Normal operation
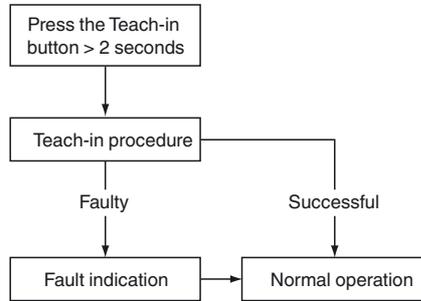
Object detection after successful Teach-in

The objects to be detected should be large enough so that the reflector is always completely covered in one dimension.

optimal
Object = resolution

not optimal
Object > resolution

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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