



Retroreflective area sensor

RLG28-55-7226



- 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

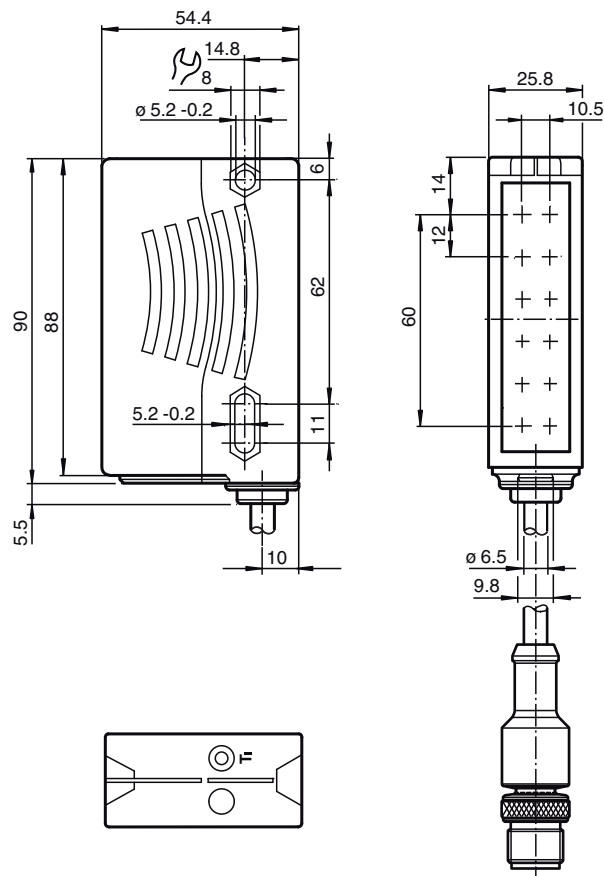
Retroreflective area sensor with 6 beams in the standard photoelectric-sensor enclosure, red light, 0.6 m detection range, light/dark on, push-pull output, fixed cable with socket



Function

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



Technical Data

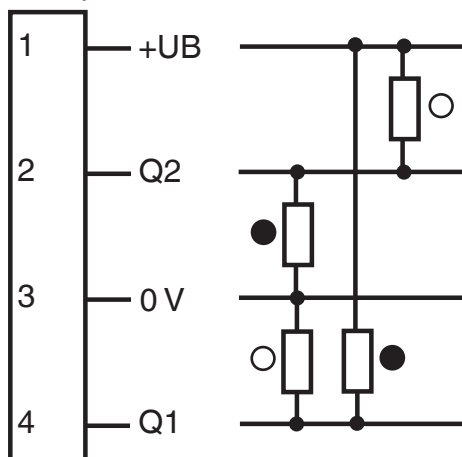
General specifications	
Effective detection range	0 ... 0.6 m
Reflector distance	0.15 ... 0.6 m
Threshold detection range	1 m
Sensing range	typical 60 mm , Object has to cover the reffector completely in one dimension
Reference target	Reflector H50x100 , H85-2 reflector
Light source	LED
Light type	modulated visible red light , 625 nm
Polarization filter	yes
Number of beams	6
Opening angle	+/- 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)

Technical Data

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

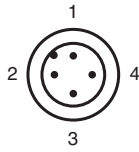
Connection Assignment

Option:



- = Light on
- = Dark on

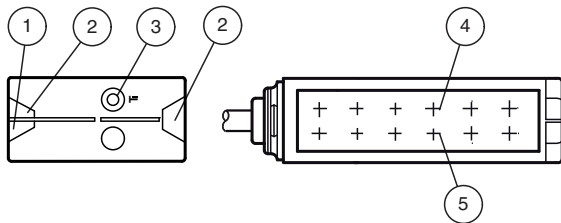
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Assembly



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

Accessories

	OMH-05	Mounting aid for round steel \varnothing 12 mm or sheet 1.5 mm ... 3 mm
	OMH-21	Mounting bracket: mounting aid for sensors in the RL* series
	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 single-ended M12 straight A-coded, 4-pin, PUR cable grey
	V1-W-2M-PUR	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey

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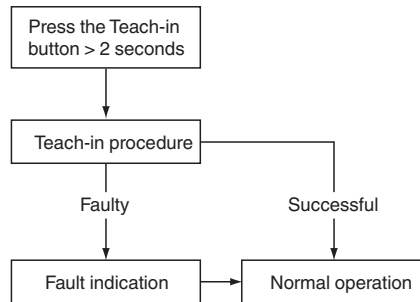
Additional Information

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



Teach-in:



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.

