Dimensions

Terminal compartment

81.8
75
64
6
45
ø 5.4
ø 5.4
PG9
25
40.5
28.4
Optical axis receiver
Optical axis emitter

Back view (with cover removed)

19
17
15
LED yellow
LED red

LED yellow
LED red
D   L

only for version -Z: Timer mode switch
1 2 3 4
only for version -Z: Time adjuster
Sensivity adjuster
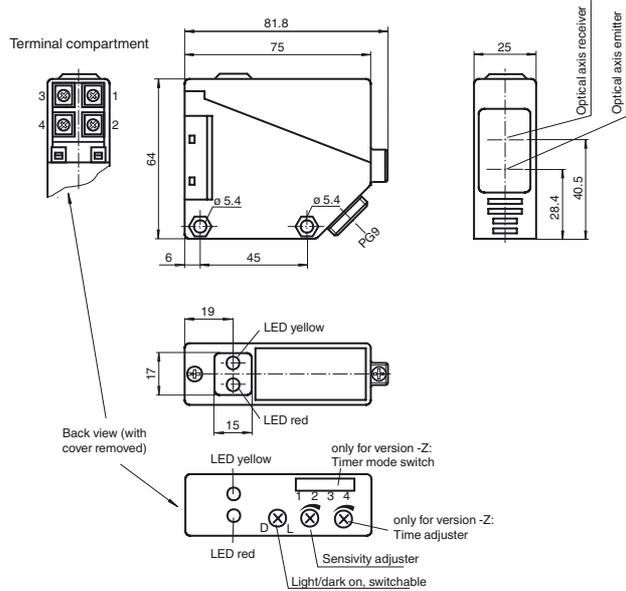Light/dark on, switchable

Model Number

RL39-8-2000/32/40a/82a/116
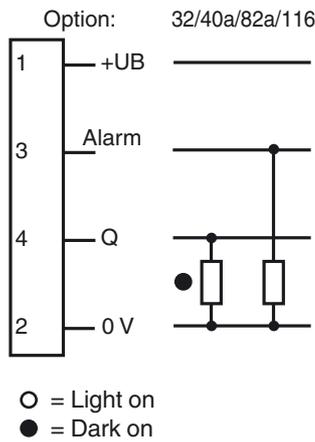
Diffuse mode sensor
with terminal compartment

Features

- Infrared light
- Light/dark ON, switchable
- Degree of protection IP67

Electrical connection

Option: 32/40a/82a/116

1 — +UB

3 — Alarm

4 — Q

2 — 0 V

○ = Light on
● = Dark on

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Technical data

General specifications

Detection range	0 ... 2000 mm
Adjustment range	200 ... 2000 mm
Reference target	standard white 200 mm x 200 mm
Light source	IRED
Light type	modulated infrared light
Ambient light limit	IEC / EN 60947-5-2 , 10000 Lux

Functional safety related parameters

$MTTF_d$	800 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Function indicator	LED yellow: switching state LED red: pre-fault indication
Control elements	Sensing range adjuster, light-on/dark-on changeover switch

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I_0	≤ 20 mA
Time delay before availability	t_v	≤ 300 ms

Output

Pre-fault indication output		1 PNP, active when falling short of the stability control
Switching type		light/dark on
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 200 mA , resistive load
Voltage drop	U_d	≤ 3 V
Switching frequency	f	≤ 300 Hz
Response time		≤ 1.5 ms

Conformity

Product standard	EN 60947-5-2

Ambient conditions

Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Housing width	25 mm
Housing height	64 mm
Housing depth	75 mm
Degree of protection	IP67
Connection	terminal compartment PG9, ≤ 2.5 mm²
Material	
Housing	PBT
Optical face	PMMA
Mass	approx. 100 g

General information

Scope of delivery	Mounting aid

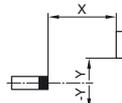### Approvals and certificates

CCC approval	CCC approval / marking not required for products rated ≤36 V
Approvals	CE

Curves/Diagrams

Characteristic response curve

Offset Y [mm] vs Distance X [mm]
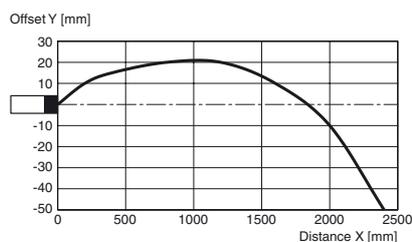
Permissible distance (offset) between optical axis and object.

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Additional Information

Conventional use:

The reflex light scanner contains the emitter and receiver in a single housing. The light from transmitter is beamed back from the recorded object is evaluated by the receiver. The detection range depend on the object colour. With dark or very small objects the detection range reduces.

Mounting instructions:

The sensor can be fastened over the through-holes directly or with the included mounting bracket.
The base surface must be flat to avoid distorting the housing during mounting. It is advisable to secure the bolts and screws with washers so that the sensor does not become misaligned.

Instructions for adjustment:

Adjust the sensor on the background. If the yellow LED illuminates, the detection range needs to be reduced with the detection range adjuster, until the yellow LED goes off.

Object detection check:

Position the object into the light beam. Position light spot on object. If the object is detected, the yellow LED illuminated. If it does not light up, further to adjust the detection range with the potentiometer, until the yellow LED lights up.
The red LED flashes if reception deteriorates (e.g. soiled lenses or by maladjustment) and when falling short of the stability control.

Iustration:

We recommend that you clean the optical interfaces and check the plug-in connections and screw connections at regular intervals.

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

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