

# Diffuse mode sensor

## RL39-8-800/30/40a/116/126a

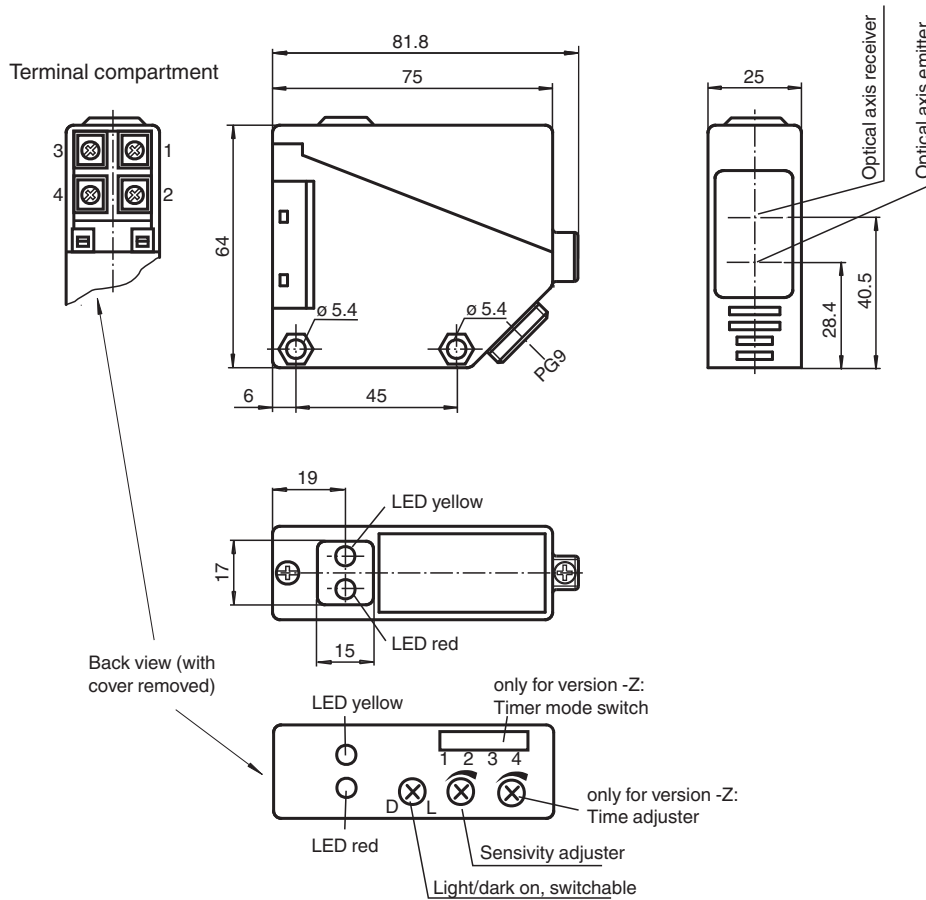


- Infrared light
- Light-on/dark-on, switchable
- Degree of protection IP67

Diffuse mode sensor



### Dimensions



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

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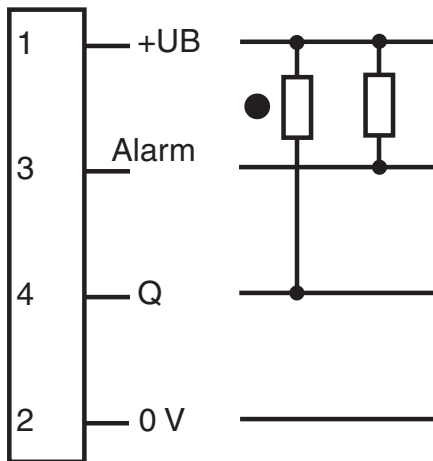
PEPPERL+FUCHS

## Technical Data

General specifications		
Detection range		0 ... 800 mm
Adjustment range		150 ... 800 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 <sub>d</sub>		916 a
Mission Time (T <sub>M</sub> )		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 <sub>B</sub>	10 ... 30 V DC
Ripple		10 %
No-load supply current	I <sub>0</sub>	≤ 20 mA
Time delay before availability	t <sub>v</sub>	≤ 300 ms
Output		
Stability alarm output		1 NPN, active when falling short of the stability control
Switching type		light/dark on
Signal output		1 NPN 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 <sub>d</sub>	≤ 3 V
Switching frequency	f	≤ 300 Hz
Response time		≤ 1.5 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
CCC approval		CCC approval / marking not required for products rated ≤36 V
Approvals		CE
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 mm <sup>2</sup>
Material		
Housing		PBT
Optical face		PMMA
Mass		approx. 100 g
General information		
Scope of delivery		Mounting aid

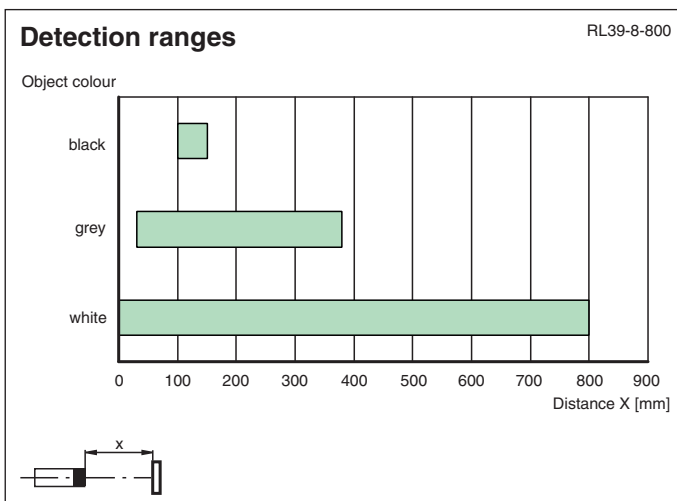
## Connection Assignment

Option: 30/40a/116/126a



- = Light on
- = Dark on

## Characteristic Curve



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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.

**Illustration:**

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