

Diffuse mode sensor

RL39-8-2000/32/40a/73c/82a

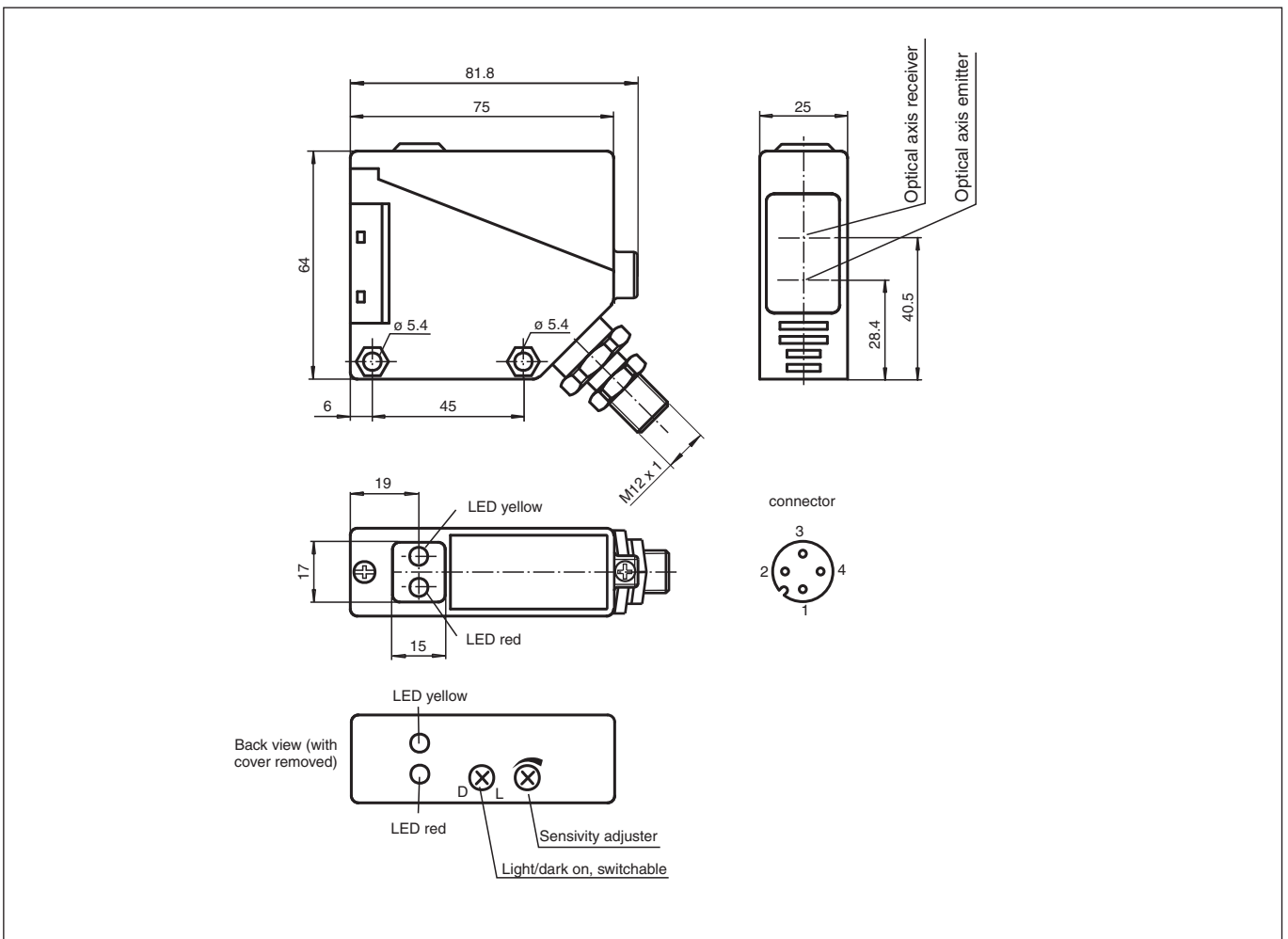


- Infrared light
- Light-on/dark-on, switchable
- Degree of protection IP67

Diffuse mode sensor



Dimensions



Release date: 2022-08-08 Date of issue: 2022-08-08 Filename: 088826_eng.pdf

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

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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		IREC
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
Approvals and certificates		
EAC conformity		TR CU 020/2011
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		4-pin, M12 x 1 connector
Material		
Housing		PBT
Optical face		PMMA
Mass		approx. 100 g
General information		
Scope of delivery		Mounting aid

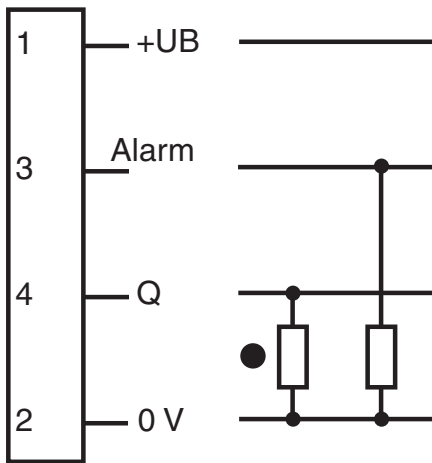
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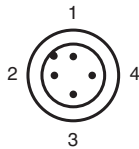
Connection Assignment

Option: 32/40a/82a



- = Light on
- = Dark on

Connection Assignment

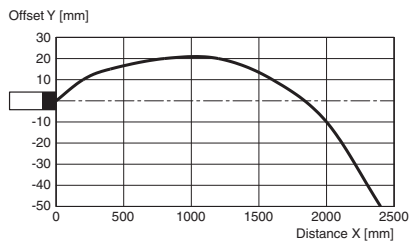


Wire colors in accordance with EN 60947-5-2

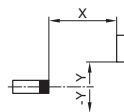
1		BN	(brown)
2		WH	(white)
3		BU	(blue)
4		BK	(black)

Characteristic Curve

Characteristic response curve



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.

Illustration:

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