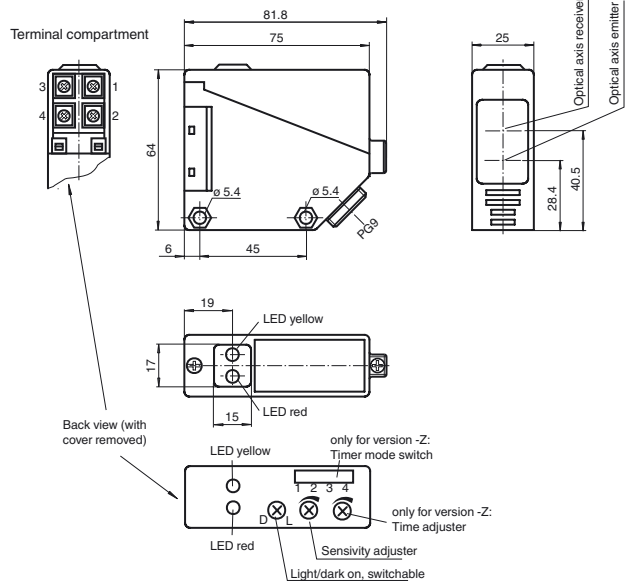## Model Number

RLK39-8-2000/31/40a/116

Diffuse mode sensor
with terminal compartment
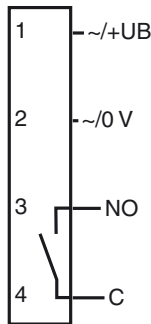
Features

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

Dimensions

Terminal compartment

81.8
75
64
6
45
ø 5.4
ø 5.4
PG9

25
Optical axis receiver
Optical axis emitter
28.4
40.5

19
17
15
LED yellow
LED red

Back view (with cover removed)

LED yellow
LED red

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

Electrical connection

1 — ~/+UB

2 — ~/0 V

3 — NO

4 — C

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Technical data

General specifications

Detection range	0 ... 2000 mm
Adjustment range	75 ... 2000 mm
Reference target	standard white 200 mm x 200 mm
Light source	IRED
Light type	modulated infrared light
Ambient light limit	10000 Lux

Functional safety related parameters

$MTTF_d$	1002 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	Detection range adjuster, light/dark switch

Electrical specifications

Operating voltage	U_B	12 ... 240 V DC 24 ... 240 V AC (50 ... 60 Hz)
Ripple		10 %
No-load supply current	I_0	≤ 35 mA
Power consumption	P_0	≤ 3 VA
Time delay before availability	t_v	≤ 50 ms

Output

Switching type		light/dark on
Signal output		1 relay output
Switching voltage		≤ 240 V AC
Switching current		max. 3 A
Switching frequency	f	≤ 25 Hz
Response time		≤ 20 ms

Standard conformity

Standards	EN 60947-5-2

Ambient conditions

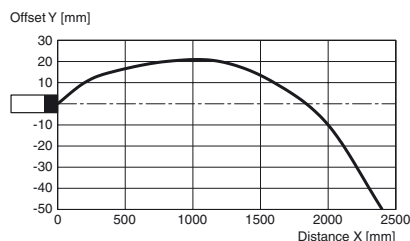|	
Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Degree of protection	IP67
Connection	terminal compartment PG9, ≤ 2.5 mm^2
Material	
Housing	PBT
Optical face	PMMA
Mass	110 g

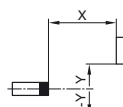### Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

CCC approval	Certified by China Compulsory Certification (CCC)
Approvals	CE

Accessories

OMH-RL39
Mounting bracket for RL39 series Sensors

Curves/Diagrams

Characteristic response curve

Permissible distance (offset) between optical axis and object.

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 4411
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

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Release date: 2014-04-03 12:03   Date of issue: 2014-04-03   088827_eng.xml

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".

Pepperl+Fuchs Group   USA: +1 330 486 0001   Germany: +49 621 776 4411   Singapore: +65 6779 9091
www.pepperl-fuchs.com   fa-info@us.pepperl-fuchs.com   fa-info@de.pepperl-fuchs.com   fa-info@sg.pepperl-fuchs.com

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