Dimensions

Terminal compartment

81.8
75
64
ø 5.4
ø 5.4
PG9
6
45

25
40.5
28.4

Optical axis receiver
Optical axis emitter

19
17
LED yellow
LED red
15

Back view (with cover removed)

LED yellow

only for version -Z:
Timer mode switch
1 2 3 4

only for version -Z:
Time adjuster

D   L

Sensivity adjuster

LED red

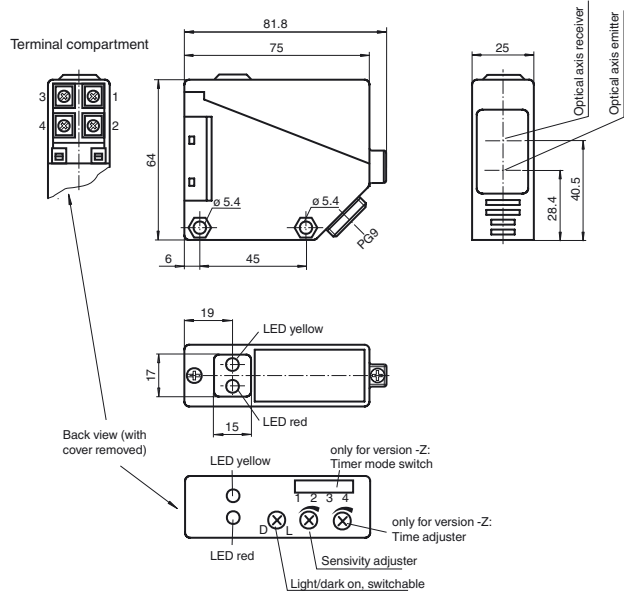Light/dark on, switchable

Model Number

RLK39-54-Z/31/40a/116

Retroreflective sensor
with terminal compartment

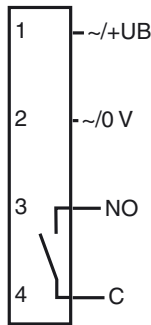## Features

- Glare protected with polarization filter
- Visible red light
- Light/dark ON, switchable
- Timer function
- Degree of protection IP67

Electrical connection

1 — ~/+UB

2 — ~/0 V

3 — NO

4 — C

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

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Technical data

General specifications

Effective detection range	0 ... 5 m
Reflector distance	0.1 ... 5 m
Threshold detection range	6 m
Reference target	H50 reflector
Light source	LED red
Light type	modulated visible red light
Polarization filter	yes
Ambient light limit	IEC / EN 60947-5-2 , 10000 Lux

Functional safety related parameters

$MTTF_d$		803 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
Control elements	switch for timer function

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	≤ 50 mA
Protection class		II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Caution! The protection class 2 is only valid when the terminal compartment is closed. output circuit has basic insulation to control circuit according to IEC/EN 61140
Power consumption	P_0	≤ 3 VA
Time delay before availability	t_v	≤ 300 ms

Output

Switching type		light/dark on
Signal output		1 relay output
Switching voltage		max. 240 V AC ; 150 V DC
Switching current		max. 3 A
Switching power		DC: max. 90 W AC: max. 750 VA
Switching frequency	f	≤ 25 Hz
Response time		≤ 20 ms
Timer function		On-/off-delay or pulse extension on choice

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^2
Material	
Housing	PBT
Optical face	PMMA
Mass	approx. 110 g

General information

Scope of delivery	Mounting aid , Reflector

Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
EMC Directive 2004/108/EC	EN 60947-5-2:2007+A1:2012 IEC 60947-5-2:2007+A1:2012
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

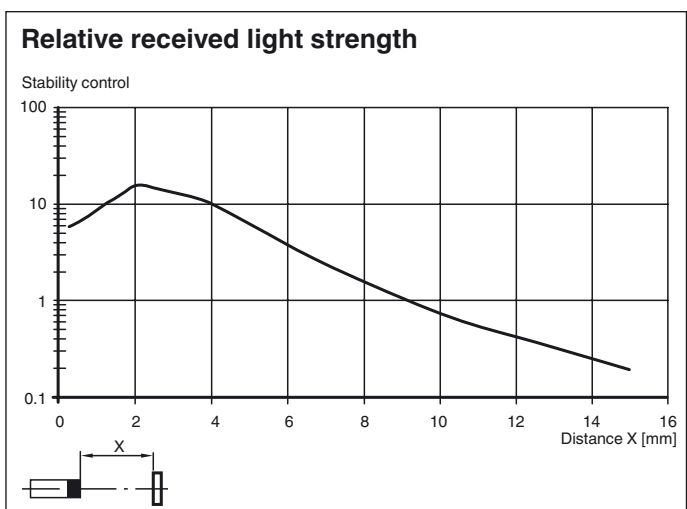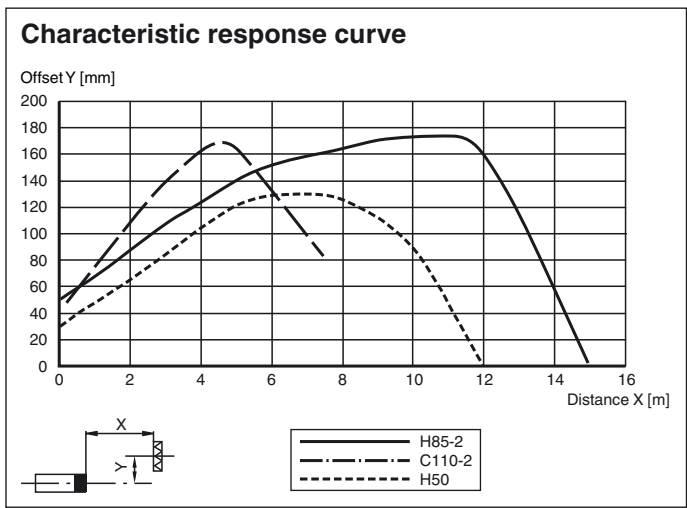### Approvals and certificates

EAC conformity	TR CU 020/2011 TR CU 004/2011
CCC approval	Certified by China Compulsory Certification (CCC)
Approvals	CE

Accessories

OMH-RL39
Mounting bracket for RL39 series Sensors

Other suitable accessories can be found at www.pepperl-fuchs.com

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

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Curves/Diagrams

Characteristic response curve

Offset Y [mm]

Distance X [m]

	H85-2
	C110-2
	H50

Relative received light strength

Stability control

Distance X [mm]

Light beam / Timer Mode

○ Denotes Light - ON T= 0.1 .... 10 sec.

● Denotes Dark - ON

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

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