

Model Number

RLK61-8-4000-Z/31/115

Diffuse mode sensor
with fixed cable

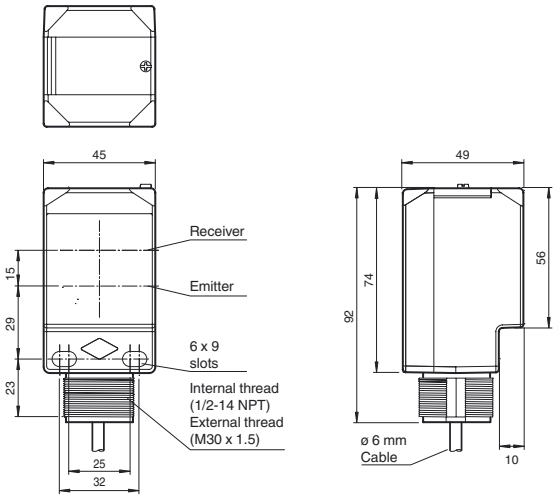
Features

- Cost-optimized series for standard tasks in a special design
- Compact design
- Wide range of mounting options thanks to cubic housing design with M30 thread
- 360° high visibility LEDs
- Programmable ON-delay, OFF-delay, and One-shot timers
- Version for universal voltages
- Relay output

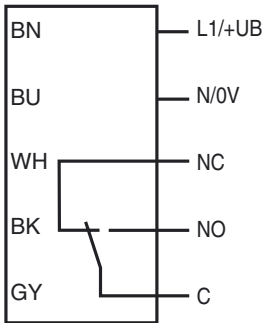
Product information

The Series 61 sensor family is a comprehensive product line, offering five sensing modes. Each sensor is equipped with four LEDs that are highly visible from all directions, indicating Power-On, target presence and marginal excess gain. The widely recognized, polycarbonate housing provides a IP67 protection degree rating. Color-coded labels are clearly printed on the housing to easily identify the sensing mode. DC models offer a 4-in-1 output while AC/DC models have a SPDT relay output rated to 3 A. All versions come standard with an integral multifunction timer, sensitivity adjustment and Light-ON/Dark-ON switch. Series 61 sensors are cross-talk protected and have a high degree of resistance to ambient lighting. Each sensor can be mounted via front and rear slots, rear dovetail guide or M30 x 1.5 mounting base. Additionally, cabled sensor models provide ½" - 14 NPT internal threads for use with flexible conduit.

Dimensions

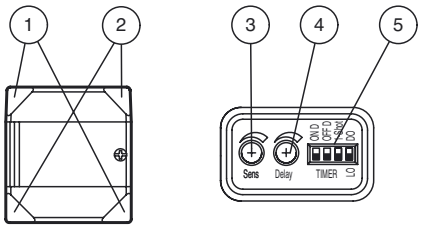


Electrical connection



The relay-functions "NC" and "NO" bear on the switching mode "Light-ON".
This complies to the default setting of the light/dark switch, located on top of the housing (factory setting).

Indicators/operating means



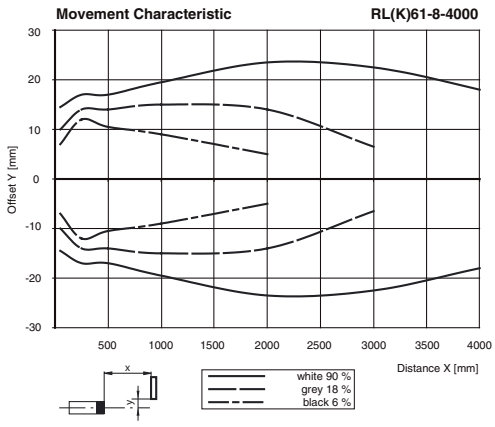
1	Operating display	green
2	Signal display	yellow
3	Sensing range adjuster	
4	Time adjuster	
5	DIP-switches	

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Technical data

General specifications		
Detection range		0 ... 4000 mm adjustable
Adjustment range		270 ... 4000 mm
Reference target		standard white 200 mm x 200 mm
Light source		IRED
Light type		modulated infrared light , 850 nm
Diameter of the light spot		approx. 45 mm at a distance of 4000 mm
Angle of divergence		0.7 °
Ambient light limit		5000 Lux ; according EN 60947-5-2
Indicators/operating means		
Operation indicator		2 LEDs green
Function indicator		2 LEDs yellow ON: object inside the scanning range OFF: object outside the scanning range
Control elements		Light/Dark switch
Control elements		Detection range adjuster
Control elements		Time adjuster (0 ... 10 s)
Electrical specifications		
Operating voltage	U_B	24 ... 240 V AC 12 ... 240 V DC
No-load supply current	I_0	≤ 35 mA
Protection class		II , rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Output circuit basis insulation of input circuit according to EN 50178, rated insulation voltage 240 V AC
Power consumption	P_0	≤ 2 VA
Output		
Switching type		light/dark on, switchable
Signal output		Relay, 1 alternator
Switching voltage		max. 250 V AC/DC
Switching current		max. 3 A
Switching power		DC: max. 150 W AC: max. 750 VA
Switching frequency	f	20 Hz
Response time		≤ 25 ms
Timer function		DIP-switch for selection of operating modes
Ambient conditions		
Ambient temperature		-40 ... 55 °C (-40 ... 131 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		2 m fixed cable
Material		
Housing		PC (Polycarbonate)
Optical face		PMMA
Mass		240 g
Tightening torque, fastening screws		≤ 2 Nm
Compliance with standards and directives		
Standard conformity		
Product standard		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
UL approval		cULus
CCC approval		Certified by China Compulsory Certification (CCC)

Curves/Diagrams



Accessories

MPZB01
Mounting bracket with vertical slots

MPZB02
Mounting bracket with circular slots

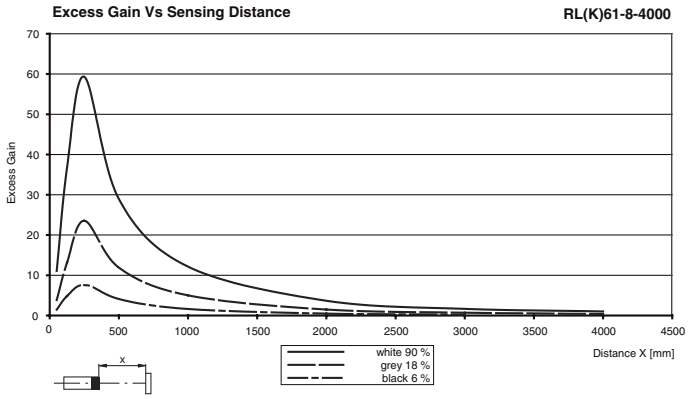
MPZB06
Ball and Swivel Mounting Bracket

MPZB07
Ball and Swivel Vertical Mounting Plate

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

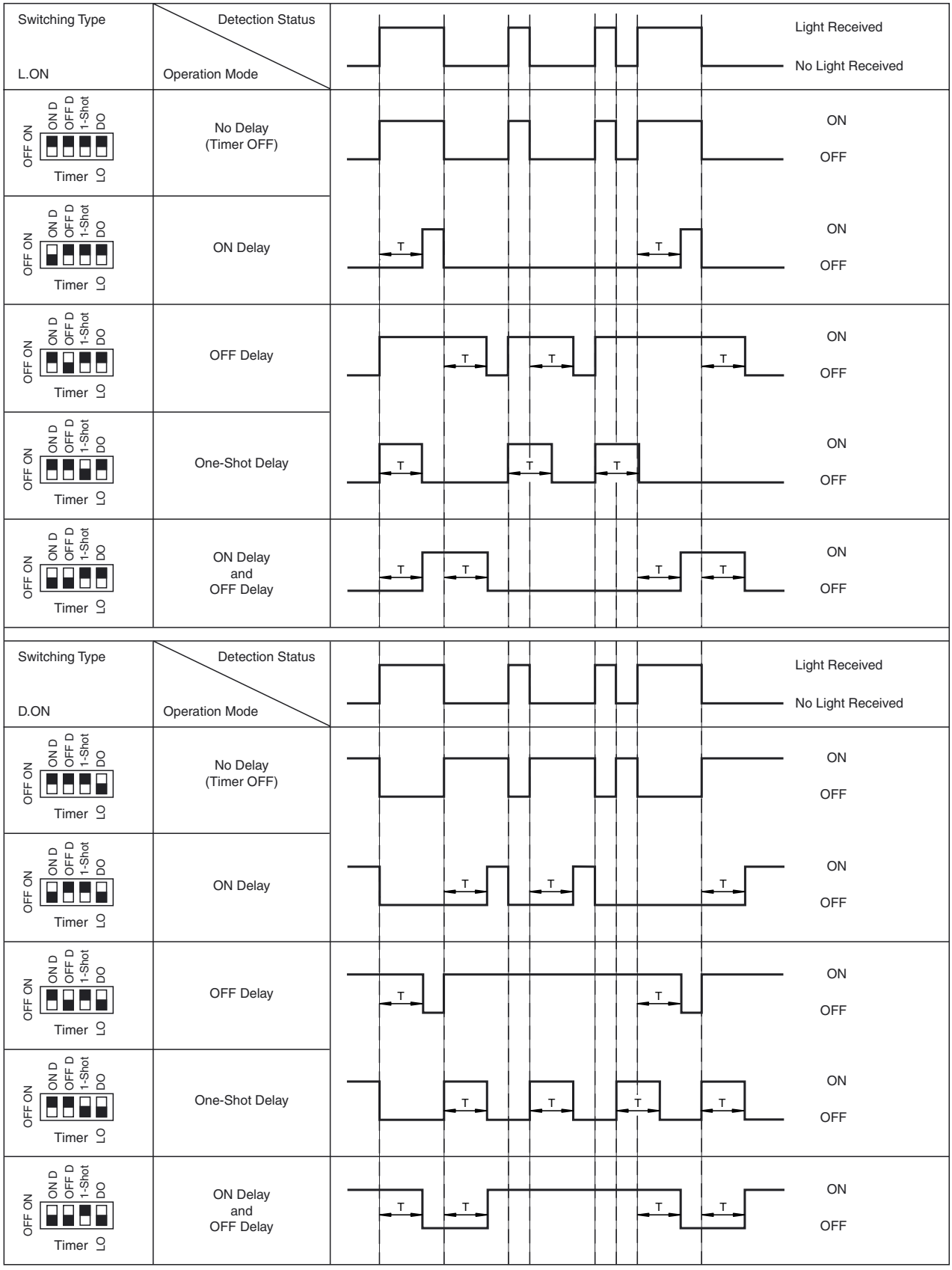
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".
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Timer Functions



DIP-Switch position

Time (T) is adjustable from 0 to 10 sec

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Adjustment Instructions

Intended use:
The diffuse mode sensor contains the emitter and receiver in a single housing. The light from transmitter is reflected back from the target object and is evaluated by the receiver. The sensing range depends on the object color and finish. With dark or very small objects, the sensing range is reduced.

Mounting instructions
The sensor can be mounted using the through-holes or with a mounting bracket (not included with delivery).
The base surface must be flat to avoid distorting the sensor housing during mounting. It is advisable to secure the bolts and screws with washers so that the sensor does not become misaligned.

Adjustment Instructions:
Adjust the sensor on the background. If the yellow LED illuminates, reduce the sensing range using the potentiometer until the yellow LED turns off.

Object detection:
Move the target into the light beam. Position the light spot on the object. If the object is detected, the yellow LED lights up. If it does not light up, further adjust the sensing range with the potentiometer until the yellow LED lights up.

Cleaning:
We recommend that you clean the optical interfaces and check all connections at regular intervals.

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