Model Number

LD61/LV61-Z/92/136

Thru-beam sensor

with 4-pin, M12 x 1 connector

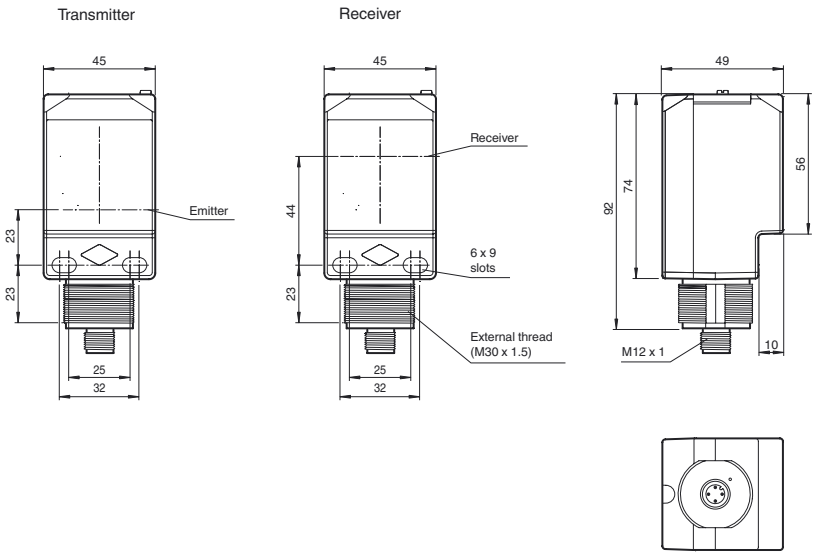
Features

- 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
- 4-in-1 output (push-pull)

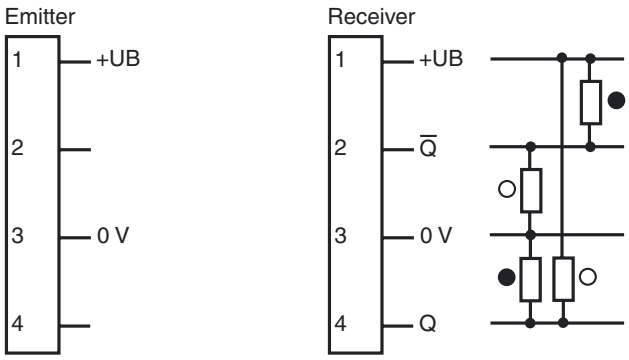
Product information

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

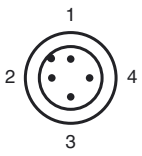


Electrical connection

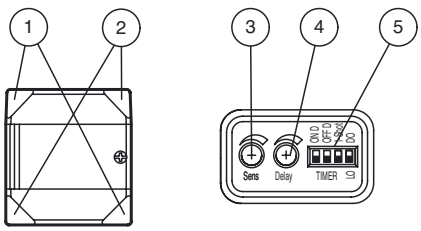


○ = Light on
● = Dark on

Pinout



Indicators/operating means



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

Release date: 2014-11-10 11:56 Date of issue: 2014-11-10 913910_eng.xml

Technical data

System components		
Emitter		LD61/92
Receiver		LV61-Z/92/136
General specifications		
Effective detection range		0 ... 60 m
Threshold detection range		85 m
Light source		IRED
Light type		modulated infrared light , 850 nm
Diameter of the light spot		approx. 1600 mm at a distance of 60 m
Angle of divergence		Emitter: 1.5 ° , Receiver: 1.5 °
Ambient light limit		5000 Lux ; according EN 60947-5-2
Indicators/operating means		
Operation indicator		2 LEDs green
Function indicator		2 LEDs yellow Receiver: receiver LED yellow, lights up when light beam is free, flashes when falling short of the stability control ; OFF when light beam is interrupted
Control elements		Light/Dark switch
Control elements		Detection range adjuster
Control elements		Time adjuster (0 ... 50 ms)
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
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
Output		
Switching type		light/dark on, switchable
Signal output		2 push-pull (4 in 1) outputs, short-circuit protected, reverse polarity protected
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Voltage drop	U_d	≤ 2.5 V
Switching frequency	f	500 Hz
Response time		≤ 1 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		M12 connector, 4-pin
Material		
Housing		PC (glass-fiber-reinforced Makrolon)
Optical face		PMMA
Mass		Emitter: 120 g Receiver: 120 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		CCC approval / marking not required for products rated ≤36 V

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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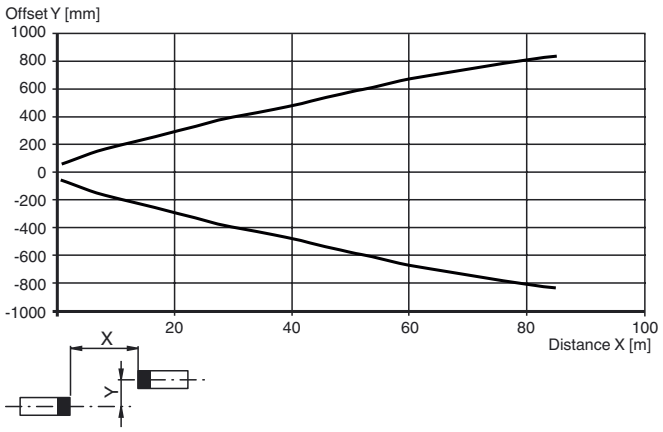
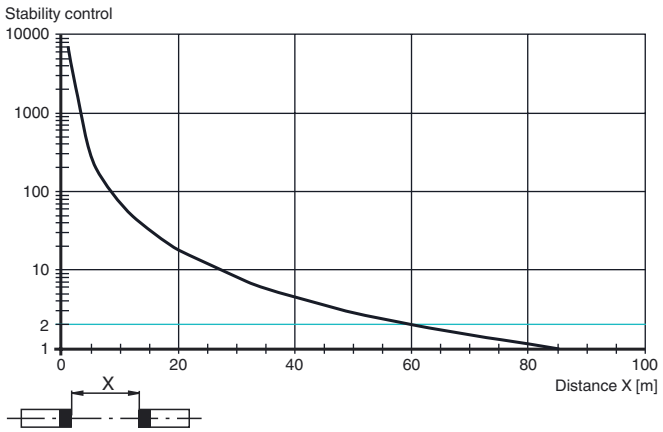
Curves/Diagrams

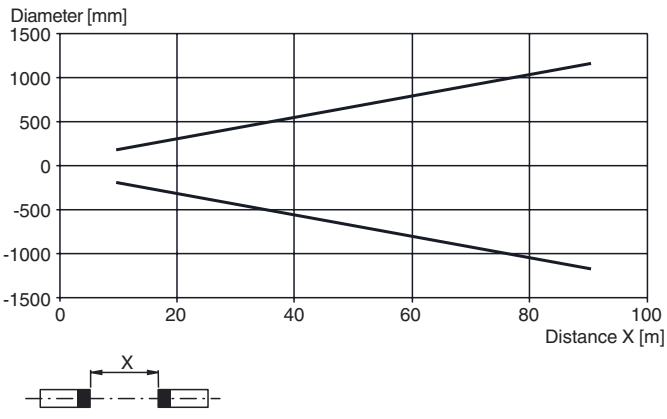
Characteristic response curve



Relative received light strength

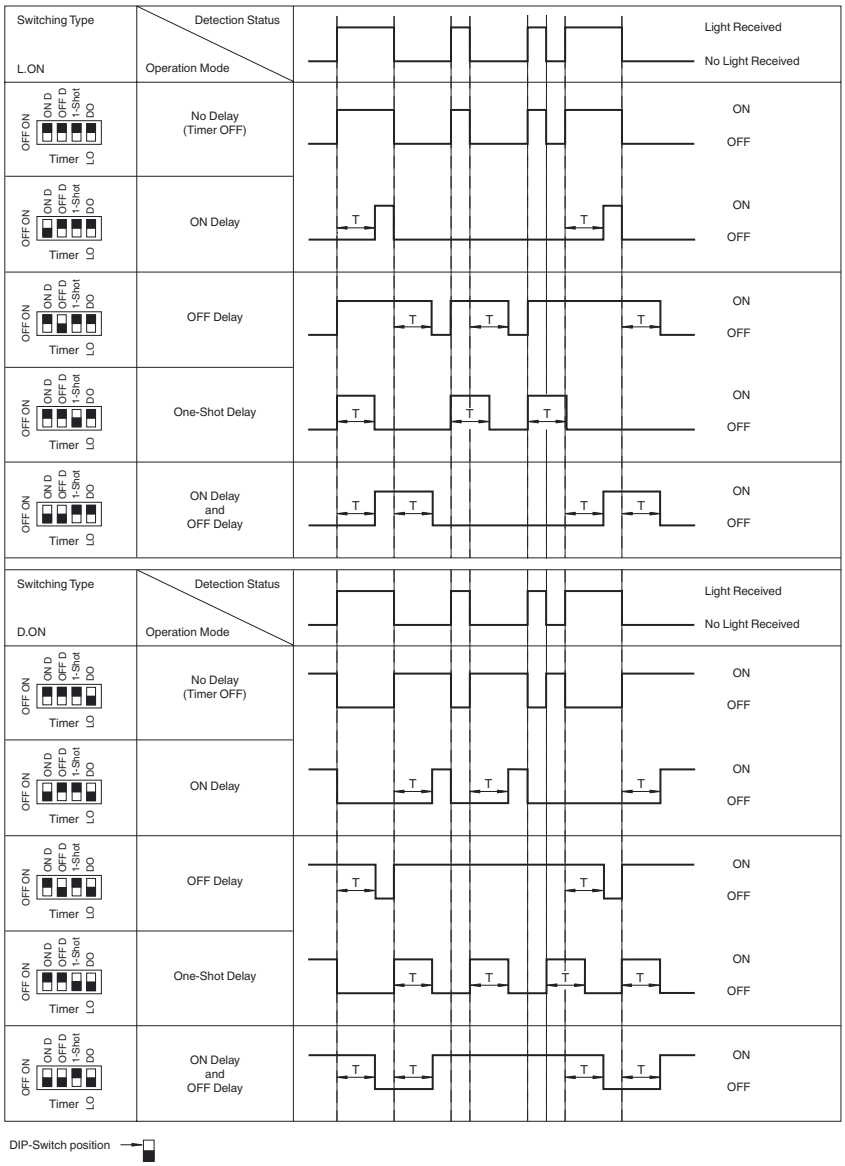


Light spot diameter



Release date: 2014-11-10 11:56 Date of issue: 2014-11-10 913910_eng.xml

Timer Functions



DIP-Switch position

Release date: 2014-11-10 11:56 Date of issue: 2014-11-10 913910_eng.xml

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