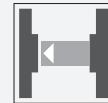




Thru-beam sensor LA61/LK61-Z/31/135



- 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

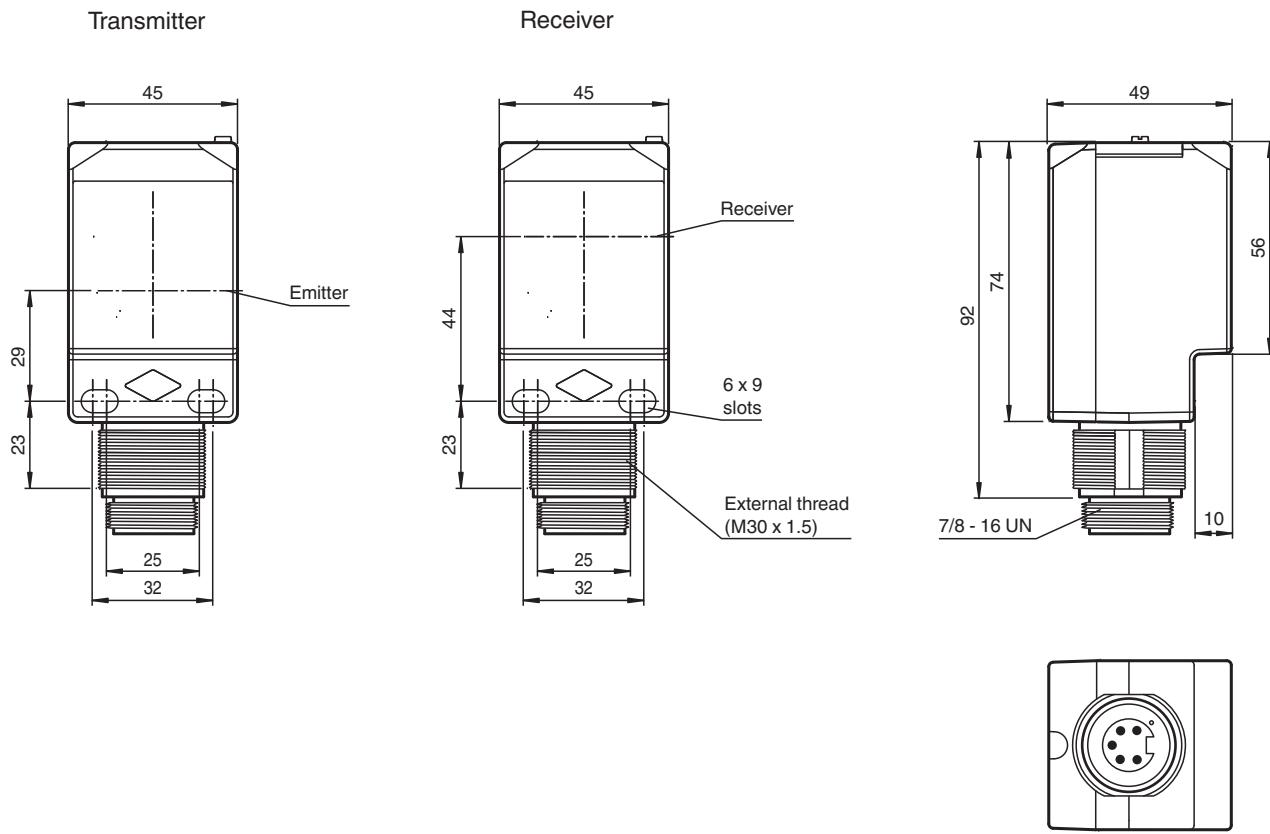
Thru-beam sensor



Function

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 1/2" - 14 NPT internal threads for use with flexible conduit.

Dimensions



Technical Data

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 913909_eng.pdf

System components		
Emitter	LA61/135	
Receiver	LK61-Z/31/135	
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	
Opening angle	Emitter: 1.5 ° , Receiver: 1.5 °	
Optical face	frontal	
Ambient light limit	5000 Lux ; according to 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 operating reserve ; OFF when light beam is interrupted	
Control elements	Light-on/dark-on changeover switch	
Control elements	Sensing 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	$\leq 35 \text{ mA}$

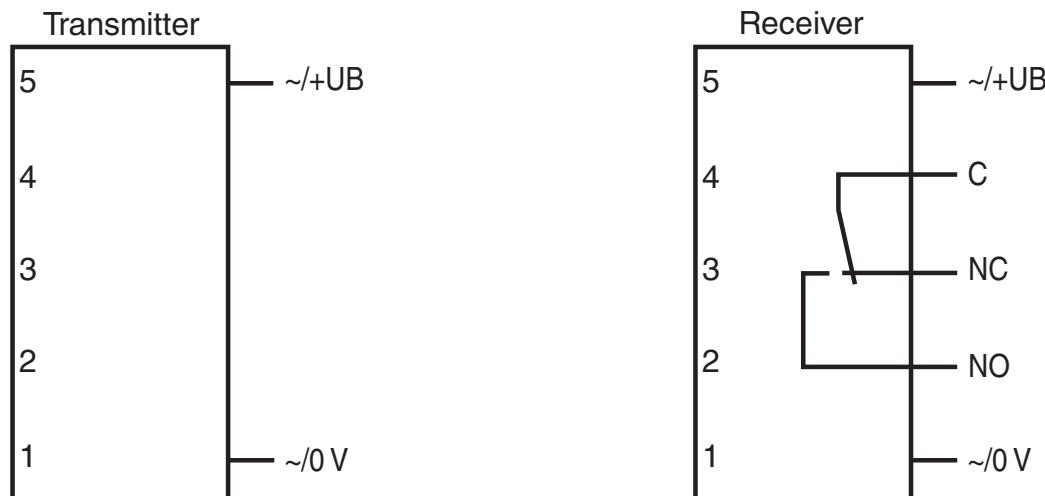
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.comUSA: +1 330 486 0001
fa-info@us.pepperl-fuchs.comGermany: +49 621 776 1111
fa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com
 PEPPERL+FUCHS

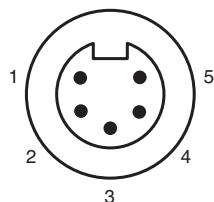
Technical Data

Protection class		
II, rated voltage \leq 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	\leq 2 VA per device
Output		
Switching type		light/dark on, switchable
Signal output		1 SPDT relay
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		\leq 25 ms
Timer function		DIP switch for selection of operating modes
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 60947-5-2:2007+A1:2012
Standard conformity		
Product standard		EN 60947-5-2:2007 IEC 60947-5-2:2007
Standards		EN 50178, UL 508
Approvals and certificates		
UL approval		cULus Listed, Type 1 enclosure For overcurrent protection, install a fuse with a rated current of max. 5 A and min. 240 V AC/DC
CCC approval		Certified by China Compulsory Certification (CCC)
Ambient conditions		
Ambient temperature		-40 ... 55 °C (-40 ... 131 °F)
Storage temperature		-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Housing width		45 mm
Housing height		73.7 mm
Housing depth		48.6 mm
Degree of protection		IP67
Connection		7/8"-16 UN connector
Material		
Housing		PC (glass-fiber-reinforced Makrolon)
Optical face		PMMA
Mass		approx. 140 g per device
Tightening torque, fastening screws		< 2 Nm

Connection Assignment



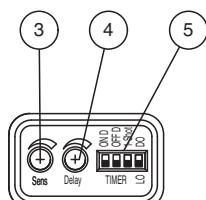
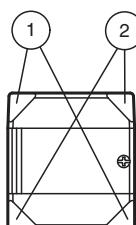
Connection Assignment



Wire colors

1	WH	(white)
2	RD	(red)
3	GN	(green)
4	OR	(orange)
5	BK	(black)

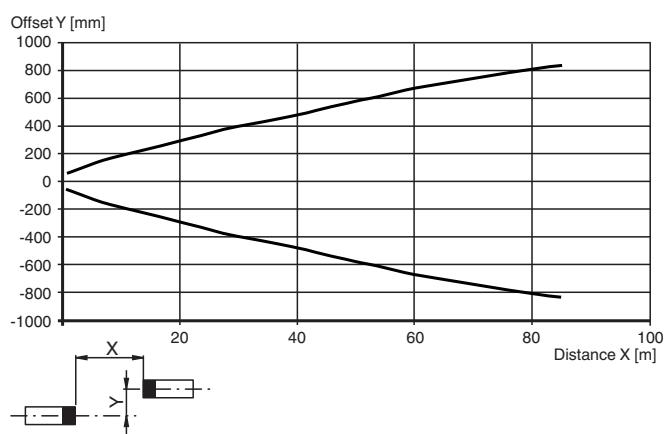
Assembly



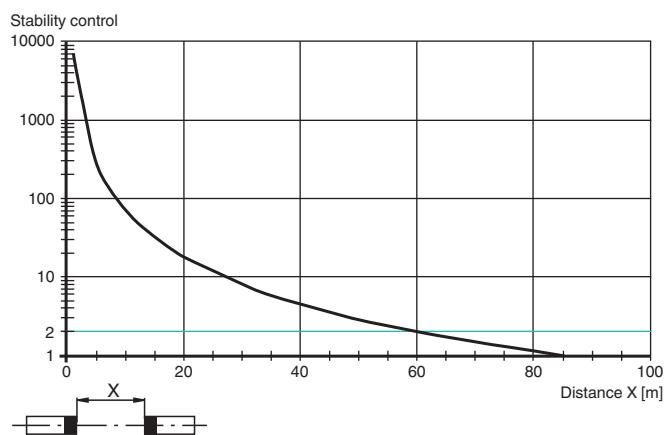
1	Operating display	green
2	Signal display	yellow
3	Sensing range adjuster	
4	Time adjuster	
5	DIP-switches	

Characteristic Curve

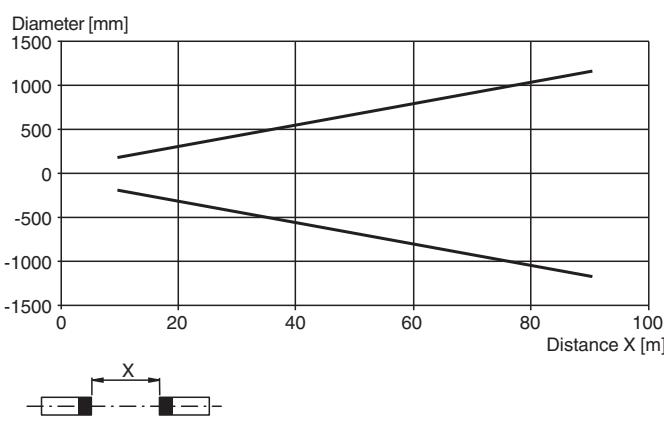
Characteristic response curve



Relative received light strength



Light spot diameter



Characteristic Curve

Timer Functions

Switching Type	Detection Status			Light Received
		Operation Mode		
L.ON	OFF ON		No Delay (Timer OFF)	ON
L.ON	OFF ON		ON Delay	OFF
L.ON	OFF ON		OFF Delay	ON
L.ON	OFF ON		One-Shot Delay	OFF
L.ON	OFF ON		ON Delay and OFF Delay	ON
L.ON	OFF ON		ON Delay and OFF Delay	OFF
Switching Type	Detection Status			Light Received
		Operation Mode		
D.ON	OFF ON		No Delay (Timer OFF)	ON
D.ON	OFF ON		ON Delay	OFF
D.ON	OFF ON		OFF Delay	ON
D.ON	OFF ON		One-Shot Delay	OFF
D.ON	OFF ON		ON Delay and OFF Delay	ON
D.ON	OFF ON		ON Delay and OFF Delay	OFF

Time (T) is adjustable from 0 to 10 s

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