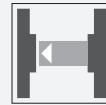




Thru-beam sensor LD61/LV61-Z/92/136



- 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)

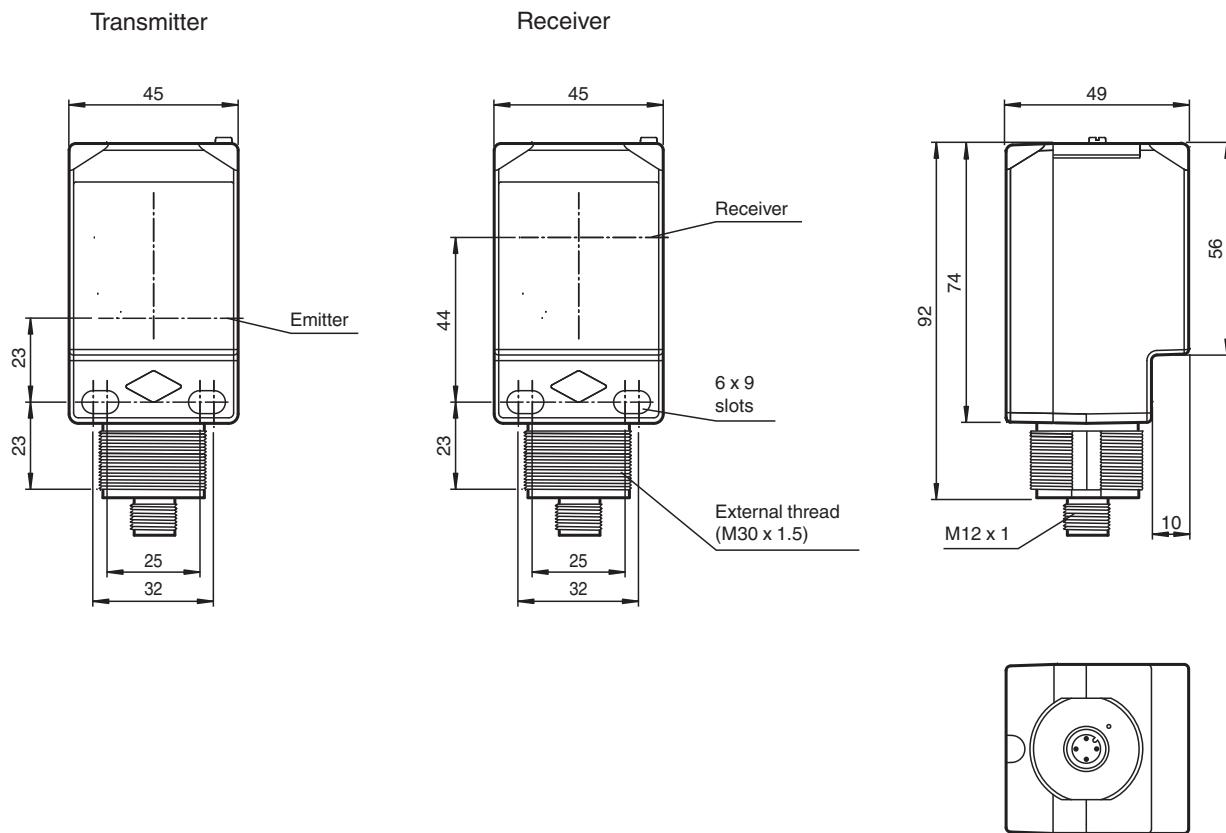
Universal thru-beam sensor, large housing design, 60 m detection range, infrared light, light/dark on, detection range adjuster, DC version, 2 push-pull outputs, adjustable timer functions, M12 plug



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



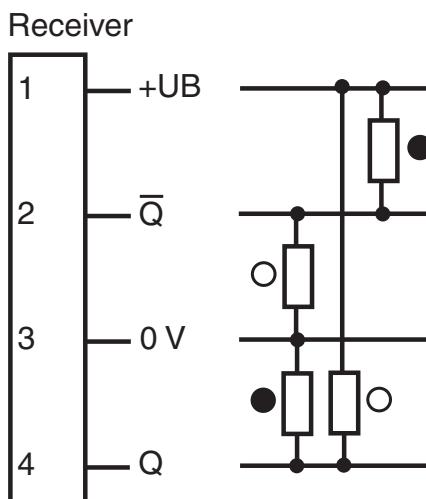
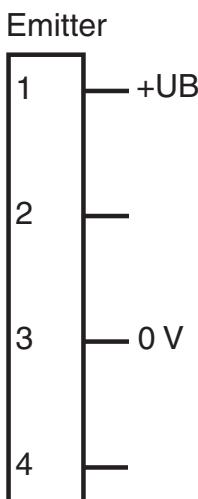
Technical Data

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	
Opening angle	Emitter: 1.5 ° , Receiver: 1.5 °	
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 ... 50 ms)	
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple	10 %	
No-load supply current	I_0	≤ 35 mA

Technical Data

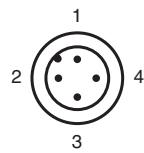
Protection class	II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Output circuit basis insulation of input circuit according to EN 50178, rated insulation voltage 240 V AC	
Output		
Switching type	light/dark on, switchable	
Signal output	2 push-pull (4 in 1) outputs, short-circuit 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	
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	
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	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	

Connection Assignment



○ = Light on
● = Dark on

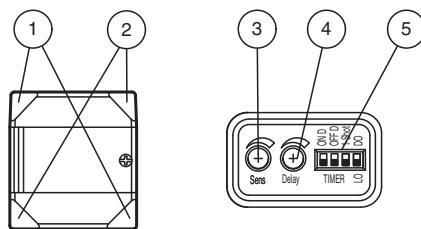
Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

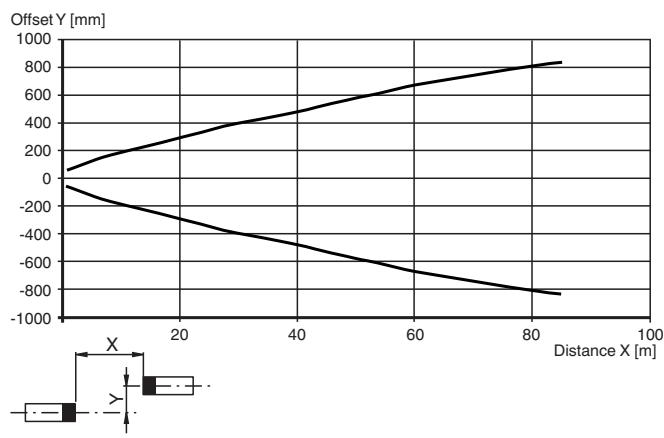
Assembly



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

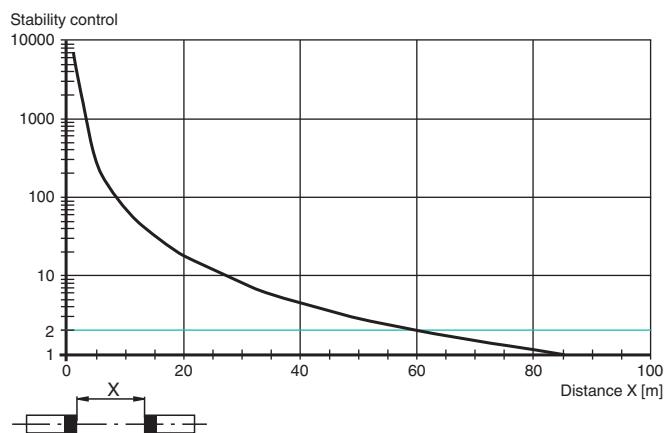
Characteristic Curve

Characteristic response curve

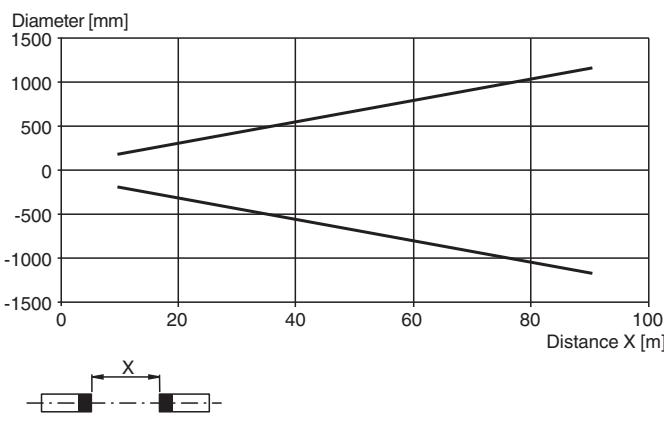


Characteristic Curve

Relative received light strength



Light spot diameter



Characteristic Curve

Timer Functions

Switching Type	Detection Status		
		Operation Mode	
L.ON	Light Received		No Light Received
OFF ON	ON D OFF D 1-Shot DO	No Delay (Timer OFF)	ON OFF
OFF ON	ON D OFF D 1-Shot DO	ON Delay	ON OFF
OFF ON	ON D OFF D 1-Shot DO	OFF Delay	ON OFF
OFF ON	ON D OFF D 1-Shot DO	One-Shot Delay	ON OFF
OFF ON	ON D OFF D 1-Shot DO	ON Delay and OFF Delay	ON OFF
D.ON	Light Received		No Light Received
	ON D OFF D 1-Shot DO	No Delay (Timer OFF)	ON OFF
OFF ON	ON D OFF D 1-Shot DO	ON Delay	ON OFF
OFF ON	ON D OFF D 1-Shot DO	OFF Delay	ON OFF
OFF ON	ON D OFF D 1-Shot DO	One-Shot Delay	ON OFF
OFF ON	ON D OFF D 1-Shot DO	ON Delay and OFF Delay	ON OFF

DIP-Switch position → 

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