



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)

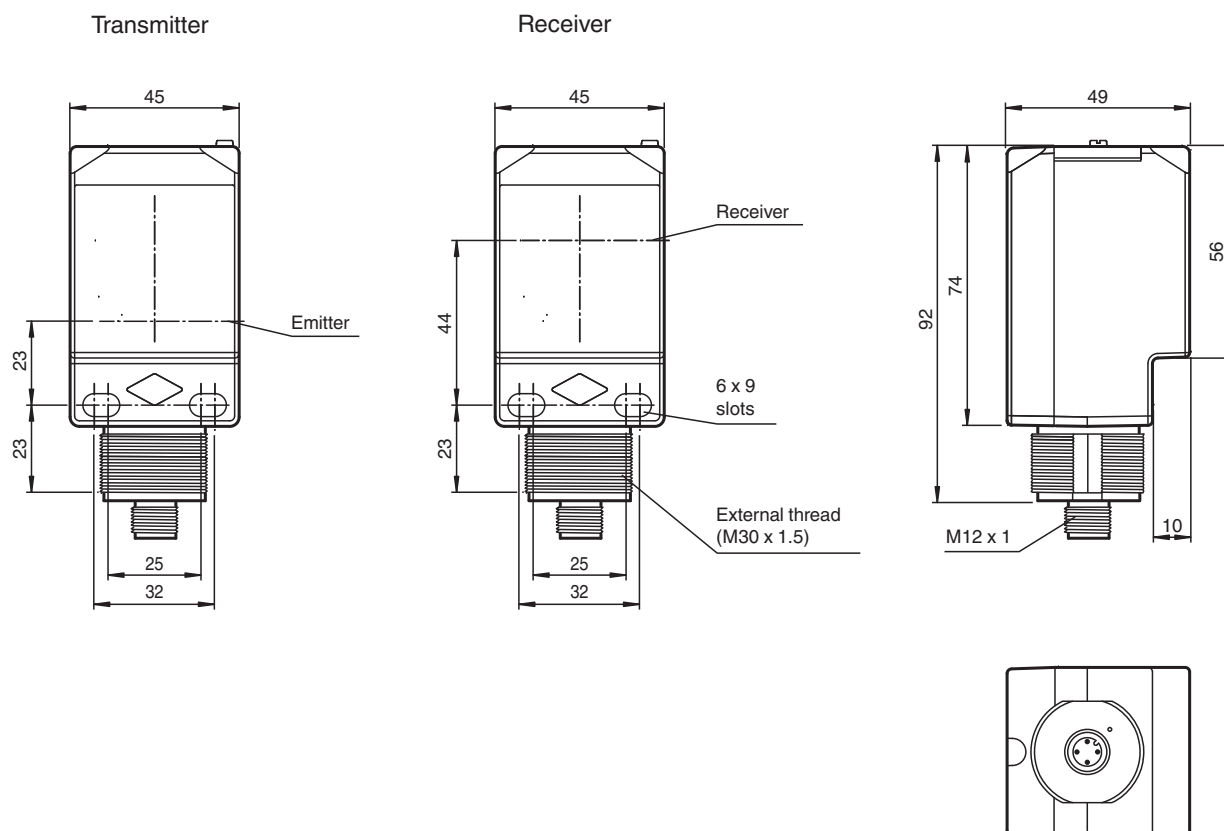
Universal thru-beam sensor, large housing design, 60 m detection range, infrared light, light/dark on, detection range adjuster, DC version, 2 push-pull outputs, adjustable timer functions, M12 plug



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 ½" - 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	IRE
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

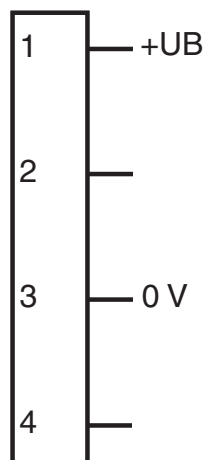
Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I_0	≤ 35 mA

Technical Data

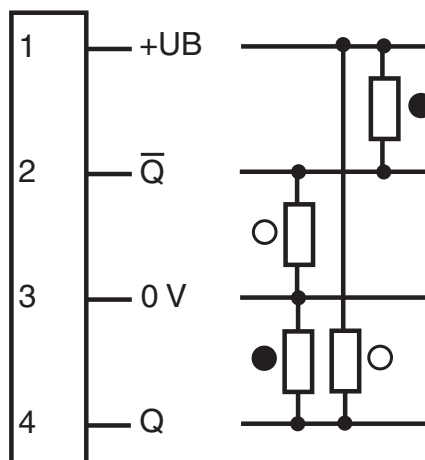
Protection class		II , rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Output circuit basis insulation of input circuit according to EN 50178, rated insulation voltage 240 V AC
Output		
Switching type		light/dark on, switchable
Signal output		2 push-pull (4 in 1) outputs,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

Emitter

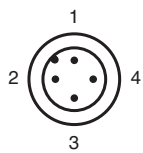


Receiver



○ = Light on
● = Dark on

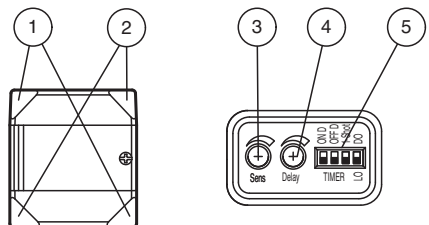
Connection Assignment



Wire colors in accordance with EN 60947-5-2

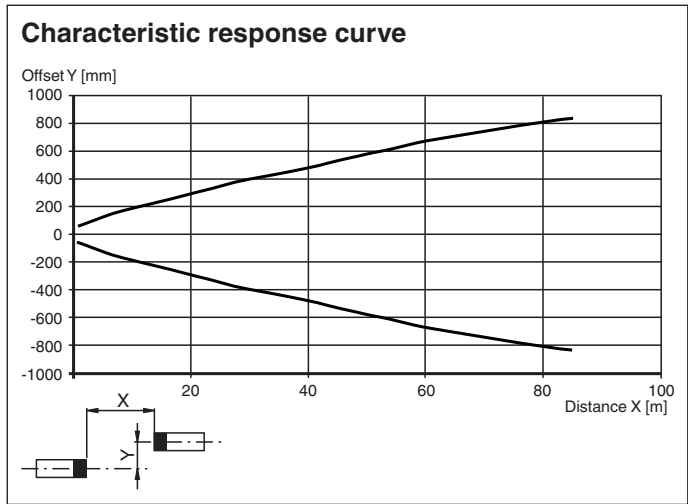
- 1 | BN (brown)
- 2 | WH (white)
- 3 | BU (blue)
- 4 | BK (black)

Assembly



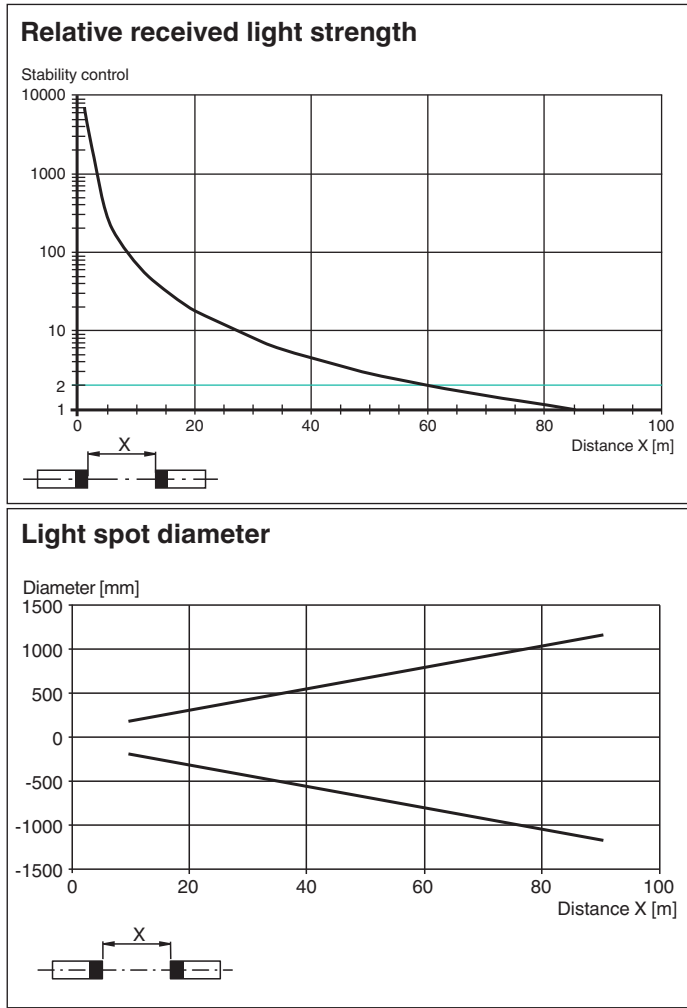
1	Operating display	green
2	Signal display	yellow
3	Sensing range adjuster	
4	Time adjuster	
5	DIP-switches	

Characteristic Curve



Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 913910_eng.pdf

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Characteristic Curve

Timer Functions

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

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