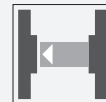




Thru-beam sensor LA29/LK29-Z-F1/31/116-SET



- Robust, compact photoelectric sensor for single-beam gate protection
- Very high detection range
- No measurable emitted interference on all frequencies
- Not sensitive to ambient light, even with energy saving lamps
- Adjustable timer functions
- Version with accessories in scope of delivery

Thru-beam sensor



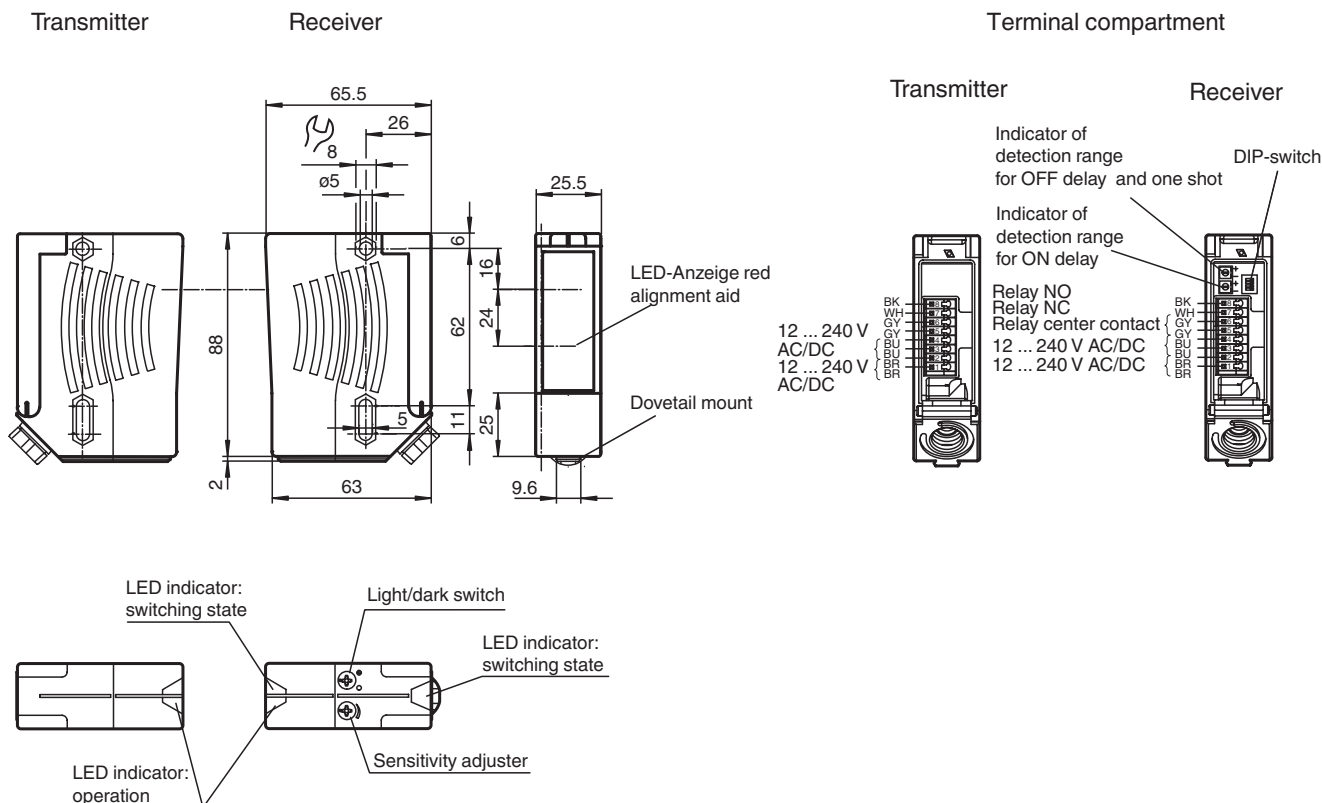
Function

Series 29 is a range of low-cost and, most importantly, reliable photoelectric sensors for monitoring industrial doors, elevators, and automatic gates. Their high degree of protection makes them the ideal solution for tasks outdoors and at thresholds, and in harsh environments. These "universal-voltage sensors" can be operated with any supply voltage from 24 V to 240 V, and with direct current or alternating current.

Application

- Monitoring closing edges of automatic industrial doors and elevators
- Monitoring the swing range of automatic gates
- Detecting and tracking objects in material handling

Dimensions



Technical Data

System components

Emitter	LA29-F1/116
Receiver	LK29-Z-F1/31/116

General specifications

Effective detection range	0 ... 65 m
Threshold detection range	90 m
Light source	LED
Light type	modulated visible red light , 660 nm
Alignment aid	LED red (in receiver lens) illuminated constantly: beam is interrupted, flashes: reaching switching point, off: sufficient stability control
Transmitter frequency	F1 = 25 kHz
Diameter of the light spot	approx. 1.3 m at 65 m
Opening angle	Emitter 1.2°, Receiver 5°
Ambient light limit	50000 Lux

Functional safety related parameters

MTTF _d	490 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED green
Function indicator	LED yellow: 1. LED lit constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point
Control elements	sensitivity adjustment (Adjustment to < 25% of the effective operating range) , Light-on/dark-on changeover switch

Electrical specifications

Technical Data

Operating voltage	U _B	12 ... 240 V AC/DC
Power consumption	P ₀	≤ 3.5 VA
Output		
Switching type		light/dark on, switchable . (selectable, light/dark switching is only activated if the receiver has 'dark on' selected.)
Signal output		Relay, 1 alternator
Switching voltage		max. 250 V AC/DC
Switching current		max. 2 A
Switching power		DC: max. 50 W AC: max. 500 VA
Switching frequency	f	25 Hz
Response time		20 ms
Timer function		ON delay (GAN), OFF delay (GAB), one shot (IAB), ON delay-OFF delay (GAN-GAB), programmable adjustment range 0.1 ...10 s
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
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 230 V AC Caution! The protection class 2 is only valid when the terminal compartment is closed.
CCC approval		Certified by China Compulsory Certification (CCC)
Ambient conditions		
Ambient temperature		-40 ... 60 °C (-40 ... 140 °F)
Storage temperature		-40 ... 75 °C (-40 ... 167 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		terminal compartment with 8 spring-loaded terminals for wire cross section 0.5 ... 1.5 mm ² , Insulation stripping 7.5 ... 8.5 mm , M16 x 1.5 cable gland
Material		
Housing		plastic
Optical face		Plastic pane
Mass		200 g (emitter and receiver)
Dimensions		
Height		88 mm
Width		25.8 mm
Depth		65.5 mm
General information		
Scope of delivery		2x OMH-RLK29-HW

Emitter

Wire Color	Connection
BK	n.c.
WH	n.c.
GY	n.c.
GY	n.c.
BU	~0 V
BU	~0 V
BN	~+UB
BN	~+UB

12V .. 240 V AC/DC

Receiver

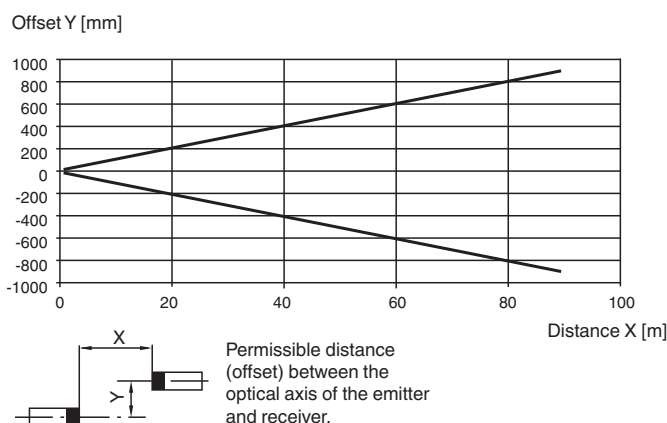
Wire Color	Connection
BK	NO
WH	NC
GY	C
GY	C
BU	~0 V
BU	~0 V
BN	~+UB
BN	~+UB

12V .. 240 V AC/DC

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

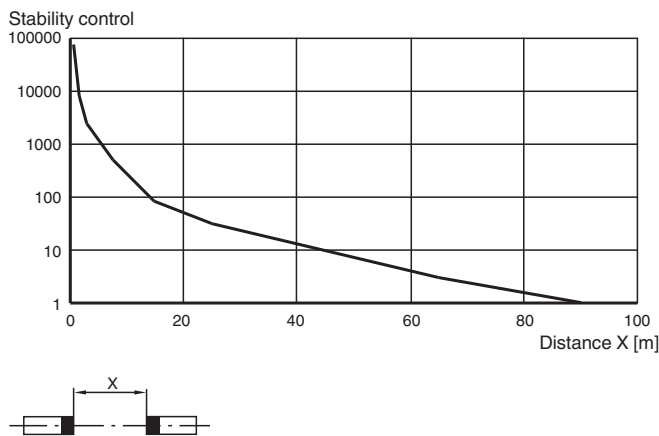
1	Operating display green
2	Switch state yellow
3	Bright/dark switch
4	Sensitivity adjustment
5	Receiver
6	Transmitter

Characteristic response curve

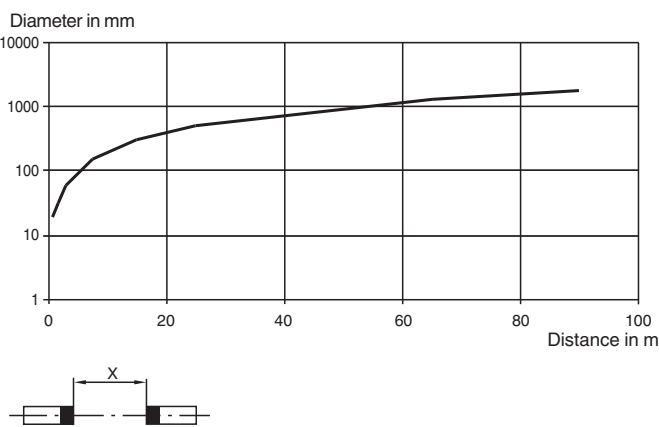


Characteristic Curve

Relative received light strength



Light spot diameter = f (Distance)



Application

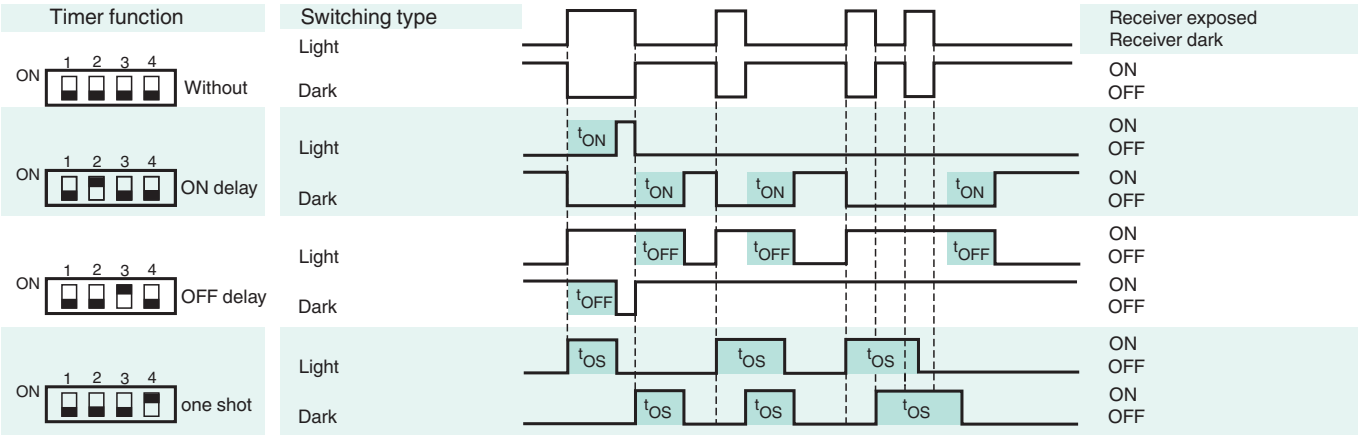


Kit component

	OMH-RLK29-HW	Mounting bracket for rear wall mounting
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Timer functions



Time t_{ON} , t_{OFF} and t_{OS} are adjustable from 0.1 to 10 seconds.
The Light-/Dark-Switch (Left, outer switch) is shown in the "Dark ON" position.

Type	Description	Notes
-Z	OFF delay timer	Adjustable time interval (0.1 s - 10 s)
	one shot timer	
	ON delay timer	
	ON delay timer / OFF delay timer	
	ON delay timer / one shot timer	