



Model Number

LA39/LK39-Z/31/40a/116

Thru-beam sensor
with terminal compartment

Features

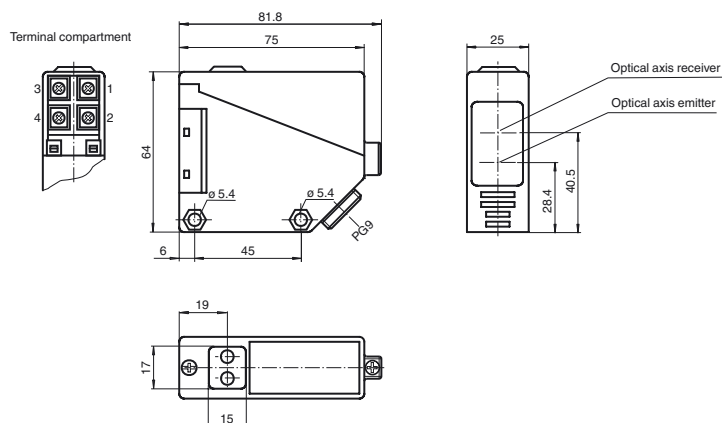
- Light/dark ON, switchable
- Timer function
- Supplied with mounting accessory
- Degree of protection IP67

Product information

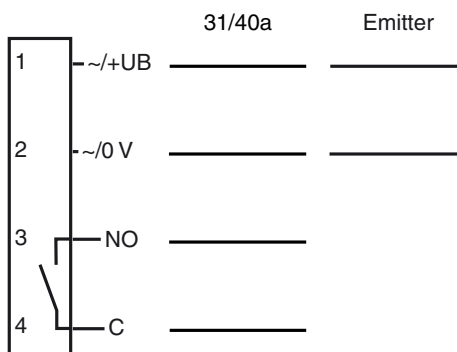
Series 39 sensors are characterized by their high performance level, compact housing design, and variety of available versions. These include thru-beam sensors with a 20 m detection range, retroreflective sensors with polarization filter for a 5 m detection range, energetic diffuse mode sensors with an 800 mm and 2000 mm detection range, and a background suppression sensor with 500 mm detection range. Fitted in a robust plastic housing, this series is ideal for tough industrial applications.

The sensors are supplied with 10 V to 30 V DC, or 24 V to 240 V AC/DC. Various transistor and relay outputs are available as signal outputs. Standard features include pre-fault diagnostics and pre-fault output. The switching element function can be changed using the light/dark switch.

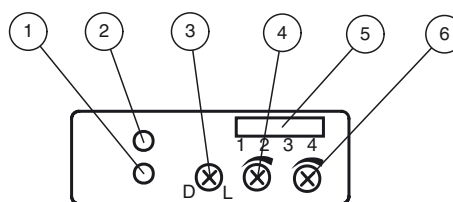
Dimensions



Electrical connection



Indicators/operating means



1	Operating display red (Transmitter)
2	Pre-fault indication red (Receiver)
3	Switch state yellow
4	Light/dark on switch
5	Sensitivity adjustment
6	Timer mode switch (version -Z)

Technical data

System components

Emitter	LA39/116
Receiver	LK39-Z/31/40a/116

General specifications

Effective detection range	0 ... 20 m
Threshold detection range	25 m
Adjustment range	2 ... 25 m
Reference target	receiver
Light source	IRED
Light type	modulated infrared light
Ambient light limit	10000 Lux

Functional safety related parameters

MTTF _d	916 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED red (emitter)
Function indicator	LED yellow: switching state LED red: pre-fault indication
Control elements	Sensing range adjuster, light-on/dark-on changeover switch
Control elements	switch for timer function

Electrical specifications

Operating voltage	U _B	12 ... 240 V DC / 24 ... 240 V AC (50 ... 60 Hz)
Ripple		10 %
No-load supply current	I ₀	≤ 60 mA receiver and emitter
Protection class		II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Caution! The protection class 2 is only valid when the terminal compartment is closed. output circuit has basic insulation to control circuit according to IEC/EN 61140
Power consumption	P ₀	≤ 3 VA
Time delay before availability	t _v	≤ 300 ms

Output

Switching type	light/dark on
Signal output	1 relay output
Switching voltage	max. 240 V AC ; 150 V DC
Switching current	max. 3 A
Switching power	DC: max. 90 W AC: max. 750 VA
Switching frequency	f ≤ 25 Hz
Response time	≤ 20 ms
Timer function	On-/off-delay or pulse extension on choice

Conformity

Product standard	EN 60947-5-2
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Ambient conditions

Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Housing width	25 mm
Housing height	64 mm
Housing depth	75 mm
Degree of protection	IP67
Connection	terminal compartment PG9, ≤ 2.5 mm ²
Material	
Housing	PBT
Optical face	PMMA
Mass	Emitter: approx. 90 g receiver: approx. 110 g

General information

Scope of delivery	Mounting aid
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Approvals and certificates

EAC conformity	TR CU 020/2011 TR CU 004/2011
CCC approval	Certified by China Compulsory Certification (CCC)
Approvals	CE

Operating principle

The thru-beam sensor requires a pair of devices for operation, comprising a light transmitter and a light receiver. The emitter and receiver must be arranged in optical alignment with each other. The infrared light from the emitter is detected by the receiver and evaluated.

Accessories

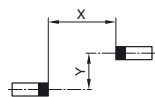
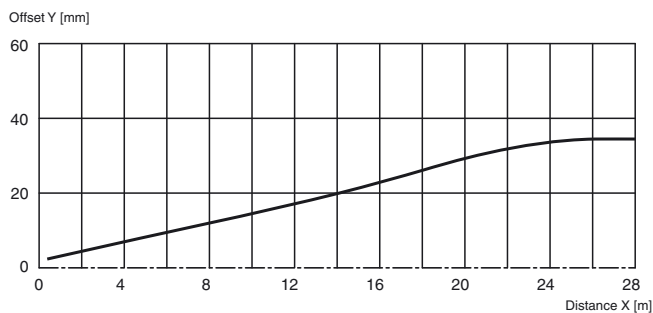
OMH-RL39

Mounting bracket for RL39 series
Sensors

Other suitable accessories can be found at
www.pepperl-fuchs.com

Curves/Diagrams

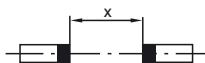
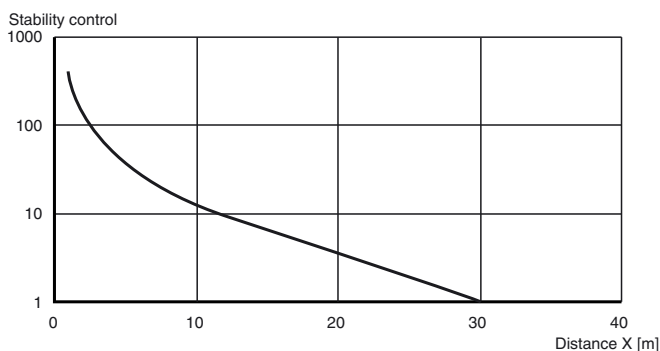
Characteristic response curve



Permissible distance (offset) between the optical axis of the emitter and receiver.

Relative received light strength

L39/LV(K)39



Light beam		Light pass Light block	
Timer Mode			
One shot 	○		ON
	●		OFF
Off-delay 	○		ON
	●		OFF
On-delay 	○		ON
	●		OFF
Normal 	○		ON
	●		OFF

○ Denotes Light - ON T= 0.1 10 sec.

● Denotes Dark - ON



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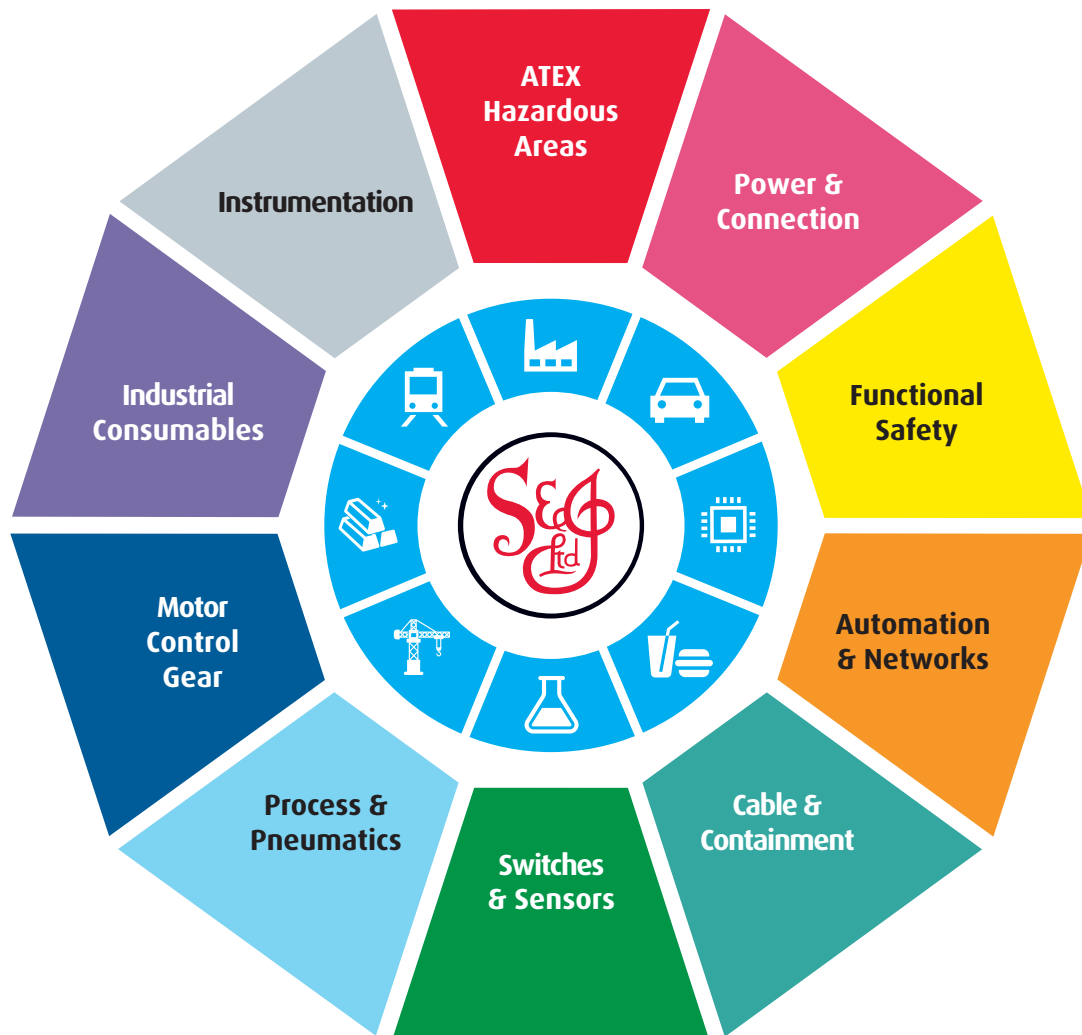
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