

Thru-beam sensor LA39/LK39/31/40a/116



- Light-on/dark-on, switchable
- Supplied with mounting accessory
- Degree of protection IP67

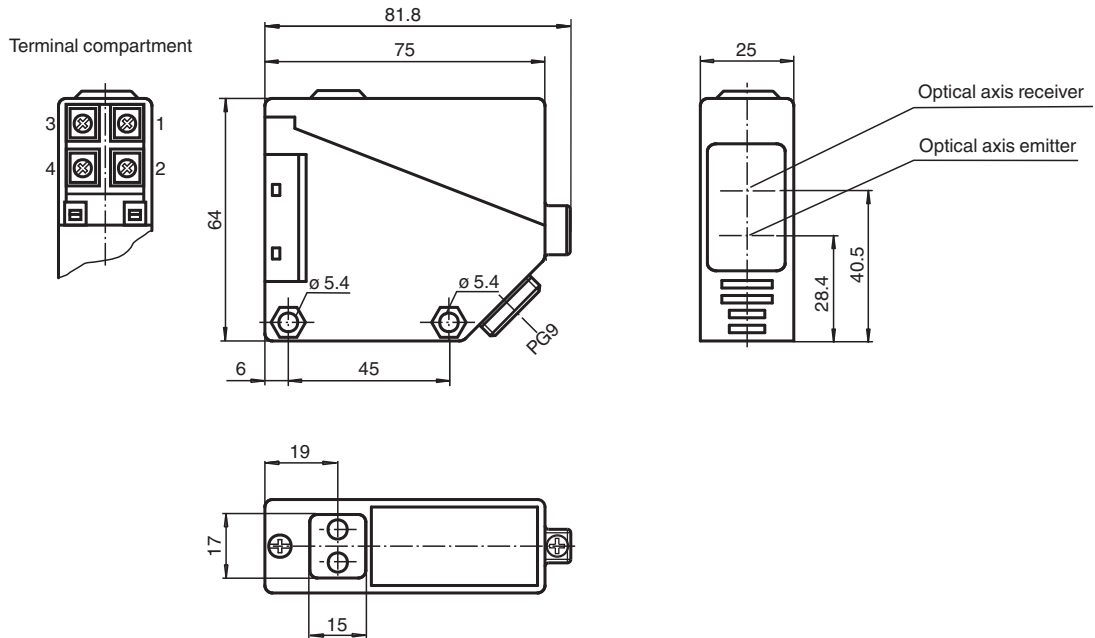
Thru-beam sensor, 20 m detection range, infrared light, light/dark on, AC/DC version, relay contact output, sensitivity adjuster, terminal compartment



Function

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



Technical Data

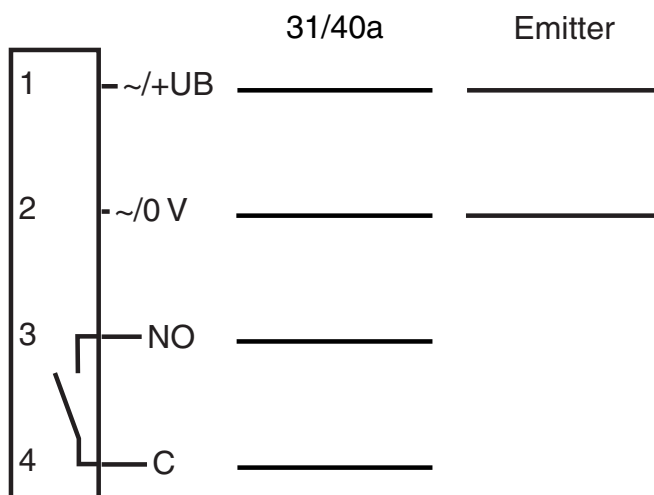
System components		
Emitter		LA39/116
Receiver		LK39/31/40a/116
General specifications		
Effective detection range		0 ... 20 m
Threshold detection range		25 m
Adjustment range		2 ... 25 m
Reference target		receiver
Light source		IRED
Light type		modulated infrared light
Ambient light limit		IEC / EN 60947-5-2 , 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
Electrical specifications		
Operating voltage	U _B	12 ... 240 V DC / 24 ... 240 V AC (50 ... 60 Hz)

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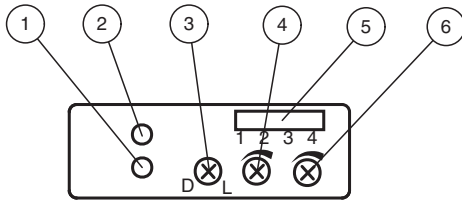
Ripple		10 %
No-load supply current	I_0	≤ 60 mA receiver and emitter
Protection class		II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Caution! The protection class 2 is only valid when the terminal compartment is closed. output circuit has basic insulation to control 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
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
CCC approval		Certified by China Compulsory Certification (CCC)
Approvals		CE
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

Connection Assignment



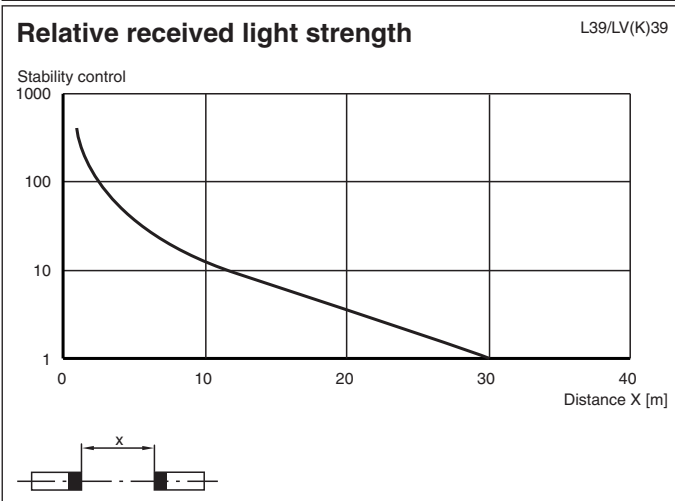
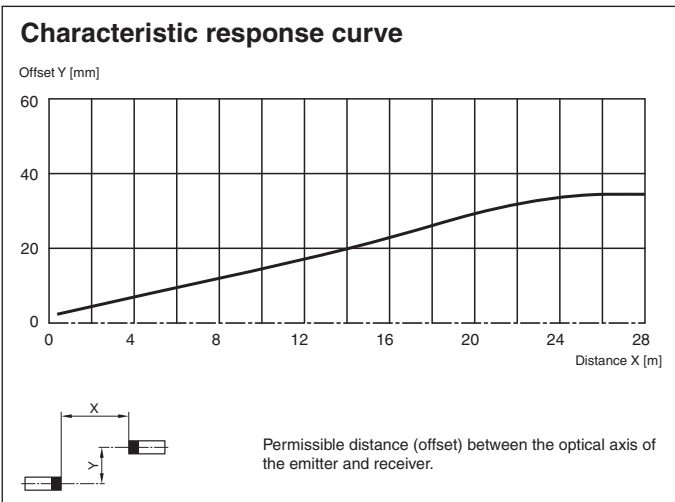
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Assembly



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

Characteristic Curve




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Application



Accessories

	OMH-RL39	Mounting bracket for RL39 series Sensors
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Function 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.

Application

- Object tracking in material handling, and the packaging sector
- Material flow monitoring
- Bin occupancy check in storage technology
- Fine positioning in high-bay warehouses
- Presence and height monitoring on pallet conveyors
- Single-beam protection for automatic industrial gates and elevator doors
- Protection at automatic gates