



**Model Number**

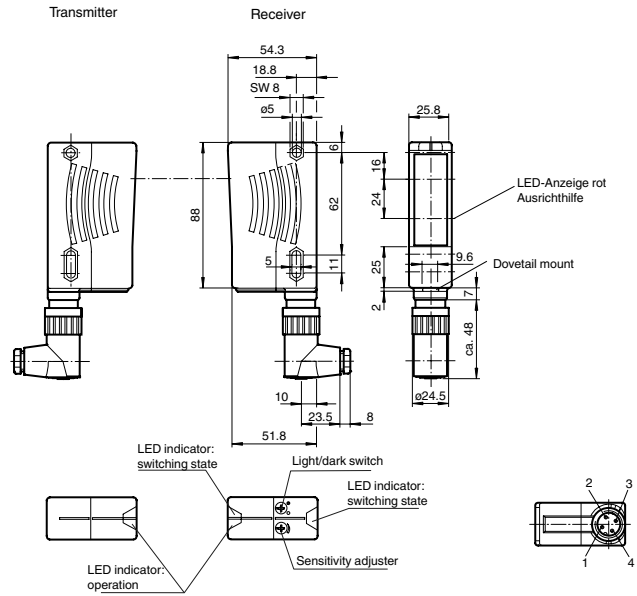
**LD28/LV28-F1/49/74/76a**

Thru-beam sensor  
with 4-pin, M18 x 1 plastic connector

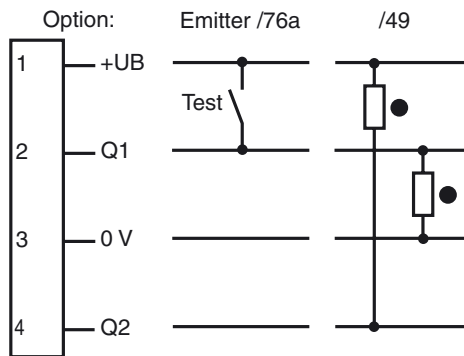
**Features**

- Universal series with highly versatile fields of use
- Resistant against noise: reliable operation under all conditions
- Highly visible LED as alignment aid in receiver optics
- Emitter with test input
- Version with red light

**Dimensions**



**Electrical connection**



○ = Light on  
● = Dark on

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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**Technical data****System components**

Emitter	LD28-F1/74/76a
Receiver	LV28-F1/49/74

**General specifications**

Effective detection range	0 ... 30 m
Threshold detection range	40 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. 0.6 m at 30 m
Angle of divergence	Emitter 1.2°, Receiver 5°
Ambient light limit	50000 Lux

**Functional safety related parameters**

MTTF <sub>d</sub>	620 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	90 %

**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**

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		10 %
No-load supply current	I <sub>0</sub>	Emitter: ≤ 50 mA Receiver: ≤ 35 mA

**Input**

Test input	emitter deactivation at +U <sub>B</sub> (I <sub>max.</sub> < 3 mA at 30 V DC)
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**Output**

Switching type	light/dark on, switchable
Signal output	1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected , open collectors
Switching voltage	max. 30 V DC
Switching current	max. 200 mA
Switching frequency	f 1000 Hz
Response time	0.5 ms

**Conformity**

Product standard	EN 60947-5-2
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**Ambient conditions**

Ambient temperature	-40 ... 60 °C (-40 ... 140 °F)
Storage temperature	-40 ... 75 °C (-40 ... 167 °F)

**Mechanical specifications**

Housing width	25.8 mm
Housing height	88 mm
Housing depth	54.3 mm
Degree of protection	IP67
Connection	4-pin, M18 plastic connector
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	140 g (emitter and receiver)

**Approvals and certificates**

Protection class	II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval	cULus Listed , Class 2 power source
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

**Accessories****OMH-05**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

**OMH-07**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

**OMH-21**

Mounting bracket

**OMH-22**

Mounting bracket

**OMH-MLV11-K**

dove tail mounting clamp

**OMH-RLK29-HW**

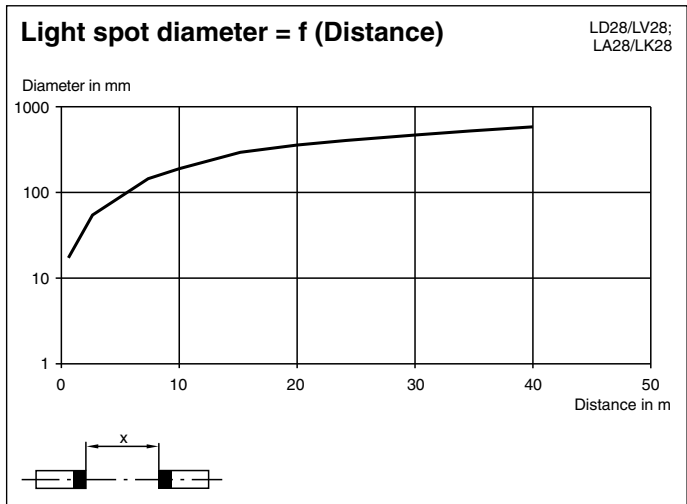
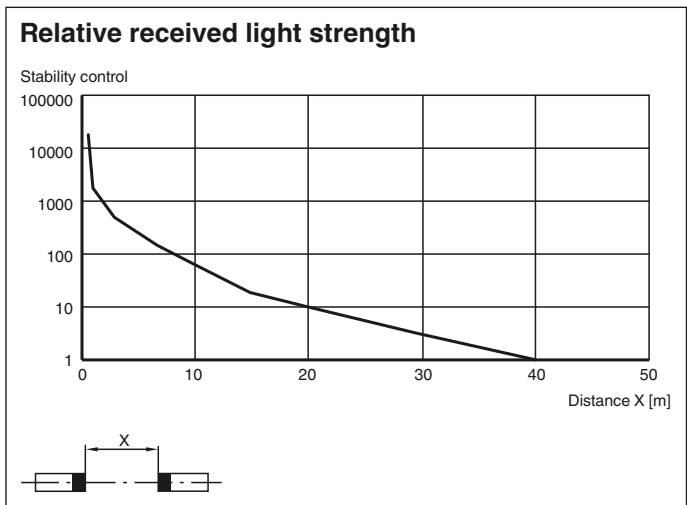
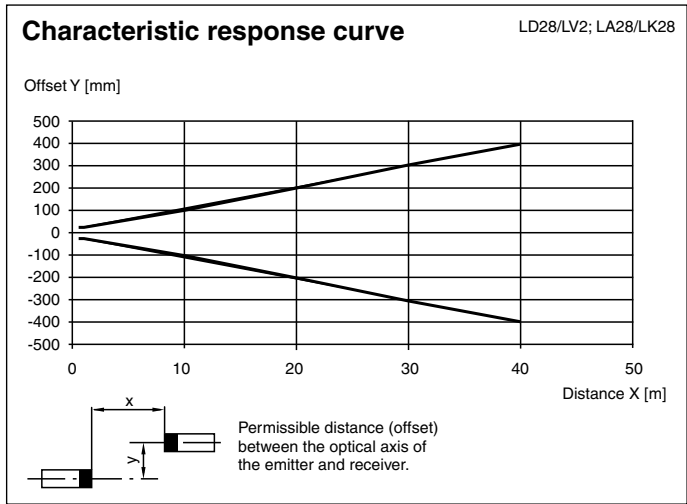
Mounting bracket for rear wall mounting

**OMH-RL28-C**

Weld slag cover model

Additional accessories can be found in the Internet.

Curves/Diagrams



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