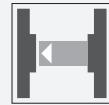




Thru-beam sensor LD28/LV28-F1/49/74/76a

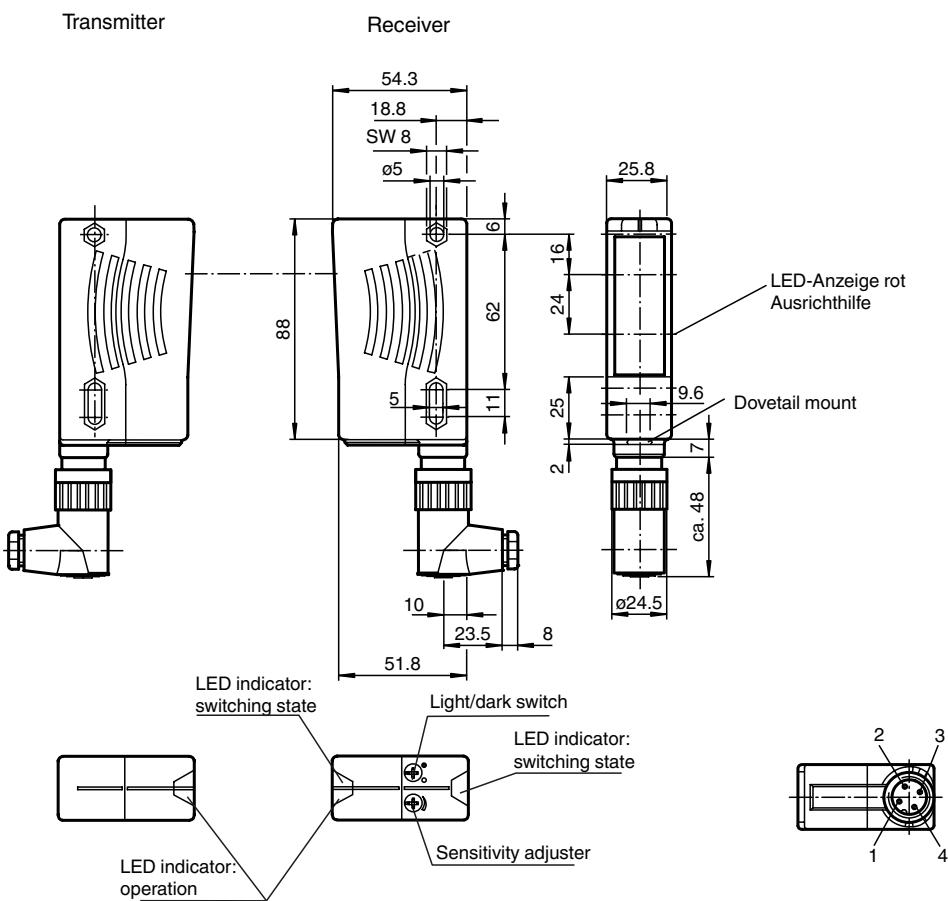


- Universal series with highly versatile fields of use
- Resistant against noise: reliable operation under all conditions
- Highly visible LED as alignment aid in receiver optics
- Emitter with test input
- Version with red light

Universal thru-beam sensor, large housing design, 30 m detection range, red light, 25 kHz transmission frequency, light/dark on, DC version, NPN output, PNP output, test input, M18 plug



Dimensions



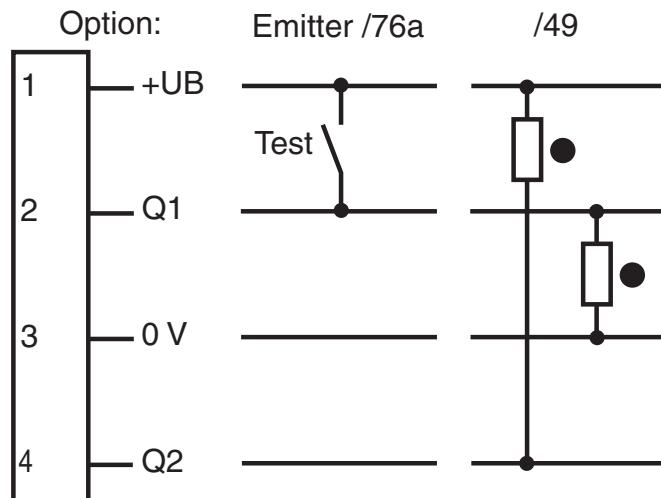
Technical Data

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 _d	620 a	
Mission Time (T _M)	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 _B	10 ... 30 V DC
Ripple	10 %	
No-load supply current	I ₀	Emitter: ≤ 50 mA Receiver: ≤ 35 mA
Input		
Test input	emitter deactivation at +U _B (I _{max.} < 3 mA at 30 V DC)	
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	
Approvals and certificates		
EAC conformity	TR CU 020/2011	
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	
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	

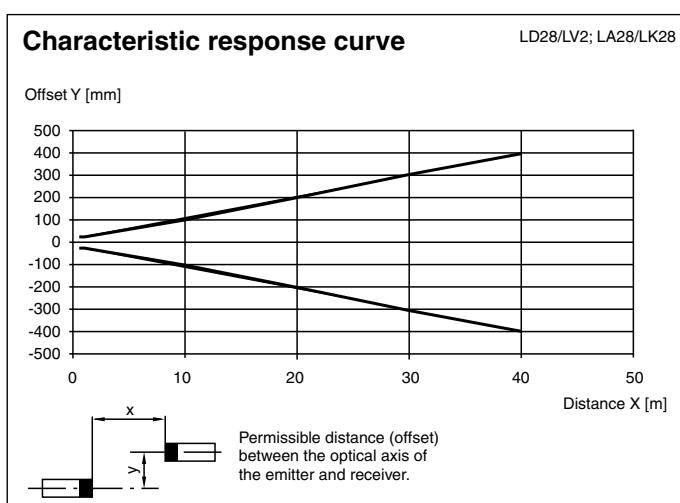
Technical Data

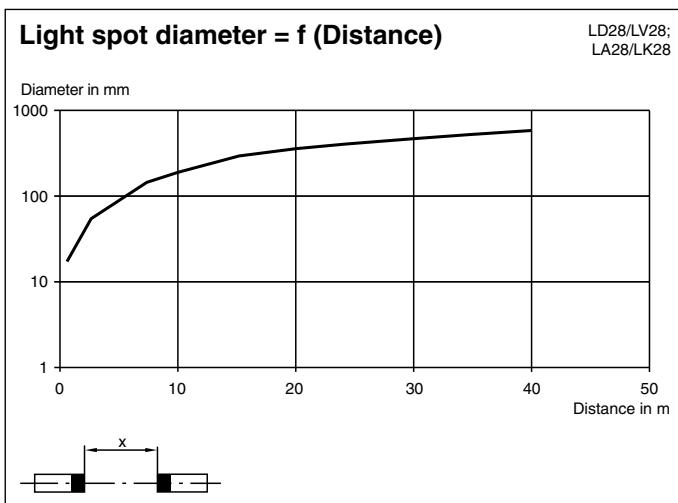
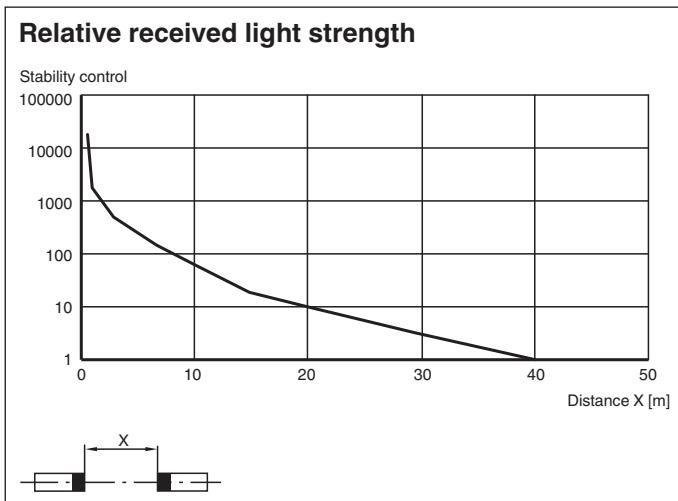
Housing depth	54.3 mm
Degree of protection	IP67
Connection	4-pin, M18 plastic connector
Material	
Housing	Plastic ABS
Optical face	Plastic pane
Mass	140 g (emitter and receiver)

Connection Assignment



Characteristic Curve





Accessories

	OMH-05	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
	OMH-21	Mounting bracket: mounting aid for sensors in the RL* series
	OMH-22	Mounting aid for RL* series
	OMH-RLK29-HW	Mounting bracket for rear wall mounting
	OMH-RL28-C	Weld slag cover model