



**PHOTOELECTRIC SENSORS:
LASER
SERIES 1121L**



- ✓ M12 **miniature laser sensors**
- ✓ **Accurate detection** of smallest targets
- ✓ **Accurate & speed-independent target detection**; response time 0.1 msec
- ✓ **Sensing range up to 50 m**
- ✓ **Easy adjustment** (due to visible red laser light)
- ✓ **Shock & vibration resistant** due to fully vacuum-potted electronics
- ✓ **Laser protection class 2**

TECHNICAL DATA

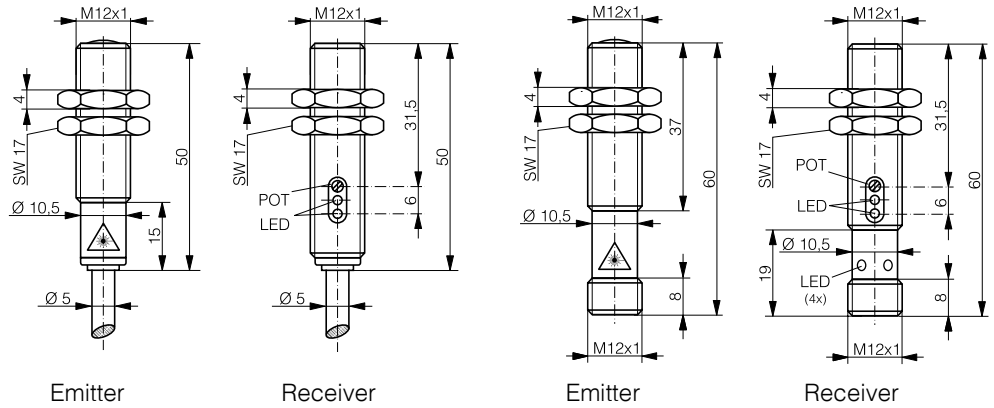
(according to IEC 60947-5-2)	
Housing material	Stainless steel V2A
Supply voltage range U_B	10 ... 36 VDC
Max. ripple content	20 %
Output current	≤ 200 mA
Output voltage drop	≤ 2.0 V at 200 mA
Max. switching frequency	5,000 Hz
Switching time (\uparrow and \downarrow)	0.1 msec
Max. ambient light:	
halogen	5,000 Lux
sun	10,000 Lux
Ambient temperature range	-10 ... +50 °C
Degree of protection	IP 67
Laser protection class	2
EMC protection:	
IEC 60947-5-2 (7.2.3.1)	1 kV
IEC 61000-4-2	Level 2
IEC 61000-4-3	Level 3
IEC 61000-4-4	Level 3
IEC 61000-4-6	Level 2
Short-circuit protection	Built-in
Polarity reversal protection	Built-in
Power-on reset	Built-in

Rugged M12 miniature laser sensors (laser protection class 2) in metal housings with long sensing range of 50 m for accurate and speed-independent detection of smallest targets. Shock and vibration, scratch and chemically resistant with high system reserves (excess gain). Pollution monitoring (green LED) in case of reduced system reserves prevents downtime caused by pollution. Easy adjustment due to visible red laser light. Particularly suited for rough industrial environments and where space is limited:

- ✓ **automation equipment**
- ✓ **special machinery**
- ✓ **handling systems**
- ✓ **machine tool industry**
- ✓ **printing industry**
- ✓ **automotive industry**

HOUSING SIZE	M12 LASER
SENSING RANGE	THROUGH-BEAM SENSOR 50,000 mm

Dimensions:



TECHNICAL DATA

Sensing range	50,000 mm
Standard target	---
No-load supply current	≤ 10 mA
Emitter	Laser red pulsed 660 nm
Approvals	CE, UL, RoHS
Weight (cable / connector model)	180 / 50 g (R and E)

PART REFERENCES

(bold: preferred types)	(R) receiver / (E) emitter
NPN light-ON / cable	LLK-1121L-201 (R) / LLK-1121L-200 (E)
NPN dark-ON / cable	LLK-1121L-202 (R) / LLK-1121L-200 (E)
NPN light-ON / connector S12	LLS-1121L-201 (R) / LLS-1121L-200 (E)
NPN dark-ON / connector S12	LLS-1121L-202 (R) / LLS-1121L-200 (E)
PNP light-ON / cable	LLK-1121L-203 (R) / LLK-1121L-200 (E)
PNP dark-ON / cable	LLK-1121L-204 (R) / LLK-1121L-200 (E)
PNP light-ON / connector S12	LLS-1121L-203 (R) / LLS-1121L-200 (E)
PNP dark-ON / connector S12	LLS-1121L-204 (R) / LLS-1121L-200 (E)
Compatible connectors (page 268)	M, N
Wiring (pages 198-199)	Diagram 1 (R) / 4 (E)

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