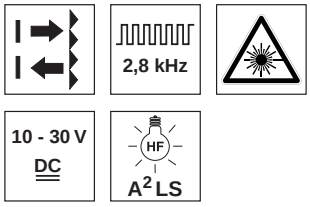
PRKL 8

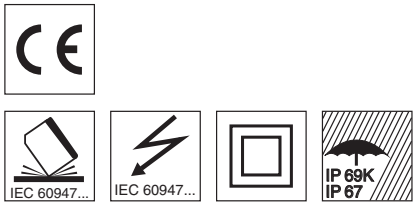
Laser retro-reflective photoelectric sensor

en 01-2017/09 50137595



0 ... 14m

- Laser, red light, laser class 1
- The autocollimation principle used ensures that the device functions reliably over the entire range (0 … max.)
- A²LS - Active Ambient Light Suppression
- Adjustable focus
- M12 turning connector

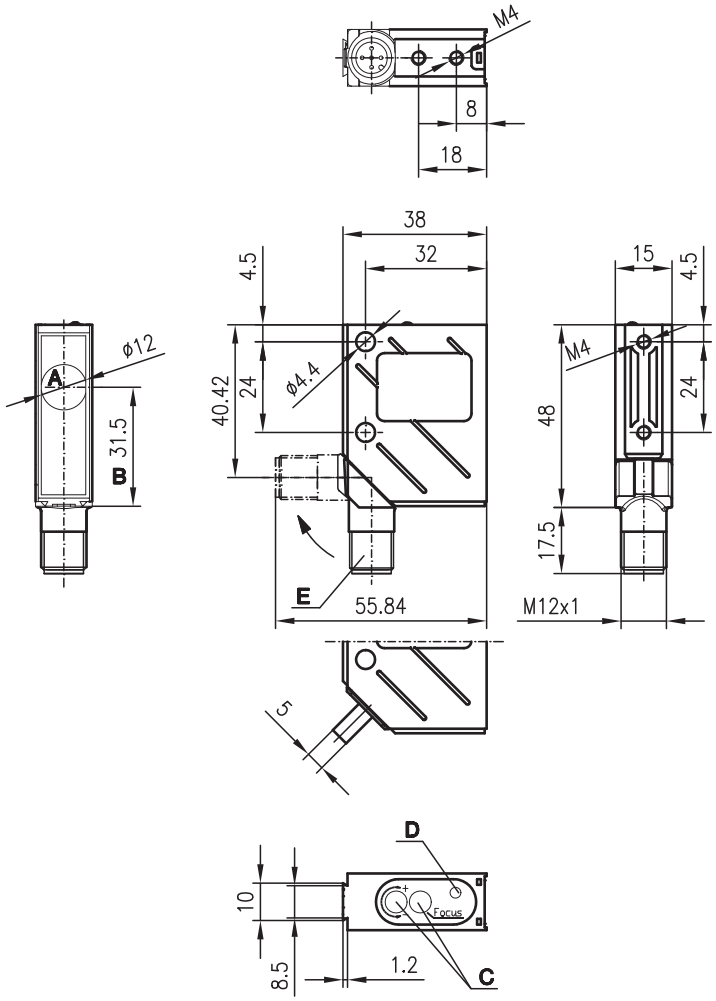


Accessories:

(available separately)

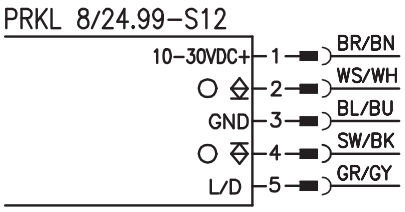
- M12 connectors (KD …)
- Ready-made cables (KD …)
- Mounting systems
- Reflectors
- Reflective tapes
- Control guard

Dimensioned drawing



A Transmitter and receiver
B Optical axis
C Operational control
D Yellow LED
E Turning connector, 90° rot. angle

Electrical connection



Specifications

Optical data

Typ. op. range limit (MTK(S) 50x50)[1]		0 … 12m
Operating range [2]		see tables
Light spot diameter		≥ 0.1mm adjustable with 16 rotations (see diagram)
Focus adjustment range		140mm … ∞ (see diagrams)
Beam divergence		≥ 0.5mrad
Light source		laser, pulsed
Laser class		1 acc. to IEC 60825-1:2007
Wavelength		670nm (visible red light)
Max. output power (peak)		0.8mW
Pulse duration		6µs

Timing

Switching frequency		2800Hz
Response time		0.18ms
Delay before start-up		≤ 100ms

Electrical data

Operating voltage U_B		10 … 30VDC
Residual ripple		≤ 15% of U_B
Open-circuit current		≤ 35mA
Switching output	…/24…	1 PNP and 1 NPN transistor output, light switching
Function	…/24…	light/dark switching via pin 5
Signal voltage high/low		≥ (U_B-2V)/≤ 2V
Output current		max. 100mA
Sensitivity		adjustable with 12-turn potentiometer

Indicators

Yellow LED	light path free
Yellow LED, flashing	light path free, no performance reserve

Mechanical data

Housing	metal
Optics cover	glass
Weight	70g
Connection type	M12 connector, 5-pin

Environmental data

Ambient temp. (operation/storage)	-10°C … +40°C/-40°C … +70°C
Protective circuit [3]	2, 3
VDE safety class [4]	II, all-insulated
Degree of protection [5]	IP 67, IP 69K [6]
Standards applied	IEC 60947-5-2

Options

L/D input

Dark/light switching	U_B/0V or not connected
L/D delay	< 0.5ms

1) Typ. operating range limit: max. attainable range without performance reserve, focus = 16m
2) Operating range: recommended range with performance reserve, focus = 16m
3) 2=polarity reversal protection, 3=short circuit protection for all outputs
4) Rating voltage 250VAC
5) In end position of the turning connector (turning connector engaged)
6) IP 69K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives, acids and bases are not part of the test

Order guide

	Designation	Part no.
Laser class 1		
With M12 connector	PRKL 8/24.99-S12	50115689

Tables

Laser class 1:

Reflectors			Operating range
1	TK(S)	100x100	0 … 12.0m
2	MTK(S)	50x50	0 … 10.0m
3	TK(S)	30x50	0 … 4.0m
4	TK(S)	20x40	0 … 4.0m
5	REF 6-S-	20x40	0 … 5.0m
6	Tape 6	50x50	0 … 5.0m

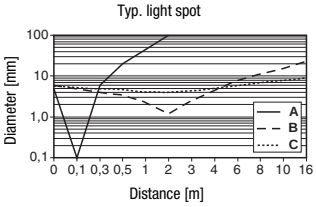
1	0											12		14
2	0										10		12	
3	0				4		5							
4	0				4		5							
5	0					5			6					
6	0					5			6					

Operating range [m] *
Typ. operating range limit [m] *

* for focus adjusted to 16m (right limit stop)

TK … = adhesive
TKS … = screw type
Tape 2 = adhesive

Diagrams



A Focus adjusted to 0.144m (left limit stop)
B Focus adjusted to 2m
C Focus adjusted to 16m (right limit stop)

Remarks

Operate in accordance with intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with the intended use.

- Use reflectors with small tripel structure – MTK(S), REF 6-S… or tape 6

Laser safety notices

ATTENTION, LASER RADIATION – LASER CLASS 1

The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product in **laser class 1** as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24th, 2007.

- Adhere to the applicable legal and local regulations regarding protection from laser beams.
- The device must not be tampered with and must not be changed in any way.
  There are no user-serviceable parts inside the device.
  Repairs must only be performed by Leuze electronic GmbH + Co. KG.