

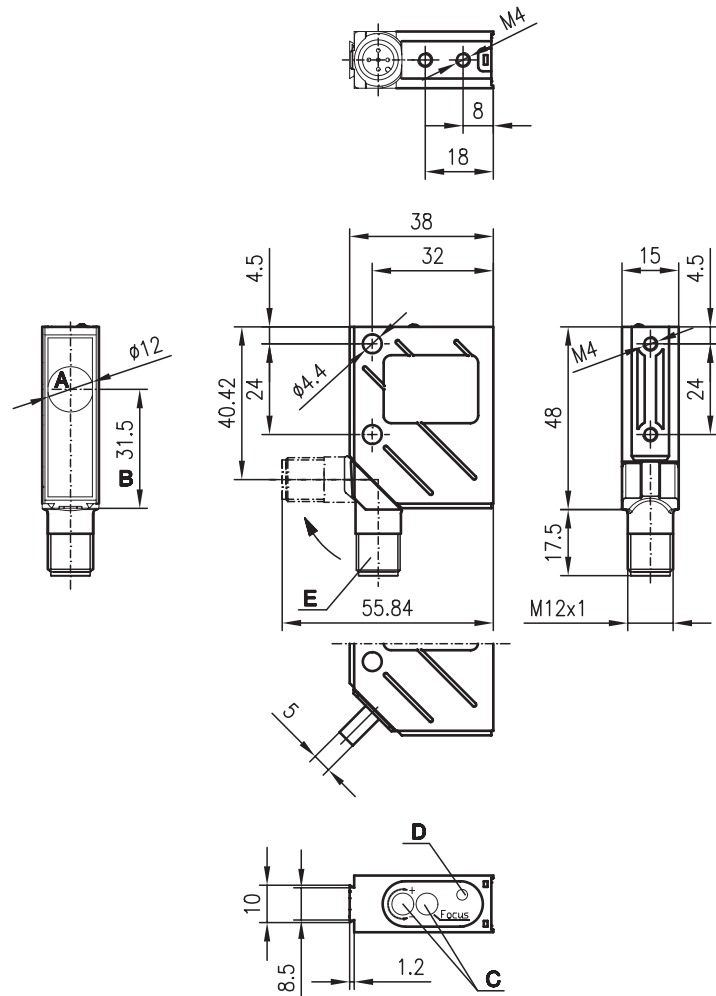


PRKL 8

Laser retro-reflective photoelectric sensor



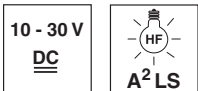
Dimensioned drawing



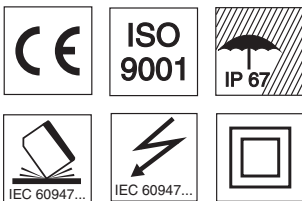
- A Transmitter and receiver
- B Optical axis
- C Operational control
- D LED yellow
- E 90° turning connector



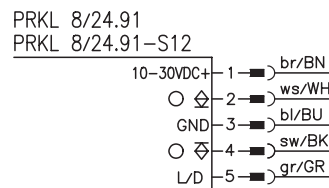
0 ... 21 m



- Laser, red light
- The autocollimation principle used ensures that the device functions reliably over the entire range (0 ... max.)
- A²LS - active suppression of extraneous light
- Adjustable focus
- M12 turning connector or cable connection



Electrical connection



Accessories:

(available separately • see page 72)

- M12 connectors (KD ...)
- Cable (KB ...)
- Mounting systems
- Reflectors
- Reflective tapes
- Control guard

We reserve the right to make changes • 8_b02e.fm



Specifications

Optical data

Typ. operating range limit (MTK(S) 50x50) ¹⁾	0 ... 21m
Operating range ²⁾	see tables
Light spot diameter	≥ 0.1mm adjustable (see diagrams)
Focus adjustment range	140mm ... ∞ (see diagrams)
Beam spread	≥ 0.5mrad
Light source	laser, class 2
Wavelength	670nm (visible red light, polarised)
Laser class	2 acc. to EN 60825-1 (2003/10)
Laser warning notice	see remarks

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
Bias current	≤ 35mA
Switching output	PNP and NPN transistor output
Function characteristics	light switching (dark switching for + U_B connected to pin 5)
Signal voltage high/low	≥ ($U_B - 2V$) ≤ 2V
Output current	max. 100mA
Sensitivity	adjustable with 12-turn potentiometer

Indicators

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

Mechanical data

Housing	metal
Optics cover	glass
Weight (plug/cable)	70g/140g
Connection type	M12 connector, 5-pin or cable: 2000mm, 5x0.25mm ²

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
Protection class ⁵⁾	IP 67
Standards applied	IEC 60947-5-2

Options

L/D input	
Dark switching/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 stop position of the turning connector (turning connector locked)

Order guide

	Designation	Part No.
with M12 connector	PRKL 8/24.91-S12	500 36364
with 2m cable	PRKL 8/24.91	500 36365

Tables

Reflectors	Operating range
1 TK(S) 100 x100	0 ... 16.0m
2 MTK(S) 50x50	0 ... 17.0m
3 TK(S) 30 x50	0 ... 6.0m
4 TK(S) 20 x40	0 ... 7.0m
5 Tape 2 100x100	0 ... 1.5m

1	0	16	20
2	0	17	21
3	0	6	8
4	0	7	9
5	0	1.5	2

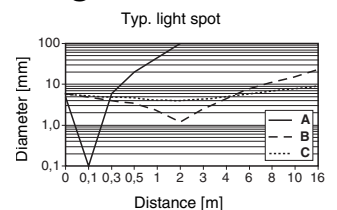
□ Operating range [m] *

▒ Typ. operating range limit [m] *

* for focus adjusted to 16m

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

Diagrams



- A focus = 0.144m
- B focus = 2m
- C focus = 16m

Remarks

- Use reflectors with small triple structures – MTK(S)

LASER LIGHT	
DO NOT STARE INTO BEAM	
Maximum Output:	1.8mW
Pulse duration:	6µs
Wavelength:	670nm
CLASS 2 LASER PRODUCT	
EN60825-1:2003-10	