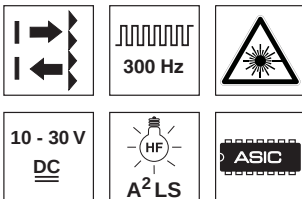


PRKL 25B

Laser retro-reflective photoelectric sensor with polarization filter

en 03-2018/03 50122143-02



0.05 ... 26m

- Laser class 1 acc. to EN 60825-1
- Polarized retro-reflective photoelectric sensor with visible red laser light
- High performance reserve and large operating range
- Small and compact construction with robust plastic housing, degree of protection IP 66/IP 67 for industrial application
- A²LS - Active Ambient Light Suppression
- Push-pull switching outputs
- Warning output for increased availability
- Optimized light beam propagation for the detection of small objects.
- Operating range adjustment

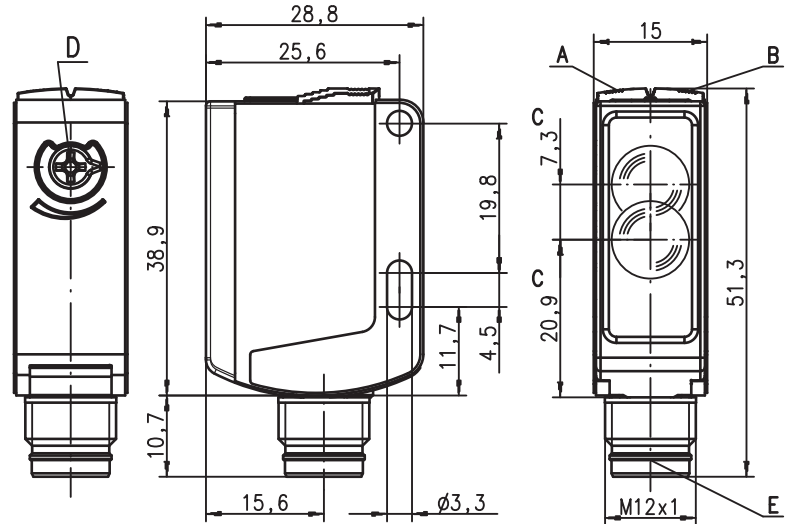


Accessories:

(available separately)

- Mounting systems (BT 25, UMS 25...)
- Cable with M8 or M12 connector (K-D ...)
- Reflectors
- Reflective tapes

Dimensioned drawing



- A Green indicator diode
- B Yellow indicator diode
- C Optical axis
- D Sensitivity adjustment
- E Plug M12x1

Electrical connection

PRKL 25B/66.P-S12

10-30V DC +	1	■	br/BN
● ○ ⊗	2	■	ws/WH
GND	3	■	bl/BU
○ ● ⊗	4	■	sw/BK

Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾	0.05 ... 26m ²⁾
Operating range ³⁾	see tables
Light beam characteristic	collimated
Light spot diameter	3x5mm ² at 1m, 10x20mm ² at 10m
Light source ⁴⁾	laser (pulsed)
Laser class	1 in accordance with IEC 60825-1:2007
Wavelength	655nm (visible red light, polarized)
Max. output power (peak)	1.5mW
Pulse duration	8.1µs

Timing

Switching frequency	300Hz
Response time	1.67ms
Delay before start-up	≤ 300ms

Electrical data

Operating voltage U _B ⁵⁾	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U _B
Open-circuit current	≤ 20mA
Switching output ⁶⁾	2 push-pull switching outputs pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching light/dark switching ≥ (U _B -2V)/≤ 2V max. 100mA adjustable with potentiometer
Function	
Signal voltage high/low	
Output current	
Operating range	

.../66.P

Indicators

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

Mechanical data

Housing	plastic (PC-ABS)
Optics cover	plastic (PMMA)
Weight	with connector: 15g with 2m cable: 55g
Connection type	cable 2m (cross section 3x0.20mm ²), M8 or M12 connector

Environmental data

Ambient temp. (operation/storage) ⁷⁾	-40°C ... +40°C/-40°C ... +60°C
Protective circuit ⁸⁾	2, 3
VDE safety class ⁹⁾	II
Degree of protection	IP 66, IP 67
Standards applied	IEC 60947-5-2
Certifications	UL 508, C22.2 No.14-13 ⁵⁾ ⁷⁾ ¹⁰⁾

Options

Activation input activ	
Transmitter active/not active	≥ 8V/≤ 2V
Activation/disable delay	≤ 1ms
Input resistance	10KΩ ± 10%

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Reflectivity > 50%
- 3) Operating range: recommended range with performance reserve
- 4) Average life expectancy 50,000h at an ambient temperature of 25°C
- 5) For UL applications: for use in class 2 circuits according to NEC only
- 6) The push-pull switching outputs must not be connected in parallel
- 7) UL certified in the temperature range -30°C to 60°C
- 8) 2=polarity reversal protection, 3=short circuit protection for all transistor outputs
- 9) Rating voltage 50V
- 10) These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

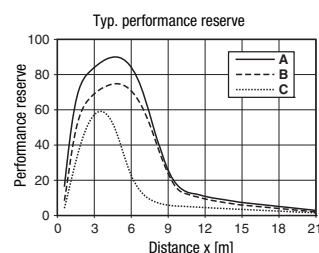
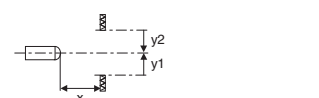
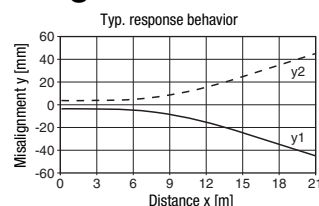
Tables

Reflectors			Operating range	
1	TK(S)	100x100	0.30 ... 21.0m ²⁾	
2	MTKS	50x50	0.05 ... 16.0m	
3	MTKS	20x20	0.05 ... 9.0m	
1	0.30		21	26 ²⁾
2	0.05		16	20
3	0.05	9	11	

□ Operating range [m]
 ■ Typ. operating range limit [m]

TK ... = adhesive
 TKS ... = screw type
 MTKS ... = micro triple, screw type

Diagrams



- A TK(S) 100x100
- B MTKS 50x50
- C MTKS 20x20

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.

UL REQUIREMENTS

Enclosure Type Rating: Type 1

For Use in NFPA 79 Applications only.

Adapters providing field wiring means are available from the manufacturer. Refer to manufacturers information.

CAUTION – the use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION ! Si d'autres dispositifs d'alignement que ceux préconisés ici sont utilisés ou s'il est procédé autrement qu'indiqué, cela peut entraîner une exposition à des rayonnements et un danger pour les personnes.

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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.

Order guide

	Designation	Part no.
Laser class 1		
2 push-pull switching outputs	PRKL 25B/66.P-S12	50126556

