

## Technical data sheet

### Polarized retro-reflective photoelectric

Part no.: 50143273

SET PRK23/4X-M8TKS50x50.1

#### Contents



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Figure can vary



## Set consists of

	Quantity	Part no.	Designation	Article	Description
	1	50138471	PRK23/4X-M8	Polarized retro-reflective photoelectric sensor	Operating range limit: 0.1 ... 6 m Light source: LED, Red Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 4 -pin
	1	50105153	TKS 50X50.1	Reflector	Design: Rectangular Reflective surface: 47 mm x 48 mm Triple reflector size: 4 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive

## Technical data

## Basic data

Series	23
Operating principle	Reflection principle

## Special design

Special design	Article set
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## Optical data

Operating range	Guaranteed operating range
Operating range	0.1 ... 2.5 m, With reflector TKS 50x50.1
Operating range limit	Typical operating range
Operating range limit	0.1 ... 3.3 m, With reflector TKS 50x50.1
Light source	LED, Red
LED light wavelength	645 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)

## Electrical data

Protective circuit	Polarity reversal protection Short circuit protected
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## Performance data

Supply voltage $U_B$	10 ... 30 V, DC, Incl. residual ripple
Residual ripple	0 ... 15 %, From $U_B$
Open-circuit current	0 ... 20 mA

## Outputs

Number of digital switching outputs	1 Piece(s)
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## Switching outputs

Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: $\geq(U_B - 2.5V)$ low: $\leq 2.5V$

## Switching output 1

Switching element	Transistor, PNP
Switching principle	Light switching

## Timing

Switching frequency	500 Hz
Response time	1 ms
Readiness delay	300 ms

## Connection

## Connection 1

Function	Signal OUT Voltage supply
Type of connection	Connector
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

## Mechanical data

Dimension (W x H x L)	11.4 mm x 34.2 mm x 18.3 mm
Housing material	Plastic, PC-ABS
Lens cover material	Plastic / PMMA
Housing color	Black Red

## Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)

## Environmental data

Ambient temperature, operation	-40 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

## Certifications

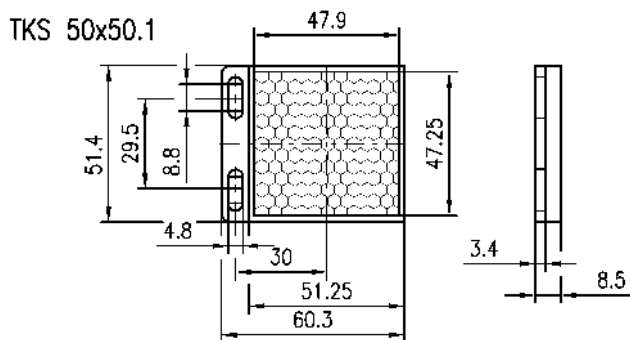
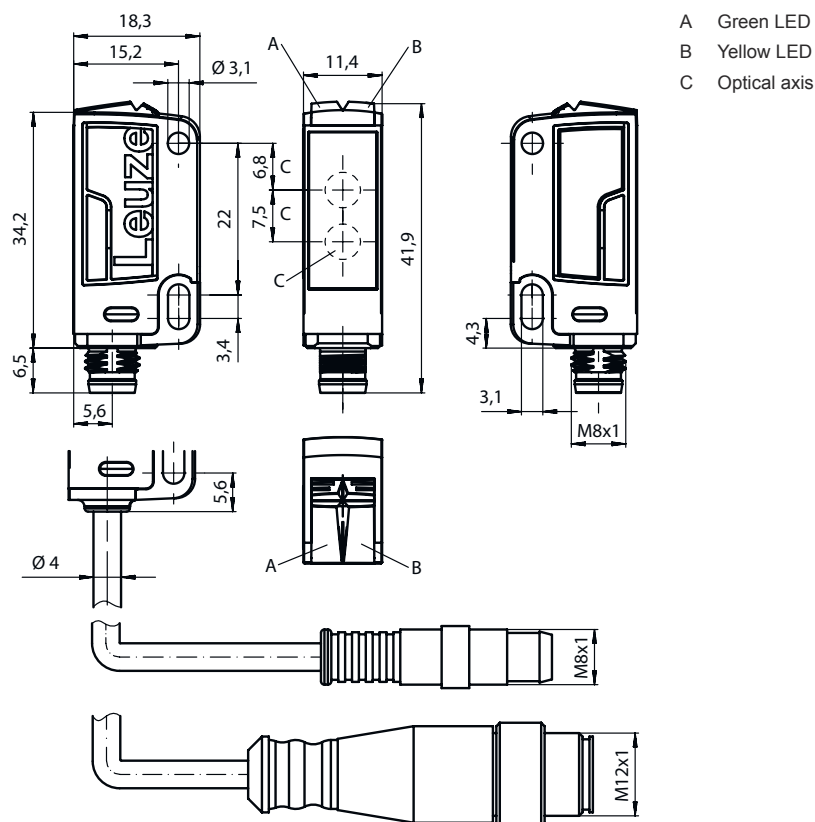
Degree of protection	IP 67
Protection class	III
Standards applied	IEC 60947-5-2

## Classification

Customs tariff number	85365019
eCl@ss 8.0	27270902
eCl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717

## Dimensioned drawings

All dimensions in millimeters



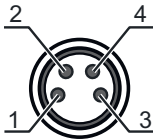
## Electrical connection

### Connection 1

Function	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

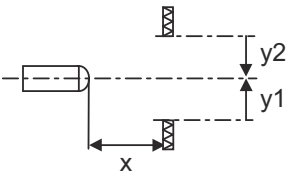
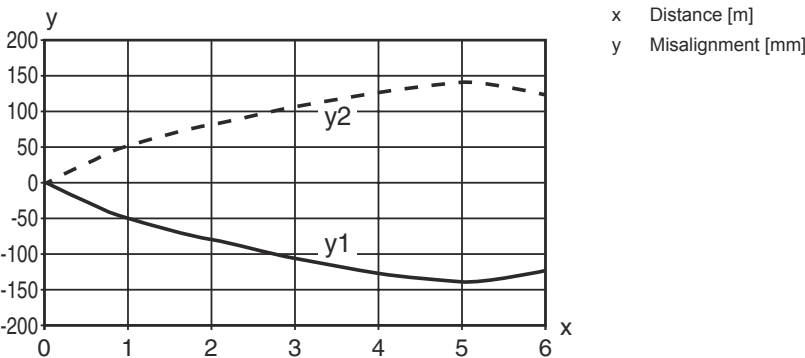
Electrical connection

Pin	Pin assignment
1	V+
2	n.c.
3	GND
4	OUT 1



Diagrams

Typ. response behavior



Operation and display

LED	Display	Meaning
1	Yellow, continuous light	Light path free
	Yellow, flashing	No function reserve
2	Green, continuous light	Operational readiness

Part number code

Part designation: AAA23.GJ/ ff-HH

AAA23	<b>Operating principle / construction</b> HT23: diffuse reflection sensor with background suppression PRK23: retro-reflective photoelectric sensor with polarization filter LS23: throughbeam photoelectric sensor transmitter LE23: throughbeam photoelectric sensor receiver ET23: energetic diffuse reflection sensor FT23: diffuse reflection sensor with fading
G	<b>Equipment</b> T: autocollimation principle (single lens) for highly transparent bottles without tracking
J	<b>Operating range adjustment</b> 3: teach-in via button
ff	<b>Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2)</b> 2: NPN transistor output, light switching N: NPN transistor output, dark switching 4: PNP transistor output, light switching P: PNP transistor output, dark switching X: pin not used

## Part number code

HH	<b>Electrical connection</b>
	n/a: cable, standard length 2000 mm, 3-wire
	M8: M8 connector, 4-pin (plug)
	200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug)
	M12: M12 connector, 4-pin (plug)
	200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug)

### Note



A list with all available device types can be found on the Leuze website at [www.leuze.com](http://www.leuze.com).

## Notes



### Observe 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 its intended use.

### For UL applications:



- Only for use in "class 2" circuits
- 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)



## Accessories

### Connection technology - Connection cables



	Part no.	Designation	Article	Description
	50130850	KD U-M8-4A-V1-050	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50130871	KD U-M8-4W-V1-050	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

## Accessories

### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50118542	BT 200M.5	Mounting bracket	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Adjustable Material: Stainless steel
	50124651	BT 205M-10SET	Mounting device set	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

### Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117829	BTP 200M-D12	Mounting system	Design of mounting device: Protection hood Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117255	BTU 200M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

#### Note



A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.