

## Technical data sheet

### Polarized retro-reflective photoelectric

Part no.: 50136402

Set PRK5/XP-200-M8+Reflector

#### Contents

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- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Part number code
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Figure can vary



## Technical data

### Basic data

Series	5
Operating principle	Reflection principle
Contains	Reflector

### Special version

Special version	Article set
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### Optical data

Operating range	Guaranteed operating range
Operating range	0.02 ... 1 m, With reflector in set
Operating range limit	Typical operating range
Operating range limit	0.02 ... 1.2 m, With reflector in set
Light source	LED, Red
LED light wavelength	620 nm
LED group	Exempt group (in acc. with EN 62471)
Transmitted-signal shape	Pulsed

### Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected

### Performance data

Supply voltage $U_B$	10 ... 30 V, DC
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

Assignment	Connection 1, pin 2
Switching element	Transistor, PNP
Switching principle	Dark 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	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Wire cross section	0.2 mm <sup>2</sup>
Thread size	Snap-in, M8
Type	Male
Material	Plastic
No. of pins	4 -pin

### Mechanical data

Dimension (W x H x L)	14 mm x 32.5 mm x 20.2 mm
Housing material	Plastic
Plastic housing	ABS
Lens cover material	Plastic
Net weight	40 g
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

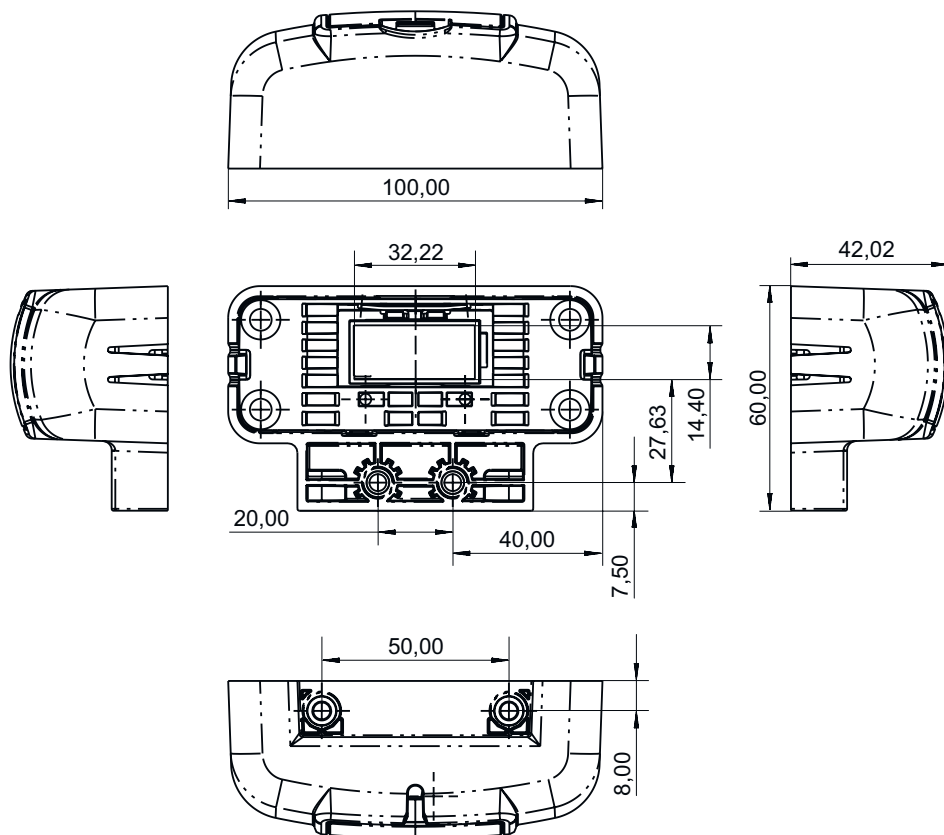
Degree of protection	IP 67
Protection class	III
Standards applied	IEC 60947-5-2

### Classification

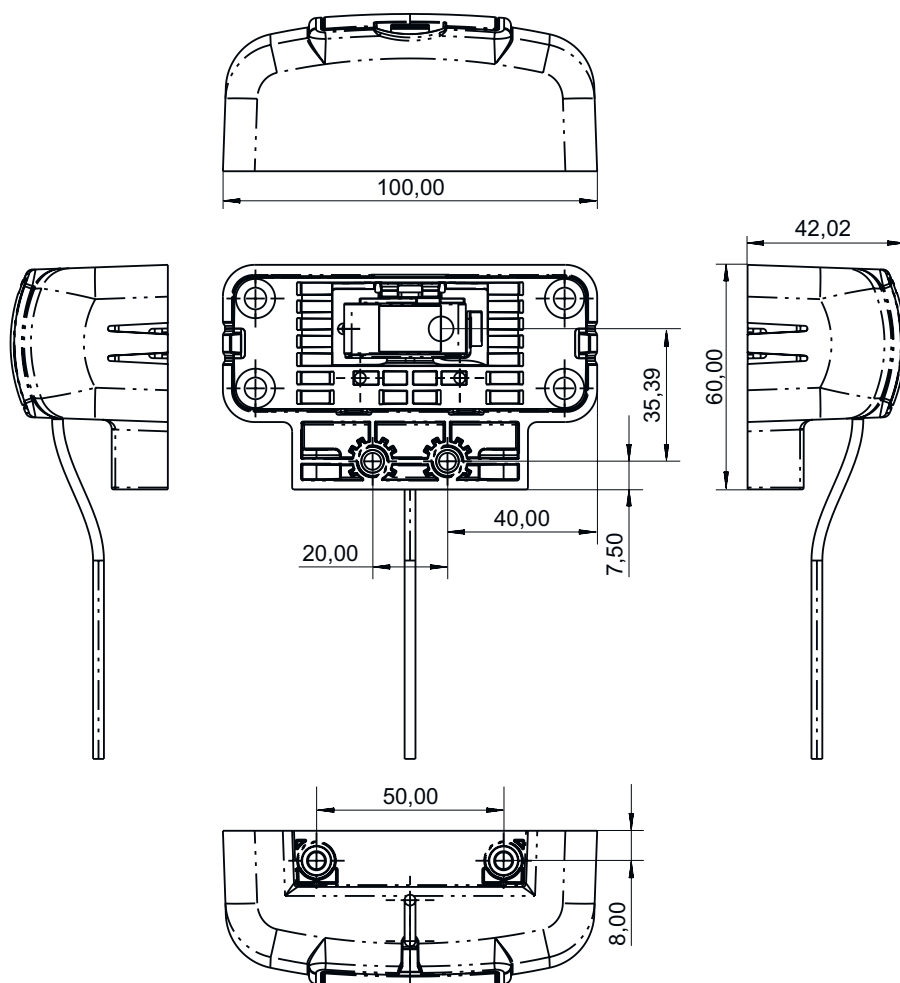
Customs tariff number	85365019
eCl@ss 5.1.4	27270902
eCl@ss 8.0	27270902
eCl@ss 9.0	27270902
eCl@ss 10.0	27270902
eCl@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717

## Dimensioned drawings

All dimensions in millimeters



# Dimensioned drawings



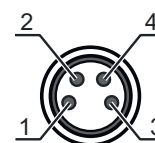
## Electrical connection

### Connection 1

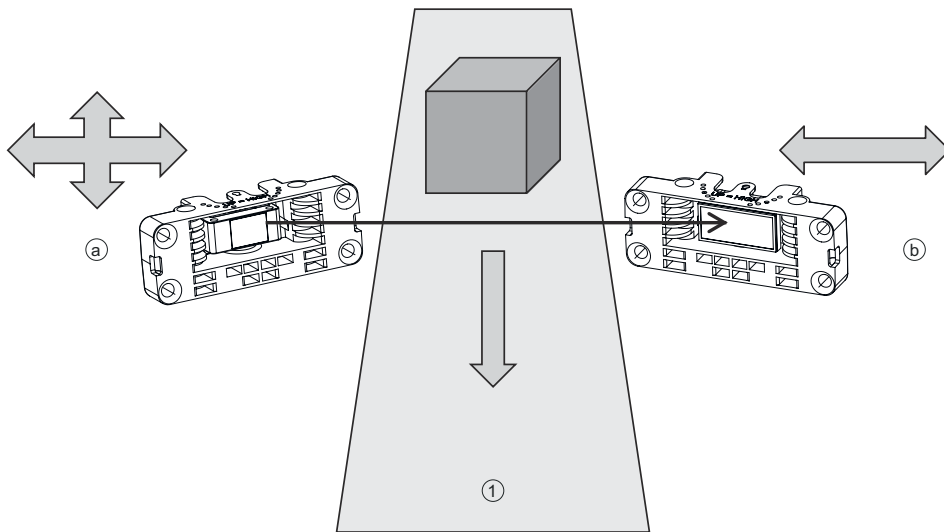
<b>Function</b>	Signal OUT
	Voltage supply
<b>Type of connection</b>	Cable with connector
<b>Cable length</b>	200 mm
<b>Sheathing material</b>	PUR
<b>Cable color</b>	Black
<b>Wire cross section</b>	0.2 mm <sup>2</sup>
<b>Thread size</b>	Snap-in, M8
<b>Type</b>	Male
<b>Material</b>	Plastic
<b>No. of pins</b>	4 -pin

### Pin Pin assignment

<b>Pin</b>	<b>Pin assignment</b>
1	V+
2	OUT 1
3	GND
4	n.c.

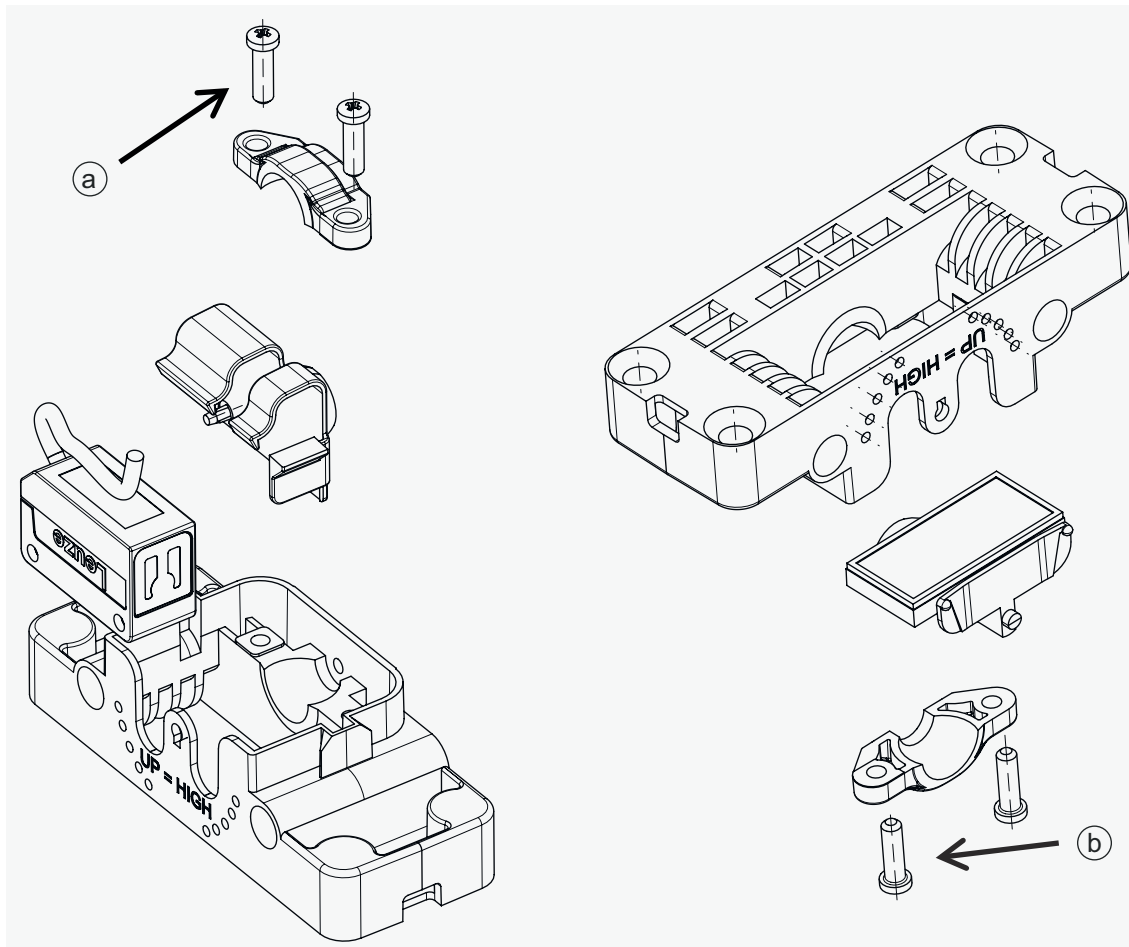


## Diagrams



- a Vertical and horizontal sensor alignment
- b Horizontal reflector alignment
- 1 600 mm to 1400 mm

## Diagrams



- a Loosen the screws to align the sensor  
 b Loosen the screws to align the reflector

## 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: **AAA5d.EE/ ff-GG-hh-l**

<b>AAA5</b>	<b>Operating principle / construction</b> HT5: diffuse reflection sensor with background suppression LS5: throughbeam photoelectric sensor transmitter LE5: throughbeam photoelectric sensor receiver ET5: energetic diffuse reflection sensor FT5: diffuse reflection sensor with fading PRK5: retro-reflective photoelectric sensor with polarization filter
<b>d</b>	<b>Light type</b> n/a: red light I: infrared light

## Part number code

<b>EE</b>	<b>Equipment</b> 1: adjustable range M: for semi-transparent objects H: for the detection of transparent films X: reinforced fading 3: teach-in via button R: combination product for reflector DTKS 30x50
<b>ff</b>	<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 9: deactivation input (deactivation with high signal) D: deactivation input (deactivation with low signal)
<b>GG</b>	<b>Version</b> P1: narrow light beam
<b>hh</b>	<b>Electrical connection</b> n/a: cable, standard length 2000 mm, 4-wire M8: M8 connector, 4-pin (plug) M8.3: M8 connector, 3-pin (plug) 200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug) 200-M8.3: cable, length 200 mm with M8 connector, 3-pin, axial (plug) 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug) M8.1: Snap-in, M8 connector, 4-pin (plug)
<b>I</b>	<b>Configuration</b> P1: different configuration

### 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)

## Further information

- Sum of the output currents for both outputs, 50 mA for ambient temperatures > 40 °C

## Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130856	KD U-M8-4A-P1-050	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
	50130875	KD U-M8-4W-P1-050	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR

#### Note



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