



**Part no.: 50125993**  
**SET PRK5 + BT205M + TKS40x60.A**  
**Polarized retro-reflective photoelectric sensor set**




Figure can vary

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## Set consists of

	Quantity	Part no.	Designation	Article	Description
	1	50117705	PRK5/4P	Polarized retro-reflective photoelectric sensor	Operating range limit: 0.02 ... 6 m Light source: LED, Red Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching output 2: Transistor, PNP, Dark switching Switching frequency: 500 Hz Connection: Cable, 2,000 mm, 4 -wire

## Technical data

<b>Basic data</b>	
Series	5
Operating principle	Reflection principle
Contains	1x BT 205M 1x TKS 40x60.A 4x M3 x 8 screw
<b>Special design</b>	
Special design	Article set
<b>Optical data</b>	
Operating range	Guaranteed operating range
Operating range	0.02 ... 2.8 m
Operating range limit	Typical operating range
Operating range limit	0.02 ... 4.2 m , With reflector TK 40x60.A
Light source	LED , Red
LED light wavelength	620 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)
<b>Electrical data</b>	
Protective circuit	Polarity reversal protection Short circuit protected
<b>Performance data</b>	
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 2 Piece(s)

**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, conductor 4
Switching element	Transistor , PNP
Switching principle	Light switching

**Switching output 2**

Assignment	Connection 1, conductor 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**

Type of connection	Cable
Function	Signal OUT Voltage supply
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm <sup>2</sup>

**Mechanical data**

Dimension (W x H x L)	14 mm x 32.5 mm x 20.2 mm
Housing material	Plastic , ABS
Lens cover material	Plastic
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 ... 60 °C

**Certifications**

Degree of protection	IP 67
Protection class	III

Part no.: 50125993 – SET PRK5 + BT205M + TKS40x60.A – Polarized retro-

Certifications	c UL US
Standards applied	IEC 60947-5-2

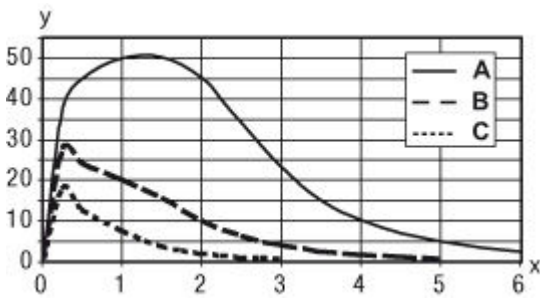
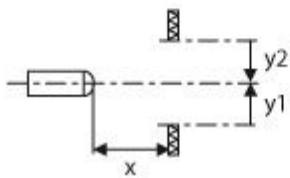
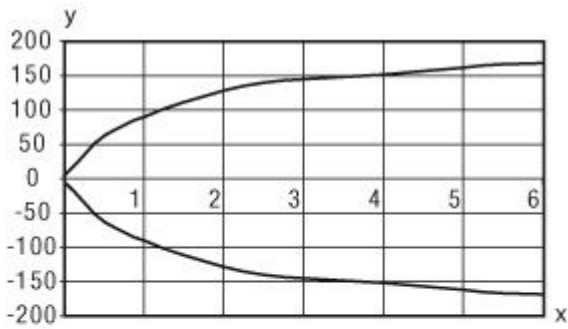
<b>Classification</b>	
Customs tariff number	85365019
eCl@ss 8.0	27270902
eCl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717

## Electrical connection

<b>Connection 1</b>	
Type of connection	Cable
Function	Signal OUT Voltage supply
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm <sup>2</sup>

<b>Conductor color</b>	<b>Conductor assignment</b>
Brown	V+
White	OUT 2
Blue	GND
Black	OUT 1

**Diagrams**



**Operation and display**

**LEDs**

LED	Display	Meaning
1		

**Part number code**

Part designation: **AAA5d.EE/ ff-GG-hh-l**

AAA5	<p><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</p>
d	<p><b>Light type:</b>                      n/a: red light                      l: infrared light</p>

EE	<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
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 9: deactivation input (deactivation with high signal) D: deactivation input (deactivation with low signal)
GG	<b>Design:</b> P1: narrow light beam
hh	<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)
I	<b>Configuration:</b> P1: configuration for label detection

#### Note

A list with all available device types can be found on the Leuze electronic 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)

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