

Technical data sheet

Polarized retro-reflective photoelectric

Part no.: 50125993

SET PRK5 + BT205M + TKS40x60.A




Contents

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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

Basic data

Series	5
Operating principle	Reflection principle
Contains	1x BT 205M 1x TKS 40x60.A 4x M3 x 8 screw

Special version

Special version	Article set
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Optical data

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)

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	2 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, 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

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

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
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
Certifications	c UL US
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

Electrical connection

Connection 1

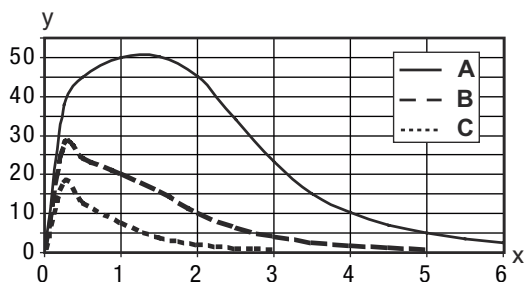
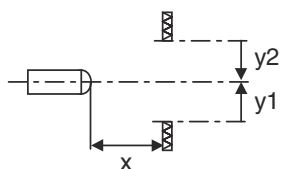
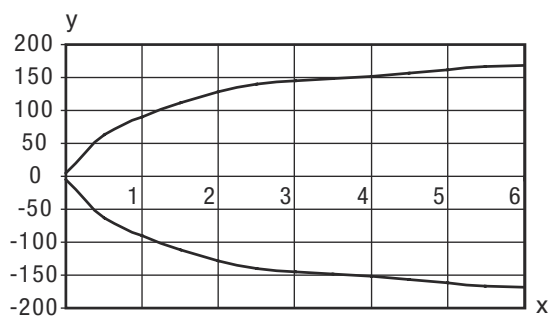
Function	Signal OUT
	Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm ²

Conductor color

Conductor assignment

Brown	V+
White	OUT 2
Blue	GND
Black	OUT 1

Diagrams



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-I**

AAA5	Operating principle / construction 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
d	Light type n/a: red light I: infrared light
EE	Equipment 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	Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2) 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	Version P1: narrow light beam
hh	Electrical connection 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	Configuration P1: different configuration

Note



A list with all available device types can be found on the Leuze website at 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.

Notes

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