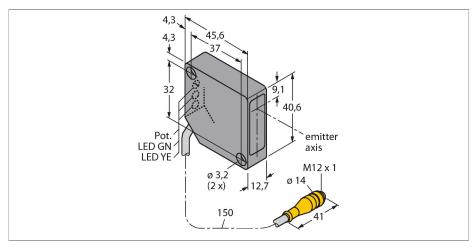


PD45VP6C100Q Photoelectric Sensor – Convergent Mode Laser Sensor



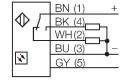
Technical data

| ID 3046289 Optical data Function Proximity switch Operating mode Convergent Light type Red Wavelength 650 nm Focal distance 102 mm Laser class ▲ 2 Beam diameter 0,25 mm Range 102 mm Electrical data Operating voltage 1030 VDC No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms Overcurrent release > 220 mA Setting option Potentiometer Mechanical data Design Rectangular, PicoDot Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material Lens plastic, Acrylic | Туре | PD45VP6C100Q | | |
|---|-----------------------|---------------------------------|--|--|
| Function Proximity switch Operating mode Convergent Light type Red Wavelength 650 nm Focal distance 102 mm Laser class ▲ 2 Beam diameter 0,25 mm Range 102 mm Electrical data Operating voltage 1030 VDC No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms Overcurrent release > 220 mA Setting option Potentiometer Mechanical data Design Rectangular, PicoDot Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material | ID | 3046289 | | |
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| Wavelength 650 nm Focal distance 102 mm Laser class ♠ 2 Beam diameter 0,25 mm Range 102 mm Electrical data Operating voltage No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Operating mode | Convergent | | |
| Focal distance 102 mm Laser class | Light type | Red | | |
| Laser class ♠ 2 Beam diameter 0,25 mm Range 102 mm Electrical data 1030 VDC No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Wavelength | 650 nm | | |
| Beam diameter 0,25 mm Range 102 mm Electrical data 1030 VDC No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Focal distance | 102 mm | | |
| Range 102 mm Electrical data 1030 VDC No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Laser class | <u>^</u> 2 | | |
| Electrical data Operating voltage 1030 VDC No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms Overcurrent release > 220 mA Setting option Potentiometer Mechanical data Design Rectangular, PicoDot Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material | Beam diameter | 0,25 mm | | |
| Operating voltage 1030 VDC No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Range | 102 mm | | |
| No-load current ≤ 20 mA Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Electrical data | | | |
| Output function Complementary contact, PNP Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Operating voltage | 1030 VDC | | |
| Switching frequency 2.5 kHz Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | No-load current | ≤ 20 mA | | |
| Readiness delay ≤ 1 s Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Output function | Complementary contact, PNP | | |
| Readiness delay ≤ 1000 ms Response time typical < 0.2 ms | Switching frequency | 2.5 kHz | | |
| Response time typical < 0.2 ms Overcurrent release > 220 mA Setting option Potentiometer Mechanical data Design Rectangular, PicoDot Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material | Readiness delay | ≤1s | | |
| Overcurrent release > 220 mA Setting option Potentiometer Mechanical data Design Rectangular, PicoDot Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material | Readiness delay | ≤ 1000 ms | | |
| Setting option Potentiometer Mechanical data Design Rectangular, PicoDot Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material | Response time typical | < 0.2 ms | | |
| Mechanical data Design Rectangular, PicoDot Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material | Overcurrent release | > 220 mA | | |
| DesignRectangular, PicoDotDimensions45.6 x 12.7 x 40.6 mmHousing materialPlastic, Thermoplastic material | Setting option | Potentiometer | | |
| Dimensions 45.6 x 12.7 x 40.6 mm Housing material Plastic, Thermoplastic material | Mechanical data | | | |
| Housing material Plastic, Thermoplastic material | Design | Rectangular, PicoDot | | |
| | Dimensions | 45.6 x 12.7 x 40.6 mm | | |
| Lens plastic, Acrylic | Housing material | Plastic, Thermoplastic material | | |
| | Lens | plastic, Acrylic | | |

Features

- High excess gain
- ■Focal point, Ø 0.25 mm
- ■M12 × 1 male connector
- Sensitivity adjusted via potentiometer
- Light and dark operation

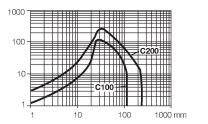
Wiring diagram



Functional principle

Convergent mode sensors are equipped with a lens in front of the emitter diode that produces a small and intense focal point at a defined distance from the sensor. Similar to diffuse mode sensors, the light reflected by the target is evaluated. Convergent mode sensors are particularly suited for detection of small targets or edges. Based on the intense light concentration in the focal point, convergent mode sensors are capable of detecting targets with a low reflectivity.

Excess gain curve Excess gain in relation to the distance





Technical data

| Electrical connection | Cable with connector, M12 × 1, 0.15 m, PVC | | |
|------------------------|--|--|--|
| Number of cores | 5 | | |
| Ambient temperature | -10+45 °C | | |
| Protection class | IP54 | | |
| Special features | Laser | | |
| Power-on indication | LED, Green | | |
| Switching state | LED, Yellow | | |
| Error indication | LED, green, Flashing | | |
| Excess gain indication | LED | | |
| Tests/approvals | | | |
| Approvals | CE | | |

Accessories

| Dimension drawing | Туре | ID | |
|--|---------------|---------|---|
| M12x1 o 15 14 14 11.5 14 14 15 15 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15 | RKC4.5T-2/TEL | 6625016 | Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
| 015 M12x1 26.5 214 | WKC4.5T-2/TEL | 6625028 | Connection cable, female M12, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |