



WTV4-3P3441

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------|----------|
| WTV4-3P3441 | 1029582 |

Other models and accessories → www.sick.com/W4

Detailed technical data

Features

| | |
|------------------------------------|--|
| Functional principle | Photoelectric proximity sensor |
| Functional principle detail | Background suppression |
| Sensing range max. | 4 mm ... 50 mm ¹⁾ |
| Sensing range | 15 mm ... 50 mm ¹⁾ |
| Emitted beam | |
| Light source | PinPoint LED ²⁾ |
| Type of light | Visible red light |
| Light spot size (distance) | Ø 10 mm (40 mm) |
| Key LED figures | |
| Wave length | 650 nm |
| Adjustment | Potentiometer, 5 turns |
| Special applications | Detecting uneven, shiny objects, Detecting objects wrapped in film |

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Safety-related parameters

| | |
|-------------------------|-------------|
| MTTF_D | 1,124 years |
| DC_{avg} | 0 % |

Electrical data

| | |
|--|---|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption | 20 mA ³⁾ |
| Protection class | III |
| Digital output | |
| Type | PNP |
| Output current I_{max} | ≤ 100 mA |
| Response time | < 0.5 ms ⁴⁾ |
| Switching frequency | 1,000 Hz ⁵⁾ |
| Switching mode | Light/dark switching |
| Circuit protection | A ⁶⁾ C ⁷⁾ D ⁸⁾ |
| Special feature | V-optics |

¹⁾ Limit values.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

Mechanical data

| | |
|-------------------------------|--|
| Housing | Rectangular |
| Design detail | Flat |
| Dimensions (W x H x D) | 16 mm x 39.5 mm x 12 mm |
| Connection | Cable with M12 male connector, 4-pin ¹⁾ |
| Connection detail | |
| Conductor size | 0.14 mm ² |
| Cable diameter | Ø 3.4 mm |
| Length of cable (L) | 150 mm ¹⁾ |
| Material | |
| Housing | Plastic, ABS |
| Front screen | Plastic, PMMA |
| Cable | PVC |
| Weight | 30 g |

¹⁾ Do not bend below 0 °C.

Ambient data

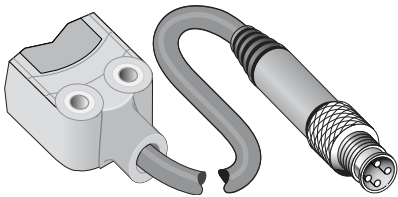
| | |
|--------------------------------------|-------------------|
| Enclosure rating | IP67 IP66 |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |

| | |
|--------------------|------------------------------|
| UL File No. | NRKH.E181493 & NRKH7.E181493 |
|--------------------|------------------------------|

Classifications

| | |
|-----------------------|----------|
| eCl@ss 5.0 | 27270904 |
| eCl@ss 5.1.4 | 27270904 |
| eCl@ss 6.0 | 27270904 |
| eCl@ss 6.2 | 27270904 |
| eCl@ss 7.0 | 27270904 |
| eCl@ss 8.0 | 27270904 |
| eCl@ss 8.1 | 27270904 |
| eCl@ss 9.0 | 27270904 |
| eCl@ss 10.0 | 27270904 |
| eCl@ss 11.0 | 27270904 |
| eCl@ss 12.0 | 27270903 |
| ETIM 5.0 | EC002719 |
| ETIM 6.0 | EC002719 |
| ETIM 7.0 | EC002719 |
| ETIM 8.0 | EC002719 |
| UNSPSC 16.0901 | 39121528 |

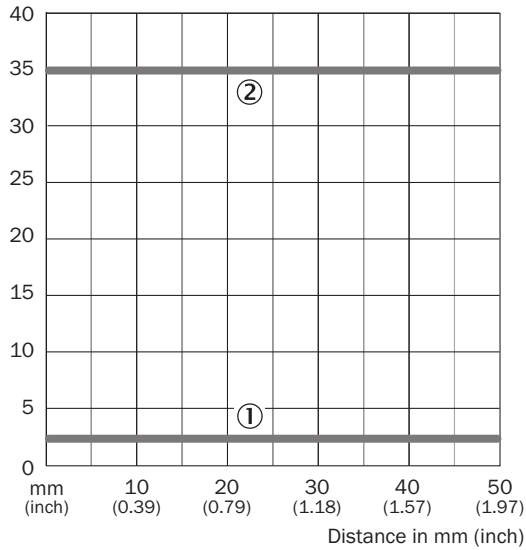
Connection type



Characteristic curve

WTV4-3, V-optics

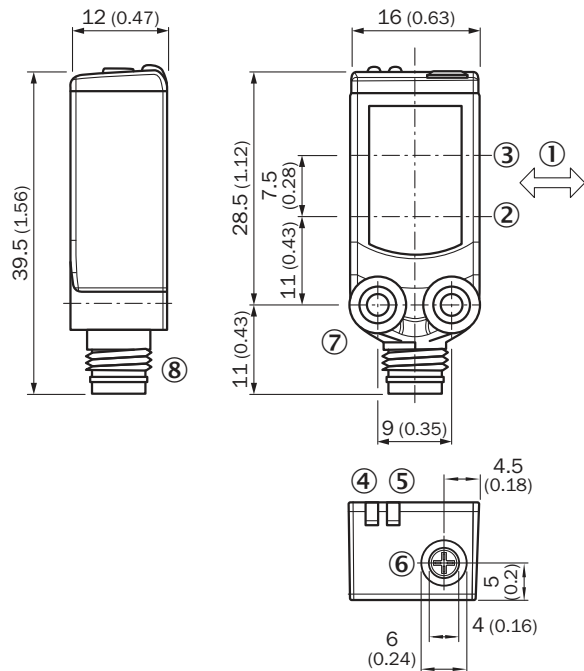
Background



- ① Black/white shift 90% / 6%
- ② Distance to the background with transparent objects

Dimensional drawing (Dimensions in mm (inch))



WTx4-3, potentiometer



- ① Standard direction of the material being detected
- ② Optical axis, sender
- ③ Optical axis, receiver
- ④ LED indicator yellow: Status of received light beam
- ⑤ LED indicator green: Supply voltage active
- ⑥ Potentiometer
- ⑦ Threaded mounting hole M3
- ⑧ Connection

Recommended accessories

Other models and accessories → www.sick.com/W4

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
| Plug connectors and cables | | | |
|  | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14-050VB3XLEAX | 2096235 |
|  | Head A: male connector, M12, 4-pin, straight Cable: unshielded | STE-1204-G | 6009932 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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