# WTB4-3P2100S93

MultiPulse

**PHOTOELECTRIC SENSORS**

**SICK**
Sensor Intelligence.



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## Ordering information

| Type | part no. |
|---|---|
| WTB4-3P2100S93 | 1094827 |

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

## Detailed technical data

### Features

| | |
|---|---|
| **Functional principle** | Photoelectric proximity sensor |
| **Functional principle detail** | Background suppression |
| **Dimensions (W x H x D)** | 16 mm x 39.5 mm x 12 mm |
| **Housing design (light emission)** | Rectangular |
| **Sensing range max.** | 15 mm ... 60 mm [1] |
| **Sensing range** | 15 mm ... 60 mm [1] |
| **Type of light** | Visible red light |
| **Light source** | PinPoint LED [2] |
| **Light spot size (distance)** | Ø 7 mm (50 mm) |
| **Wave length** | 650 nm |
| **Adjustment** | None |
| **Special feature** | Oscillating output |
| **Special features** | Sensor with self-monitoring |

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Average service life: 100,000 h at $T_U$ = +25 °C.

### Mechanics/electronics

| | |
|---|---|
| **Supply voltage** | 10 V DC ... 30 V DC [1] |
| **Ripple** | < 5 $V_{pp}$ [2] |
| **Current consumption** | 20 mA [3] |

[1] Limit values.
[2] May not exceed or fall below $U_v$ tolerances.
[3] Without load.
[4] Pulsed.
[5] Signal transit time with resistive load.
[6] With light/dark ratio 1:1.
[7] A = $V_S$ connections reverse-polarity protected.
[8] C = interference suppression.
[9] D = outputs overcurrent and short-circuit protected.

| | |
|---|---|
| **Switching output** | PNP [4] |
| **Switching mode** | Light switching [4] |
| **Output current I$_{max.}$** | ≤ 100 mA |
| **Response time** | < 0.1 ms [5] |
| **Switching frequency** | 10 Hz [6] |
| **Connection type** | Connector M8, 3-pin |
| **Circuit protection** | A [7]<br>C [8]<br>D [9] |
| **Protection class** | III |
| **Weight** | 30 g |
| **Special device** | ✓ |
| **Housing material** | Plastic, ABS |
| **Optics material** | Plastic, PMMA |
| **Enclosure rating** | IP67<br>IP66 |
| **Special feature** | Oscillating output |
| **Ambient operating temperature** | –40 °C ... +60 °C |
| **Ambient temperature, storage** | –40 °C ... +75 °C |
| **UL File No.** | NRKH.E181493 & NRKH7.E181493 |

[1] Limit values.

[2] May not exceed or fall below U$_v$ tolerances.

[3] Without load.

[4] Pulsed.

[5] Signal transit time with resistive load.

[6] With light/dark ratio 1:1.

[7] A = V$_S$ connections reverse-polarity protected.

[8] C = interference suppression.

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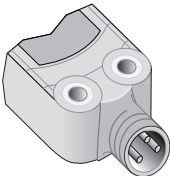
## Safety-related parameters

| | |
|---|---|
| **MTTF$_D$** | 574 years |
| **DC$_{avg}$** | 0 % |

## Classifications

| | |
|---|---|
| **ECLASS 5.0** | 27270904 |
| **ECLASS 5.1.4** | 27270904 |
| **ECLASS 6.0** | 27270904 |
| **ECLASS 6.2** | 27270904 |
| **ECLASS 7.0** | 27270904 |
| **ECLASS 8.0** | 27270904 |
| **ECLASS 8.1** | 27270904 |
| **ECLASS 9.0** | 27270904 |
| **ECLASS 10.0** | 27270904 |
| **ECLASS 11.0** | 27270904 |

# WTB4-3P2100S93 | MultiPulse

## PHOTOELECTRIC SENSORS

| ECLASS 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

## Connection diagram Cd-045

```
BN   1   + (L+)
BU   3   - (M)
BK   4   Q
```

## Functional principle

No object

0 Hz

Object present

2 Hz / 10 Hz
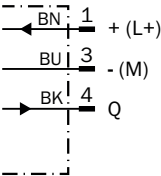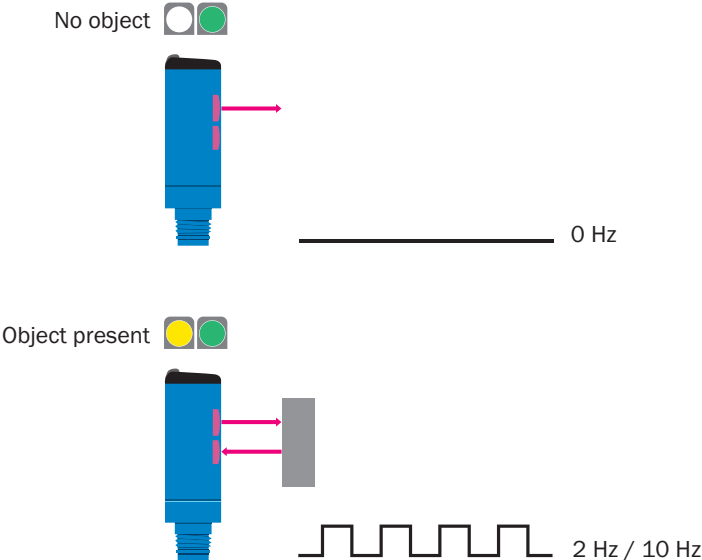
## Dimensional drawing
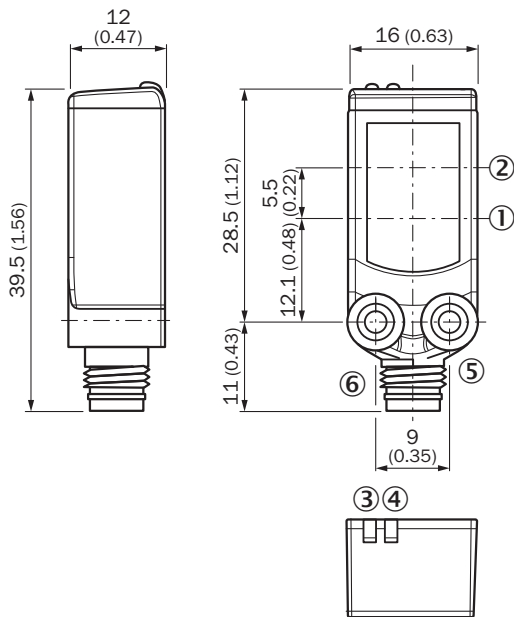


Dimensions in mm (inch)

## Recommended accessories

Other models and accessories ➜ www.sick.com/MultiPulse

| | Brief description | Type | part no. |
|---|---|---|---|
| connects and cables | | | |
| | • **Connection type head A:** Male connector, M8, 3-pin, straight, A-coded<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** 0.14 mm² ... 0.5 mm² | STE-0803-G | 6037322 |
| | • **Connection type head A:** Female connector, M8, 3-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 3-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with chemicals, Uncontaminated zones | YF8U13-050VA1XLEAX | 2095884 |

| Brief description | Type | part no. |
|---|---|---|
| **Mounting systems** | | |
| • **Description:** Mounting bracket for floor mounting<br>• **Material:** Stainless steel<br>• **Details:** Stainless steel 1.4571<br>• **Items supplied:** Mounting hardware included<br>• **Suitable for:** W4S, W4F, W4S | BEF-W4-B | 2051630 |
| • **Description:** Plate N08 for universal clamp bracket<br>• **Material:** Steel, zinc diecast<br>• **Details:** Zinc plated steel (sheet), Zinc die cast (clamping bracket)<br>• **Items supplied:** Universal clamp (5322626), mounting hardware<br>• **Usable for:** W100, W150, W4S, W4F, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W10, G6 Inox, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, MultiLine, LUT3, KT5, KT8, KT10, CS8 | BEF-KHS-N08 | 2051607 |
| • **Description:** Mounting bracket for wall mounting<br>• **Material:** Stainless steel<br>• **Details:** Stainless steel 1.4571<br>• **Items supplied:** Mounting hardware included<br>• **Suitable for:** W4S, W4F, W4S | BEF-W4-A | 2051628 |

## 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:

Contacts and other locations –**www.sick.com**

SICK AG   |   Waldkirch   |   Germany   |   www.sick.com

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