



WTB4S-3N1162H

W4

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|---------------|----------|
| WTB4S-3N1162H | 1048095 |

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 ... 500 mm ¹⁾ | |
| Sensing range | 10 mm ... 350 mm ¹⁾ | |
| Emitted beam | Light source | PinPoint LED ²⁾ |
| | Type of light | Visible red light |
| | Light spot size (distance) | Ø 6.5 mm (150 mm) |
| Key LED figures | Wave length | 650 nm |
| | Adjustment | Single teach-in button |
| Special applications | Hygienic and washdown zones | |
| Housing design | Hygiene | |

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 | 1,231 years |
| DC_{avg} | 0 % |
| T_M (mission time) | 20 years |

Electronics

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

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_γ 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⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

Mechanics

| | |
|-------------------------------|---|
| Housing | Rectangular |
| Design detail | Slim |
| Dimensions (W x H x D) | 15.25 mm x 63.2 mm x 22.15 mm |
| Connection | Cable, 4-wire, 2 m ¹⁾ |
| Connection detail | |
| Conductor size | 0.14 mm ² |
| Length of cable (L) | 2 m ¹⁾ |
| Material | |
| Housing | Metal, Stainless steel V4A (1.4404, 316L) |
| Front screen | Plastic, PMMA |
| Cable | Plastic, PVC |
| Weight | 80 g |

¹⁾ Do not bend below 0 °C.

Ambient data

| | |
|--------------------------------------|--|
| Enclosure rating | IP66 IP67 IP68 IP69K |
| Ambient operating temperature | -30 °C ... +70 °C ¹⁾ -30 °C ... +60 °C |

¹⁾ At UV ≤ 24 V and IA < 30 mA.

| | |
|-------------------------------------|--|
| Ambient temperature, storage | -30 °C ... +75 °C |
| UL File No. | FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493 |

¹⁾ At UV ≤ 24 V and IA < 30 mA.

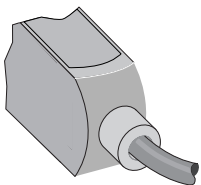
Certificates

| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| ECOLAB certificate | ✓ |
| Photobiological safety (DIN EN 62471) certificate | ✓ |

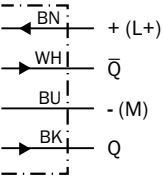
Classifications

| | |
|-----------------------|----------|
| 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 |
| ECLASS 12.0 | 27270903 |
| ETIM 5.0 | EC002719 |
| ETIM 6.0 | EC002719 |
| ETIM 7.0 | EC002719 |
| ETIM 8.0 | EC002719 |
| UNSPSC 16.0901 | 39121528 |

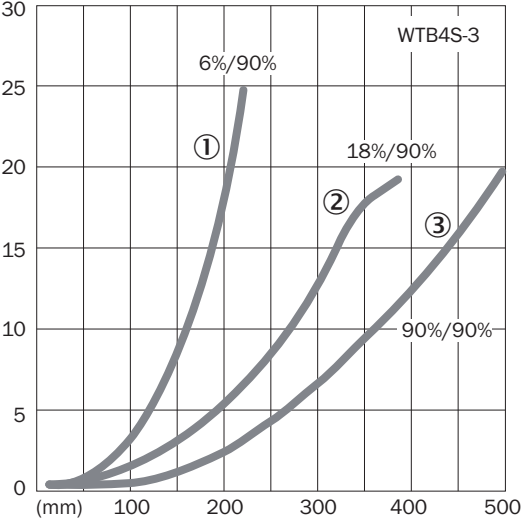
Connection type



Connection diagram Cd-094

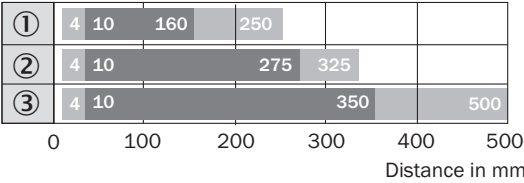


Characteristic curve WTB4S-3, 500 mm



- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

Sensing range diagram WTB4S-3, 500 mm




■ Sensing range ■ Sensing range max.

- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|------------|----------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none">• Description: Unshielded• Connection type head A: Male connector, M8, 4-pin, straight, A-coded• Connection systems: Screw-type terminals• Permitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0804-G | 6037323 |

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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