



WTB12-3N1011S42

W12

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

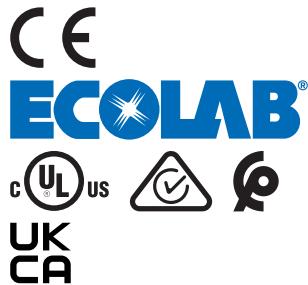


Ordering information

| Type | part no. |
|-----------------|----------|
| WTB12-3N1011S42 | 1044101 |

Other models and accessories → www.sick.com/W12

Illustration may differ



Detailed technical data

Features

| | |
|------------------------------------|--------------------------------|
| Functional principle | Photoelectric proximity sensor |
| Functional principle detail | Background suppression |
| Sensing range max. | 20 mm ... 150 mm ¹⁾ |
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| Emitted beam | |
| Light source | LED ³⁾ |
| Type of light | Infrared light |
| Light spot size (distance) | 200 mm |
| Key LED figures | |
| Wave length | 850 nm |
| Adjustment | None |
| Special features | Sensing range pre-set: 150 mm |

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

²⁾ Preset sensing range.

³⁾ Average service life: 100,000 h at $T_U = +25^\circ\text{C}$.

Electronics

| | |
|--|-----------------------------------|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | $< 5 V_{pp}$ ²⁾ |
| Current consumption | 55 mA ³⁾ |
| Protection class | III |
| Digital output | |
| Type | NPN |
| Switching mode | Light switching |
| Signal voltage NPN HIGH/LOW | Approx. VS / < 2.5 V |
| Output current $I_{max.}$ | ≤ 100 mA |
| Response time | ≤ 330 μ s ⁴⁾ |
| Switching frequency | 1,500 Hz ⁵⁾ |
| Circuit protection | |
| | A ⁶⁾ |
| | C ⁷⁾ |
| | D ⁸⁾ |

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed 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.

Mechanics

| | |
|-------------------------------|--|
| Housing | Rectangular |
| Dimensions (W x H x D) | 15.6 mm x 48.5 mm x 42 mm |
| Connection | Cable with AMP connector, 320 mm ¹⁾ |
| Connection detail | |
| Conductor size | 0.85 mm ² |
| Length of cable (L) | 320 mm ¹⁾ |
| Material | |
| Housing | Metal |
| Front screen | Plastic, PMMA |
| Cable | Plastic, PVC |
| Weight | 200 g |

¹⁾ Do not bend below 0 °C.

Ambient data

| | |
|--------------------------------------|------------------------------|
| Enclosure rating | IP66 IP67 IP69K |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

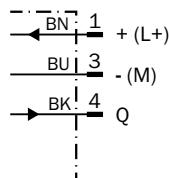
Certificates

| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China-RoHS | ✓ |
| ECOLAB certificate | ✓ |
| cULus 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 diagram Cd-045



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