



WTB27-3S1511P04
W27

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Type | part no. |
|-----------------|----------|
| WTB27-3S1511P04 | 1042970 |

Other models and accessories → www.sick.com/W27

Detailed technical data

Features

| | |
|--|---|
| Functional principle | Photoelectric proximity sensor |
| Functional principle detail | Background suppression |
| Dimensions (W x H x D) | 24.6 mm x 80.6 mm x 54 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 30 mm ... 2,000 mm ¹⁾ |
| Sensing range | 100 mm ... 2,000 mm |
| Type of light | Infrared light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 25 mm (800 mm) |
| Wave length | 880 nm |
| Adjustment | Potentiometer |
| Special features | Sensing range 2000 mm Mounting bracket premounted at an angle of 90° Including front lens for fast mounting |

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

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

Mechanics/electronics

| | |
|-------------------------------------|--|
| Supply voltage U_B | 20 V AC/DC ... 250 V AC/DC ¹⁾ |
| Power consumption | ≤ 2.5 VA |
| Switching output | Relay, electrically isolated ²⁾ |
| Output function | Change-over contacts |

¹⁾ Limit values.

²⁾ Provide suitable spark suppression for inductive or capacitive loads.

³⁾ With light/dark ratio 1:1.

⁴⁾ Do not bend below 0 °C.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ Reference voltage: 250 V AC, overvoltage category 2.

| | |
|--|---|
| Switching mode | Light switching |
| Switching current (switching voltage) | 4 A @ 250 V AC, 4 A @ 24 V DC, 0.125 A @ 250 V DC UL: 4 A @ 250 V AC, general use / 4 A @ 250 V AC, resistive (NO) / 3 A @ 250 V AC, resistive (NC) / 4 A @ 24 V DC, NO, general use / 3 A @ 24 V DC, NC, general use / R300 / B300 (NO contacts only) / 0 °C ... +60 °C |
| Response time | ≤ 10 ms |
| Switching frequency | 10 Hz ³⁾ |
| Connection type | Cable, 5-wire, 2 m ⁴⁾ |
| Cable material | Plastic, PVC |
| Conductor cross section | 0.25 mm ² |
| Circuit protection | A ⁵⁾ C ⁶⁾ |
| Protection class | II ⁷⁾ |
| Weight | 500 g |
| Special device | ✓ |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP66 IP67 |
| Usage category | AC-15, DC-13 According to EN 60947-1 |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

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³⁾ With light/dark ratio 1:1.

⁴⁾ Do not bend below 0 °C.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ Reference voltage: 250 V AC, overvoltage category 2.

Safety-related parameters

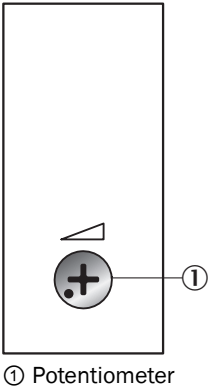
| | |
|-------------------------|-----------|
| MTTF_D | 712 years |
| DC_{avg} | 0 % |

Classifications

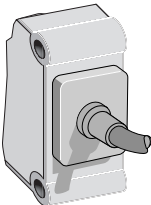
| | |
|---------------------|----------|
| ECLASS 5.0 | 27270904 |
| ECLASS 5.1.4 | 27270904 |
| ECLASS 6.0 | 27270904 |
| ECLASS 6.2 | 27270904 |
| ECLASS 7.0 | 27270904 |
| ECLASS 8.0 | 27270904 |
| ECLASS 8.1 | 27270904 |
| ECLASS 9.0 | 27270904 |
| ECLASS 10.0 | 27270904 |

| | |
|----------------|----------|
| ECLASS 11.0 | 27270904 |
| ECLASS 12.0 | 27270903 |
| ETIM 5.0 | EC002719 |
| ETIM 6.0 | EC002719 |
| ETIM 7.0 | EC002719 |
| ETIM 8.0 | EC002719 |
| UNSPSC 16.0901 | 39121528 |

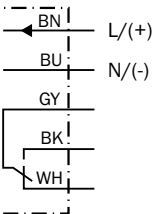
Adjustments Potentiometer



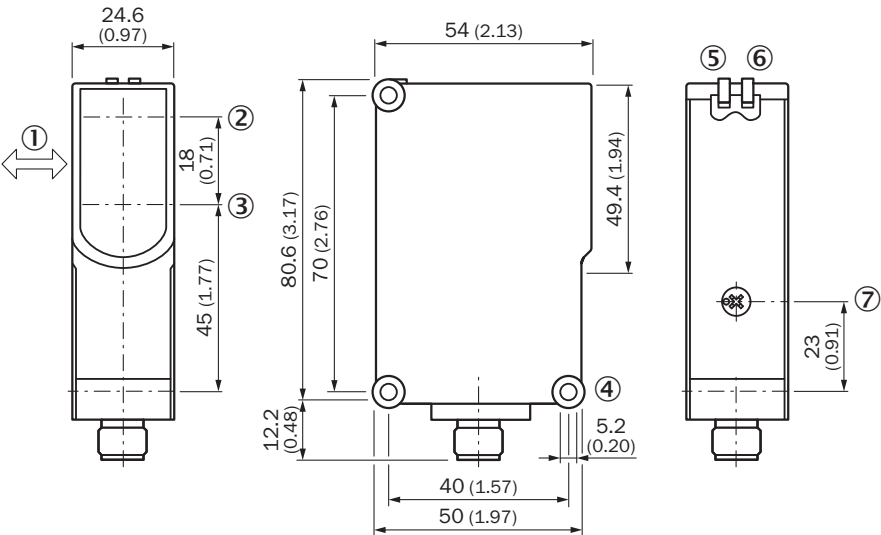
Connection type



Connection diagram Cd-161



Dimensional drawing WTB27-3, potentiometer






Dimensions in mm (inch)

- ① Standard direction of the material being detected
- ② Optical axis, sender
- ③ Optical axis, receiver
- ④ Mounting hole \varnothing 5.2 mm
- ⑤ LED indicator green: Supply voltage active
- ⑥ LED indicator yellow: Status of received light beam
- ⑦ Sensing range adjustment: potentiometer

Recommended accessories

Other models and accessories → www.sick.com/W27

| | Brief description | Type | part no. |
|---|---|------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none">• Description: Mounting bracket with hinged arm• Material: Steel• Details: Steel, zinc coated• Items supplied: Mounting hardware included• Suitable for: W23-2, W27-3, Reflex Array | BEF-WN-W27 | 2009122 |
| device protection and care | | | |
|  | <ul style="list-style-type: none">• Description: Protective housing for W26, W27-3 and mounting rods with diameter 12 mm ... 20 mm• Material: Steel, zinc diecast• Items supplied: Universal clamp BEF-KHS-KH1 (2022726), mounting hardware• Suitable for: W27-3, W26, RAY26 | BEF-SG-W27 | 2039601 |

| | Brief description | Type | part no. |
|---|--|------------|----------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none">• Connection type head A: Male connector, M12, 5-pin, straight, A-coded• Description: Unshielded• Connection systems: Screw-type terminals• Permitted cross-section: ≤ 0.75 mm²• Note: For field bus technology | STE-1205-G | 6022083 |

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