



WTB27-3S1511

W27

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|--------------|----------|
| WTB27-3S1511 | 1027762 |

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 ... 1,600 mm ¹⁾ |
| Sensing range | 100 mm ... 1,600 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 |

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⁾ |

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.

⁸⁾ UL: 0 °C ... +60 °C.

| | |
|--|---|
| Output function | Change-over contacts |
| 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 | 200 g |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP66 IP67 |
| Ambient operating temperature | -40 °C ... +60 °C ⁸⁾ |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

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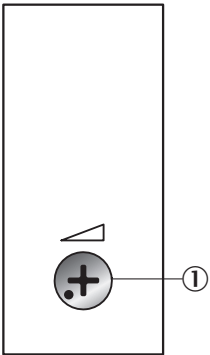
Classifications

| | |
|---------------------|----------|
| 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 |

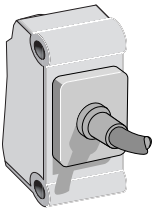
Adjustments

Potentiometer



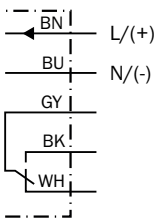
① Potentiometer

Connection type



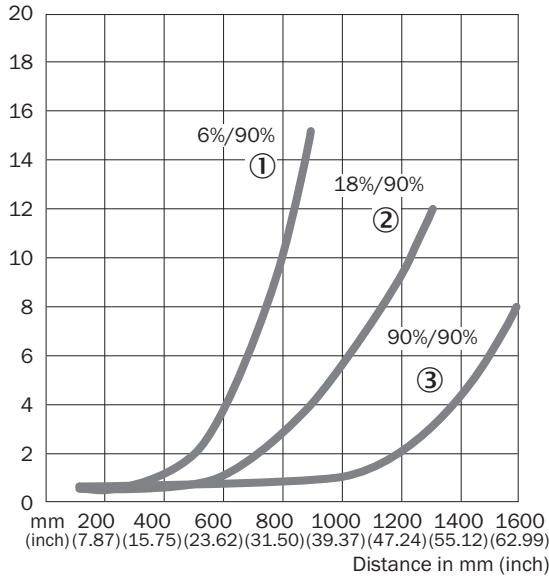
Connection diagram

Cd-161



Characteristic curve

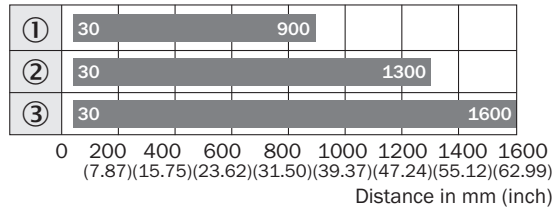
WTB27-3, infrared



- 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

WTB27-3, infrared

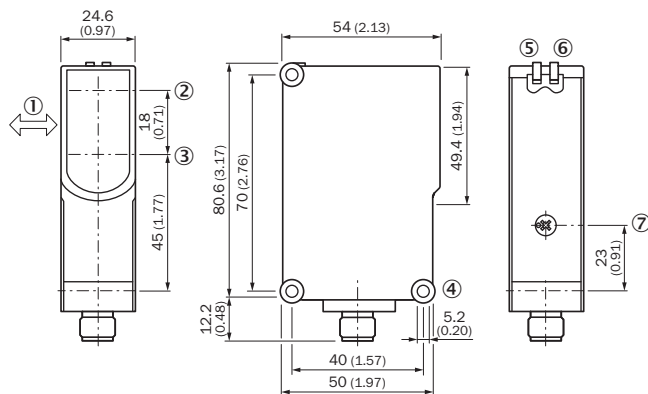


■ Sensing range

- ① Sensing range on black, 6% remission factor
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Dimensional drawing (Dimensions in mm (inch))



WTB27-3, potentiometer



- 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. |
|---|---|------------|----------|
| Device protection (mechanical) | | | |
|  | Protective housing for W26, W27-3 and mounting rods with diameter 12 mm ... 20 mm, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp BEF-KHS-KH1 (2022726), mounting hardware | BEF-SG-W27 | 2039601 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 5-pin, straight, A-coded • Description: Unshielded, Head A: male connector, M12, 5-pin, straight, unshielded, for cable diameter 4 mm ... 6 mm Head B: - • Connection systems: Screw-type terminals • Permitted cross-section: $\leq 0.75 \text{ mm}^2$ • 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.”

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