



Photoelectric sensors  
W27-3, Photoelectric proximity sensor,  
Background suppression

WTB27-3S1511P04



**Model Name** > **WTB27-3S1511P04**  
**Part No.** > **1042970**



*Illustration may differ*

#### At a glance

- Precise background suppression with no scanning distance drift
- PinPoint technology: intense red LED with consistent light spot
- Resistant to ambient light, optical reflections, and crosstalk from other photoelectric devices
- Sensing range adjustment with potentiometer or teach-in
- Operating temperature: -40 °C to +60 °C
- Flexible sensing ranges and hysteresis settings
- Key lock function, remote teach, quality monitoring
- Diagnostics messages (contamination and short-circuit)

#### Your benefits

- PinPoint technology can replace laser photoelectric proximity sensors in some applications. No laser safety regulations and a longer operating life due to PinPoint technology
- Less downtime due to ASIC (application-specific integrated circuit) chip technology by SICK
- Resistant to ambient light, optical reflections, and immune to crosstalk from other photoelectric devices, reducing false detection
- Durable housing with reinforced mounting holes withstands harsh conditions
- Reliable operation in harsh environments with temperatures as low as -40 °C
- Quick and easy format adjustment
- Easy monitoring of sensor status
- Key lock function and parameter download prevent incorrect settings
- Simple sensor cloning



#### Features

|                                  |                                                                                                                                                                                                                      |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensor/detection principle:      | Photoelectric proximity sensor, 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 <sup>1)</sup>                                                                                                                                                                                     |
| Sensing range:                   | 100 mm ... 2,000 mm                                                                                                                                                                                                  |
| Type of light:                   | Infrared light                                                                                                                                                                                                       |
| Light source:                    | LED <sup>2)</sup>                                                                                                                                                                                                    |
| Wave length:                     | 880 nm                                                                                                                                                                                                               |
| Special features:                | Pre-assembled on bracket in 1an angle of 90 °Pre-assembled on bracket in 1an angle of 90 °, Including front lens for fast mountingIncluding front lens for fast mounting, Sensing range 2000 mmSensing range 2000 mm |
| Adjustment:                      | Potentiometer                                                                                                                                                                                                        |

Light spot size (distance): Ø 25 mm (800 mm)

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at  $T_A = +25\text{ °C}$

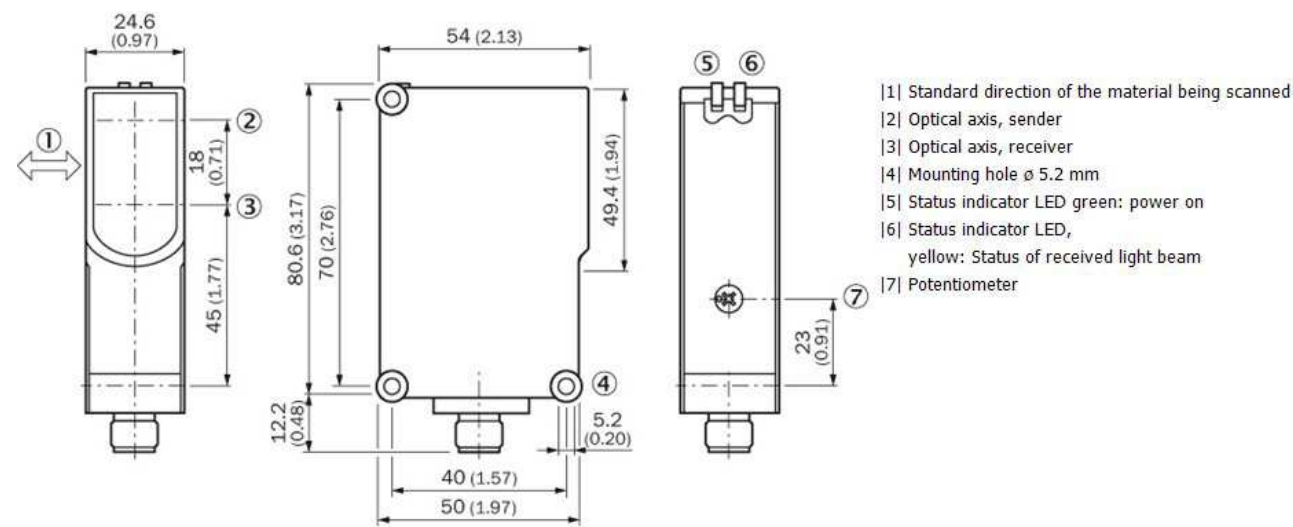
## Mechanics/electronics

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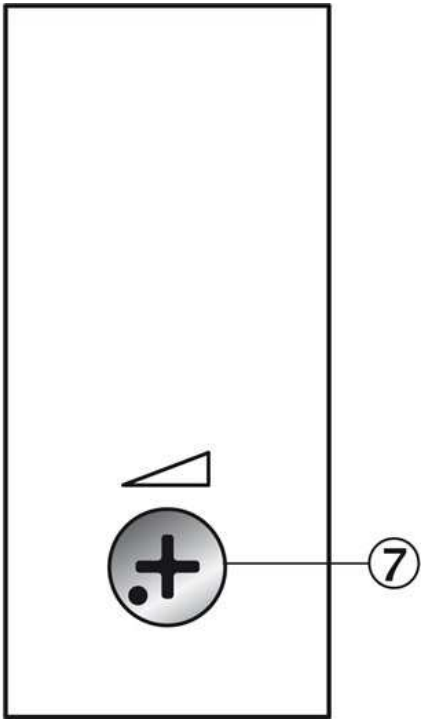
|                                        |                                                  |
|----------------------------------------|--------------------------------------------------|
| Supply voltage:                        | 24 V AC/DC ... 240 V AC/DC <sup>1)</sup>         |
| Power consumption:                     | ≤ 2.5 VA                                         |
| Output type:                           | Relay <sup>2)</sup>                              |
| Output function:                       | Change-over contacts                             |
| Switching mode:                        | Light switching <sup>3)</sup>                    |
| Output characteristic:                 | Electrically isolated                            |
| Switching current (switching voltage): | 0.11 A (250 V DC), 3 A (24 V DC), 3 A (250 V AC) |
| Response time:                         | ≤ 10 ms                                          |
| Switching frequency:                   | 10 Hz <sup>4)</sup>                              |
| Connection type:                       | Cable, 5-wire, 2 m <sup>5)</sup>                 |
| Cable material:                        | PVC                                              |
| Circuit protection:                    | A, C <sup>6) 7)</sup>                            |
| Protection class:                      | II <sup>8)</sup>                                 |
| Weight:                                | 500 g                                            |
| Special device:                        | ✓                                                |
| Housing material:                      | ABS, Plastic                                     |
| Optics material:                       | PMMA                                             |
| Enclosure rating:                      | IP 66<br>IP 67                                   |
| Usage category:                        | AC-15, DC-13, According to EN 60947-1            |
| Ambient operating temperature:         | -40 °C ... 60 °C                                 |
| Ambient storage temperature:           | -40 °C ... 75 °C                                 |
| UL File No.:                           | NRKH.E181493 & NRKH7.E181493                     |

<sup>1)</sup> +- 10 % <sup>2) 3)</sup> Provide suitable spark suppression for inductive or capacitive loads <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> Do not bend below 0 °C <sup>6)</sup> A = V<sub>S</sub> connections  
reverse-polarity protected <sup>7)</sup> C = interference suppression <sup>8)</sup> Reference voltage 250 V AC

Dimensional drawing



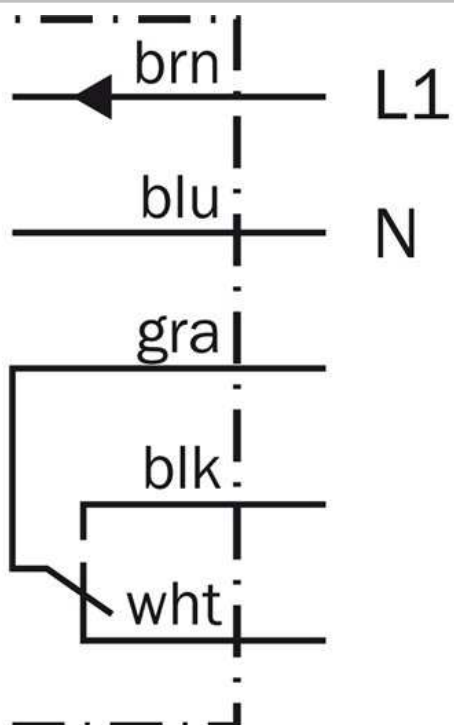
Adjustments possible



|1| Sensing range adjustment

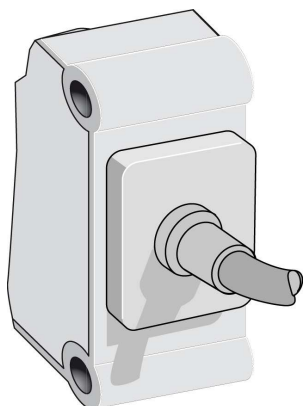
## Connection diagram

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## Connection type

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