

PHOTOELECTRIC SENSORS



WTF27-3K2401S20

W27-3

SENSORS
INCORPORATED

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SICK
Sensor Intelligence.

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Illustration may differ



Ordering information

| Type | Part no. |
|-----------------|----------|
| WTF27-3K2401S20 | 1044670 |

Other models and accessories → www.sick.de/W27-3

Detailed technical data

Features

| | |
|---------------------------------|--|
| Sensor/detection principle | Photoelectric proximity sensor, Foreground 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 | 30 mm ... 2,000 mm |
| Type of light | Visible red light |
| Light source | PinPoint LED ²⁾ |
| Light spot size (distance) | Ø 12 mm (800 mm) |
| Wave length | 660 nm |
| Adjustment | PotentiometerPotentiometer |
| Special features | Foreground suppression |

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033)

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

WTF27-3K2401S20 | W27-3
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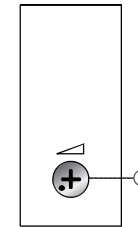
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Mechanics/electronics

| | |
|--|---|
| Supply voltage | 10 V DC ... 30 V DC ³⁾ |
| Ripple | $\leq 5 V_{DD}$ ²⁾ |
| Output type | PNP |
| Output function | Complementary |
| Switching mode | Light/dark switching |
| Signal voltage PNP HIGH/LOW | Approx. $V_G - 2.5 V / 0 V$ |
| Output current I_{max} | $\leq 100 mA$ |
| Response time | $\leq 1.5 ms$ ²⁾ |
| Switching frequency | 350 Hz ⁴⁾ |
| Connection type | Connector M12, 4-pin |
| Circuit protection | A ⁵⁾ B ⁶⁾ C ⁷⁾ |
| Protection class | II ⁵⁾ |
| Weight | 100 g |
| Special device | ✓ |
| Housing material | ABS/plastic |
| Optics material | PMMA |
| Enclosure rating | IP 69K |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient storage temperature | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

Adjustments possible

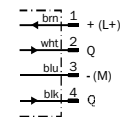
Potentiometer



① Potentiometer

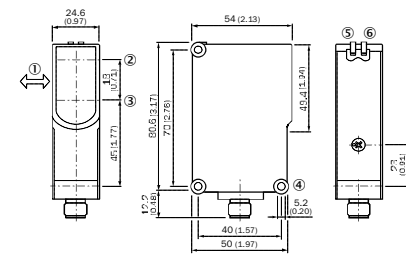
Connection diagram

Cd-101



Dimensional drawing (Dimensions in mm (inch))

WTF27-3, potentiometer








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

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.
²⁾ May not exceed or fall below U_G tolerances.
³⁾ Signal transit time with resistive load in switching mode. Different values possible in COM2 mode.
⁴⁾ With light/dark ratio 1:1 in switching mode. Different values possible in IO-Link mode.
⁵⁾ A = V_G ; connections reverse polarity protected.
⁶⁾ B = inputs and output reverse polarity protected.
⁷⁾ C = interference suppression.
⁸⁾ Reference voltage: 50 V DC.

WTF27-3K2401S20 | W27-3
PHOTOELECTRIC SENSORS

Recommended accessories

Other models and accessories → www.sick.de/W27-3

| Brief description | Type | Part no. |
|--|--------------|----------|
| Universal bar clamp systems | | |
|  Plate N04 for universal clamp, steel, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware | BEF-KHS-N04 | 205161C |
| Device protection (mechanical) | | |
|  Protective housing for universal clamp, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware | BEF-SG-W27 | 2039601 |
|  Weather hood for universal clamp bracket, steel, zinc coated, mounting hardware included | OBW-KHS-M01 | 202324C |
| Mounting brackets and mounting plates | | |
|  Mounting bracket with articulated arm for W11-2, W27, Dx50, steel, zinc coated, mounting hardware included | BEF-WN-MULTI | 206446S |
|  Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included | BEF-WN-W27 | 200912Z |