



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

WTB27-302641S08



Model Name > **WTB27-302641S08**
Part No. > **1029141**



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.:	100 m ... 250 mm, 30 mm ... 1,100 mm ^{1) 2)}
Sensing range:	100 mm ... 250 mm
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	660 nm
Adjustment:	Potentiometer fixed with glue
Light spot size (distance):	Ø 15 mm (500 mm)

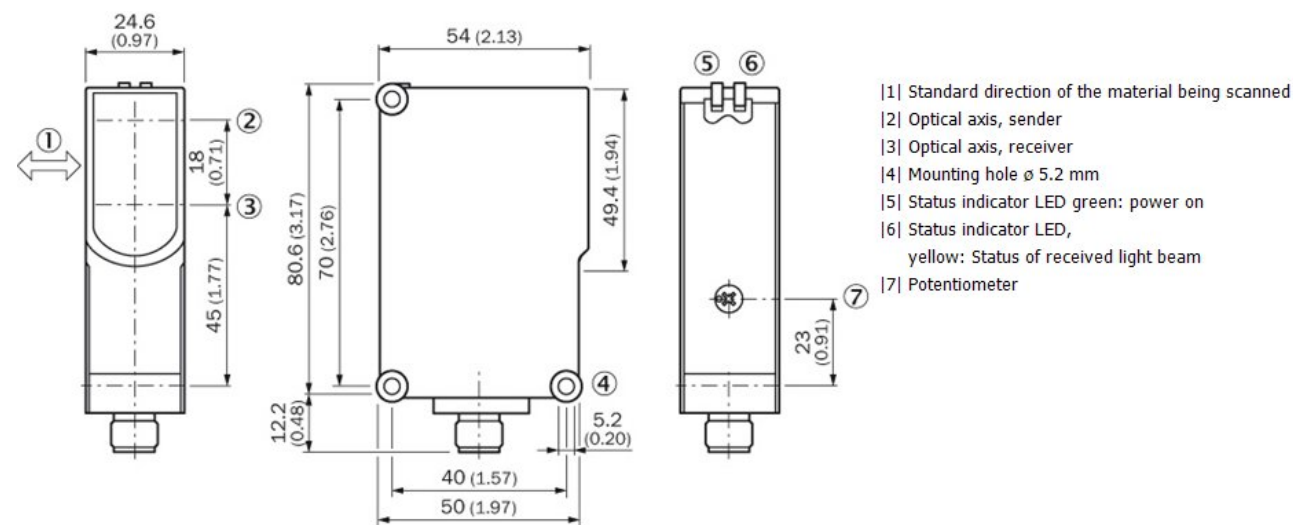
1) Object with 90 % reflectance (referred to standard white DIN 5033) 2) Object with 18 % reflectance (referred to grey) 3) Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

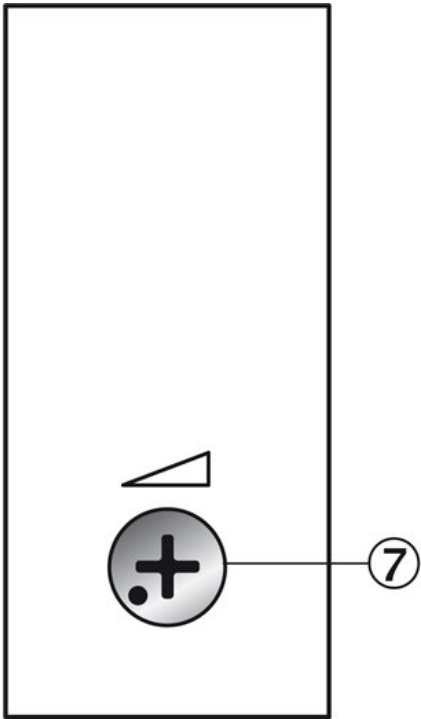
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 V _{pp} ²⁾
Power consumption:	≤ 50 mA ³⁾
Output type:	Semiconductor relay
Switching current (switching voltage):	100 mA (20 V AC), 100 mA (30 V DC)
Response time:	≤ 3 ms
Switching frequency:	200 Hz ⁴⁾
Connection type:	Connector Q6, 6-pin, AC/UC-coding
Circuit protection:::	A, C, E ^{5) 6) 7)}
Protection class:	II ⁸⁾
Weight:	120 g
IO-Link:	-
Special device:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 65
Special features:	With semiconductor relay 24 VDCWith semiconductor relay 24 VDC, Sensing range potentiometer fixed with glueSensing range potentiometer fixed with glue, Sensing range preset at 250 mm on an object with 18 % remission
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

1) Limit values, operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of V_S tolerances 3) Without load 4) With light/dark ratio 1:1 5) A = V_S connections reverse-polarity protected 6) C = interference suppression 7) E = semiconductor relay short-circuit protected 8) Reference voltage 50 V DC

Dimensional drawing

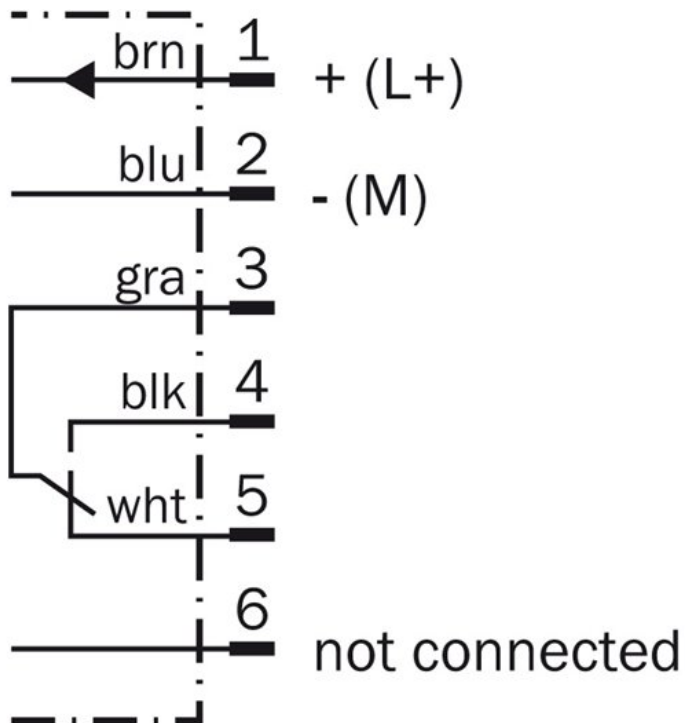


Adjustments possible

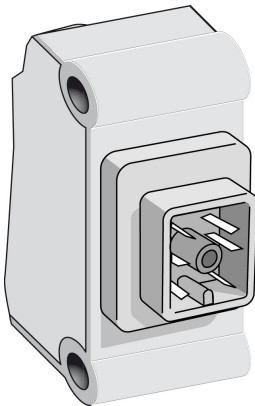


1| Sensing range adjustment

Connection diagram



Connection type



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