



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

WTB27-3P2441



Model Name > [WTB27-3P2441](#)
Part No. > [1027744](#)



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 distance adjustment with potentiometer or teach-in pushbutton
- Operating temperature: -40 °C to +60 °C
- UL approval

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
- Remote configuration through IO-Link saves time
- Durable housing with reinforced mounting holes withstands harsh conditions
- Reliable operation in harsh environments with temperatures as low as -40 °C



Features

Dimensions (W x H x D):	24.6 mm x 80.6 mm x 54 mm
Sensing range max.:	30 mm ... 1,100 mm
Sensing range:	100 mm ... 1,100 mm
Housing desig (light emission):	Cuboid
Light source:	LED ²⁾
Type of light:	visible red light
Wave length:	660 nm
Adjustment of operating distance:	Potentiometer
Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Light spot (distance):	15 mm (500 mm)

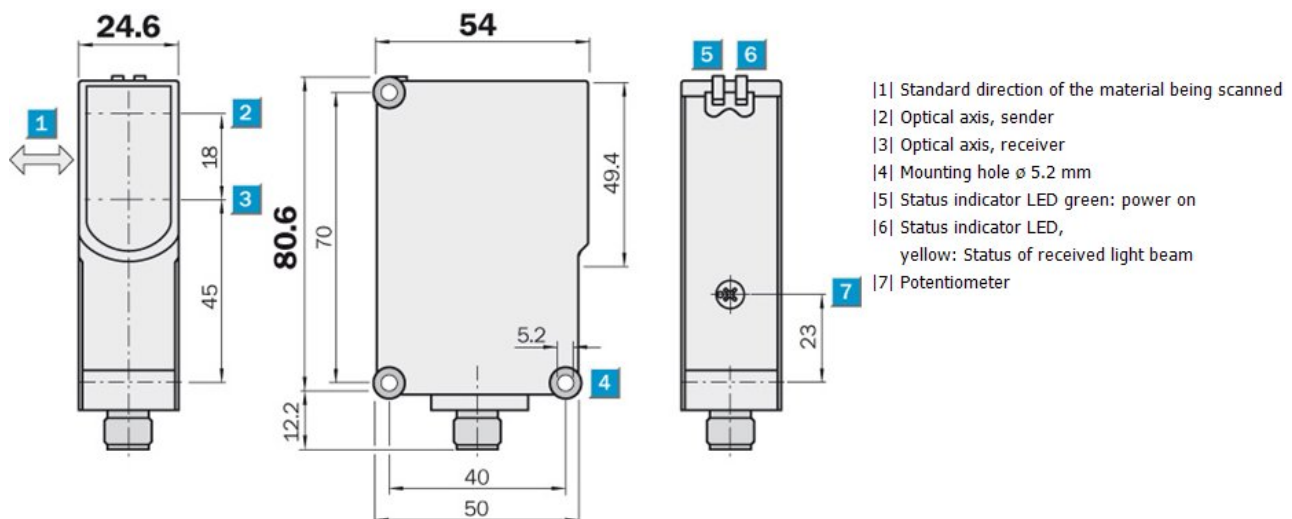
¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life 100,000 h at Ta = +25 °C

Mechanics/electronics

Enclosure rating:	IP 69K
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	$\leq 5 \text{ V}_{pp}$ ²⁾
Power consumption:	$\leq 35 \text{ mA}$ ³⁾
Switching output:	PNP, light/dark-switching, Complementary
Output current I _{max.} :	$\leq 100 \text{ mA}$ ⁴⁾
Response time:	$\leq 1.5 \text{ ms}$ ⁵⁾
Switching frequency:	350 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Protection class:	II ⁶⁾
Circuit protection:::	A B ⁷⁾ 8) 9) C
Weight:	100 g
Housing material:	ABS
Optics material:	PMMA
Ambient temperature, operation:	-40 °C ... 60 °C
Ambient temperature, storage:	-40 °C ... 75 °C
Signal voltage PNP HIGH/LOW:	approx. V _S - 2.5 V / 0 V
Special device:	-
IO-Link:	-
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Reference voltage 50 V DC ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ C = interference suppression

Dimensional drawing

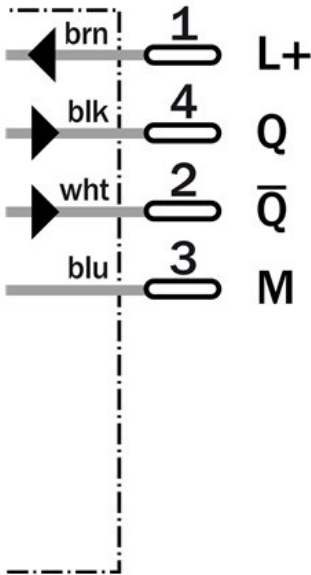


Einstell-Möglichkeiten



|7| Scanning distance adjustment, Poti

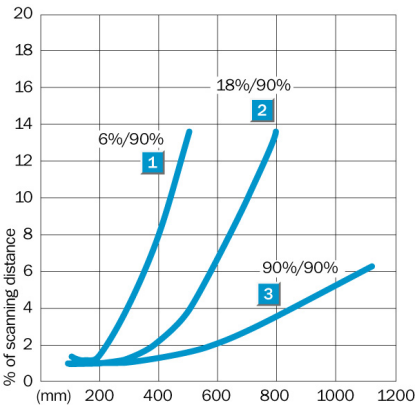
Connection diagram



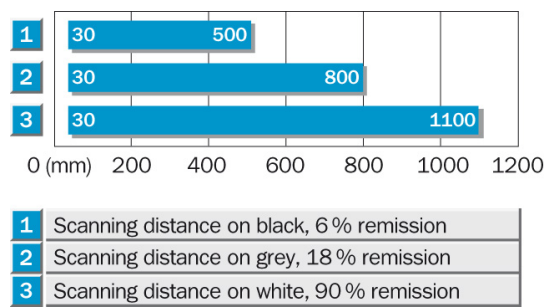
Connection type



Characteristic curve



Sensing range diagram



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