



Photoelectric sensors W27-3, Through-beam photoelectric sensor

WSE27-3P2450



Model Name > [WSE27-3P2450](#)
Part No. > [1027791](#)



Illustration may differ

At a glance

- Long sensing range with a high operating reserve
- Quick alignment with red emitter
- Resistant to environmental noise such as ambient light
- Optional alarm output, front screen heating, test input, time delays, and universal AC/DC voltage
- Operating temperature: -40 °C - +60 °C
- UL approval

Your benefits

- Less contamination due to high operating reserves, reducing downtime
- Optional features, such as time delays, enhance functionality when needed.
- Resistant to vibrations, reducing downtime
- Reliable operation in harsh environments with temperatures as low as -40 °C
- Durable housing with reinforced mounting holes withstands harsh conditions



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	24.6 mm x 80.6 mm x 54 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 35 m
Sensing range:	0 m ... 25 m
Type of light:	Visible red light
Light source:	LED ¹⁾
Wave length:	645 nm
Angle of dispersion:	Ca. 1.5 °
Light spot size (distance):	Ø 600 mm (25 m)

¹⁾ Average service life of 100,000 h at T_A = +25 °C

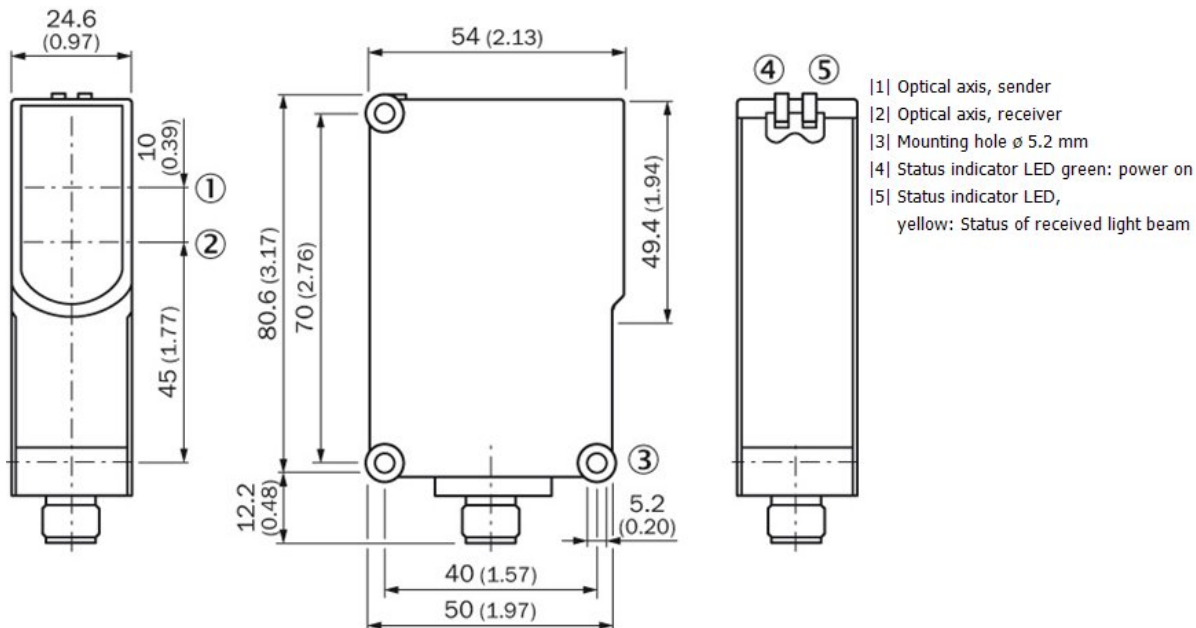
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption, sender:	50 mA ²⁾
Power consumption, receiver:	35 mA ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching

Signal voltage PNP HIGH/LOW:	Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$
Output current I_{max} :	$\leq 100 \text{ mA}$
Response time:	$\leq 500 \mu\text{s}$ ⁴⁾
Switching frequency:	$1,000 \text{ Hz}$ ⁵⁾
Angle of reception:	Ca. 3°
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C ⁶⁾ ⁷⁾ ⁸⁾
Protection class:	II ⁹⁾
Weight:	200 g
Front screen heating:	✓
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 69K
Test input sender off:	TE to 0 V
Ambient operating temperature:	$-40^\circ\text{C} \dots 60^\circ\text{C}$
Ambient storage temperature:	$-40^\circ\text{C} \dots 75^\circ\text{C}$
Part number of individual components:	Receiver, WE27-3P2450, 2033604, Sender, WS27-3D2450, 2033598
UL File No.:	NRKH.E181493 & NRKH7.E181493

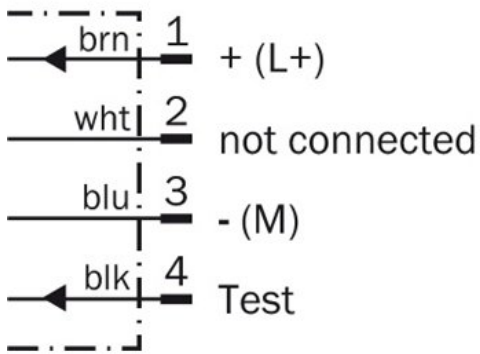
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ^{2) 3)} Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ $A = V_S$
connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ Reference voltage 50 V DC

Dimensional drawing

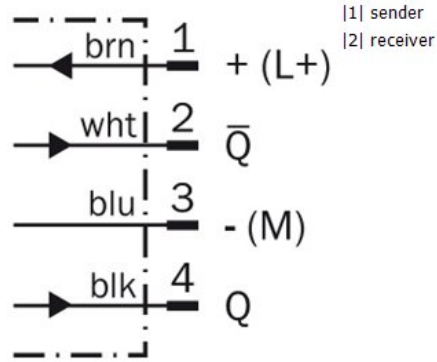


Connection diagram

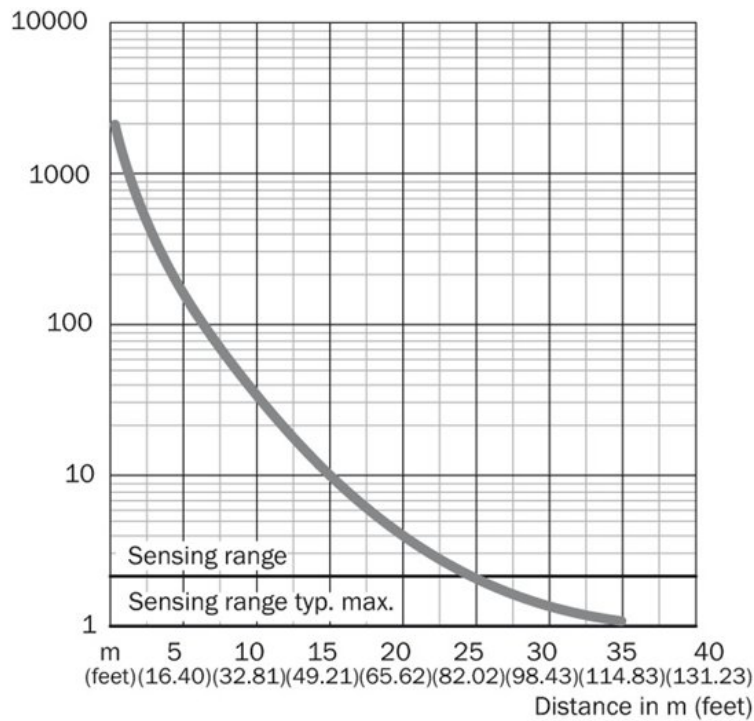
①



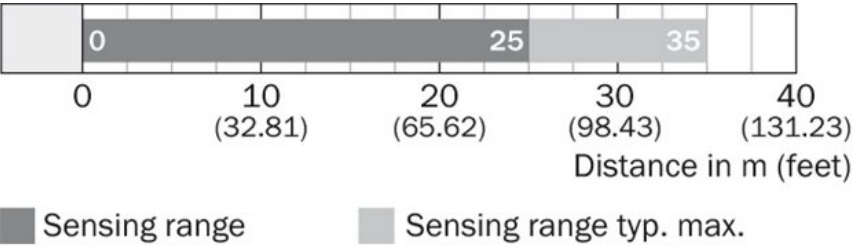
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Characteristic curve



Sensing range diagram



Connection type



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