



Photoelectric sensors
W27-3, Through-beam photoelectric sensor

WSE27-3E2631



Model Name > [WSE27-3E2631](#)
Part No. > [1027793](#)



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
Sensitivity adjustment:	Potentiometer
Time type:	Switch on delay time delay off switch on delay and time delay off
Delay time:	0.5 ... 10 s, Adjustable via time delay selector switch: 0.02 ... 0.5 s
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

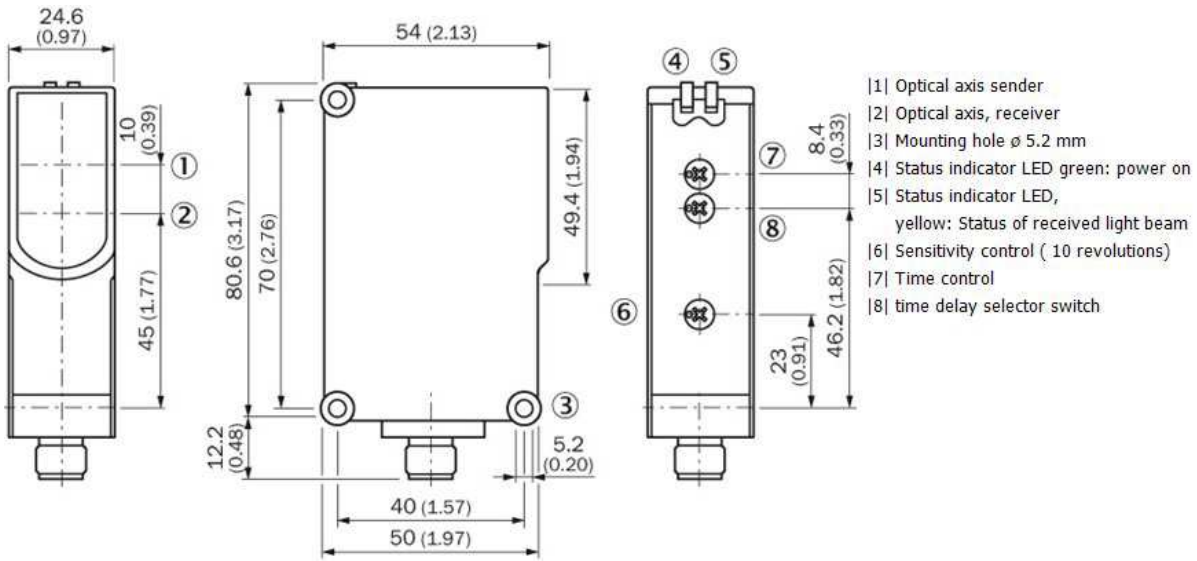
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 Vpp ²⁾

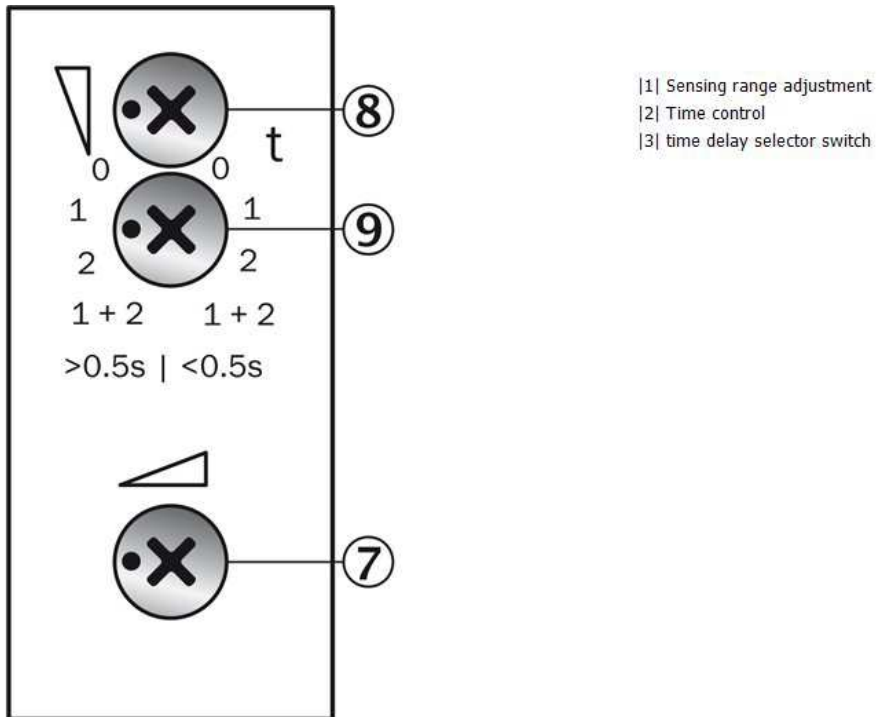
Power consumption, sender:	35 mA ³⁾
Power consumption, receiver:	20 mA ⁴⁾
Output type:	NPN
Output function:	Complementary
Switching mode:	Light/dark switching
Signal voltage NPN HIGH/LOW:	Approx. $V_S / < 2.5 V$
Output current I _{max} :	≤ 100 mA
Response time:	≤ 500 μs ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Angle of reception:	Ca. 3 °
Connection type:	Connector Q6, 6-pin, DC-coding
Circuit protection:::	A, B, C ^{7) 8) 9)}
Protection class:	II ¹⁰⁾
Weight:	200 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 65
Test input sender off:	TE to VS
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493
Part number of individual components:	Receiver, WE27-3E2631, 2033601, Sender, WS27-3D2630, 2033595

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ^{3) 4)} Without load ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ Reference voltage 50 V DC

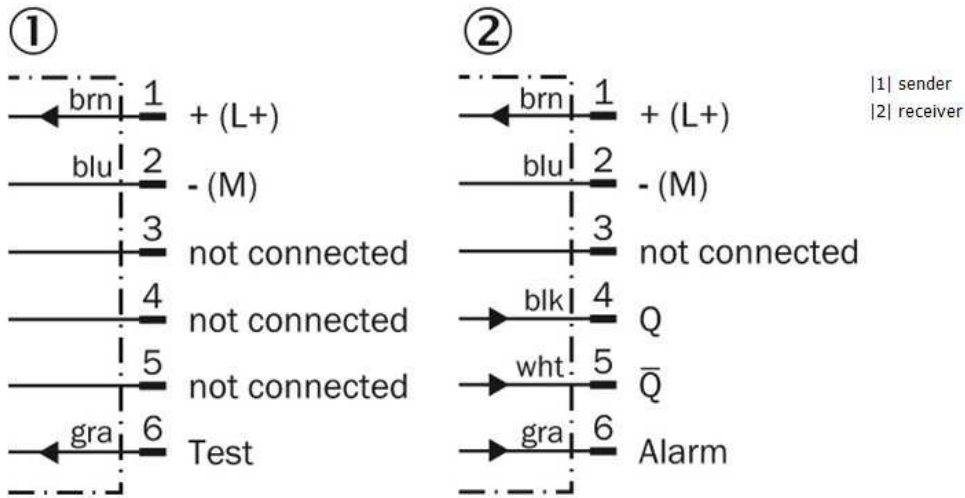
Dimensional drawing



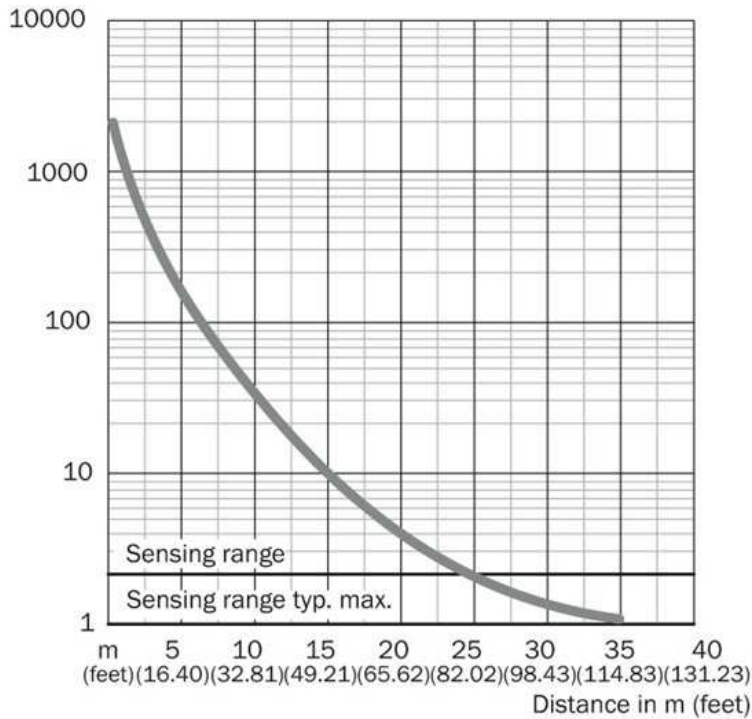
Adjustments possible



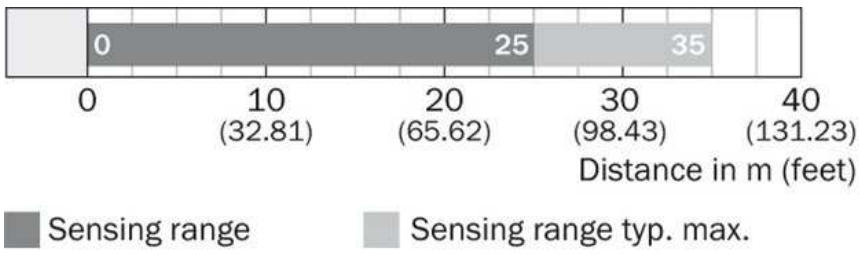
Connection diagram



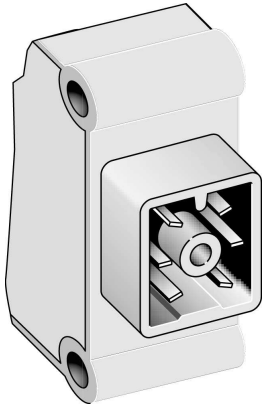
Characteristic curve



Sensing range diagram



Connection type



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