



Photoelectric sensors  
W27-3, Through-beam photoelectric sensor

WSE27-3P3730



**Model Name** > [WSE27-3P3730](#)  
**Part No.** > [1027794](#)



*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 <sup>1)</sup>
Wave length:	645 nm
Angle of dispersion:	Ca. 1.5 °
Light spot size (distance):	Ø 600 mm (25 m)

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

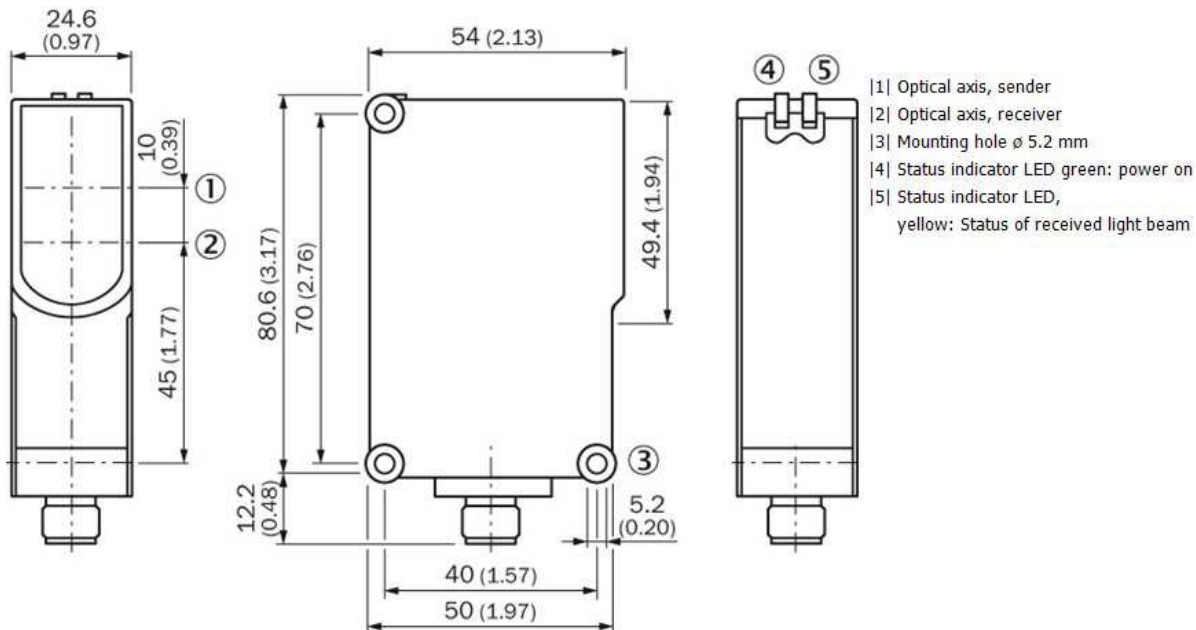
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	≤ 5 V <sub>pp</sub> <sup>2)</sup>
Power consumption, sender:	35 mA <sup>3)</sup>
Power consumption, receiver:	20 mA <sup>4)</sup>
Output type:	PNP
Output function:	Complementary

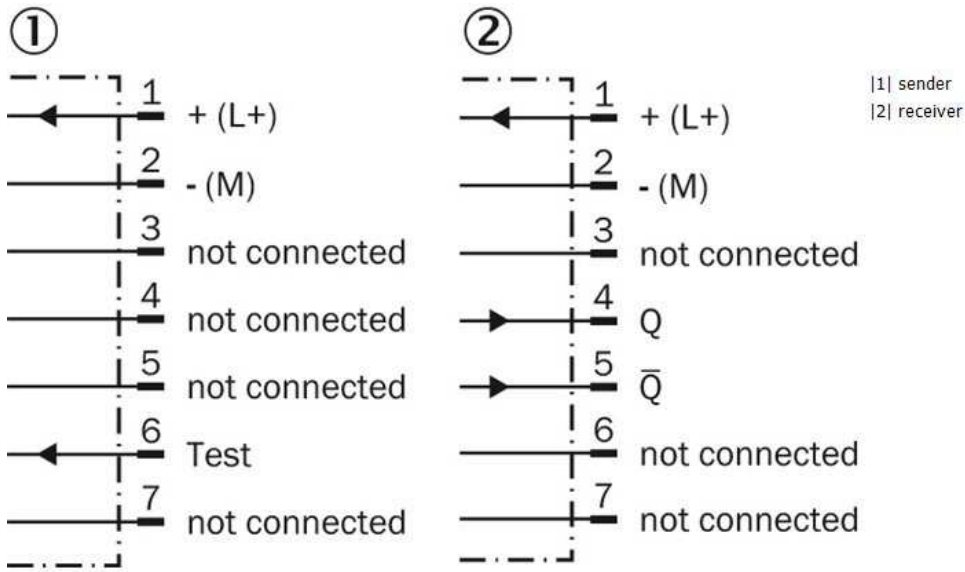
Switching mode:	Light/dark switching
Signal voltage PNP HIGH/LOW:	Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$
Output current $I_{max}$ :	$\leq 100 \text{ mA}$
Response time:	$\leq 500 \mu\text{s}$ <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Angle of reception:	Ca. $3^\circ$
Connection type:	Cable with connector Q7, 7-pin, DC-coding, 150 mm
Cable material:	PVC
Circuit protection:::	A, B, C <sup>7) 8) 9)</sup>
Protection class:	II <sup>10)</sup>
Weight:	240 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Test input sender off:	TE to 0 V
Ambient operating temperature:	$-40^\circ\text{C} \dots 60^\circ\text{C}$
Ambient storage temperature:	$-40^\circ\text{C} \dots 75^\circ\text{C}$
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493
Part number of individual components:	Receiver, WE27-3P3730, 2033603, Sender, WS27-3D3730, 2033596

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

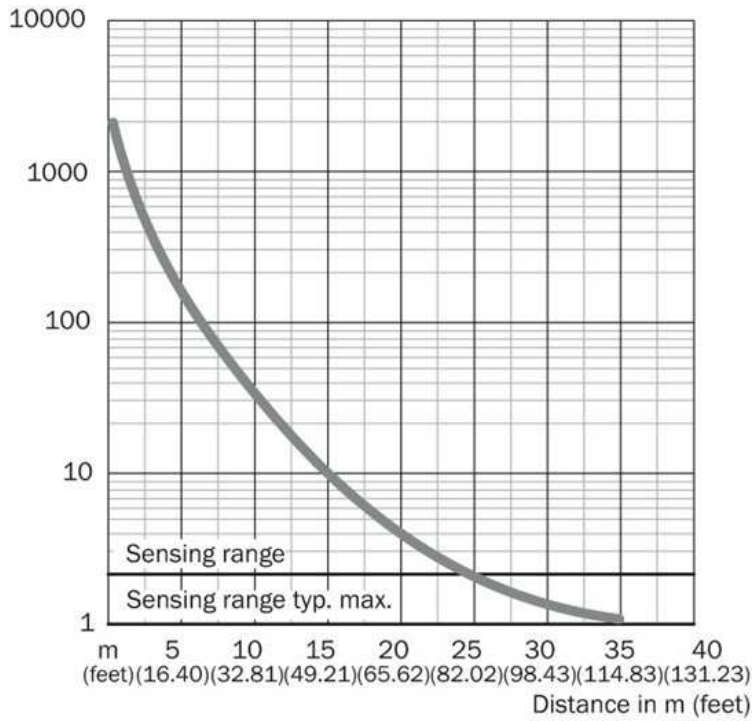
## Dimensional drawing



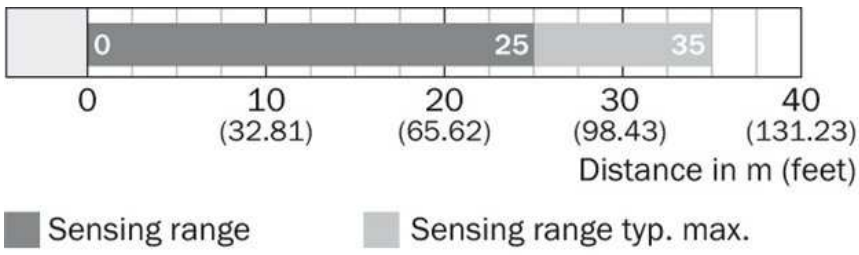
**Connection diagram**



**Characteristic curve**



### Sensing range diagram



### Connection type



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