



Photoelectric sensors  
W18-3, Through-beam photoelectric sensor

WS/WE18-3P430



**Model Name** > [WS/WE18-3P430](#)  
**Part No.** > [1025923](#)



*Illustration may differ*

**At a glance**

- Sender LED with visible red light
- High operational reliability
- Immune to ambient light
- Test input for system diagnostics
- Rugged plastic housing

**Your benefits**

- Quick installation due to visible red light saves time
- Very high operating reserves for trouble-free operation, even at long distances
- Reliable operation due to integrated system diagnostics
- High availability in the field



**Features**

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 20 m
Type of light:	Visible red light
Light source:	LED <sup>1)</sup>
Angle of dispersion:	1.5 °
Adjustment:	Potentiometer, 1 turn
Light spot size (distance):	Ø 450 mm (15 m)
Continuous threshold adaption:	-

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

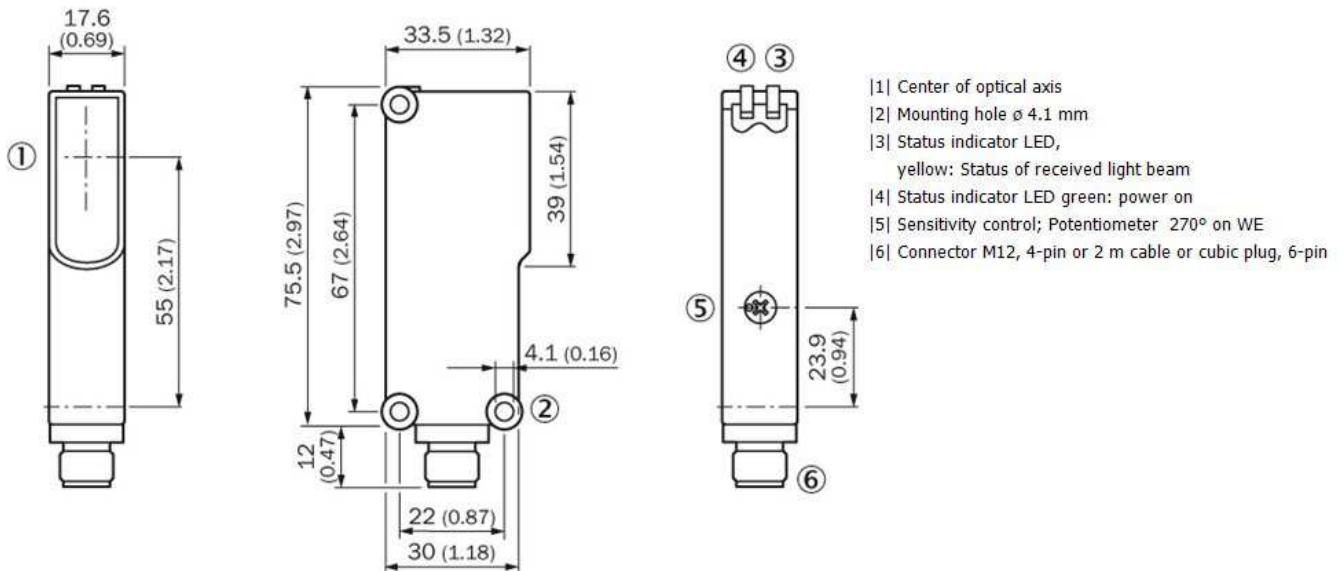
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 Vpp <sup>2)</sup>
Power consumption, sender:	< 45 mA <sup>3)</sup>
Power consumption, receiver:	< 35 mA <sup>4)</sup>
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I <sub>max.</sub> :	100 mA
Response time:	< 500 µs <sup>5)</sup>

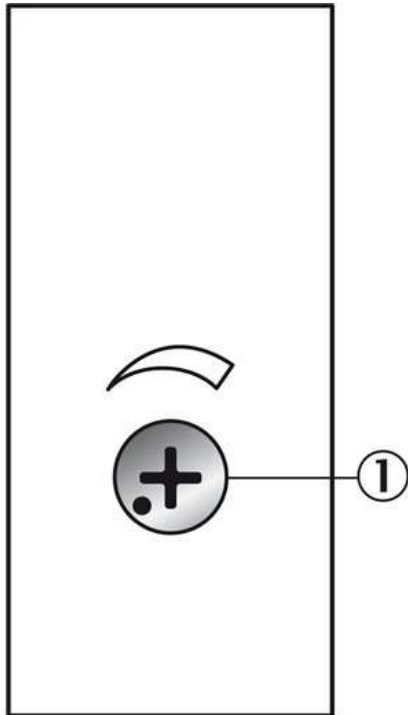
Switching frequency:	1,000 Hz <sup>6)</sup>
Angle of reception:	2 °
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D <sup>7)</sup> <sup>8)</sup> <sup>9)</sup>
Weight:	40 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Test input sender off:	TE to 0 V
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
Part number of individual components:	Receiver, WE18-3P430, 2031003, Sender, WS18-3D430, 2031001
UL File No.:	NRKH.E181493 & NRKH7.E181493

1) 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)</sup> <sup>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> C = interference suppression <sup>9)</sup> D = outputs overcurrent and short-circuit protected

### Dimensional drawing



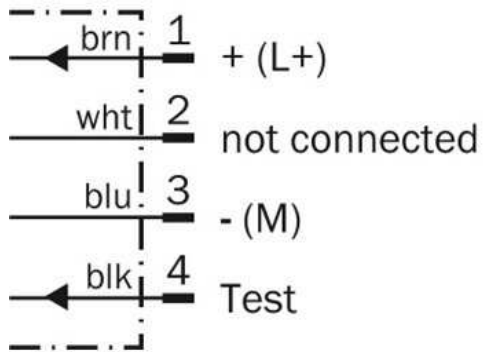
## Adjustments possible



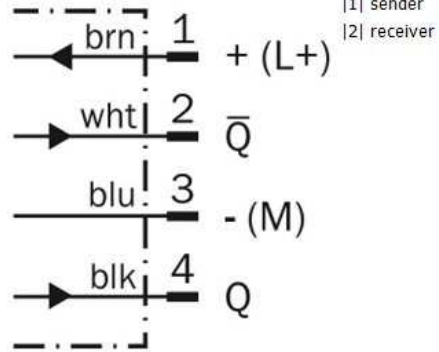
|1| Sensing range adjustment: potentiometer, 4-turn

## Connection diagram

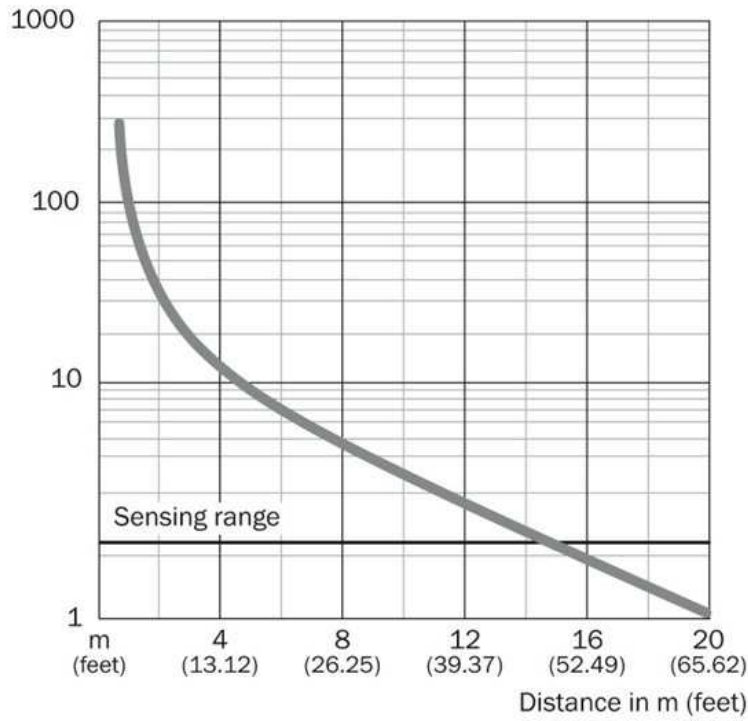
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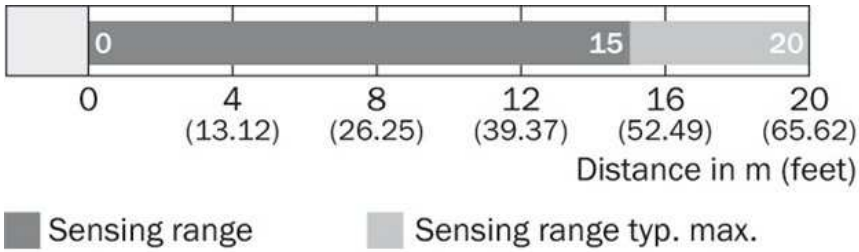
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### Characteristic curve

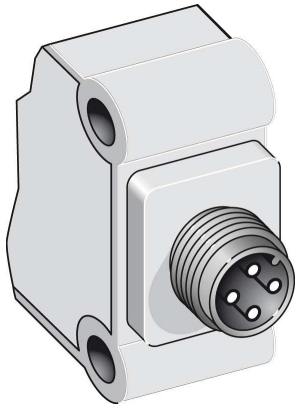


### Sensing range diagram



Connection type

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