



Photoelectric sensors  
W18-2, Photoelectric proximity sensor,  
Background suppression

WTV18-2P410



**Model Name** > [WTV18-2P410](#)  
**Part No.** > [1016198](#)



Illustration may differ

**At a glance**

- High-performance background suppression with large sender/receiver distance and special V-optics
- Variants available for short and longer sensing distances
- Sensing distance adjustment via potentiometer
- Connection: M12, 4-pin

**Your benefits**

- High-performance background suppression with large transmitter/receiver distance and special V-optics ensure reliable object detection
- Reliable detection of highly reflective surfaces
- Less downtime in industrial environments
- Crosstalk and ambient light immunity reduce false readings

**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	20 mm x 76 mm x 31.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	60 mm ... 120 mm <sup>1)</sup>
Sensing range:	60 mm ... 120 mm <sup>2)</sup>
Type of light:	Infrared light
Light source:	LED <sup>3)</sup>
Special features:	V-optics
Adjustment:	Potentiometer, 9 turns
Light spot size (distance):	Ø 8 mm (120 mm)
Continuous threshold adaption:	-

<sup>1)</sup> Object with 6 % remission <sup>2)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033) <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

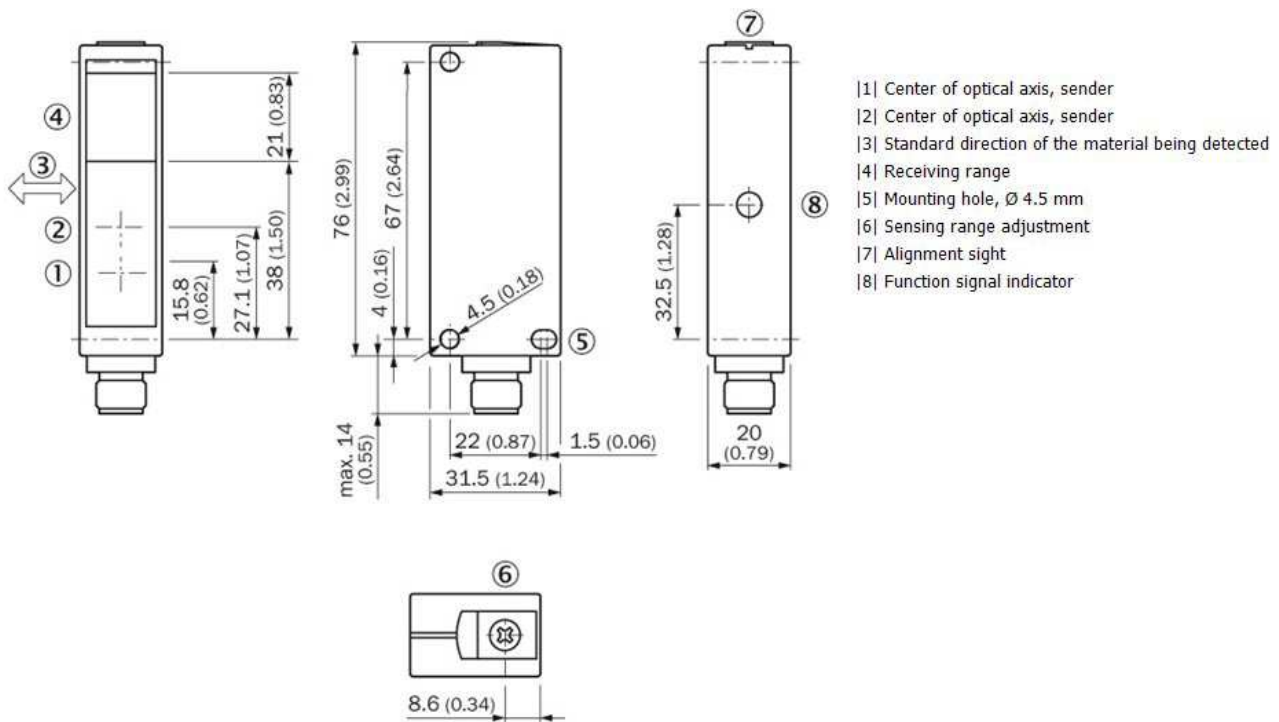
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 V <sub>pp</sub> <sup>2)</sup>
Current consumption:	30 mA <sup>3)</sup>
Output type:	PNP
Switching mode:	Light/dark switching
Output current I <sub>max.</sub> :	100 mA
Response time:	< 2,000 µs <sup>4)</sup>
Switching frequency:	250 Hz <sup>5)</sup>
Connection type:	Connector M12, 4-pin

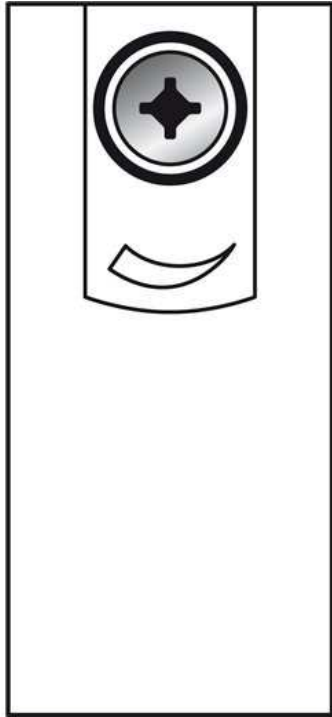
Circuit protection:::	A, C, D <sup>6) 7) 8)</sup>
Weight:	60 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... +75 °C
Ambient storage temperature:	-25 °C ... +60 °C

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> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup>  $A = V_S$  connections reverse-polarity protected <sup>7)</sup> C = interference suppression <sup>8)</sup> D = outputs overcurrent and short-circuit protected

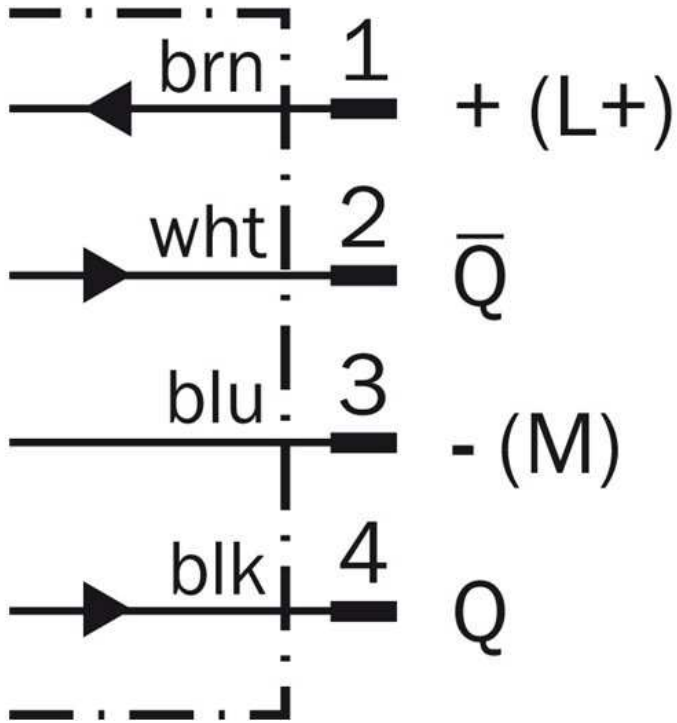
## Dimensional drawing



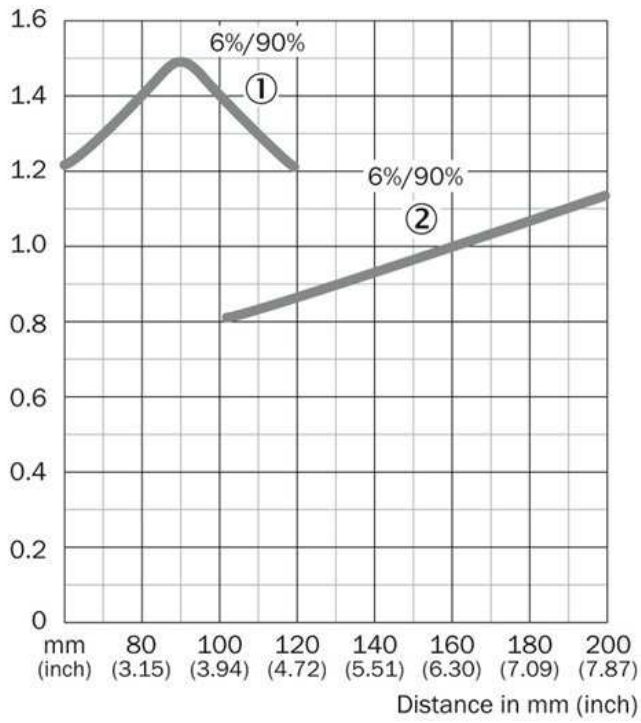
Adjustments possible



Connection diagram

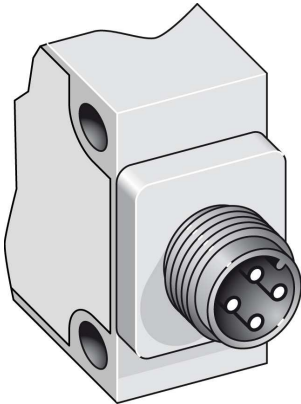


## Characteristic curve



- |1| Object with 6 % remission  
(based on black) with WTV18-2P410
- |2| Object with 6 % remission  
(based on black) with WTV18-2P420

## Connection type



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