



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

WTV18-2P420



Model Name > [WTV18-2P420](#)
Part No. > [1016243](#)



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, Slim
Sensing range max.:	100 mm ... 200 mm ¹⁾
Sensing range:	100 mm ... 200 mm ²⁾
Type of light:	Infrared light
Light source:	LED ³⁾
Wave length:	586 nm
Light spot diameter (distance):	Ø 8 mm (200 mm)
Sensitivity adjustment:	Potentiometer, 9-turn

¹⁾ Object with 6 % remission ²⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life 100,000 h at Ta = +25 °C

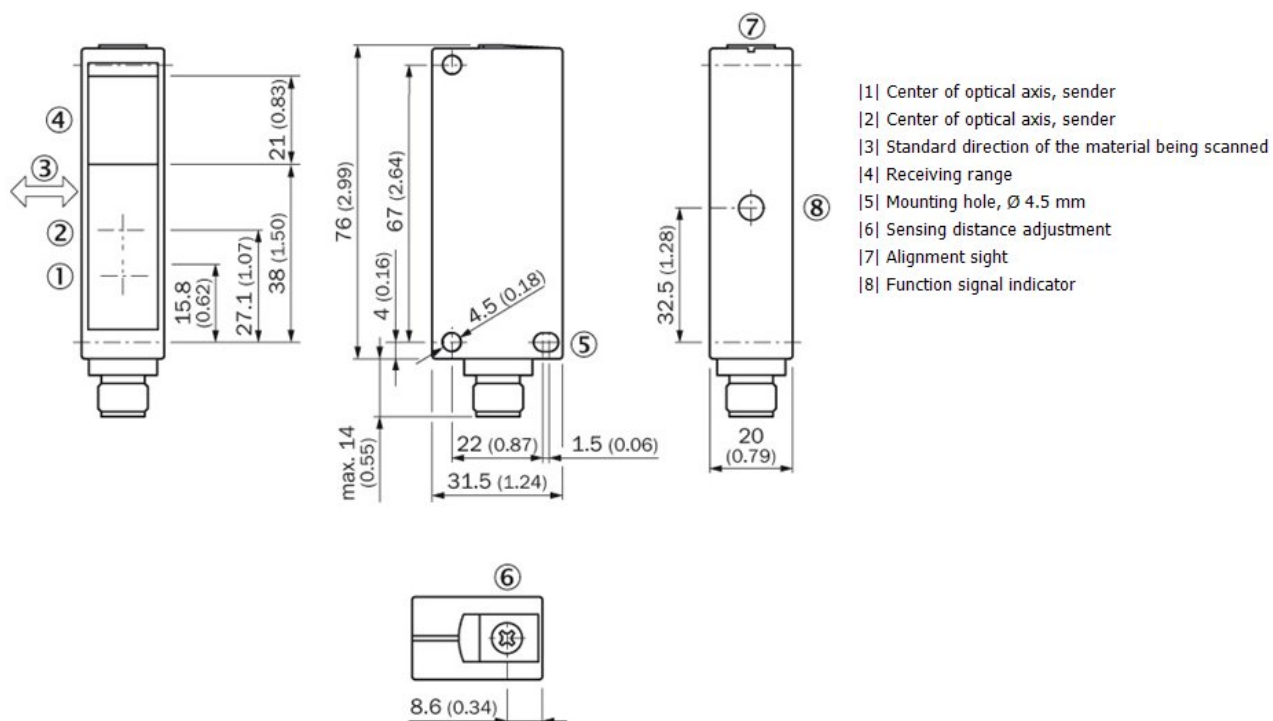
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	30 mA ³⁾
Output type:	PNP, Light/dark-switching
Output current I _{max.} :	100 mA
Response time:	< 2,000 µs ⁴⁾
Switching frequency:	250 Hz ⁵⁾
Connection type:	Connector M12, 4-pin

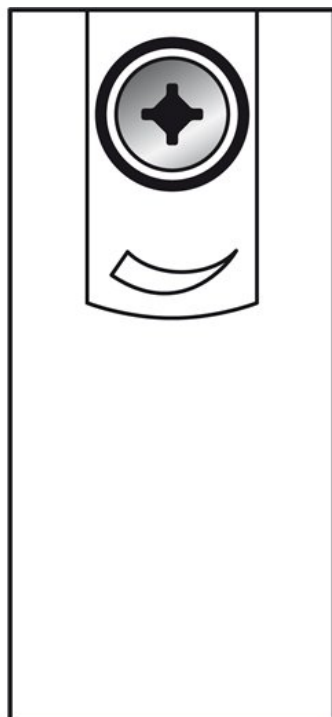
Circuit protection:::	A, C, D ^{6) 7) 8)}
Weight:	60 g
Housing material:	ABS
Optics material:	PMMA
Enclosure rating:	IP 67
Special features:	V-optics
Ambient operating temperature:	-25 °C ... 75 °C
Ambient storage temperature:	-25 °C ... 60 °C

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S 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⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected

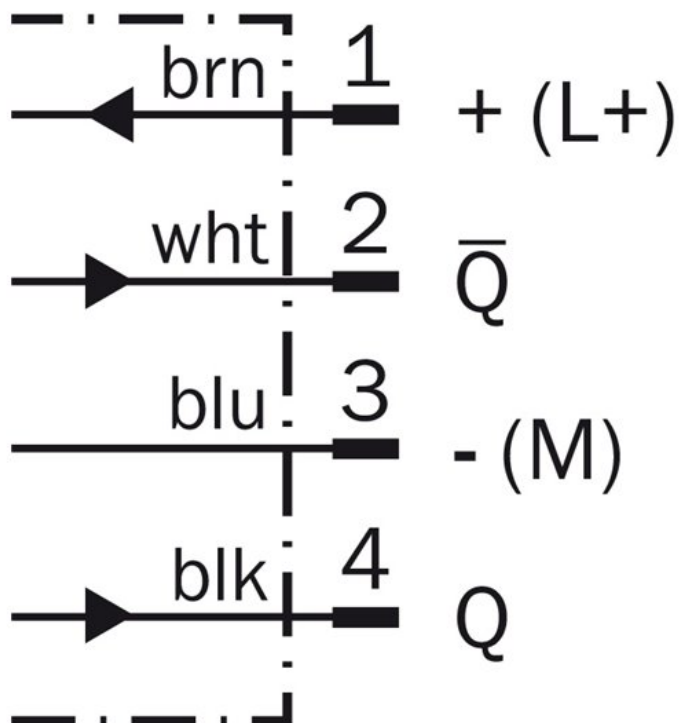
Dimensional drawing



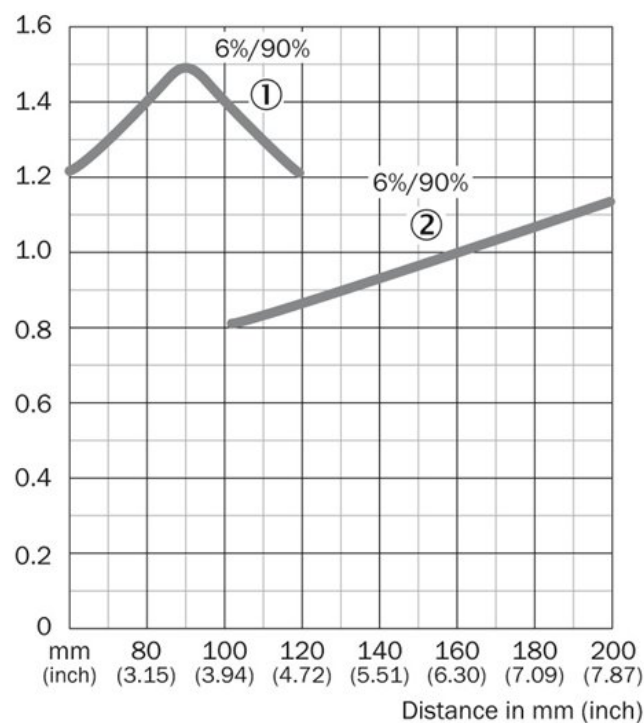
Adjustments possible



Connection diagram

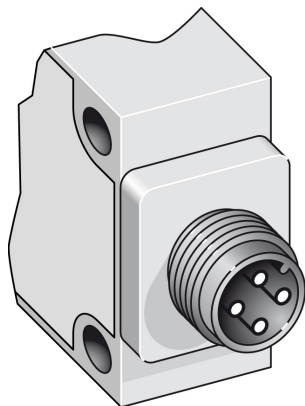


Characteristic curve



- |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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