



Photoelectric sensors
W18-3, Photoelectric proximity sensor,
Background suppression

WTB18C-3P2434



Model Name > [WTB18C-3P2434](#)
Part No. > [1040121](#)



Illustration may differ

At a glance

- Sender LED with visible red light
- Precise background suppression
- Sensing range adjustment via teach-in pushbutton
- Immune to ambient light
- Rugged plastic housing
- Flexible sensing ranges and hysteresis settings
- Key lock function, remote teach, quality monitoring
- Diagnostics messages (contamination and short-circuit)

Your benefits

- Fast installation due to highly visible red light saves time
- Reliable object detection with high-precision background suppression due to second sender LED
- Quick, easy, and accurate sensing distance adjustment via teach-in pushbutton
- Crosstalk and ambient light immunity reduce false readings and downtime
- Quick and easy format adjustment
- Easy monitoring of sensor status
- Key lock function and parameter download prevent incorrect settings
- Simple sensor cloning



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission):	Rectangular, Slim
Sensing range max.:	10 mm ... 600 mm ¹⁾
Sensing range:	50 mm ... 600 mm ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	675 nm
Teach-in:	Single teach-in button
Adjustment:	Teach-in
Light spot size (distance):	Ø 15 mm (300 mm)
Continuous threshold adaption:	-
IO-Link functions:	Standard functions

^{1) 2)} Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

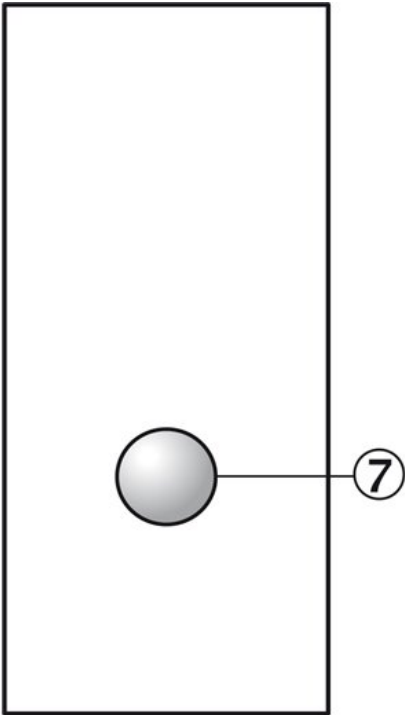
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 V _{pp} ²⁾
Power consumption:	40 mA ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I _{max} :	100 mA
Response time:	< 700 μs ⁴⁾
Switching frequency:	700 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ⁶⁾ ⁷⁾ ⁸⁾
Weight:	40 g
IO-Link:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Special feature:	IO-Link
Description:	IO-Link
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances 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

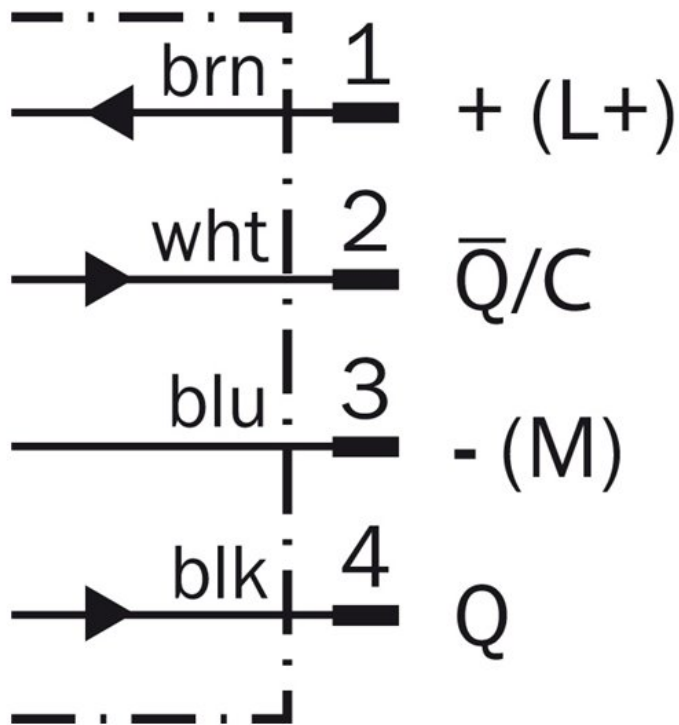
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Adjustments possible

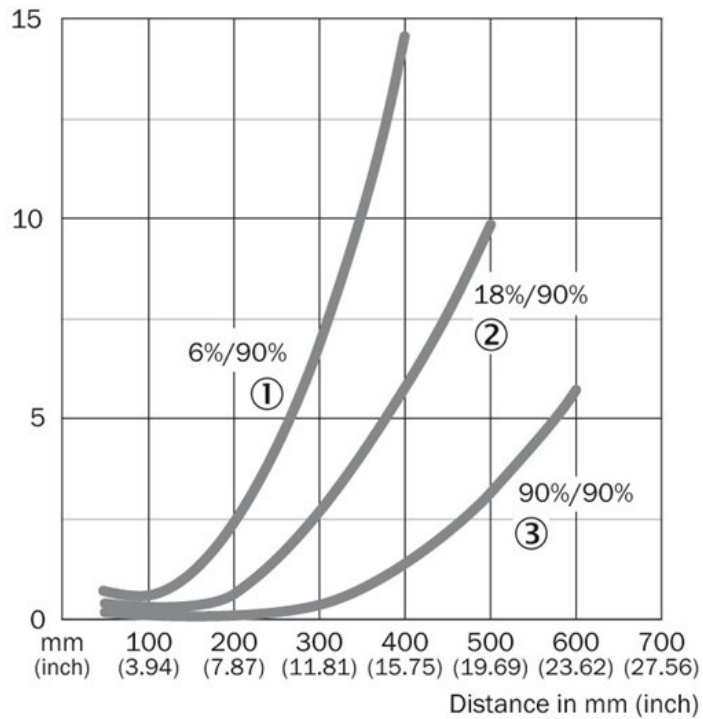


|1| Teach-in button

Connection diagram

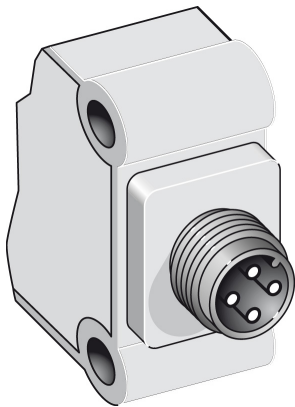


Characteristic curve

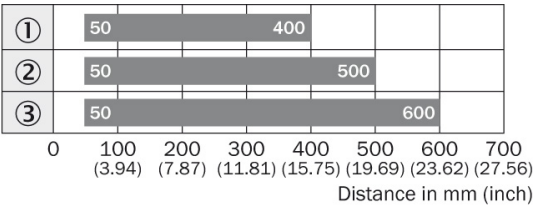


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

Connection type



Sensing range diagram



■ Sensing range

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

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