



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

WTF18-3V910



Model Name > [WTF18-3V910](#)
Part No. > [1025906](#)



Illustration may differ

At a glance

- Sender LED with infrared light
- Precise background suppression
- Sensing range adjustment via potentiometer
- Immune to ambient light
- Alarm output when sensor is contaminated
- Rugged plastic housing

Your benefits

- Long sensing distances due to high-performance infrared light
- Reliable object detection with high-precision background suppression due to second sender LED
- Quick and easy sensing distance setting due to 4-turn potentiometer
- Crosstalk and ambient light immunity reduce false readings and downtime
- Pre-warning of contamination via an alarm output



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
Sensing range max.:	300 mm ... 800 mm ¹⁾
Sensing range:	50 mm ... 700 mm ²⁾
Type of light:	Infrared light
Light source:	LED ³⁾
Wave length:	870 nm
Alarm output:	✓
Health output:	-
Adjustment:	Potentiometer, 4-turn
Light spot size (distance):	Ø 15 mm (300 mm)
Continuous threshold adaption:	-

^{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

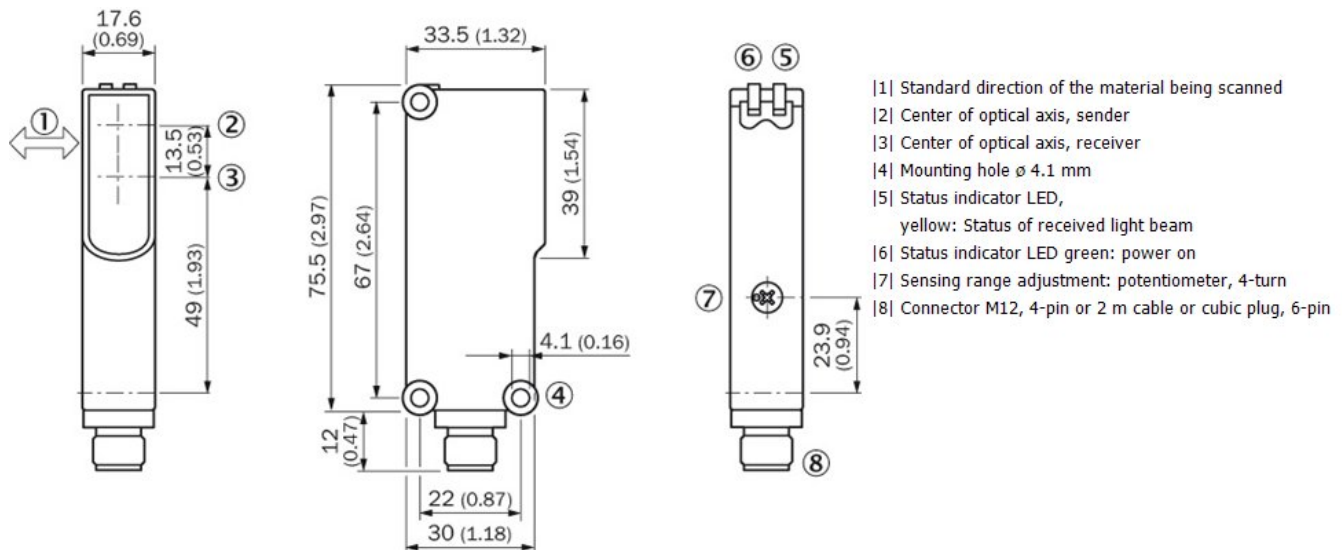
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp
Power consumption:	55 mA ²⁾

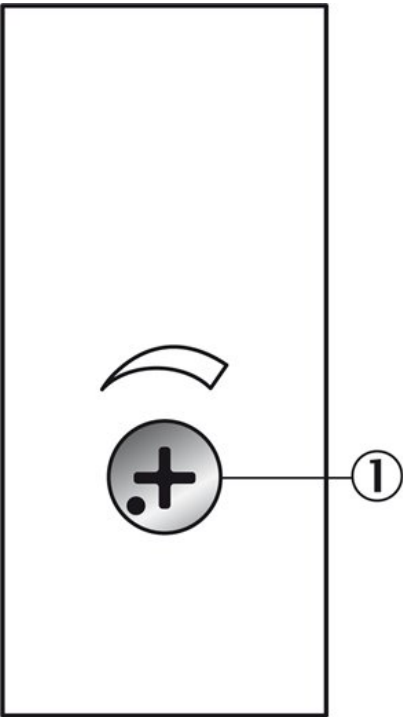
Output type:	PNP
Switching mode:	Dark-switching
Output current I _{max} :	100 mA
Response time:	< 700 µs ³⁾
Switching frequency:	700 Hz ⁴⁾
Connection type:	Cable with connector M12, 4-pin, 0.29 m ⁵⁾
Cable material:	PVC
Circuit protection:::	A, C, D ⁶⁾ ⁷⁾ ⁸⁾
Weight:	70 g
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
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⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ Do not bend below 0 °C ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing

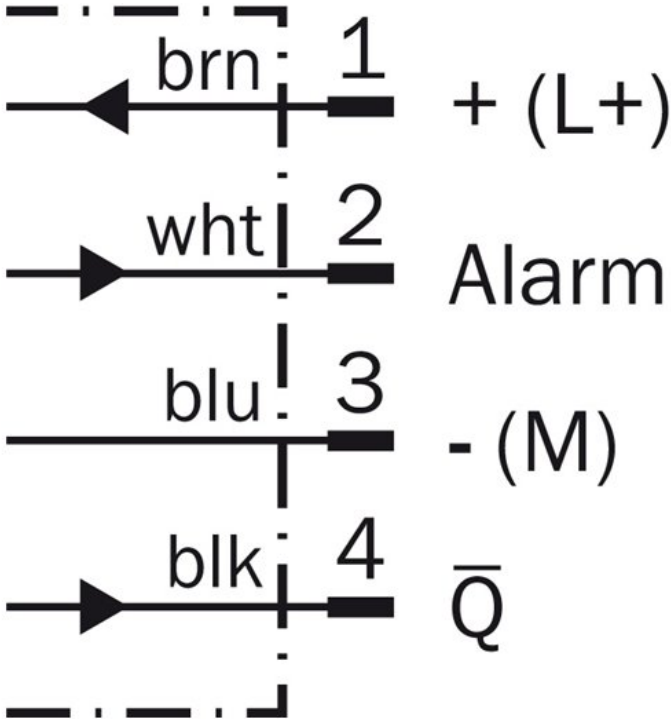


Adjustments possible



[1] Sensing range adjustment: potentiometer, 4-turn

Connection diagram



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