



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

WT18-3P110



**Model Name** > [WT18-3P110](#)  
**Part No.** > [1025887](#)



*Illustration may differ*

**At a glance**

- Sender LED with infrared light
- Precise background suppression
- Sensing range setting via potentiometer
- Immune to ambient light
- 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 adjustment due to 4-turn potentiometer
- Crosstalk and ambient light immunity reduce false readings and downtime
- High availability in the field



**Features**

Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Sensing range max.:	10 mm ... 700 mm <sup>1)</sup>
Sensing range:	50 mm ... 700 mm <sup>2)</sup>
Housing desig (light emission):	Cuboid, Slim
Light source:	LED <sup>3)</sup>
Type of light:	Infrared light
Wave length:	870 nm
Sensitivity adjustment:	Potentiometer, 4-turn
Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Light spot (distance):	20 mm (400 mm)

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

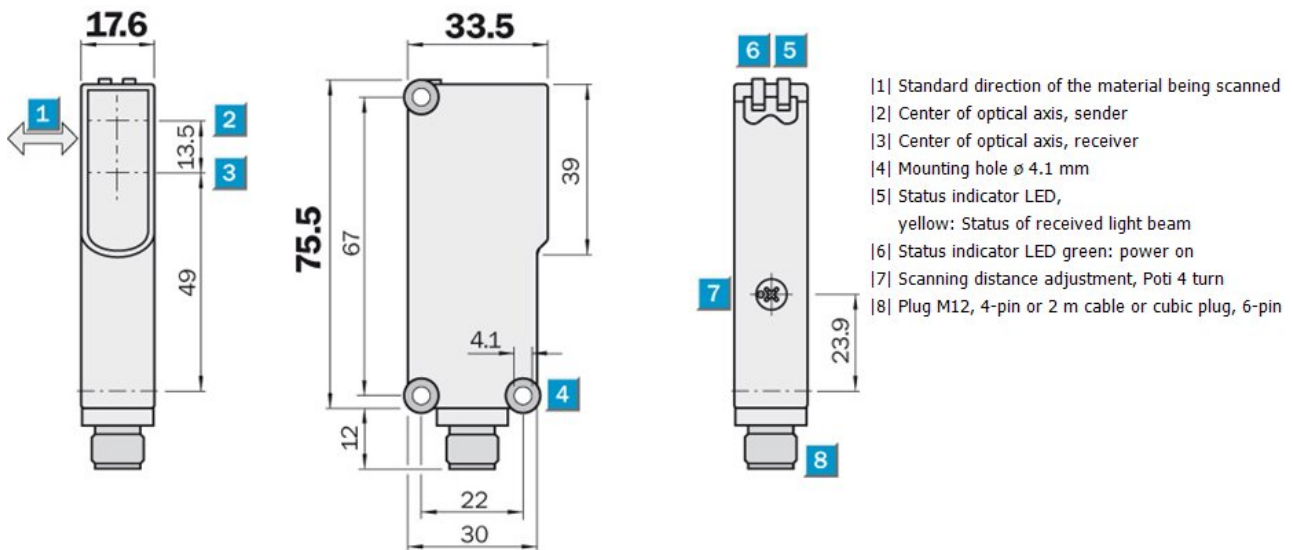
**Mechanics/electronics**

Enclosure rating:	IP 67
Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Residual ripple:	< 5 Vpp <sup>2)</sup>
Power consumption:	55 mA <sup>3)</sup>
Switching output:	PNP, light/dark-switching
Output current I <sub>max.</sub> :	100 mA
Response time:	< 700 µs <sup>4)</sup>

Switching frequency:	700 Hz <sup>5)</sup>
Connection type:	Cable, 4-wire, 2 m <sup>6)</sup>
Cable material:	PVC
Circuit protection:::	A C <sup>7) 8) 9)</sup> D
Weight:	120 g
Housing material:	ABS
Optics material:	PMMA
Ambient temperature, operation:	-40 °C ... 60 °C
Ambient temperature, storage:	-40 °C ... 75 °C
Voltage supply-LED:	✓
Output state-LED:	✓
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493

1) Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  <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> Do not bend below 0 °C <sup>7)</sup>  $A = V_S$  connections reverse-polarity protected <sup>8)</sup>  $S_C$  = interference suppression <sup>9)</sup> D = outputs overcurrent and short-circuit protected

### Dimensional drawing

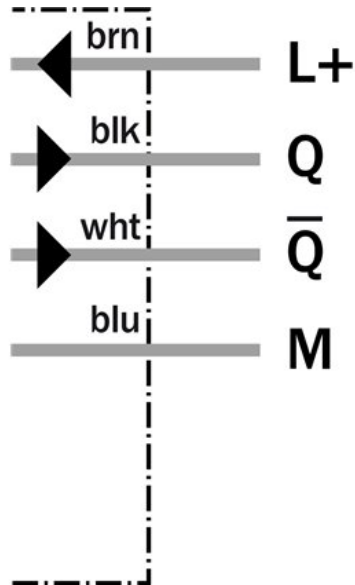


## Einstell-Möglichkeiten

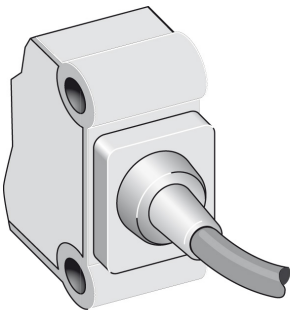


[7] Scanning distance adjustment, Poti 4 turn

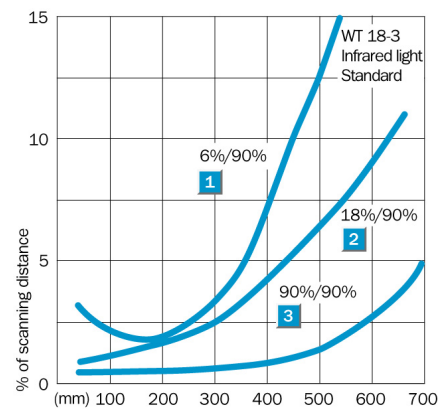
## Connection diagram



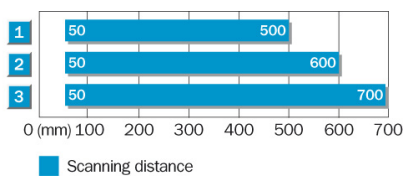
## Connection type



## Characteristic curve



## Sensing range diagram



1	Scanning distance on black, 6 % remission
2	Scanning distance on grey, 18 % remission
3	Scanning distance on white, 90 % remission

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