



Photoelectric sensors  
W34, Photoelectric proximity sensor, Background  
suppression

WT34-B440



**Model Name** > [WT34-B440](#)  
**Part No.** > [1019237](#)



Illustration may differ

**At a glance**

- Precise background suppression at long ranges
- Immune to ambient light and crosstalk from another sensor
- Switch selectable PNP or NPN output and light/dark switching
- Versions with DC voltage (10...30V) or universal AC/DC voltage (12 ... 240 V DC / 24 ... 240 V AC)
- Optional test input, adjustable ON and OFF time delays, alarm output
- M12 or terminal chamber connection: 90° rotatable
- UL approval

**Your benefits**

- Versions with IR LED provide precise object detection at sensing ranges of 2500 mm
- Immune to ambient light and crosstalk from another sensor, providing reliable operation and less downtime
- The sensor cover protects configuration components against environmental hazards
- Adjustable time delay, alarm output, test input, and universal AC/DC voltage provide additional flexibility and reduce the number of part numbers needed



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	27 mm x 92 mm x 70 mm
Housing design (light emission):	Rectangular
Sensing range max.:	100 mm ... 1,200 mm <sup>1)</sup>
Sensing range:	100 mm ... 1,200 mm
Type of light:	Visible red light
Light source:	LED <sup>2)</sup>
Wave length:	660 nm
Light spot diameter (distance):	Ø 40 mm (1,200 mm)
Adjustment of operating distance:	Potentiometer

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

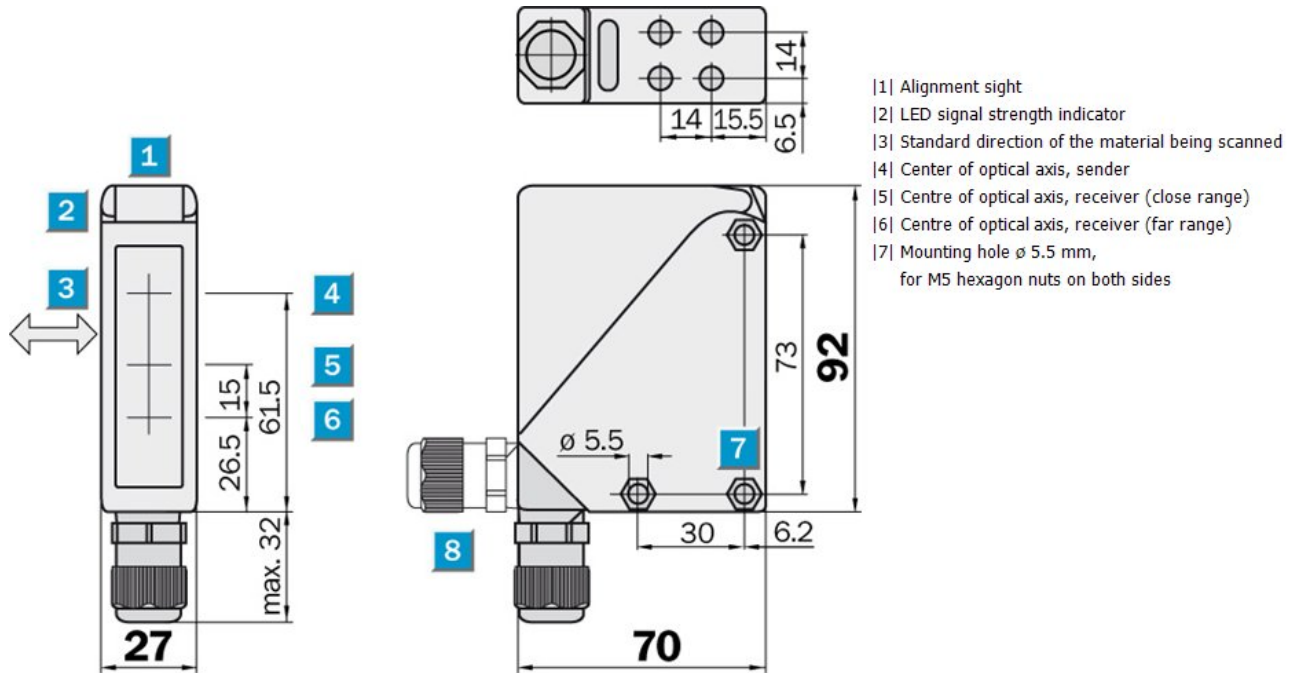
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 Vpp <sup>2)</sup>
Power consumption:	≤ 50 mA

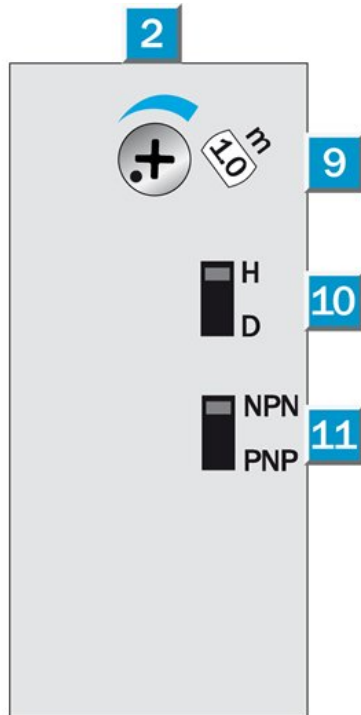
Output type:	NPN, PNP
Switching mode:	Dark-switching, Light switching
Switching mode selector:	Selectable via light/dark selector, Selectable via PNP/NPN selector
Output current I <sub>max.</sub> :	100 mA
Response time:	≤ 500 μs <sup>3)</sup>
Switching frequency:	1,000 Hz <sup>4)</sup>
Connection type:	Connector M12, 4-pin <sup>5)</sup>
Circuit protection:::	A, C, D <sup>6) 7) 8)</sup>
Protection class:	II <sup>9)</sup>
Weight:	140 g
Special device:	-
Housing material:	ABS
Enclosure rating:	IP 67
Test input sender off:	TE to 0 V
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493

<sup>1)</sup> Limit values    <sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances    <sup>3)</sup> Signal transit time with resistive load    <sup>4)</sup> With light/dark ratio 1:1    <sup>5)</sup> Connection rotatable by 90°    <sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected    <sup>7)</sup> C = interference suppression    <sup>8)</sup> D = outputs overcurrent and short-circuit protected    <sup>9)</sup> Reference voltage 50 V DC

### Dimensional drawing

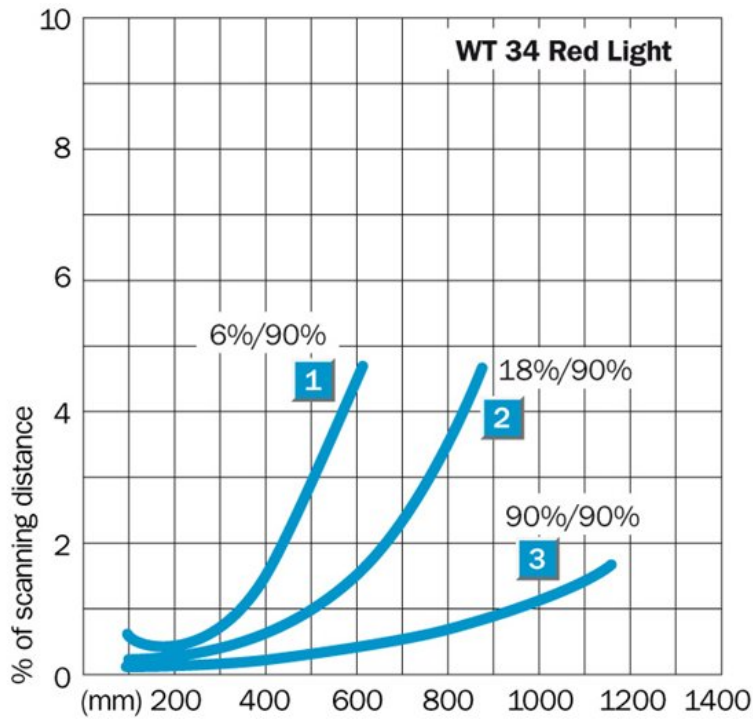


## Adjustments possible

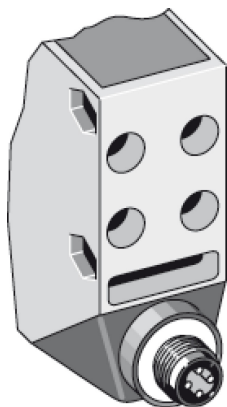


- |2| Receive indicator
- |9| Sensing range adjustment
- |10| Light/dark selector
- |11| NPN/ PNP selector

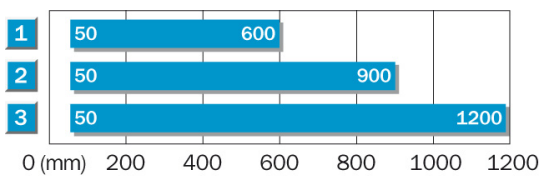
## Characteristic curve



## Connection type



## Sensing range diagram



1	Scanning distance on black <sup>9)</sup>
2	Scanning distance on grey <sup>9)</sup>
3	Scanning distance on white <sup>9)</sup>

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