



Photoelectric sensors

W34, Photoelectric proximity sensor, Background suppression

WT34-R210S02



Model Name > [WT34-R210S02](#)
Part No. > [1022603](#)



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 ... 2,500 mm ¹⁾
Sensing range:	100 mm ... 2,500 mm
Type of light:	Infrared light
Light source:	LED ²⁾
Light spot diameter (distance):	Ø 80 mm (2,500 mm)
Adjustment of operating distance:	Potentiometer

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

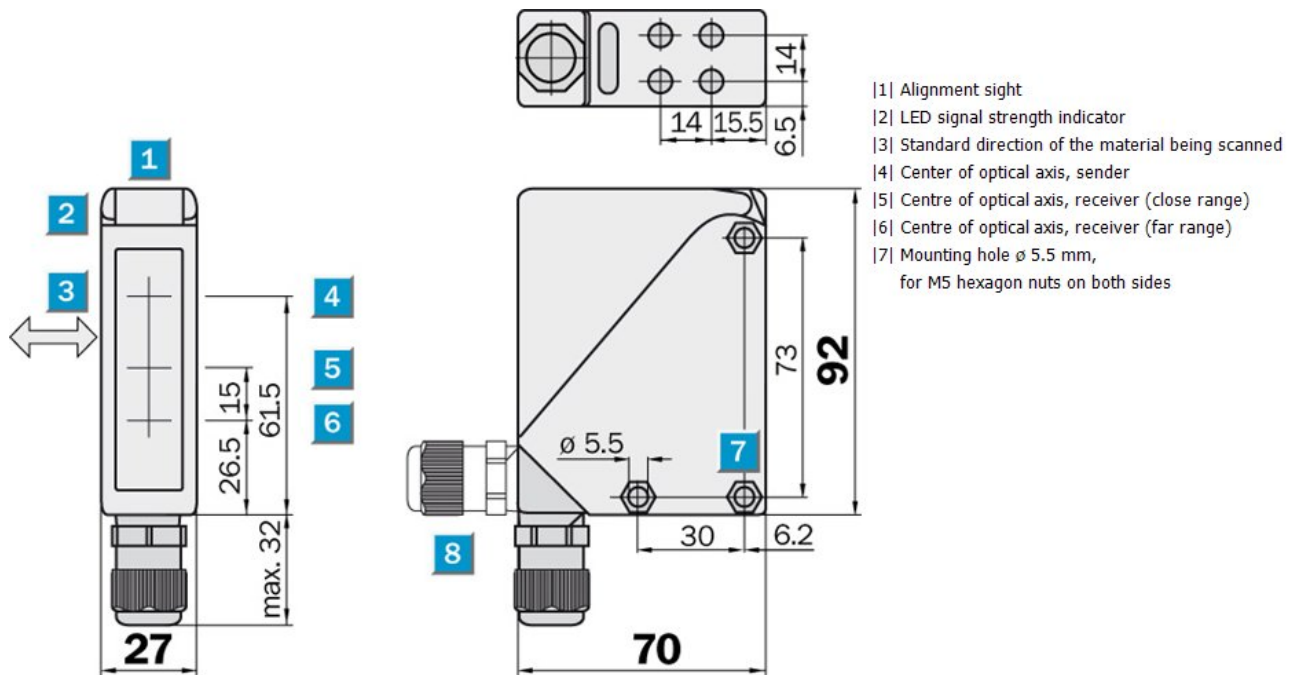
Mechanics/electronics

Supply voltage::	12 V DC ... 240 V DC, 24 V ... 240 V AC ^{1) 2)}
Power consumption:	< 2 VA
Output type:	Relay ³⁾
Output function:	Change-over contacts

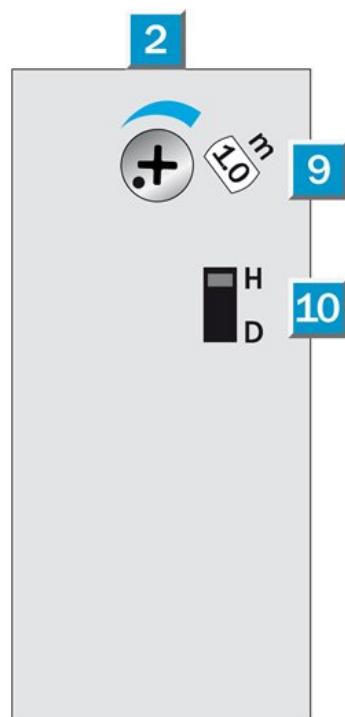
Switching mode:	Dark-switching, Light switching ⁴⁾
Output characteristic:	Electrically isolated
Switching mode selector:	Dark-switching (pre-setting), Selectable via light/dark selector
Switching current (switching voltage):	4 A (24 V DC), 4 A (250 V AC)
Response time:	≤ 10 ms
Switching frequency:	10 Hz ⁵⁾
Connection type:	Terminal connection with M16 gland ⁶⁾
Circuit protection:	A, C ^{7) 8)}
Protection class:	II ⁹⁾
Weight:	140 g
Special device:	✓
Housing material:	ABS
Enclosure rating:	IP 67
Special features:	Dark-switching (pre-setting)
Usage category:	AC-15, DC-13, According to EN 60947-1
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

¹⁾ Limit values ²⁾ ±10 % ^{3) 4)} Provide suitable spark suppression for inductive or capacitive loads ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Connection rotatable by 90° ⁷⁾ A = V_S
connections reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ Rated voltage 250 V AC/DC

Dimensional drawing

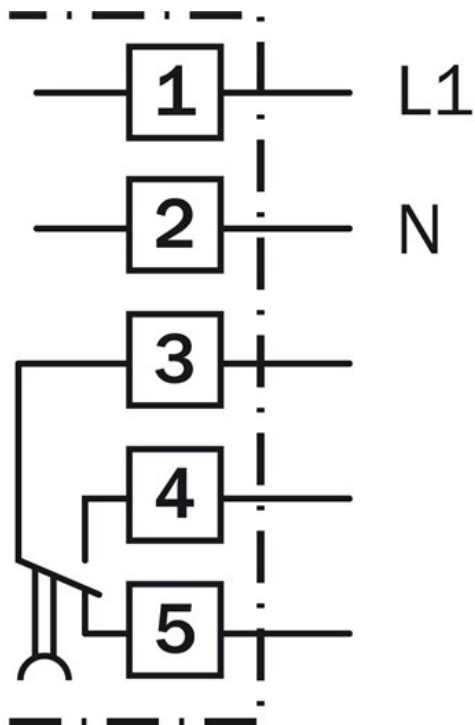


Adjustments possible

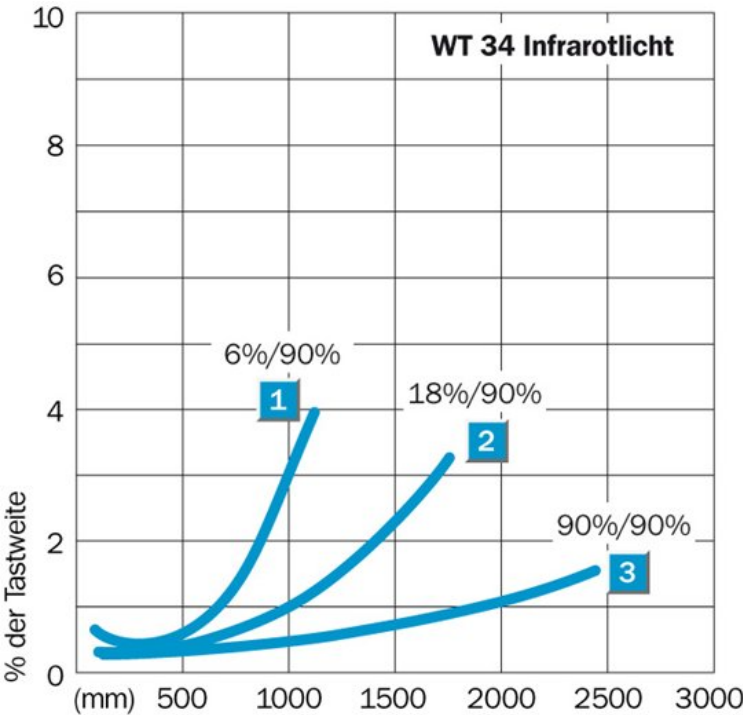


- |2| LED signal strength indicator
- |9| Sensing range adjustment
- |10| Light/dark selector

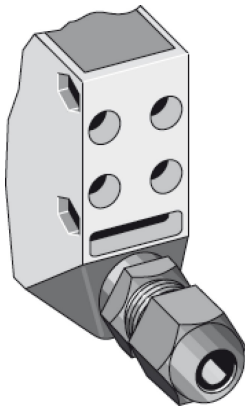
Connection diagram



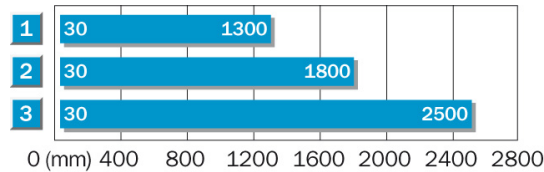
Characteristic curve



Connection type



Sensing range diagram



1	Scanning distance on black ⁹⁾
2	Scanning distance on grey ⁹⁾
3	Scanning distance on white ⁹⁾

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