



Photoelectric sensors
W45, Photoelectric proximity sensor, Background
suppression

WT45-R650



Model Name > WT45-R650
Part No. > 1009113



Illustration may differ

At a glance

- Long background suppression sensing range
- Rugged metal housing
- Optional: Powerful front lens heating
- Optional test input and time delays
- Variants for 10 - 60 V DC or 24 - 240 V DC / 24 - 240 V AC voltage supply
- IR emitter

Your benefits

- Very large sensing distance
- Rugged metal housing ensures a long service life in harsh industrial environments
- Front lens heating prevents condensation for reliable operation in outdoor applications.
- Multiple functions for simpler integration of individual systems
- Variants DC voltage and universal AC/DC voltage provides installation flexibility due to same housing



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	60 mm x 105 mm x 105 mm
Housing design (light emission):	Rectangular
Sensing range max.:	200 mm ... 2,000 mm ¹⁾
Sensing range:	200 mm ... 2,000 mm
Type of light:	Infrared light
Light source:	LED ²⁾
Time type:	Off delay, ON and OFF delay, On delay
Delay time:	Adjustable via time delay selector switch: 0.5 ... 12 s
Special features:	Dark switching (pre-setting)
Adjustment:	Potentiometer
Light spot size (distance):	Ø 35 mm (2,000 mm)

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

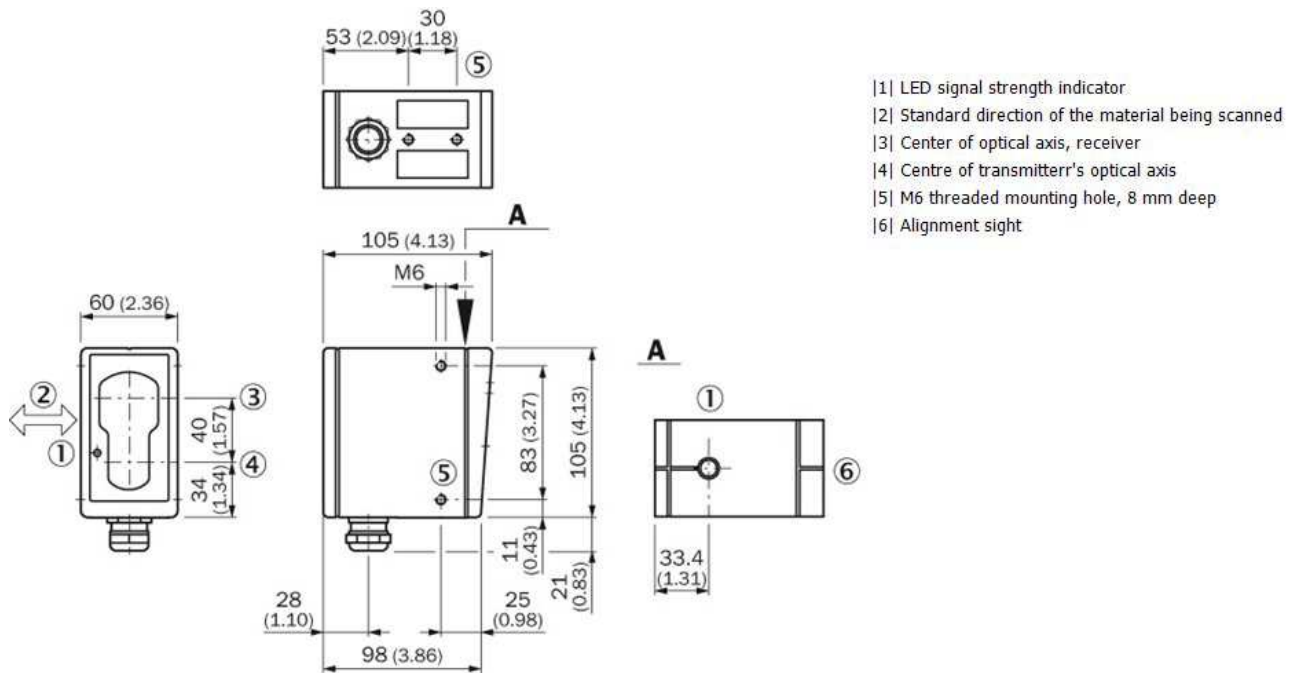
Mechanics/electronics

Supply voltage:	24 V AC/DC ... 240 V AC/DC ¹⁾
Power consumption:	≤ 6 VA
Output type:	Relay ²⁾

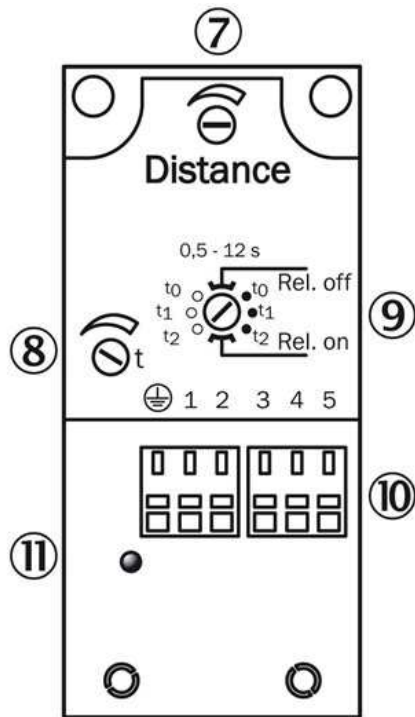
Output function:	Change-over contacts
Switching mode:	Light/dark switching ³⁾
Output characteristic:	Electrically isolated
Switching mode selector:	Light-/dark-switching selectable via time delay selector switch
Switching current (switching voltage):	4 A (24 V DC), 4 A (240 V AC)
Response time:	≤ 20 ms
Switching frequency:	10 Hz ⁴⁾
Connection type:	Connector Hirschmann, 6-pin
Circuit protection:	A, C ^{5) 6)}
Protection class:	I
Weight:	800 g
Front screen heating:	✓
Housing material:	Metal
Enclosure rating:	IP 65
Usage category:	AC-15, DC-13, According to EN 60947-1
Ambient operating temperature:	-25 °C ... 55 °C ⁷⁾
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

1) +10 %, -25% ^{2) 3)} Provide suitable spark suppression for inductive or capacitive loads ⁴⁾ With light/dark ratio 1:1 ⁵⁾ A = V_S connections reverse-polarity protected ⁶⁾
C = interference suppression ⁷⁾ Up to 140 °C with cooling plates (see accessories)

Dimensional drawing

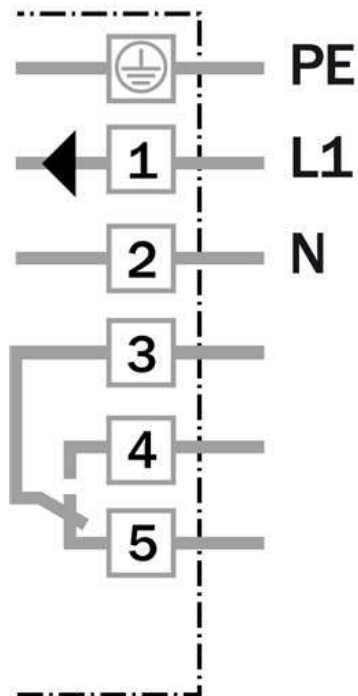


Adjustments possible

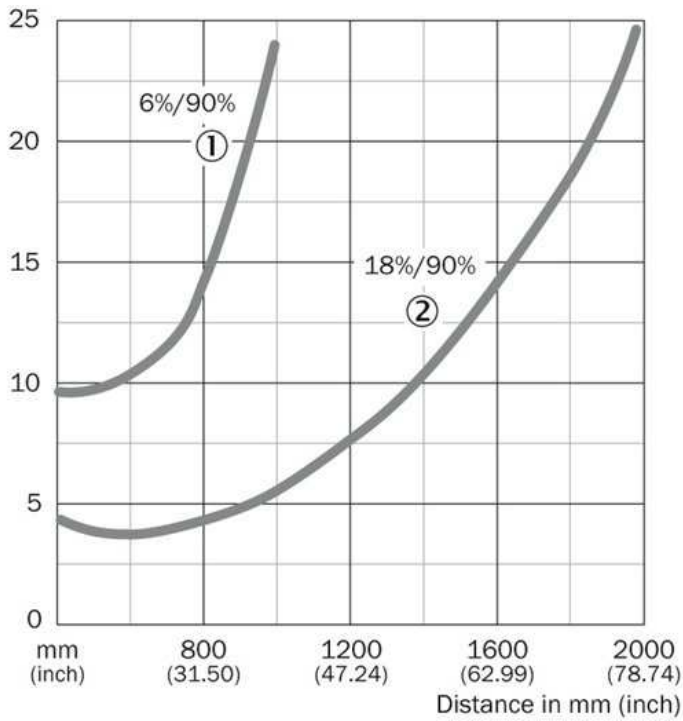


- |7| Sensing range adjustment
- |8| Time control
- |9| time delay selector switch
- |10| terminal strip
- |11| Status indicator

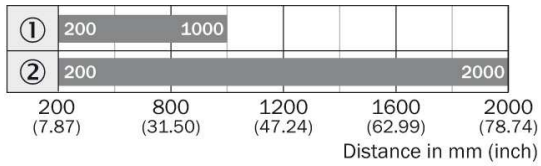
Connection diagram



Characteristic curve



Sensing range diagram



■ Sensing range

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

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