



Photoelectric sensors  
W4-3, Photoelectric proximity sensor,  
Background suppression

WTV4-3N2201S68



**Model Name** > [WTV4-3N2201S68](#)  
**Part No.** > [1055055](#)



Illustration may differ

**At a glance**

- Sensing range from 4 - 50 mm
- Reliable detection of planar, highly transparent and shiny objects at distances of 20 to 25 mm
- 5-turn potentiometer for precise adjustment
- Large, consistent light spot
- Rugged plastic housing with M3 threaded metal inserts
- IR versions available for detection of jet-black objects with a remission < 1%
- Versions available with linear light spot

**Your benefits**

- Low-cost machine design since shiny and transparent objects are directly detected, making a separate reflector or through-beam system unnecessary
- Less mounting and setup time since no alignment is required
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life
- Reliable object detection due to best-in-class background suppression and high immunity to ambient light



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	16 mm x 39.5 mm x 12 mm
Housing design (light emission):	Rectangular
Sensing range max.:	3 mm ... 50 mm <sup>1)</sup>
Sensing range:	5 mm ... 50 mm <sup>2)</sup>
Type of light:	Infrared light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	880 nm
Special features:	PIN 4: dark switching, PIN 2: light switching
Adjustment:	Potentiometer, 5 turns
Light spot size (distance):	3 x 22 mm (40 mm)

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

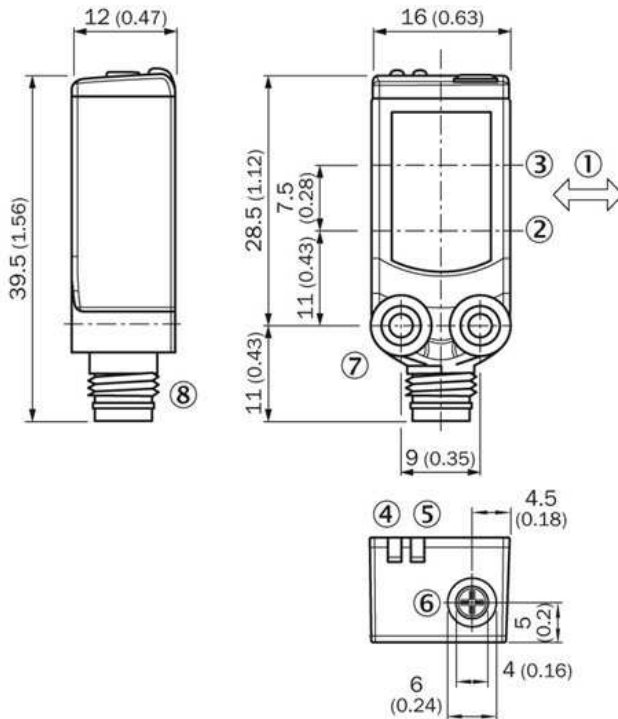
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple::	< 5 Vpp <sup>2) 3)</sup>
Power consumption:	≤ 20 mA <sup>4)</sup>

Output type:	NPN
Output function:	Complementary
Switching mode:	Light switching
Output current I <sub>max</sub> :	≤ 100 mA
Response time:	< 0.5 ms <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Connection type:	Connector M8, 4-pin, 2 m
Circuit protection:::	A, C, D <sup>7) 8) 9)</sup>
Protection class:	III
Weight:	30 g
Special device:	✓
Optics material:	PMMA
Enclosure rating:	IP 67 IP 66
Special feature:	Line-shaped light spot, V-optics
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Housing material:	ABS, Plastic

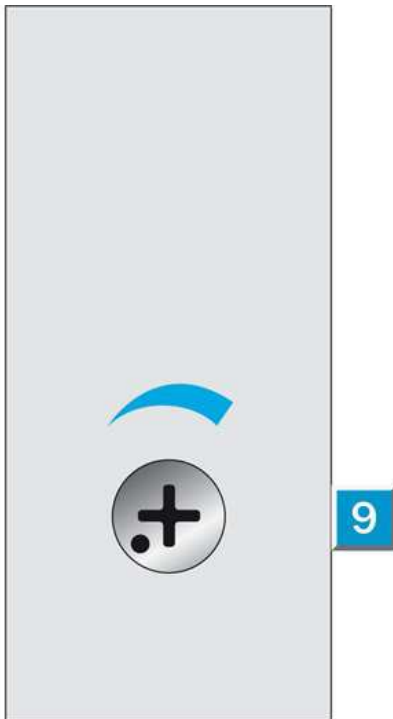
1) Limit values 2) 3) May not exceed or fall short of V<sub>S</sub> tolerances 4) Without load 5) Signal transit time with resistive load 6) With light/dark ratio 1:1 7) A = V<sub>S</sub>  
connections reverse-polarity protected 8) C = interference suppression 9) D = outputs overcurrent and short-circuit protected

## Dimensional drawing



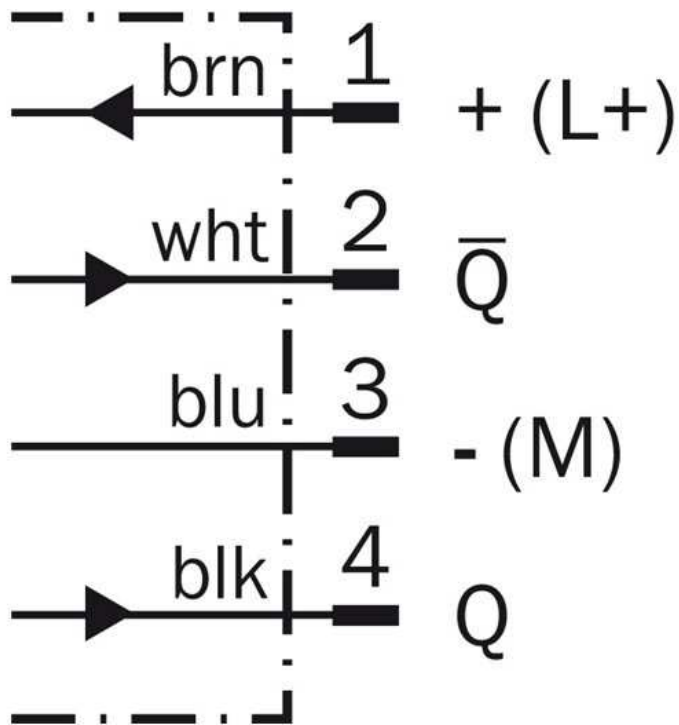
- |1| Standard direction of the material being detected
- |2| Optical axis, sender
- |3| Optical axis, receiver
- |4| Status indicator LED,  
yellow: Status of received light beam
- |5| Status indicator LED green: supply voltage on
- |6| Potentiometer
- |7| Threaded mounting hole M3
- |8| Connection

Adjustments possible

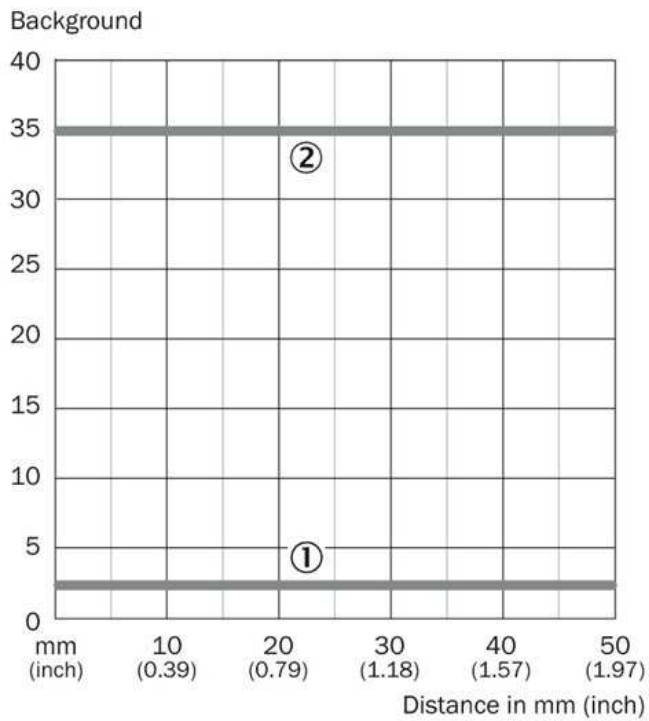


|6| Potentiometer

Connection diagram

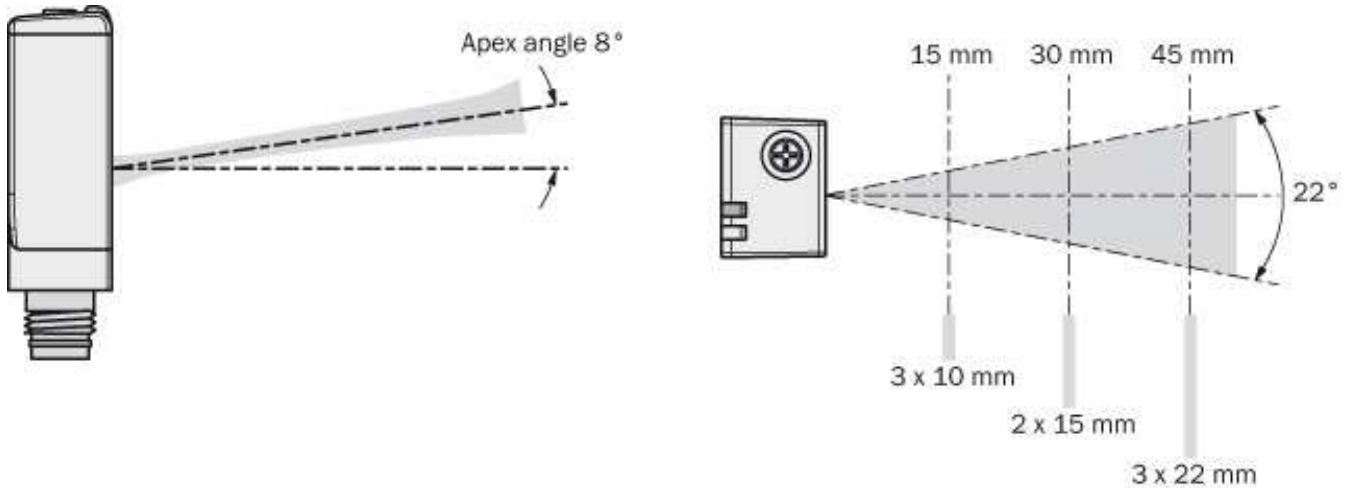


## Characteristic curve

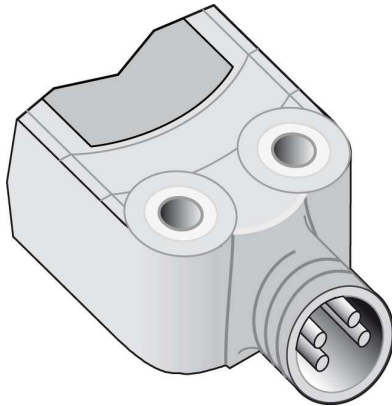


- |1| Black-white shift 90% / 6%
- |2| Distance to the background with transparent objects

## Light spot size



## Connection type



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