



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

WTV4-3P1040S42



**Model Name** > [WTV4-3P1040S42](#)  
**Part No.** > [1041689](#)



*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.:	4 mm ... 50 mm <sup>1)</sup>
Sensing range:	15 mm ... 50 mm <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	650 nm
Light spot size (distance):	Ø 10 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

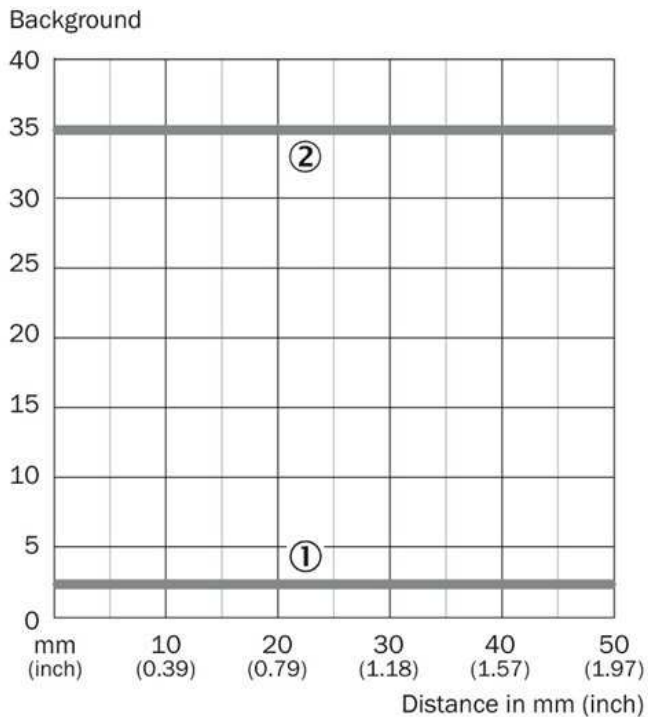
**Mechanics/electronics**

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:	PNP
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>
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:	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

### Characteristic curve



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

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