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DATA SHEET

WTV4-3P2140S33

W4  
Photoelectric sensors

**SICK** Sensor Intelligence

## PHOTOELECTRIC SENSORS

## WTV4-3P2140S33

## ORDERING INFORMATION

Type	part no.
WTV4-3P2140S33	1029887

Further device versions and accessories at [www.sick.com/W4](http://www.sick.com/W4)



Illustration may differ

## DETAILED TECHNICAL DATA

## FEATURES

Functional principle	Photoelectric proximity sensor	
Functional principle detail	Background suppression	
Sensing range max.	4 mm ... 50 mm <sup>1)</sup>	
Sensing range	15 mm ... 50 mm <sup>1)</sup>	
Emitted beam	Light source	PinPoint LED <sup>2)</sup>
	Type of light	Visible red light
	Light spot size (distance)	Ø 10 mm (40 mm)
Key LED figures	Wave length	650 nm
	Adjustment	None
Special applications	Detecting uneven, shiny objects, Detecting objects wrapped in film	

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> Average service life: 100,000 h at T<sub>u</sub> = +25 °C.

## SAFETY-RELATED PARAMETERS

MTTF <sub>D</sub>	1,179 years
DC <sub>avg</sub>	0 %

**ELECTRONICS**

Supply voltage $U_B$	10 V DC ... 30 V DC <sup>1)</sup>
Ripple	< 5 V <sub>pp</sub> <sup>2)</sup>
Current consumption	20 mA <sup>3)</sup>
Protection class	III
Digital output	Type PNP Switching mode Light switching Output current $I_{max}$ ≤ 100 mA Response time < 0.5 ms <sup>4)</sup> Switching frequency 1,000 Hz <sup>5)</sup>
Circuit protection	A <sup>6)</sup> C <sup>7)</sup> D <sup>8)</sup>
Special feature	V-optics

<sup>1)</sup> Limit values.

<sup>2)</sup> May not fall below or exceed  $U_V$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> A =  $V_B$  connections reverse-polarity protected.

<sup>7)</sup> C = interference suppression.

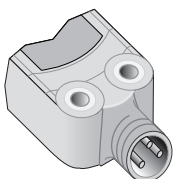
<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

**MECHANICS**

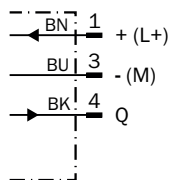
Housing	Rectangular
Design detail	Flat
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Connection	Connector M8, 3-pin
Material	Housing Plastic, ABS Front screen Plastic, PMMA
Weight	30 g

**AMBIENT DATA**

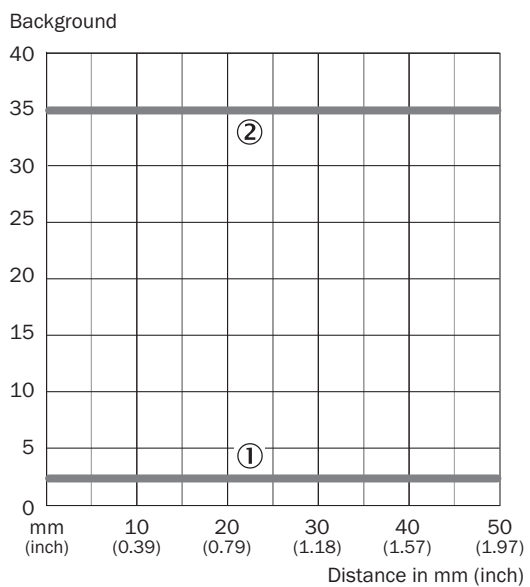
Enclosure rating	IP67 IP66
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

**CONNECTION TYPE**

**CONNECTION DIAGRAM CD-045**



**CHARACTERISTIC CURVE WTV4-3, V-OPTICS**



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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/1029887](http://www.sick.com/1029887)



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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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