



# VT12T-2N132

V12

CYLINDRICAL PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
VT12T-2N132	6026213

Other models and accessories → [www.sick.com/V12](http://www.sick.com/V12)

Illustration may differ



### Detailed technical data

#### Features

<b>Functional principle</b>	Photoelectric proximity sensor
<b>Functional principle detail</b>	Energetic
<b>Dimensions (W x H x D)</b>	12 mm x 12 mm x 54.5 mm
<b>Housing design (light emission)</b>	Cylindrical
<b>Housing length</b>	54.5 mm
<b>Thread diameter (housing)</b>	Round connector M12 x 1
<b>Sensing range max.</b>	0 mm ... 340 mm <sup>1)</sup>
<b>Sensing range</b>	2 mm ... 300 mm
<b>Focus</b>	Approx. 5.3°
<b>Type of light</b>	Infrared light
<b>Light source</b>	LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 28 mm (300 mm)
<b>Angle of dispersion</b>	Approx. 5.3°
<b>Wave length</b>	880 nm
<b>Adjustment</b>	Single teach-in button, Selectable via control input C (Sensing range, Sensing range) <sup>3) 4)</sup>

<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.

<sup>3)</sup> Manual, via teach-in button.

<sup>4)</sup> Electronically via control input C (0 V).

## Mechanics/electronics

<b>Supply voltage <math>U_B</math></b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	$\pm 10\%$ <sup>2)</sup>
<b>Current consumption</b>	20 mA <sup>3)</sup>
<b>Switching output</b>	NPN
<b>Switching mode</b>	Light/dark switching
<b>Switching mode selector</b>	Selectable via control input C
<b>Output current <math>I_{max}</math></b>	$\leq 100$ mA <sup>3)</sup>
<b>Response time</b>	$\leq 1.25$ ms <sup>4)</sup>
<b>Switching frequency</b>	400 Hz <sup>5)</sup>
<b>Connection type</b>	Cable, 4-wire, 2 m <sup>6)</sup>
<b>Cable material</b>	Plastic, PVC
<b>Conductor cross section</b>	0.14 mm <sup>2</sup>
<b>Cable diameter</b>	$\varnothing 3.75$ mm
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> C <sup>9)</sup> D <sup>10)</sup>
<b>Protection class</b>	III
<b>Weight</b>	54 g
<b>Housing material</b>	Metal, Nickel-plated brass/PA
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-25 °C ... +70 °C
<b>Ambient temperature, storage</b>	-25 °C ... +70 °C
<b>UL File No.</b>	E175606

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

<sup>2)</sup> May not exceed or fall below  $U_V$  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> Do not bend below 0 °C.

<sup>7)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>8)</sup> B = inputs and output reverse-polarity protected.

<sup>9)</sup> C = interference suppression.

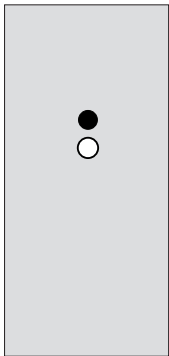
<sup>10)</sup> D = outputs overcurrent and short-circuit protected.

## Classifications

<b>ECLASS 5.0</b>	27270903
<b>ECLASS 5.1.4</b>	27270903
<b>ECLASS 6.0</b>	27270903
<b>ECLASS 6.2</b>	27270903
<b>ECLASS 7.0</b>	27270903
<b>ECLASS 8.0</b>	27270903

<b>ECLASS 8.1</b>	27270903
<b>ECLASS 9.0</b>	27270903
<b>ECLASS 10.0</b>	27270904
<b>ECLASS 11.0</b>	27270904
<b>ECLASS 12.0</b>	27270903
<b>ETIM 5.0</b>	EC001821
<b>ETIM 6.0</b>	EC001821
<b>ETIM 7.0</b>	EC002719
<b>ETIM 8.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

### Adjustments

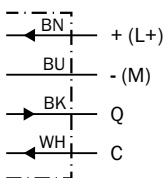


### Connection type

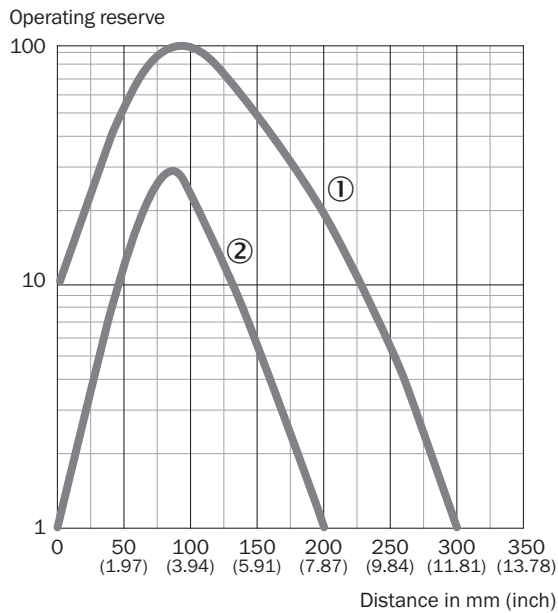


### Connection diagram

Cd-100

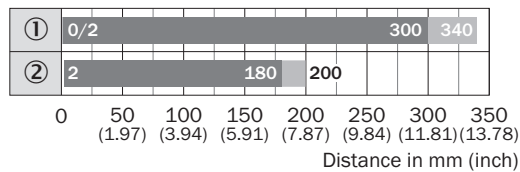


### Characteristic curve



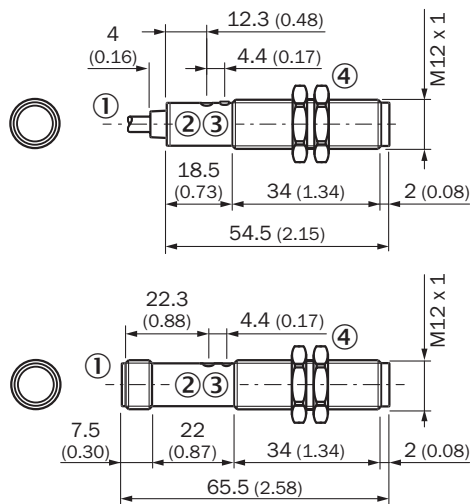
- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor

### Sensing range diagram



- Sensing range
- Sensing range max.
- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor



### Dimensional drawing (Dimensions in mm (inch))



- ① Cable or connector M12, 4-pin
- ② Sensitivity setting: single teach-in button
- ③ Yellow LED indicator: - lights continuously: Reception signal > reserve factor 2 - blinks: Reception signal < reserve factor 2 but > switching threshold 1
- ④ Fastening nuts (2x); width across 17, metal

### Recommended accessories

Other models and accessories → [www.sick.com/V12](http://www.sick.com/V12)

	Brief description	Type	Part no.
<b>Mounting brackets and plates</b>			
	Mounting bracket for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M12	5308447
<b>Others</b>			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	STE-1204-G	6009932

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SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)