



**VT18-2P4420S02**

V18

**CYLINDRICAL PHOTOELECTRIC SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
VT18-2P4420S02	6011641

Other models and accessories → [www.sick.com/V18](http://www.sick.com/V18)

### 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>	18 mm x 18 mm x 96 mm
<b>Housing design (light emission)</b>	Cylindrical
<b>Housing length</b>	96 mm
<b>Thread diameter (housing)</b>	M18 x 1
<b>Optical axis</b>	Radial
<b>Sensing range max.</b>	2 mm ... 100 mm <sup>1)</sup>
<b>Sensing range</b>	3 mm ... 90 mm
<b>Type of light</b>	Infrared light
<b>Light source</b>	LED <sup>2)</sup>
<b>Wave length</b>	880 nm
<b>Adjustment</b>	None

<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>J</sub> = +25 °C.

#### Mechanics/electronics

<b>Supply voltage U<sub>B</sub></b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	± 10 % <sup>2)</sup>
<b>Current consumption</b>	30 mA <sup>3)</sup>

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

<sup>2)</sup> May not exceed or fall below U<sub>V</sub> 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> B = inputs and output reverse-polarity protected.

<sup>7)</sup> D = outputs overcurrent and short-circuit protected.

<b>Switching output</b>	PNP
<b>Switching mode</b>	Light/dark switching
<b>Signal voltage PNP HIGH/LOW</b>	Approx. $U_V - 1.0\text{ V} / 0\text{ V}$
<b>Output current <math>I_{\max}</math></b>	$\leq 100\text{ mA}$
<b>Response time</b>	$\leq 5\text{ ms}^{4)}$
<b>Switching frequency</b>	$100\text{ Hz}^{5)}$
<b>Connection type</b>	Male connector M12, 4-pin
<b>Circuit protection</b>	B <sup>6)</sup> D <sup>7)</sup>
<b>Protection class</b>	III
<b>Weight</b>	120 g
<b>Special device</b>	✓
<b>Housing material</b>	Metal, Nickel-plated brass
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	$-25\text{ °C} \dots +70\text{ °C}$
<b>UL File No.</b>	NMFT2.E175606

1) Limit values.

2) May not exceed or fall below  $U_V$  tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

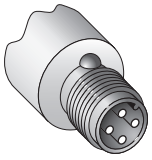
6) B = inputs and output reverse-polarity protected.

7) D = outputs overcurrent and short-circuit protected.

## Classifications

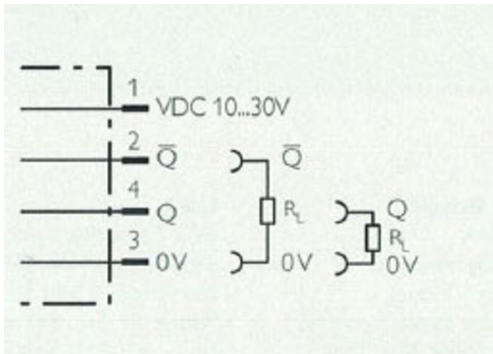
<b>eCl@ss 5.0</b>	27270903
<b>eCl@ss 5.1.4</b>	27270903
<b>eCl@ss 6.0</b>	27270903
<b>eCl@ss 6.2</b>	27270903
<b>eCl@ss 7.0</b>	27270903
<b>eCl@ss 8.0</b>	27270903
<b>eCl@ss 8.1</b>	27270903
<b>eCl@ss 9.0</b>	27270903
<b>eCl@ss 10.0</b>	27270904
<b>eCl@ss 11.0</b>	27270904
<b>eCl@ss 12.0</b>	27270903
<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

Connection type

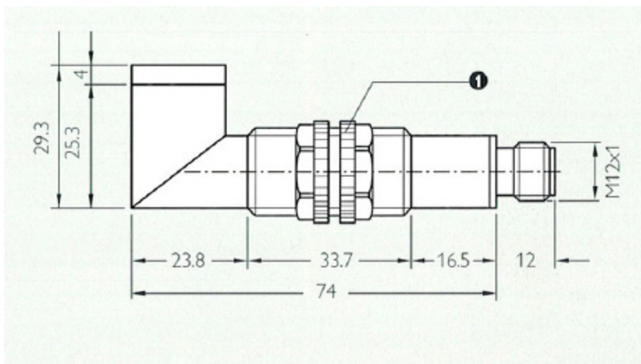


Connection diagram

Cd-196






Dimensional drawing (Dimensions in mm (inch))



Recommended accessories

Other models and accessories → [www.sick.com/V18](http://www.sick.com/V18)

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

## SICK AT A GLANCE

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)