



# WTE15-N2411

W15

CYLINDRICAL PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
WTE15-N2411	1043313

Other models and accessories → [www.sick.com/W15](http://www.sick.com/W15)

### Detailed technical data

#### Features

<b>Sensor/ detection principle</b>	Photoelectric proximity sensor, Energetic
<b>Dimensions (W x H x D)</b>	16.2 mm x 48.5 mm x 31.9 mm
<b>Housing design (light emission)</b>	Hybrid
<b>Thread diameter (housing)</b>	M18 x 1
<b>Sensing range max.</b>	10 mm ... 350 mm <sup>1)</sup>
<b>Sensing range</b>	10 mm ... 250 mm
<b>Type of light</b>	Infrared light
<b>Light source</b>	LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 50 mm (350 mm)
<b>Angle of dispersion</b>	4.5°
<b>Wave length</b>	950 nm
<b>Adjustment</b>	Potentiometer, 5 turns (Sensing range) Potentiometer, 5 rotations

<sup>1)</sup> Object with 90 % reflectance (referred to 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</b>	10 V DC ... 30 V DC <sup>1)</sup>
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<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A.

<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> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>7)</sup> B = inputs and output reverse-polarity protected.

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

<sup>9)</sup> Reference voltage: 50 V DC.

<b>Ripple</b>	$\leq 5 V_{pp}$ <sup>2)</sup>
<b>Current consumption</b>	30 mA <sup>3)</sup>
<b>Switching output</b>	NPN
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark switching
<b>Output current <math>I_{max}</math></b>	$\leq 100$ mA
<b>Response time</b>	$\leq 1.25$ ms <sup>4)</sup>
<b>Switching frequency</b>	400 Hz <sup>5)</sup>
<b>Connection type</b>	Male connector M12, 4-pin
<b>Circuit protection</b>	A <sup>6)</sup> B <sup>7)</sup> D <sup>8)</sup>
<b>Protection class</b>	II <sup>9)</sup>
<b>Weight</b>	10 g
<b>Housing material</b>	Plastic, ABS
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Items supplied</b>	Snap-ring and M18 nut
<b>Ambient operating temperature</b>	-25 °C ... +55 °C
<b>Ambient storage temperature</b>	-25 °C ... +70 °C
<b>UL File No.</b>	NRKH.E189383 & NRKH7.E189383

1) Limit values when operated in short-circuit protected network: max. 8 A.

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) A =  $V_S$  connections reverse-polarity protected.

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

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

9) Reference voltage: 50 V DC.

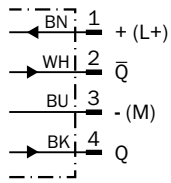
## Classifications

<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>ETIM 5.0</b>	EC001821
<b>ETIM 6.0</b>	EC001821

<b>ETIM 7.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

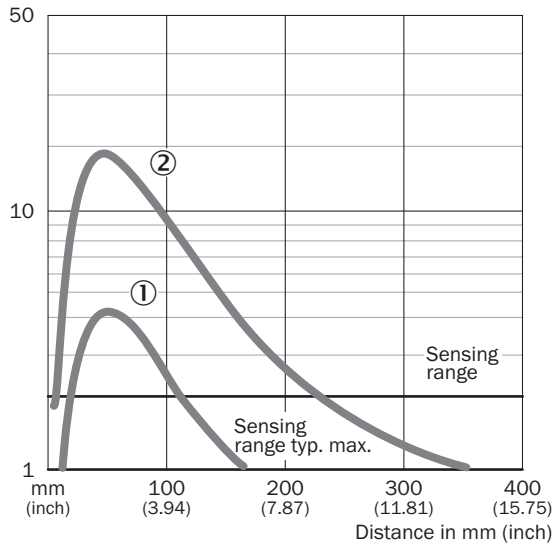
### Connection diagram

Cd-083



### Characteristic curve

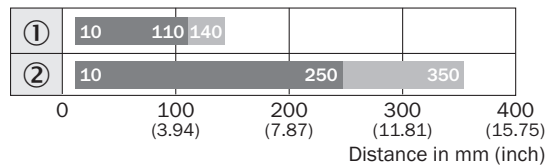
WTE15



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

### Sensing range diagram

WTE15

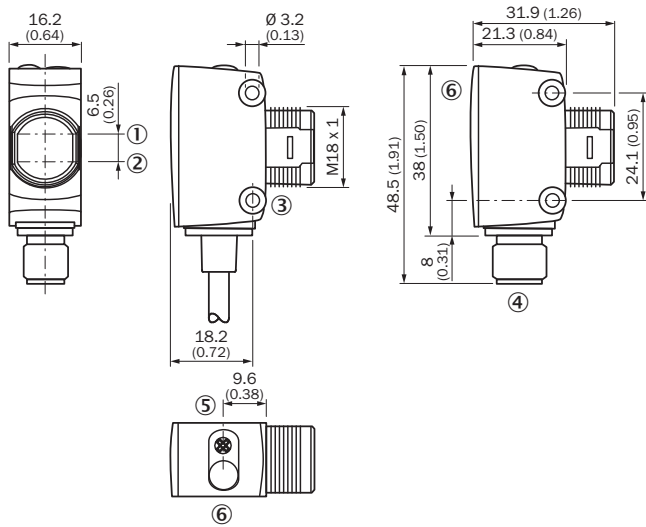


■ Sensing range    ■ Sensing range max.

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

Dimensional drawing (Dimensions in mm (inch))



WTE15, WTB15



- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting hole, Ø 3.2 mm
- ④ M12 male device connector, 4-pin
- ⑤ Potentiometer
- ⑥ LED indicator green: power; yellow: output

Recommended accessories

Other models and accessories → [www.sick.com/W15](http://www.sick.com/W15)

	Brief description	Type	Part no.
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 Head B: - 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)