



# WS/WE160-F440

PRODUCT PORTFOLIO

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
WS/WE160-F440	6022758

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

## Detailed technical data

### Features

<b>Sensor/ detection principle</b>	Through-beam photoelectric sensor
<b>Dimensions (W x H x D)</b>	11 mm x 38 mm x 23 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	≤ 15 mm
<b>Sensing range</b>	0 m ... 11 m <sup>1)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	LED
<b>Wave length</b>	680 nm

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033).

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	± 10 %
<b>Power consumption</b>	≤ 25 mA <sup>1)</sup>
<b>Switching output</b>	PNP
<b>Switching mode</b>	Light/dark switching
<b>Switching mode selector</b>	Selectable via light/dark rotary switch
<b>Response time</b>	≤ 0.5 ms <sup>2)</sup>
<b>Connection type</b>	Connector M8, 4-pin
<b>Housing material</b>	Plastic, PBT
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP69K
<b>Ambient operating temperature</b>	-25 °C ... +55 °C
<b>Ambient storage temperature</b>	-40 °C ... +70 °C

<sup>1)</sup> Without load.

<sup>2)</sup> Signal transit time with resistive load.

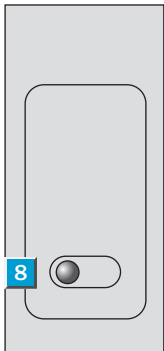
<b>UL File No.</b>	NRNT2.E128350 & NRNT8.E128350
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- 1) Without load.
- 2) Signal transit time with resistive load.

**Classifications**

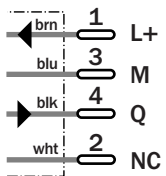
<b>ECl@ss 5.0</b>	27270901
<b>ECl@ss 5.1.4</b>	27270901
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<b>ECl@ss 6.2</b>	27270901
<b>ECl@ss 7.0</b>	27270901
<b>ECl@ss 8.0</b>	27270901
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<b>ECl@ss 9.0</b>	27270901
<b>ETIM 5.0</b>	EC002716
<b>ETIM 6.0</b>	EC002716
<b>UNSPSC 16.0901</b>	39121528

**Adjustments possible**

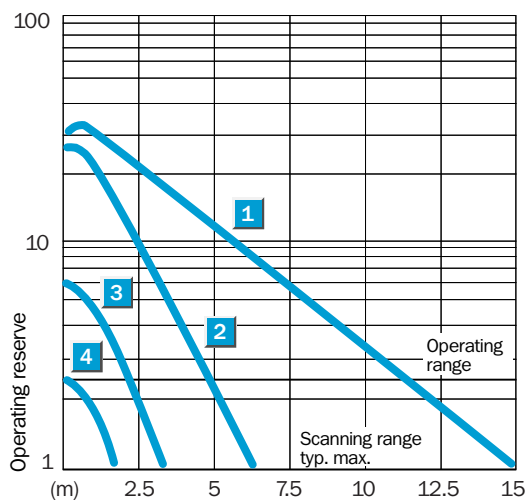


⊗ Red LED: sender active

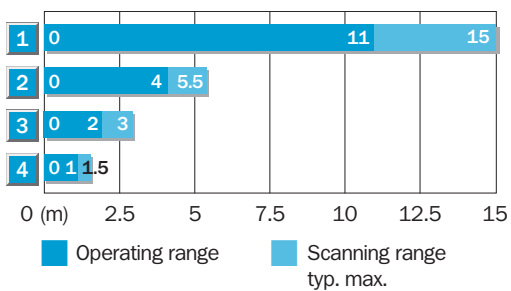
**Connection diagram**



Characteristic curve

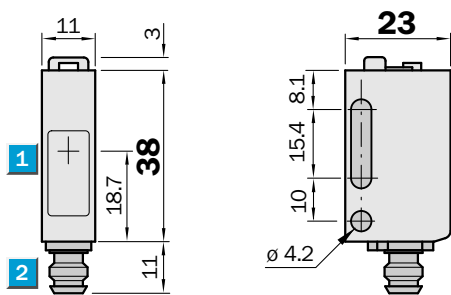


Sensing range diagram



1	Without slotted mask
2	With slotted mask 2 mm, BL-160-SK
3	With slotted mask 1 mm, BL-160-SK
4	With slotted mask 0.5 mm, BL-160-SK

Dimensional drawing (Dimensions in mm (inch))



- ① Center of optical axis
- ② Connection

## 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)