



WS/WE160-F440

**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>Functional 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% remission (based on standard white, DIN 5033).

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	± 10 %
<b>Current 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>	Male connector M8, 4-pin
<b>Housing material</b>	Plastic, PBT
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-25 °C ... +55 °C
<b>Ambient temperature, storage</b>	-40 °C ... +70 °C

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

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

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

Safety-related parameters

MTTF <sub>D</sub>	1,137 years
DC <sub>avg</sub>	0 %

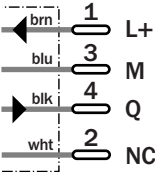
Classifications

eCl@ss 5.0	27270901
eCl@ss 5.1.4	27270901
eCl@ss 6.0	27270901
eCl@ss 6.2	27270901
eCl@ss 7.0	27270901
eCl@ss 8.0	27270901
eCl@ss 8.1	27270901
eCl@ss 9.0	27270901
eCl@ss 10.0	27270901
eCl@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
UNSPSC 16.0901	39121528

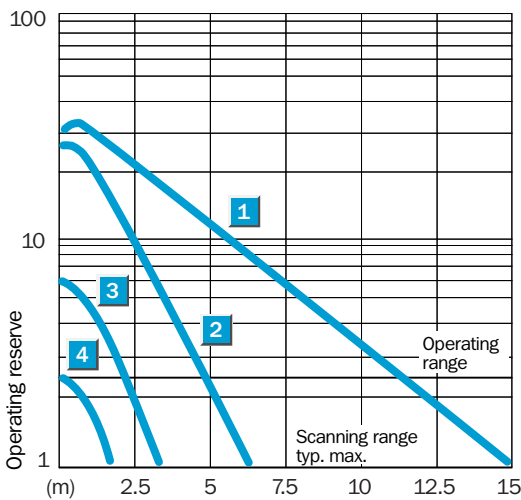
Connection type



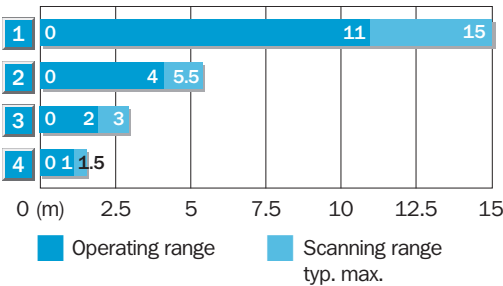
Connection diagram



Characteristic curve

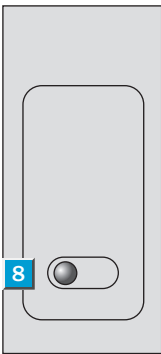


Sensing range diagram



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

Adjustments

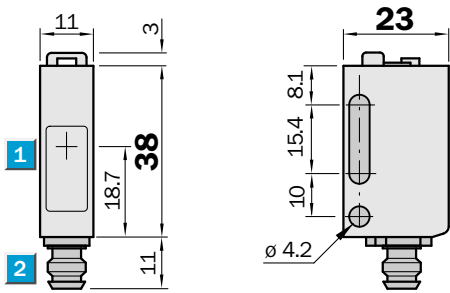


⑧ Red LED: sender active



- ③ Sensitivity control
- ④ Scaling 270°
- ⑤ Light/ dark rotary switch: L = light switching, D = dark switching
- ⑥ Orange LED indicator : switching output active
- ⑦ Green LED indicator: light reception with operating reserve >1.1 and < 0.9

### 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)