



WL160-F440

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL160-F440	6022774

Other models and accessories → www.sick.com/

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor
Dimensions (W x H x D)	11 mm x 38 mm x 23 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.01 m ... 6.5 m ¹⁾
Sensing range	0.01 m ... 4.5 m ¹⁾
Type of light	Visible red light
Light source	LED
Wave length	680 nm

¹⁾ Reflector PL80A.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	± 10 %
Power consumption	25 mA ¹⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Response time	≤ 0.5 ms ²⁾
Connection type	Male connector M8, 4-pin
Housing material	Plastic, PBT
Optics material	Plastic, PMMA
Enclosure rating	IP67

¹⁾ Without load.

²⁾ Signal transit time with resistive load.

Ambient operating temperature	-25 °C ... +55 °C
Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

1) Without load.

2) Signal transit time with resistive load.

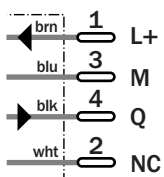
Safety-related parameters

MTTF_D	1,574 years
DC_{avg}	0%

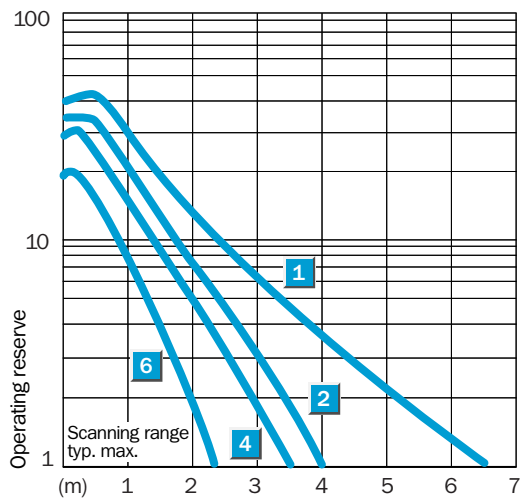
Classifications

ECI@ss 5.0	27270902
ECI@ss 5.1.4	27270902
ECI@ss 6.0	27270902
ECI@ss 6.2	27270902
ECI@ss 7.0	27270902
ECI@ss 8.0	27270902
ECI@ss 8.1	27270902
ECI@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
UNSPSC 16.0901	39121528

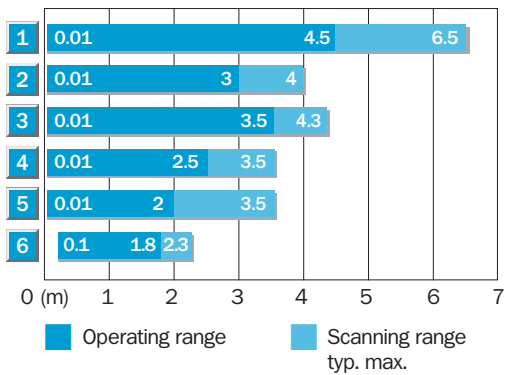
Connection diagram



Characteristic curve

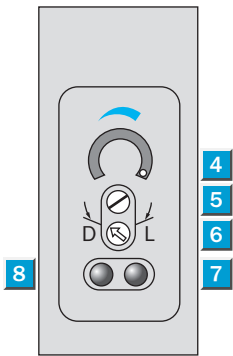


Sensing range diagram



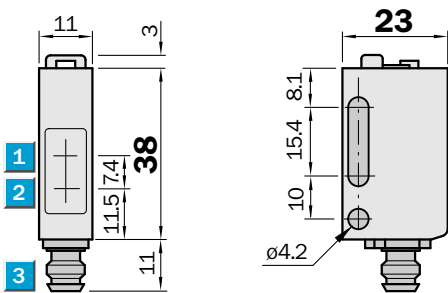
Reflector type	Operating range
1	PL80A 0.01 ... 4.5 m
2	P250 0.01 ... 3 m
3	PL50A/PL40A 0.01 ... 3.5 m
4	PL30A/PL31A 0.01 ... 2.5 m
5	PL20A 0.01 ... 2 m
6	Reflective tape Diamond Grade 0.1 ... 1.8 m (100 x 100 mm ²)

Adjustments possible



- ④ Scaling 270°
- ⑤ Sensitivity control
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching
- ⑦ Orange LED indicator : switching output active
- ⑧ Green LED indicator: light reception with operating reserve >1.1 and < 0.9

Dimensional drawing (Dimensions in mm (inch))



- ① Center of optical axis, receiver
- ② Center of optical axis, sender
- ③ 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