



# WL170-P420

PRODUCT PORTFOLIO

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
WL170-P420	6010186

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

## Detailed technical data

### Features

<b>Sensor/ detection principle</b>	Photoelectric retro-reflective sensor
<b>Dimensions (W x H x D)</b>	12 mm x 37 mm x 28.6 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	0.1 m ... 0.8 m <sup>1)</sup>
<b>Sensing range</b>	0.1 m ... 0.6 m <sup>2)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	LED

<sup>1)</sup> Reflector PL80A.

<sup>2)</sup> Reflector P250.

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	± 10 %
<b>Power consumption</b>	≤ 30 mA <sup>1)</sup>
<b>Switching output</b>	PNP
<b>Switching mode</b>	Light/dark switching
<b>Switching mode selector</b>	Selectable via L/D control cable
<b>Response time</b>	≤ 0.7 ms <sup>2)</sup>
<b>Attenuation along light beam</b>	≥ 20 %
<b>Connection type</b>	Connector M8, 4-pin
<b>Housing material</b>	Stainless steel, Stainless steel/ABS
<b>Optics material</b>	Plastic, PC
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-25 °C ... +55 °C

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

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

<b>Ambient storage temperature</b>	-40 °C ... +70 °C
<b>UL File No.</b>	NRNT2.E128350 & NRNT8.E128350

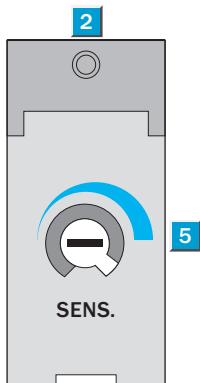
1) Without load.

2) Signal transit time with resistive load.

### Classifications

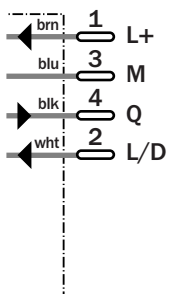
<b>ECl@ss 5.0</b>	27270902
<b>ECl@ss 5.1.4</b>	27270902
<b>ECl@ss 6.0</b>	27270902
<b>ECl@ss 6.2</b>	27270902
<b>ECl@ss 7.0</b>	27270902
<b>ECl@ss 8.0</b>	27270902
<b>ECl@ss 8.1</b>	27270902
<b>ECl@ss 9.0</b>	27270902
<b>ETIM 5.0</b>	EC002717
<b>ETIM 6.0</b>	EC002717
<b>UNSPSC 16.0901</b>	39121528

### Adjustments possible

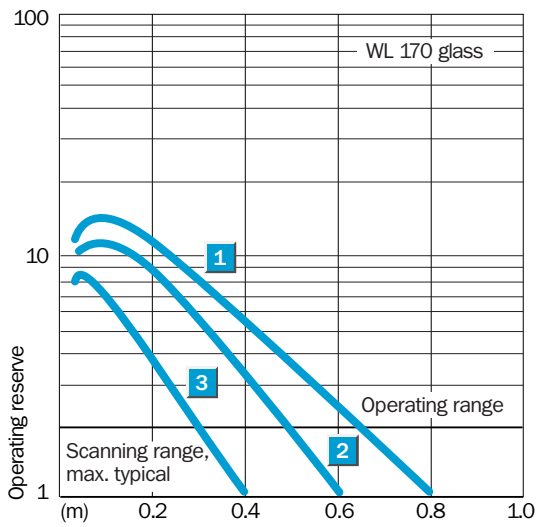


- ② Mounting hole, Ø 3 mm with integrated M3 thread
- ⑤ Sensitivity control (potentiometer, 270°)

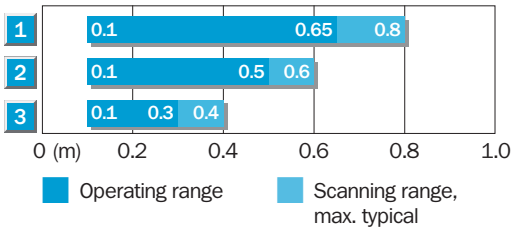
### Connection diagram



Characteristic curve

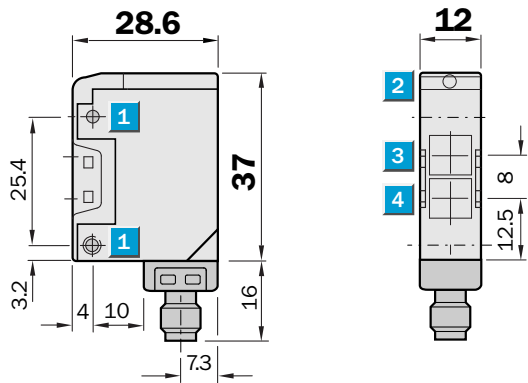


Sensing range diagram



Reflector type	Operating range
1 PL 80 A	0.1 ... 0.65 m
2 P 250	0.1 ... 0.5 m
3 PL 20 A	0.1 ... 0.3 m

Dimensional drawing (Dimensions in mm (inch))



- ① Mounting hole,  $\varnothing$  3 mm with integrated M3 thread
- ② LED signal strength indicator, red: Light received  $\geq$  switching threshold
- ③ Center of optical axis, receiver
- ④ Center of optical axis, sender

## 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)