



# WS/WE34-R240

## W34

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
WS/WE34-R240	1019258

Other models and accessories → [www.sick.com/W34](http://www.sick.com/W34)

## Detailed technical data

### Features

<b>Functional principle</b>	Through-beam photoelectric sensor
<b>Dimensions (W x H x D)</b>	27 mm x 92 mm x 70 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	0 m ... 60 m
<b>Sensing range</b>	0 m ... 60 m
<b>Focus</b>	Approx. 1°
<b>Type of light</b>	Visible red light
<b>Light source</b>	LED <sup>1)</sup>
<b>Light spot size (distance)</b>	Ø 700 mm (50 m)
<b>Angle of dispersion</b>	Approx. 1°
<b>Wave length</b>	660 nm
<b>Adjustment</b>	Potentiometer

<sup>1)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

### Mechanics/electronics

<b>Supply voltage</b>	20 V AC/DC ... 250 V AC/DC
<b>Power consumption</b>	< 2 VA
<b>Switching output</b>	Relay, electrically isolated <sup>1)</sup>
<b>Output function</b>	Change-over contacts
<b>Switching mode</b>	Light switching <sup>1)</sup> Dark switching
<b>Switching mode selector</b>	Selectable via light/dark selector

<sup>1)</sup> Provide suitable spark suppression for inductive or capacitive loads.

<sup>2)</sup> With light/dark ratio 1:1.

<sup>3)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>4)</sup> C = interference suppression.

<sup>5)</sup> Rated voltage: 250 V AC/DC.

<b>Switching current (switching voltage)</b>	4 A @ 250 V AC, 4 A @ 24 V DC, 0.125 A @ 250 V DC UL: 4 A @ 250 V AC, general use / 4 A @ 250 V AC, resistive (NO) / 3 A @ 250 V AC, resistive (NC) / 4 A @ 24 V DC, NO, general use / 3 A @ 24 V DC, NC, general use / R300 / B300 (NO contacts only)
<b>Response time</b>	≤ 10 ms
<b>Switching frequency</b>	10 Hz <sup>2)</sup>
<b>Angle of reception</b>	Approx. 2.5 °
<b>Time functions</b>	Off delay On delay Adjustable
<b>Delay time</b>	Adjustable via time delay selector switch, 0.5 s ... 10 s
<b>Connection type</b>	Terminal connection with M16 gland
<b>Circuit protection</b>	A <sup>3)</sup> C <sup>4)</sup>
<b>Protection class</b>	II <sup>5)</sup>
<b>Weight</b>	280 g
<b>Housing material</b>	Plastic, ABS
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-40 °C ... +60 °C
<b>Ambient temperature, storage</b>	-40 °C ... +75 °C
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493
<b>Part number of individual components</b>	2022816 WE34-R240 2022824 WS34-U240

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<sup>4)</sup> C = interference suppression.

<sup>5)</sup> Rated voltage: 250 V AC/DC.

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	314 years
<b>DC<sub>avg</sub></b>	0 %
<b>B<sub>10d</sub></b>	65,693 Switching cycles <sup>1)</sup>

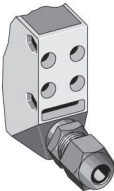
<sup>1)</sup> Only for devices containing electro-mechanical components. In this case, the MTTF<sub>D</sub> value of the entire device must be calculated from the given B<sub>10D</sub> value, the number of switching cycles and the given MTTF<sub>D</sub> value.

## Classifications

<b>eCl@ss 5.0</b>	27270901
<b>eCl@ss 5.1.4</b>	27270901
<b>eCl@ss 6.0</b>	27270901
<b>eCl@ss 6.2</b>	27270901
<b>eCl@ss 7.0</b>	27270901
<b>eCl@ss 8.0</b>	27270901
<b>eCl@ss 8.1</b>	27270901
<b>eCl@ss 9.0</b>	27270901
<b>eCl@ss 10.0</b>	27270901
<b>eCl@ss 11.0</b>	27270901

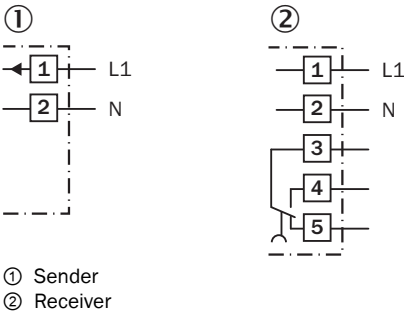
<b>eCl@ss 12.0</b>	27270901
<b>ETIM 5.0</b>	EC002716
<b>ETIM 6.0</b>	EC002716
<b>ETIM 7.0</b>	EC002716
<b>ETIM 8.0</b>	EC002716
<b>UNSPSC 16.0901</b>	39121528

Connection type

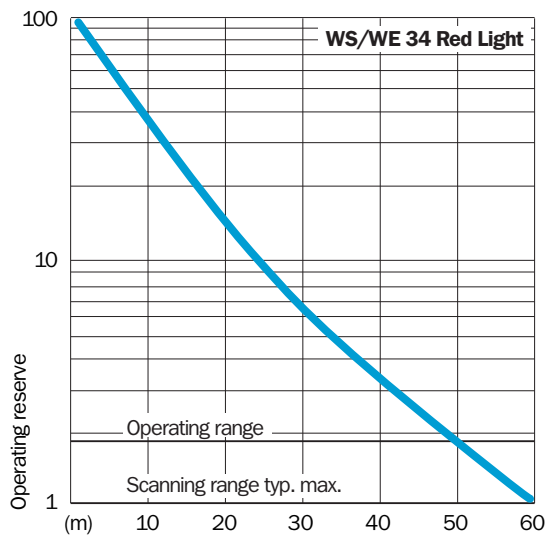


Connection diagram

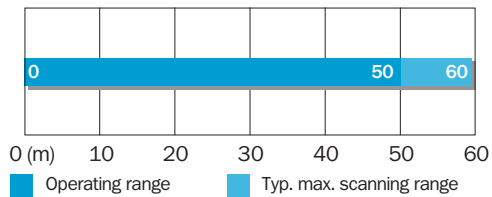
Cd-127



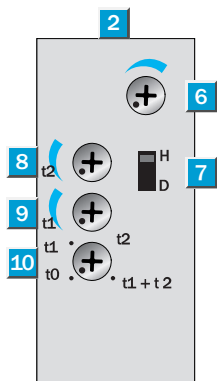
## Characteristic curve



## Sensing range diagram

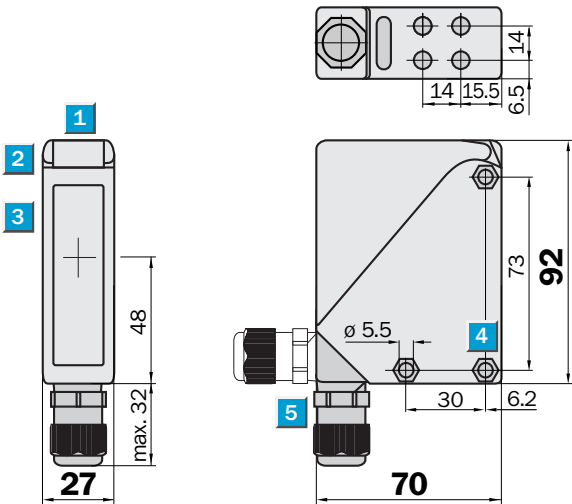


## Adjustments




- ② LED signal strength indicator
- ⑥ Sensitivity control
- ⑦ Light/dark selector
- ⑧ Time control  $t_2$  = OFF delay
- ⑨ Time control  $t_1$  = ON delay
- ⑩ Time delay selector switch

Dimensional drawing (Dimensions in mm (inch))



Recommended accessories

Other models and accessories → [www.sick.com/W34](http://www.sick.com/W34)

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, Stainless steel (1.4301), mounting hardware included	BEF-WN-W24	2015248

## 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)