



# WL27-2R830

W27-2

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type       | Part no. |
|------------|----------|
| WL27-2R830 | 1016072  |

Other models and accessories → [www.sick.com/W27-2](http://www.sick.com/W27-2)

Illustration may differ



### Detailed technical data

#### Features

|  |                                       |
|--|---------------------------------------|
| <b>Functional principle</b>            | Photoelectric retro-reflective sensor |
| <b>Dimensions (W x H x D)</b>          | 24.6 mm x 80 mm x 53.5 mm             |
| <b>Housing design (light emission)</b> | Rectangular                           |
| <b>Sensing range max.</b>              | 0.1 m ... 14 m <sup>1)</sup>          |
| <b>Sensing range</b>                   | 0.1 m ... 14 m <sup>1)</sup>          |
| <b>Type of light</b>                   | Visible red light                     |
| <b>Light source</b>                    | LED <sup>2)</sup>                     |
| <b>Light spot size (distance)</b>      | Ø 220 mm (10 m)                       |
| <b>Adjustment</b>                      | Potentiometer                         |

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

<sup>2)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

#### Mechanics/electronics

|                                |  |
|--------------------------------|--|
| <b>Supply voltage</b>          | 24 V AC/DC ... 240 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/dark switching <sup>1)</sup>         |
| <b>Switching mode selector</b> | Selectable via time delay selector switch  |

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

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

<sup>3)</sup> With light/dark ratio 1:1.

<sup>4)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>5)</sup> C = interference suppression.

<sup>6)</sup> Reference voltage: 250 V AC, overvoltage category 2.

|  |   |
|--|---|
| <b>Switching current (switching voltage)</b> | 4 A (240 V AC)<br>0.2 A (120 V DC)<br>4 A (24 V DC)         |
| <b>Response time</b>                         | < 6 ms <sup>2)</sup>  |
| <b>Switching frequency</b>                   | 10 Hz <sup>3)</sup>   |
| <b>Time functions</b>                        | Off delay<br>On delay<br>Switch on delay and time delay off |
| <b>Delay time</b>                            | Adjustable via time delay selector switch, 0.5 s ... 10 s   |
| <b>Connection type</b>                       | Mini connector 7/8", 5-pin                                  |
| <b>Circuit protection</b>                    | A <sup>4)</sup><br>C <sup>5)</sup>                          |
| <b>Protection class</b>                      | II <sup>6)</sup>  |
| <b>Weight</b>                                | 100 g   |
| <b>Housing material</b>                      | Plastic, ABS  |
| <b>Enclosure rating</b>                      | IP65  |
| <b>Ambient operating temperature</b>         | -40 °C ... +60 °C   |
| <b>Ambient temperature, storage</b>          | -40 °C ... +75 °C   |

1) Provide suitable spark suppression for inductive or capacitive loads.

2) Signal transit time with resistive load.

3) With light/dark ratio 1:1.

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

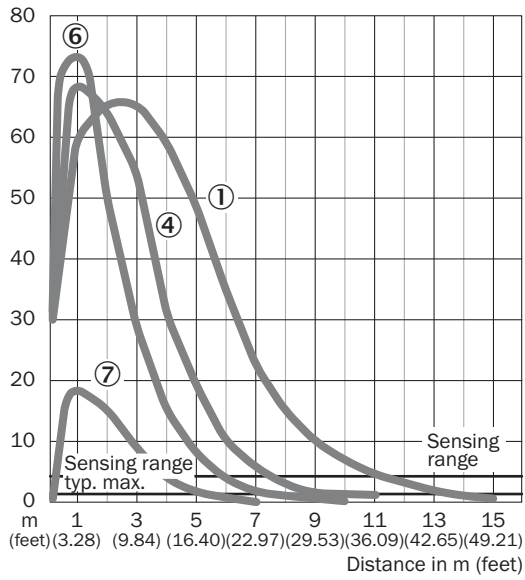
5) C = interference suppression.

6) Reference voltage: 250 V AC, overvoltage category 2.

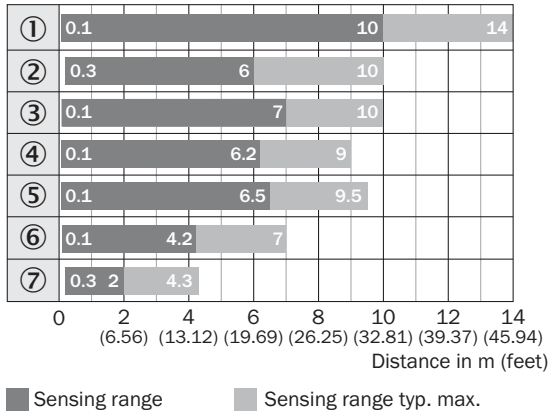
## Classifications

|                       |          |
|-----------------------|----------|
| <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>eCl@ss 10.0</b>    | 27270902 |
| <b>eCl@ss 11.0</b>    | 27270902 |
| <b>eCl@ss 12.0</b>    | 27270902 |
| <b>ETIM 5.0</b>       | EC002717 |
| <b>ETIM 6.0</b>       | EC002717 |
| <b>ETIM 7.0</b>       | EC002717 |
| <b>ETIM 8.0</b>       | EC002717 |
| <b>UNSPSC 16.0901</b> | 39121528 |

Characteristic curve



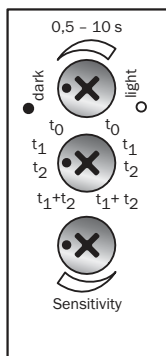
Sensing range diagram



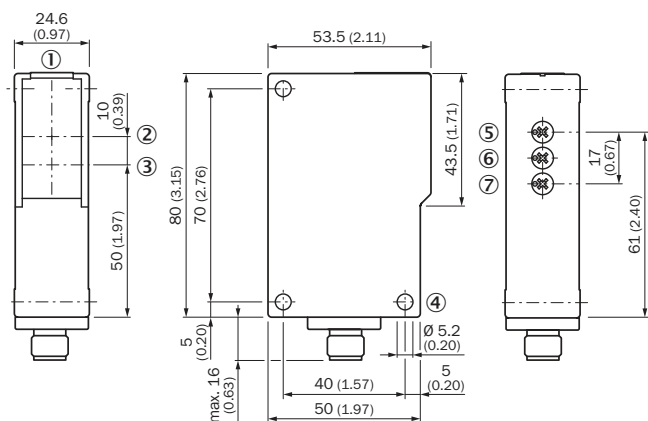
Reflector type

- ① PL80A
- ② C110
- ③ PL50A
- ④ PL40A
- ⑤ PL30A
- ⑥ PL20A
- ⑦ Reflective tape  
Diamond Grade

### Adjustments





### Dimensional drawing (Dimensions in mm (inch))



- ① LED signal strength indicator
- ② Optical axis, sender
- ③ Optical axis, receiver
- ④ Mounting hole, Ø 5.2 mm
- ⑤ Sensitivity control

### Recommended accessories

Other models and accessories → [www.sick.com/W27-2](http://www.sick.com/W27-2)

|   | Brief description   | Type        | Part no. |
|---|---|-------------|----------|
| <b>Mounting brackets and plates</b>   |   |             |          |
|  | Universal mounting bracket for reflectors, steel, zinc coated                     | BEF-WN-REFX | 2064574  |
| <b>Reflectors</b>   |   |             |          |
|  | Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting | P250        | 5304812  |

## 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)