Photoelectric sensors
PRODUCTS AT A GLANCE

SICK
Sensor Intelligence.
THE HIGHEST STANDARDS.
PRECISE DETECTION.

High-tech automation requires intelligent object detection. No matter what challenges you are faced with, photoelectric sensors from SICK are the reliable solution for a broad and demanding range of applications. The high detection quality of sensors from SICK increases the productivity of machines along with the quality of results.

YOUR ADVANTAGES AT A GLANCE

• Comprehensive detection
• All conditions; all standards
• For every type of machine
• Intelligent communication
• Complete and customized to your needs
VERSATILE, RELIABLE, FIRST-CLASS

The wide selection of photoelectric sensors from SICK ensures that numerous automation engineering applications around the world can be implemented both effectively and efficiently. Photoelectric sensors from SICK are available as standard in a wide range of designs and materials. Thanks to the use of SIRIC®, SICK’s very own ASIC, combined with modern optical technologies, they offer the highest in operational safety, regardless of any on-site interference. Additional sensor information via IO-Link helps to cut the complexity of modern production processes.

Because SICK handles all its own engineering, from the design of microchips to implementation in photoelectric sensors, customization for special applications or customer requirements can be achieved quickly and tailored to your needs.
ALL CONDITIONS; ALL NORMS AND STANDARDS

Regardless of what the conditions are, photoelectric sensors from SICK operate reliably. They deliver safe detection results even under intense ambient light or disruptive background reflections. Thanks to their rugged design, they can withstand high mechanical stresses due to shock or vibration and are also secure against electromagnetic interference. Whether there is dust, extreme temperatures or temperature change, damp or wet conditions, or contact with chemicals such as cleaning agents, sensors from SICK can be relied on. They comply with all relevant norms and standards that are required in industry today. This includes EU conformity, UL, and also RoHS. SICK’s in-house test guidelines often go much further than the statutory specifications and common industry standards.

COMPREHENSIVE DETECTION

Photoelectric sensors from SICK detect objects of various types and qualities thanks to SIRIC® – SICK’s very own ASIC. With SIRIC®, digital signal processing methods can be incorporated into the world of photoelectric sensors. Sensors equipped with this technology are more powerful than ever before and are highly resistant to all known optical or electromagnetic influences. Thanks to modern communication methods, they can be integrated seamlessly into automation networks.

Sensors from SICK reliably detect every type of object – whether transparent or opaque, small or fast, perforated or shiny, uneven or wrapped in film, near or far. You can rely on the very best in quality.
FOR EVERY TYPE OF MACHINE

From miniature to large: Thanks to their variety of housing and operating options, photoelectric sensors from SICK can fit in any machine type. For the housing materials you have the choice between stainless steel, VISTAL™, metal, plastic, or Teflon® coating. You also have numerous options when it comes to connecting and operating the sensors. All sensors from SICK are easy to set up and mount.

INTELLIGENT COMMUNICATION

More than just a switching signal: Photoelectric sensors from SICK offer intelligent automation functions in the sensor and enable modern integration into the automation network. On the basis of state-of-the-art sensor technology, they can be integrated into automation networks and, thanks to their innovative functions, can help boost the productivity of machines.

COMPLETE AND CUSTOMIZED

The extensive portfolio of photoelectric sensors from SICK covers the entire spectrum of industry-standard application requirements. Light sources such as PinPoint, lasers, infrared, or blue light are as much a part of this portfolio as the wide variety of available detection principles. This includes background and foreground suppression or autocollimation for avoiding blind zones. The product range is made complete with the addition of innovative functions such as ClearSense or AutoAdapt for detecting transparent objects. An extensive range of accessories is also available for all sensors.

But if this doesn’t contain the perfect solution, light sources and detection principles can be customized on request with special object properties relating to material, surface, or form, for instance.
# Photoelectric sensors

**SELECTION GUIDE**

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<tr>
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## Photoelectric Sensors Selection Guide

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### Cylindrical Photoelectric Sensors

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<td>SureSense</td>
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### MultiTask Photoelectric Sensors

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<td>PowerProx</td>
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<td>LL3</td>
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<td>✔</td>
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1. With LL3-DK06
2. With LL3-TX01
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<td>800 mm</td>
<td>7 m</td>
<td>20 m</td>
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<tr>
<td>200 mm</td>
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<tr>
<td>1.5 m</td>
<td>18 m</td>
<td>80 m</td>
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<td>45 m</td>
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<tr>
<td></td>
<td>18 m</td>
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<td>7 m</td>
<td>28 m</td>
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<td>1 m</td>
<td>12 m</td>
<td>60 m</td>
</tr>
<tr>
<td>4 m</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1.4 m ¹</td>
<td>-</td>
<td>20 m ²</td>
</tr>
<tr>
<td>1.4 m ¹</td>
<td>-</td>
<td>20 m ²</td>
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¹ With LL3-DK06
² With LL3-TX01

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## Photoelectric sensors

### PRODUCT FAMILY OVERVIEW

### Technical data overview

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<th>W4-3</th>
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<td>7.7 mm x 21.8 mm x 13.5 mm</td>
<td>16 mm x 39.5 mm x 12 mm</td>
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<td><strong>Sensing range max.</strong></td>
<td>1 mm ... 150 mm</td>
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<td>3 mm ... 150 mm</td>
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<tr>
<td><strong>Photoelectric proximity sensor</strong></td>
<td>0 m ... 1.2 m</td>
<td>0 m ... 1.2 m</td>
<td>0.01 m ... 4.5 m</td>
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<td><strong>Through-beam photoelectric sensor</strong></td>
<td>0 m ... 2.5 m</td>
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<td>0 m ... 4 m</td>
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<tr>
<td><strong>Light source</strong></td>
<td>PinPoint LED / LED</td>
<td>PinPoint LED</td>
<td>PinPoint LED / LED</td>
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<tr>
<td><strong>Type of light</strong></td>
<td>Visible red light / visible blue light</td>
<td>Visible red light</td>
<td>Visible red light / Infrared light</td>
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<td><strong>Enclosure rating</strong></td>
<td>IP67</td>
<td>IP67</td>
<td>IP66, IP67</td>
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<td><strong>Housing material</strong></td>
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<td>Plastic</td>
<td>Plastic</td>
</tr>
<tr>
<td><strong>Adjustment</strong></td>
<td>None, Cable, Potentiometer</td>
<td>Cable</td>
<td>None, Cable, Potentiometer, Teach-in button</td>
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</table>

### At a glance

- Sensor with background suppression and without any significant black/white shift
- PinPoint 2.0 LED with extended sensing distances and high operating reserves
- A variety of application possibilities thanks to clearly-defined laser-like or line-shaped light spots
- Detection of highly-transparent and reflective objects using sensors with V-optics
- Photoelectric retro-reflective sensor with autocolimation and a clearly visible light spot

- Extremely high sensor size to sensing distance ratio
- High switching point accuracy
- Teach-in functions enable reliable settings
- Automatic switching threshold adaption
- Single-lens autocolimation for visibility through apertures and drill holes
- Flexible sensor settings, monitoring, advanced diagnostics, and display thanks to IO-Link

- Best background suppression sensor in its class
- Universal use of PinPoint technology in all variants
- BGS proximity sensor with laser-like light spot for precise detection tasks
- Reliable setting via 5-turn potentiometer, teach-in button, teach-in via cable or IO-Link
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link

### Detailed information

- [www.sick.com/W2S-2](http://www.sick.com/W2S-2)
- [www.sick.com/W2SG-2](http://www.sick.com/W2SG-2)
- [www.sick.com/W4-3](http://www.sick.com/W4-3)
### Photolectric sensors

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<th>Housing material</th>
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<th>Accessories</th>
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<td>None, Cable, Teach-in button</td>
<td>PinPoint LED</td>
<td>Visible red light</td>
<td>Plastic</td>
<td>None, Cable, Teach-in button</td>
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</tr>
<tr>
<td><strong>W4S-3</strong></td>
<td>Photoelectric sensor family with best-in-class performance</td>
<td>0 m ... 5 m</td>
<td>Cable, Potentiometer, Teach-in button</td>
<td>PinPoint LED</td>
<td>Visible red light</td>
<td>Plastic</td>
<td>Glass, Plastic, Teach-in button</td>
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<tr>
<td><strong>W4S-3 Glass</strong></td>
<td>Slim photoelectric sensors reliably detect transparent objects</td>
<td>0.01 m ... 5 m</td>
<td>Cable, Potentiometer, Teach-in button</td>
<td>PinPoint LED</td>
<td>Visible red light</td>
<td>Plastic</td>
<td>Glass, Plastic, Teach-in button</td>
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<td><strong>W4SL-3</strong></td>
<td>Laser precision for very small or transparent objects</td>
<td>0 m ... 60 m</td>
<td>Cable, Potentiometer, Teach-in button</td>
<td>Laser</td>
<td>Visible red light</td>
<td>Plastic</td>
<td>Glass, Plastic, Teach-in button</td>
<td></td>
</tr>
</tbody>
</table>

**Technical data overview**:

- **Dimensions (W x h x D)**
  - W4-3 Glass: 16 mm x 39.5 mm x 12 mm
  - W4S-3: 12.2 mm x 41.8 mm x 17.3 mm
  - W4S-3 Glass: 12.2 mm x 41.8 mm x 17.3 mm
  - W4SL-3: 12.2 mm x 41.8 mm x 17.3 mm

- **Sensing range max.**
  - W4-3 Glass: 0.01 m ... 4.5 m
  - W4S-3: 0 m ... 5 m
  - W4S-3 Glass: 0.01 m ... 5 m
  - W4SL-3: 0 m ... 60 m

- **Adjustment**
  - W4-3 Glass: None, Cable, Teach-in button
  - W4S-3: None, Cable, Potentiometer, Teach-in button
  - W4S-3 Glass: None, Cable, Teach-in button
  - W4SL-3: Cable, Potentiometer, Teach-in button

- **Light source**
  - W4-3 Glass: PinPoint LED
  - W4S-3: PinPoint LED
  - W4S-3 Glass: PinPoint LED
  - W4SL-3: Laser

- **Sensor, detection range**
  - W4-3 Glass: Plastic
  - W4S-3: Plastic
  - W4S-3 Glass: Plastic
  - W4SL-3: Plastic

- **Technical features**
  - Fast and reliable setup via teach-in pushbutton
  - Continuous threshold adjustment technology to detect objects in changing conditions such as temperature, contamination and reflector wear
  - Versions without polarizing filters to better detect depolarizing objects such as PET bottles, CD sleeves and shrink-wrapped, glossy objects
  - Best background suppression sensor in its class
  - Universal use of PinPoint LED technology in all models
  - BGS proximity sensor with laser-like light spot for precise detection tasks
  - Reliable setting via 5-turn potentiometer, teach-in pushbutton, teach-in via cable or IO-Link
  - Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link
  - Continuous threshold adaption of the switching threshold compensates for environmental changes
  - Single-lens autocollimation optics
  - Simple setting either via teach-in pushbutton, cable or IO-Link
  - PinPoint LED technology with a small, highly visible, well-defined light spot enables high reserve levels when using small reflectors
  - Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link
  - Precise laser light spot, laser class 1
  - Teach-in pushbutton can be switched between detection of transparent and non-transparent objects
  - Sensing ranges between 25 mm and 60 m
  - Latest SICK proprietary ASIC and laser technologies with second emitter LED to provide outstanding background suppression and ambient light immunity
  - Choice of adjustment via teach-in button, potentiometer, cable, or IO-Link

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**Additional information**

- **www.sick.com/W4-3_Glass**
- **www.sick.com/W4S-3**
- **www.sick.com/W4S-3_Glass**
- **www.sick.com/W4SL-3**
### Technical data overview

<table>
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<th></th>
<th>W4SLG-3</th>
<th>W4S-3 Inox</th>
<th>W4S-3 Inox Glass</th>
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</thead>
<tbody>
<tr>
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<td>12.2 mm x 41.8 mm x 17.3 mm</td>
<td>15.25 mm x 49.2 mm x 22.2 mm</td>
<td>15.25 mm x 49.2 mm x 22.2 mm</td>
</tr>
<tr>
<td><strong>Sensing range max.</strong></td>
<td>–</td>
<td>4 mm ... 500 mm</td>
<td>–</td>
</tr>
<tr>
<td>Photoelectric proximity sensor</td>
<td>0 m ... 4.5 m</td>
<td>0 m ... 5 m</td>
<td>0 m ... 5 m</td>
</tr>
<tr>
<td>Photoelectric retro-reflective sensor,</td>
<td>–</td>
<td>0 m ... 5 m</td>
<td>–</td>
</tr>
<tr>
<td>Through-beam photoelectric sensor</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Light source</strong></td>
<td>Laser</td>
<td>PinPoint LED / LED</td>
<td>PinPoint LED</td>
</tr>
<tr>
<td><strong>Type of light</strong></td>
<td>Visible red light</td>
<td>Visible red light</td>
<td>Visible red light</td>
</tr>
<tr>
<td><strong>Housing material</strong></td>
<td>Plastic</td>
<td>Stainless steel</td>
<td>Stainless steel</td>
</tr>
<tr>
<td><strong>Adjustment</strong></td>
<td>Cable, Teach-in button</td>
<td>None, Cable, Teach-in button</td>
<td>Cable, Teach-in button</td>
</tr>
</tbody>
</table>

### At a glance

- Precise laser light spot, laser class 1
- Teach-in button can be switched between detection of transparent and smallest non-transparent objects
- Continuous threshold adaptation provides automatic adjustment to changes in light conditions
- Sensing ranges up to 4.5 m
- Autocollimation optics prevent blind spots
- Choice of adjustment via teach-in button, potentiometer, cable, or IO-Link

- WashDown rated for fluid tightness (IP 66, IP 67, IP 68 and IP 69K) and Ecolab certified
- Tough stainless steel housing (316L/1.4404)
- Resistant to a variety of common cleaning and disinfection agents
- Highly visible laser-like light spot due to PinPoint LED
- Teach-in via stainless steel pushbutton with a metal membrane
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link

- IP 66, IP 67, IP 68 and IP 69K enclosure rating and Ecolab certified
- Tough stainless steel housing (316L/1.4404)
- Resistant to a variety of common cleaning and disinfection agents
- Modern electrical connection available – M12 connector with pin casting
- PinPoint LED technology provides a highly visible laser-like light spot
- Teach-in via stainless steel pushbutton with a metal membrane
- Continuous threshold adjustment technology reliably detects objects in changing conditions

---

**Detailed information**

- [www.sick.com/W4SLG-3](http://www.sick.com/W4SLG-3)
- [www.sick.com/W4S-3_Inox](http://www.sick.com/W4S-3_Inox)
- [www.sick.com/W4S-3_Inox_Glass](http://www.sick.com/W4S-3_Inox_Glass)
<table>
<thead>
<tr>
<th>W4S-3 Inox Hygiene</th>
<th>W4SL-3V</th>
<th>W4SLG-3V</th>
<th>W4SL-3H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest reliability, maximum resistance and endless possibilities</td>
<td>The new standard for optical and mechanical ruggedness</td>
<td>Detects all objects in the harshest of environments</td>
<td>Laser technology and stainless steel hygienically combined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions (W x h x D)</th>
<th>Sensing range max.</th>
<th>housing material</th>
<th>enclosure rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.25 mm x 63.2 mm x 22.15 mm</td>
<td>0 m ... 5 m</td>
<td>Stainless steel</td>
<td>IP66, IP67, IP68, IP69K</td>
</tr>
<tr>
<td>15.3 mm x 55.4 mm x 22.2 mm</td>
<td>25 mm ... 300 mm</td>
<td>Stainless steel</td>
<td>IP66, IP67, IP68, IP69K</td>
</tr>
<tr>
<td>15.3 mm x 55.4 mm x 22.2 mm</td>
<td>0 m ... 5 m</td>
<td>Stainless steel</td>
<td>IP66, IP67, IP68, IP69K</td>
</tr>
<tr>
<td>15.3 mm x 63.2 mm x 22.2 mm</td>
<td>–</td>
<td>Stainless steel</td>
<td>IP66, IP67, IP68, IP69K</td>
</tr>
</tbody>
</table>

- **Smooth stainless steel housing** (316L/1.4404)
- **Hygienic mounting using M12-adapter thread or D12-adapter shaft**
- **IP 66, IP 67, IP 68 and IP 69K enclosure rating and Ecolab certified**
- **Resistant to a variety of common cleaning and disinfection agents**
- **Highly visible laser-like light spot due to PinPoint LED**
- **Teach-in via stainless steel pushbutton with a metal membrane**
- **Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link**
- **Precise laser light spot, laser class 1**
- **Stainless steel housing with washdown design**
- **Latest SICK proprietary ASIC and laser technologies for outstanding background suppression and ambient light immunity**
- **Teach-in pushbutton can be switched between detection of transparent and tiny non-transparent objects**
- **ECOLAB certified, tested to IP 66, IP 67, IP 68 and IP 69K enclosure rating**
- **IO-Link (optional)**
- **Precise laser light spot, laser class 1, no blind spots**
- **Stainless steel housing with washdown design**
- **Latest SICK proprietary ASIC and laser technologies for very good background suppression and ambient light immunity**
- **Teach-in pushbutton can be switched between detection of transparent and tiny non-transparent objects**
- **ECOLAB certified, tested to IP 66, IP 67, IP 68 and IP 69K enclosure rating**
- **IO-Link (optional)**

[www.sick.com/W4S-3_Inox_Hygiene](http://www.sick.com/W4S-3_Inox_Hygiene)
[www.sick.com/W4SL-3V](http://www.sick.com/W4SL-3V)
[www.sick.com/W4SLG-3V](http://www.sick.com/W4SLG-3V)
[www.sick.com/W4SL-3H](http://www.sick.com/W4SL-3H)
Photoelectric sensors

Technical data overview

<table>
<thead>
<tr>
<th></th>
<th>W4SLG-3H</th>
<th>W9-3</th>
<th>W9-3 Glass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detects all objects in the harshest environments</td>
<td>Performance inside VISTAL® housing</td>
<td>Performance inside VISTAL® housing</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions (W x H x D)**
- W4SLG-3H: 15.3 mm x 63.2 mm x 22.2 mm
- W9-3: 12.2 mm x 52.5 mm x 23.6 mm
- W9-3 Glass: 12.2 mm x 52.2 mm x 23.6 mm

**Sensing range max.**
- W4SLG-3H: 0 m ... 4.5 m
- W9-3: 0 m ... 5 m
- W9-3 Glass: 0 m ... 5 m

**Light source**
- W4SLG-3H: Laser
- W9-3: PinPoint LED / LED PinPoint
- W9-3 Glass: PinPoint LED

**Type of light**
- W4SLG-3H: Visible red light
- W9-3: Visible red light / Visible blue light / Infrared light
- W9-3 Glass: Visible red light

**Enclosure rating**
- W4SLG-3H: IP66, IP67, IP68, IP69K
- W9-3: IP66, IP67, IP69K
- W9-3 Glass: IP66, IP67, IP69K

**Housing material**
- W4SLG-3H: Stainless steel
- W9-3: Plastic
- W9-3 Glass: Plastic

**Adjustment**
- W4SLG-3H: Teach-in button
- W9-3: None, Cable, Potentiometer, Teach-in button
- W9-3 Glass: Cable, Teach-in button

**At a glance**
- Stainless-steel housing with hygienic design
- Precise laser light spot, laser class 1, without blind spot
- Latest SICK proprietary ASIC and laser technology to provide outstanding background suppression and ambient light immunity
- IP 66, IP 67, IP 68, and IP 69K enclosure rating and Ecolab certified
- Teach-in button can be switched between detection of transparent and the tiniest non-transparent objects
- IO-Link (optional)

- High-performance sensor in ultra-rugged VISTAL® housing
- PinPoint LED for highly visible and precise light spot
- Two emitter LEDs for best-in-class background suppression
- Variable mounting with M3 or M4 hole pattern
- Wide range of connection options

- High-performance sensor in ultra-rugged VISTAL® housing
- Best-in-class optical performance for transparent object detection
- Continuous threshold adaption
- PinPoint LED for highly visible and precise light spot
- Variable mounting with M3 or M4 hole pattern
- Wide range of connection options

Detailed information:
- [www.sick.com/W4SLG-3H](www.sick.com/W4SLG-3H)
- [www.sick.com/W9-3](www.sick.com/W9-3)
- [www.sick.com/W9-3_Glass](www.sick.com/W9-3_Glass)
### Technical Data Overview

<table>
<thead>
<tr>
<th>Photoelectric Retro-Reflective</th>
<th>Through-Beam Photoelectric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions (W x h x D)</strong></td>
<td><strong>Sensing Range Max.</strong></td>
</tr>
<tr>
<td>12.2 mm x 52.2 mm x 23.6 mm</td>
<td>0 m ... 4.5 m</td>
</tr>
<tr>
<td>15.6 mm x 48.5 mm x 42 mm</td>
<td>0 m ... 7 m</td>
</tr>
<tr>
<td>12.2 mm x 52.2 mm x 23.6 mm</td>
<td>0 m ... 4 m</td>
</tr>
</tbody>
</table>

- **Housing Material**: Stainless steel, Plastic, Plastic
- **Light Source**: Visible red light, Visible red light / Visible blue light
- **Adjustment**: None, Cable, Potentiometer, Teach-in button
- **Type of Light**: Laser, Infrared light
- **Teach-in Button**: None, Cable, Potentiometer, Teach-in button
- **Object Detection**: SIRIC technology by SICK, Autocollimation optics, Precise autocollimation
- **Optical Performance**: Best-in-class optical performance thanks to superior OES technology, Autocollimation optics on photoelectric retro-reflective sensors, Background and foreground suppression with second emitter LED on photoelectric proximity sensors
- **Adaption**: PinPoint technology, Reliable detection of transparent objects, Precise autocollimation optics
- **Mounting Options**: Versatile mounting options due to dovetail mounting – mounting holes and oblong holes, Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link
- **Performance**: Spot-on laser precision inside rugged VISTAL® housing, Rugged VISTAL® housing, Best-in-class optical performance thanks to superior OES technology, Rugged metal housing with optional Teflon® coating

### Product Family Overview

- **W9L-3**: Spot-on laser precision inside rugged VISTAL® housing
- **W9LG-3**: Spot-on laser precision inside rugged VISTAL® housing
- **W12-3**: The universal product platform for demanding applications
- **W12G**: Glass performance in a metal housing: from PET bottles to transparent foil

- **Dimensions (W x h x D)**: 12.2 mm x 52.2 mm x 23.6 mm, 12.2 mm x 52.2 mm x 23.6 mm, 15.6 mm x 48.5 mm x 42 mm, 15.6 mm x 48.5 mm x 42 mm
- **Sensing Range Max.**: 0 m ... 4.5 m, 0 m ... 7 m, 0 m ... 4 m
- **Light Source**: Visible red light, Visible red light / Visible blue light
- **Teach-in Button**: None, Cable, Potentiometer, Teach-in button
- **Object Detection**: SIRIC technology by SICK, Autocollimation optics, Precise autocollimation
- **Optical Performance**: Best-in-class optical performance thanks to superior OES technology, Autocollimation optics on photoelectric retro-reflective sensors, Background and foreground suppression with second emitter LED on photoelectric proximity sensors
- **Adaption**: PinPoint technology, Reliable detection of transparent objects, Precise autocollimation optics
- **Mounting Options**: Versatile mounting options due to dovetail mounting – mounting holes and oblong holes, Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link

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**Subject to change without notice**

- [www.sick.com/W9L-3](http://www.sick.com/W9L-3)
- [www.sick.com/W9LG-3](http://www.sick.com/W9LG-3)
- [www.sick.com/W12-3](http://www.sick.com/W12-3)
- [www.sick.com/W12G](http://www.sick.com/W12G)
### Technical data overview

<table>
<thead>
<tr>
<th>Feature</th>
<th>W16</th>
<th>W26</th>
<th>V180-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (W x H x D)</td>
<td>20 mm x 55.7 mm x 42 mm</td>
<td>24.6 mm x 82.5 mm x 53.3 mm</td>
<td>16.2 mm x 48.5 mm x 31.9 mm</td>
</tr>
<tr>
<td>Sensing range max.</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Photoelectric proximity sensor</td>
<td>10 mm ... 1,500 mm</td>
<td>10 mm ... 2,000 mm</td>
<td>1 mm ... 1,100 mm</td>
</tr>
<tr>
<td>Photoelectric retro-reflective sensor,</td>
<td>0 m ... 10 m</td>
<td>0 m ... 18 m</td>
<td>0.05 m ... 7 m</td>
</tr>
<tr>
<td>Through-beam photoelectric sensor</td>
<td>0 m ... 45 m</td>
<td>0 m ... 60 m</td>
<td>0 m ... 28 m</td>
</tr>
<tr>
<td>Light source</td>
<td>PinPoint LED, LED, Laser</td>
<td>PinPoint LED, LED, Laser, LED</td>
<td>–</td>
</tr>
<tr>
<td>Type of light</td>
<td>Visible red light / Infrared light</td>
<td>Visible red light / Infrared light</td>
<td>Visible red light / Infrared light</td>
</tr>
<tr>
<td>Enclosure rating</td>
<td>IP66, IP67</td>
<td>IP66, IP67</td>
<td>IP67</td>
</tr>
<tr>
<td>Housing material</td>
<td>Plastic</td>
<td>Plastic</td>
<td>Plastic / Metal</td>
</tr>
<tr>
<td>Adjustment</td>
<td>Cable, Potentiometer, Teach-in button</td>
<td>Cable, Potentiometer, Teach-in button</td>
<td>Potentiometer</td>
</tr>
</tbody>
</table>

### At a glance

- Technologies: ClearSens, LineSpot, TwinEye with OptoFilter
- BluePilot: Optical alignment aid, adjustment of the sensing range via Teach-Turn adjustment with optical sensing range indicator or via IO-Link
- PinPoint LED: Light-intensive red sender LED
- Smart Sensor: Enhanced Sensing, IO-Link, Diagnostics, Smart Tasks

- Technologies: ClearSens, LineSpot, TwinEye with OptoFilter
- BluePilot: Optical alignment aid, adjustment of the sensing range via Teach-Turn adjustment with optical sensing range indicator or via IO-Link
- PinPoint LED: Light-intensive red sender LED
- Smart Sensor: Enhanced Sensing, IO-Link, Diagnostics, Smart Tasks

- Low-cost M18 housing sensor on the market
- Long sensing distances: 100 mm, 400 mm, 800 mm (proximity sensor), 300 mm (proximity sensor with BGS), 6 m (retro-reflective sensor) and 20 m (through-beam sensor)
- Bright power and signal LEDs with 360° visibility
- Wide product portfolio solves a broad range of applications
- High switching frequencies up to 1000 Hz
- Available in a metal housing for applications in harsh environments
- Optical axis selectively axial or radial (90°)

Detailed information

- [www.sick.com/W16](http://www.sick.com/W16)
- [www.sick.com/W26](http://www.sick.com/W26)
- [www.sick.com/V180-2](http://www.sick.com/V180-2)
### Photoelectric sensors

<table>
<thead>
<tr>
<th>SureSense</th>
<th>PowerProx</th>
<th>WLL180T</th>
<th>LL3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sure way to detect any object</td>
<td>The new home of sensing range</td>
<td>High-performance fiber-optic sensor with world’s fastest response time</td>
<td>A wide variety of solutions to your most challenging applications: SICK’s fiber-optic cables</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Dimensions (W x h x D)</th>
<th>Sensing range max.</th>
<th>Enclosure rating</th>
<th>Cable, Potentiometer, Teach-in button</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureSense</td>
<td>16.2 mm x 48.5 mm x 34.4 mm</td>
<td>5 mm ... 1,000 mm</td>
<td>Plastic</td>
<td>None, Potentiometer</td>
</tr>
<tr>
<td>PowerProx</td>
<td>7.7 mm x 27.5 mm x 13.5 mm 23.5 mm x 76 mm x 55.8 mm</td>
<td>0.1 m ... 12 m 50 mm ... 4,000 mm</td>
<td>Plastic Plastic</td>
<td>Cable, Potentiometer, Teach-in button</td>
</tr>
<tr>
<td>WLL180T</td>
<td>10.5 mm x 34.6 mm x 71.9 mm</td>
<td>20 m</td>
<td>Plastic / Metal</td>
<td>Cable, Teach-in button, Menu-controlled</td>
</tr>
<tr>
<td>LL3</td>
<td></td>
<td>0 m ... 60 m</td>
<td>IP67, IP69K</td>
<td>Plastic</td>
</tr>
</tbody>
</table>

- **PinPoint LED, Laser, LED**
- **Visible red light / Infrared light**
- **IP67, IP69K**
- **Plastic**
- **None, Potentiometer**

### Characteristics

- **SureSense**
  - The most flexible and complete portfolio of hybrid sensors
  - New and intuitive light strip
  - Best background suppression in the sector
  - Detection of transparent objects with AutoAdapt technology
  - VISTAL housing

- **PowerProx**
  - Time-of-flight technology
  - Laser class 1, red and infrared light
  - Sensing range for object detection: 5 cm to 4 m
  - Switching frequencies of up to 1,000 Hz
  - Minimum distance between object and background: 6 mm
  - VISTAL™ housing
  - Up to 3 independently adjustable switching outputs or one analog output
  - IO-Link available as an option (distance value, 8 switching points, smart sensor functions)

- **WLL180T**
  - Selectable response time up to 16 µs
  - Sensing range up to 20 m (through-beam system); up to 1,400 mm (proximity system)
  - Bus-compatible with anti-interference
  - 2 x 4-digit digital display
  - Adjustable hysteresis
  - Rotatable display screen
  - High-resolution signal processing
  - Programmable time delays

- **LL3**
  - Very large selection of plastic and glass fiber-optic cables.
  - Fiber-optic cables resistant to chemicals and high temperature
  - Threaded and smooth sleeves, bands of light (array), 90° reflection versions available
  - Focused optics
  - Proximity and through-beam versions available
  - Plastic, protective metal or Teflon sheathing available

---

**Notes:**

- The new home of sensing range
- High-performance fiber-optic sensor with world’s fastest response time
- A wide variety of solutions to your most challenging applications: SICK’s fiber-optic cables

**Links:**

- [SureSense](http://www.sick.com/SureSense)
- [PowerProx](http://www.sick.com/PowerProx)
- [WLL180T](http://www.sick.com/WLL180T)
- [LL3](http://www.sick.com/LL3)

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8019333/2018-07-31
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SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 8,800 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers. 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.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the 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 SICK a reliable supplier and development partner.

Comprehensive services round out the offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

That is “Sensor Intelligence.”

Worldwide presence:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Hong Kong, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and further locations → www.sick.com