Profiler
Cost-effective profile measurement
Profiler | Laser profile sensors
DISPLACEMENT MEASUREMENT SENSORS

**Technical data overview**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>75 mm ... 125 mm</td>
</tr>
<tr>
<td>Linearity</td>
<td>± 170 µm ... ± 270 µm, ± 50 µm</td>
</tr>
<tr>
<td>Repeatability</td>
<td>25 µm, x-direction, 2 µm, z-direction</td>
</tr>
<tr>
<td>Response time</td>
<td>≥ 5 ms</td>
</tr>
<tr>
<td>Digital output</td>
<td>3 x PNP, 3 x NPN</td>
</tr>
<tr>
<td>Serial</td>
<td>✔, RS-485</td>
</tr>
<tr>
<td>Analog output</td>
<td>Number: 1, Type: Current output</td>
</tr>
<tr>
<td>Ambient temperature operation</td>
<td>−10 °C ... +40 °C, Operating temperature at V₅ = 24 V</td>
</tr>
<tr>
<td>Ambient storage temperature</td>
<td>−20 °C ... +60 °C</td>
</tr>
</tbody>
</table>

**Product description**

The Profiler 2 displacement measurement sensor performs highly accurate measurements on the x and z axes and can also measure the surface of more complex objects. Up to four areas can be analyzed at the same time with a single measurement. One of the 10 integrated measurement functions, e.g., height or width, can be selected for each area. The integrated evaluation unit of the Profiler 2 saves you time and money when it comes to installation – making the sensor one of the most cost-effective solutions for profile measurement. While the integrated CMOS receiver unit guarantees precise measuring, the supplied software makes commissioning simple and provides exceptional visualization of the measurement process. The integrated LC display offers real-time visualization.

**At a glance**

- Measure complex profiles with just one laser line
- Analyze up to four areas at the same time
- More than 10 integrated measurement functions, e.g., height, width, and inclination
- Sensor head and evaluation unit in one device
- Commissioning via software or integrated display with operating elements
- High-quality CMOS receiver unit

**Your benefits**

- Measuring a 2D profile with just one sensor saves on hardware and installation costs
- Cost-effective solution for 2D profile measurement
- Real-time visualization of the measurement results via the integrated LC display
- Intuitive and quick commissioning via the software or display reduces installation time
- Thanks to the stand-alone concept of the Profiler 2, there is no need for cabling or to mount an additional evaluation unit
- Reliable measuring regardless of color, material, or shape
- More than 10 integrated measurement functions allow profiles to be measured and analyzed quickly

**Fields of application**

- Measuring shapes and profiles
- Detecting multiple edges
- Monitoring gap sizes
- Measuring the width and thickness of components
- Measuring the coating thickness of printed circuit boards
- Measuring object angles
- Quality control in the automotive and electronics industries
Ordering information

Other models and accessories → www.sick.com/Profiler

- **Communication interface:** Serial
- **Housing material:** Die-cast zinc
- **Laser class:** 2, complies with 21 CFR 1040.10 and 1040.11 except for the tolerance according to “Laser Notice No. 50” from June 24, 2007 (IEC 60825-1:2014) (EN 60825-1:2014) (Wavelength: 655 nm, max. output: 1 mW.)
- **Measuring range:** 75 mm ... 125 mm
- **Type of analog output:** Current output
- **Connection type:** female connector, HRS, 12-pin (I/O, power supply)
- **Typ. light spot size (distance):** 0.3 mm x 32 mm

<table>
<thead>
<tr>
<th>Digital output</th>
<th>Type</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 x NPN</td>
<td>PRO2-N100B25A1</td>
<td>6052874</td>
</tr>
<tr>
<td>3 x PNP</td>
<td>PRO2-P100B25A1</td>
<td>6052873</td>
</tr>
</tbody>
</table>
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:

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