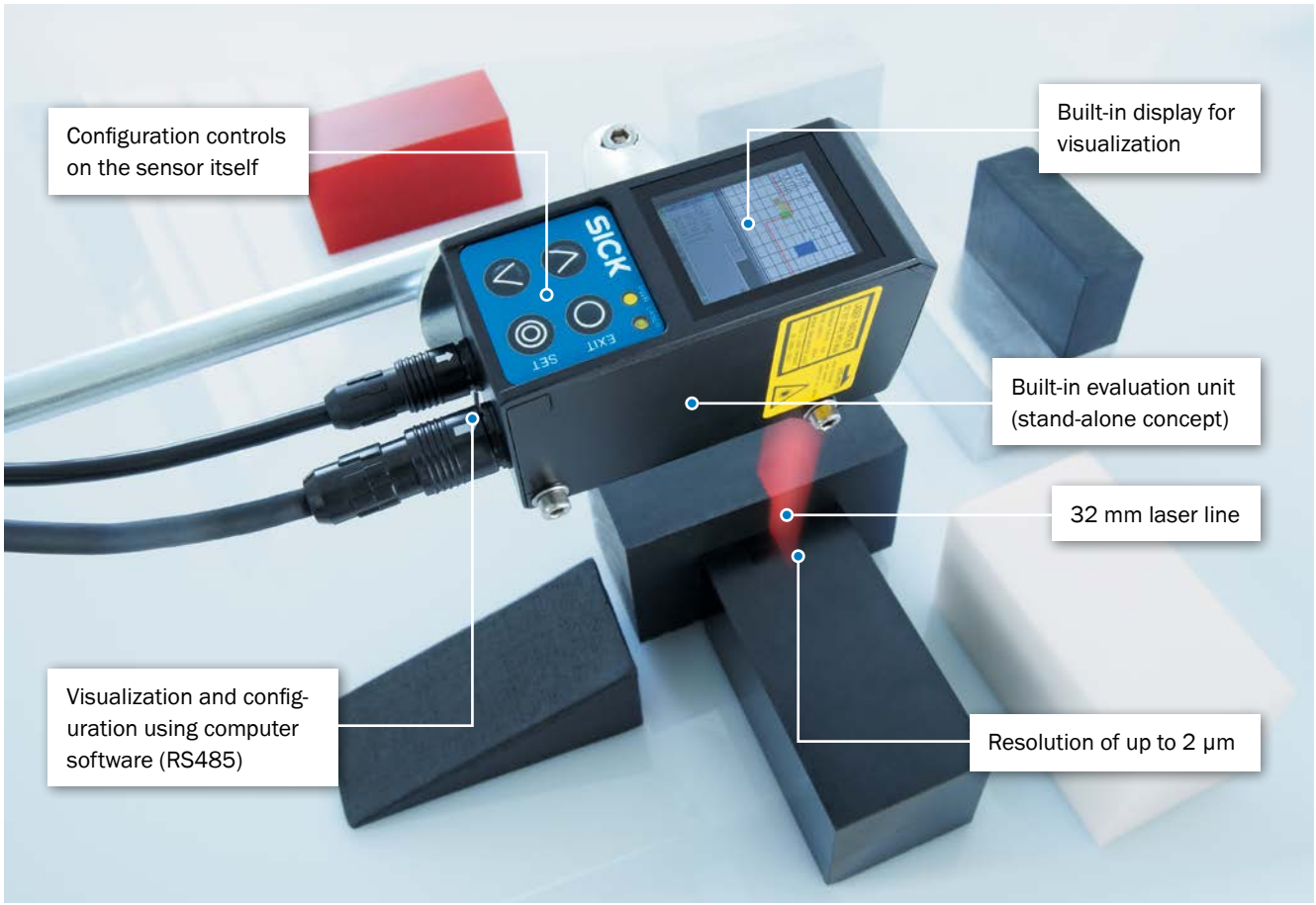
Profiler™ 2

COST-EFFECTIVE PROFILE MEASUREMENT

Short Range Distance Sensors (Displacement)

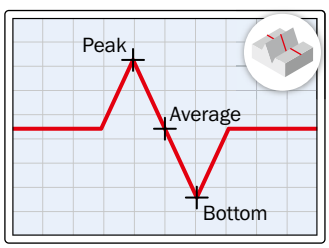
SICK
Sensor Intelligence.

PROFILER™ 2 – IMPRESSIVE ALL ROUND

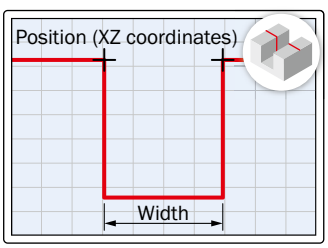


The Profiler™ 2 can really fulfill its performance potential when used for the precise measurement of two-dimensional surface profiles. Up to four areas can be detected, analyzed and offset against one another using one single measurement of the x- and z-axes, all to a very high level of accuracy. The user can choose from more than 10 built-in measuring functions, thus covering nearly all surface measurement tasks. Thanks to the stand-alone concept of the Profiler™ 2, no additional evaluation unit is required. This saves time and money during installation. The provided software enables easy commissioning and excellent visualization of the measurement results. In addition, the built-in LCD color screen with controls enables configuration and visualization of the application on the production line itself. With these functions, the Profiler™ 2 is able to impress all round.

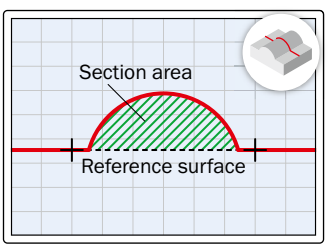
Examples of built-in measuring functions



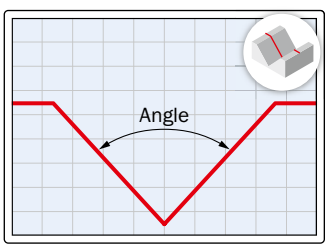
Highest/lowest value measurement



Gap width detection



Cross-section visualization

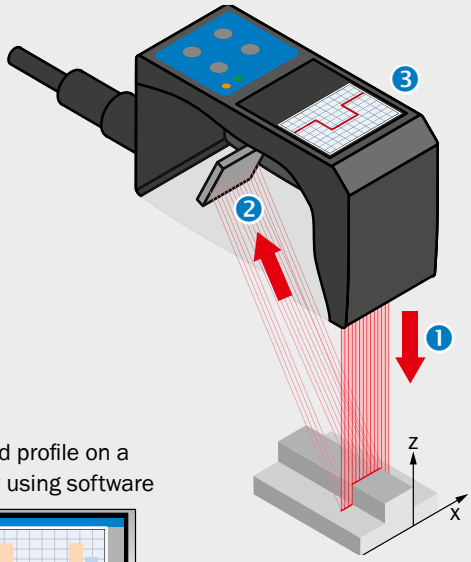


Angle measurement

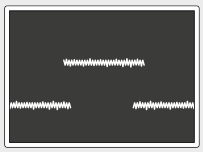
8017110/2014-03-21
Subject to change without notice

Technology and operation

The principle of operation of the Profiler™ 2 is based on the 2D triangulation process. The sensor's laser light ❶ is projected as a laser line onto the object to be measured. The reflected light is projected from the lens onto the CMOS receiver element ❷, thus enabling profiling. In order to detect the horizontal position of the object, the camera image is evaluated and transformed in the sensor, then visualized in the form of a generated profile on the built-in LCD screen ❸ or on a computer using the provided software ❹.

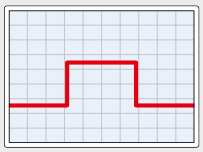


❷ Camera image

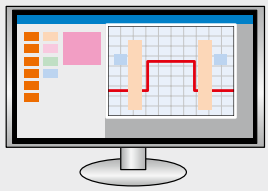


Transformation

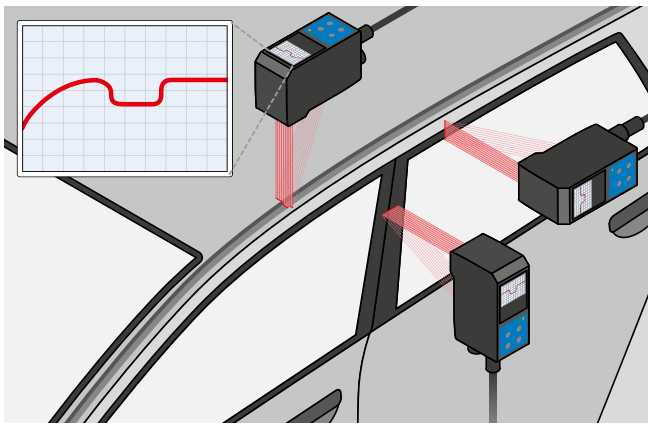
❸ Generated profile on the LCD screen



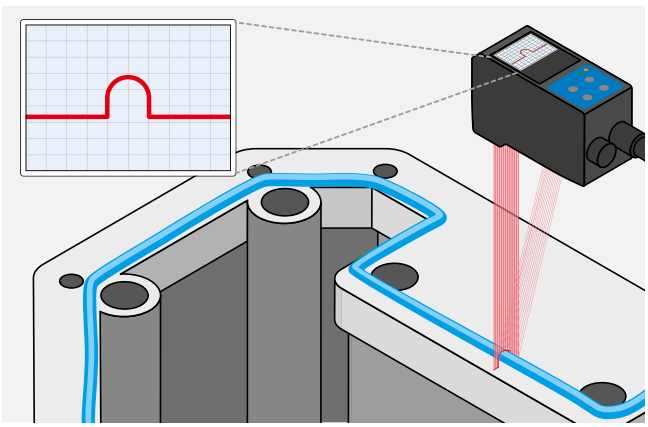
❹ Generated profile on a computer using software



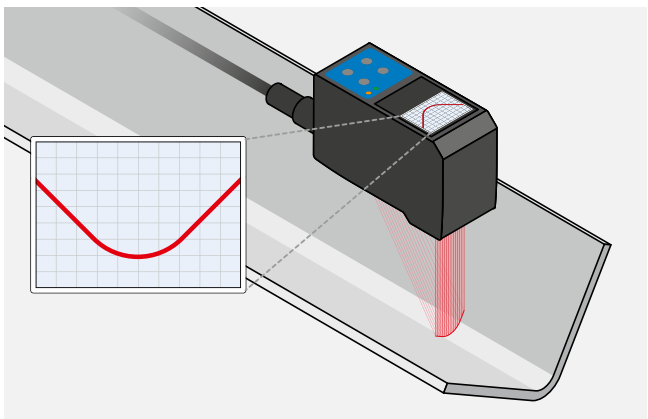
Typical industries and fields of application



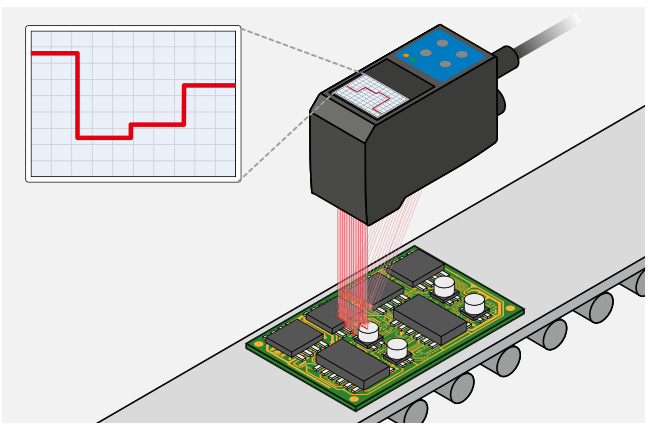
Automotive industry – multiple edge and door gap detection



Industrial assembly – monitoring of adhesive quantities in the assembly process



Processing industry – monitoring of bend radii or gaps in sheet metal



Electronics industry – monitoring of length and height geometries, for example in the case of a printed circuit board

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Detailed technical data

Performance

Light source	Laser, red [1]
Laser protection class	2 (EN 60825-1, FDA)
Response time	5 ms[2]

[1] Wave length 655 nm, max. output 1 mW.
[2] Typical value, hi-res mode.

Specific data

Measuring range	75 .... 125 mm
Measuring range (at measuring distance)	17 mm (75 mm)/22 mm (100 mm)/ 27 mm (125 mm)
Resolution (R) [1]	In x-direction: 25 µm
	In z-direction: 2 µm
Linearity	In x-direction: ± 1 % FS [2]
	In z-direction: ± 0.1 % FS [2]

[1] Typical value; real value depends on ambient conditions and settings.
[2] FS = Full scale (entire measuring range).

Mechanical and electrical data

Dimensions	40 mm x 60 mm x 94.5 mm
Supply voltage	12 V DC (–5 %) ... 24 V DC (+10 %) [1]
Weight	Approx. 300 g

[1] When using the analog output: DC 18 V (–5 %) to DC 24 V (+10 %).

Ambient data

Protection class	IP 67
Operating temperature	–10 °C to +40 °C (operation)/ –20 °C to +60 °C (storage)

Ordering information

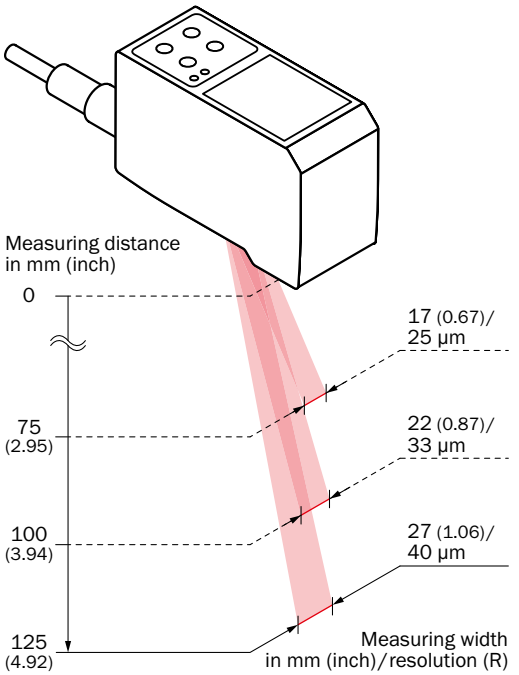
Switching outputs	Model name	Part no.
3 x PNP	PRO2-P100B25A1	6052873
3 x NPN	PRO2-N100B25A1	6052874

Recommended accessories

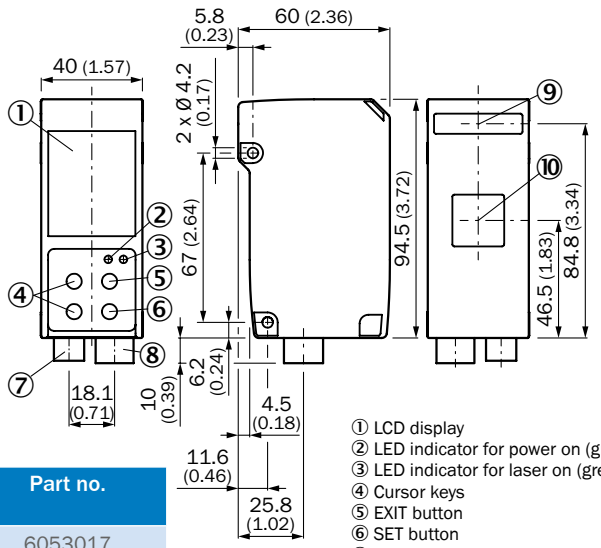
Description	Length of cable	Model name	Part no.
Male cable connector, Hirose, 12 pin, straight, with open end	2 m	STL-0H12-G02M	6053017
	5 m	STL-0H12-G05	6053018
	10 m	STL-0H12-G10M	6053019
Communication cable with USB (for PC connection)	1.8 m	DSL-DH06-G1M8	6053020
Communication cable with open end (discrete wire)	2 m	DOL-SH06-G02M	6053021
	5 m	DOL-SH06-G05M	6053196
	10 m	DOL-SH06-G10M	6053197

Field of view

Receiving area



Dimensional drawing (Dimensions in mm (inch))



① LCD display
② LED indicator for power on (green)
③ LED indicator for laser on (green)
④ Cursor keys
⑤ EXIT button
⑥ SET button
⑦ Males connector, HRS, 6-pin (communication interface)
⑧ Female connector, HRS, 12-pin (I/O, power supply)
⑨ Sender
⑩ Receiver

→ www.mysick.com/en/Profiler_2

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.

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Sensor Intelligence.