Accurate contour detection for inline quality checks: the new PMD profiler

Position sensors

ifm.com/gb/profiler

50th ifmniversary
experience in automation.

The revolution in inline quality control

Precise:
Detects height profiles to ensure correct assembly of parts.

Uncomplicated:
Quick set-up without software.

Flexible:
Distance-independent measurement for high tolerance on object positioning.

Cost-saving:
Immunity to extraneous light – no screening or external illumination required.

Optional:
Contour visualisation via software to simplify the failure analysis.

Set-up can be done in three steps directly on the sensor...

- *teach good part*
- *set ROI*
- *define threshold*

...done

Precise object scan.

Connection with IO-Link.

...or via PC by means of the Vision Assistant.

Reject rate

Detected object profiles

Contour visualisation

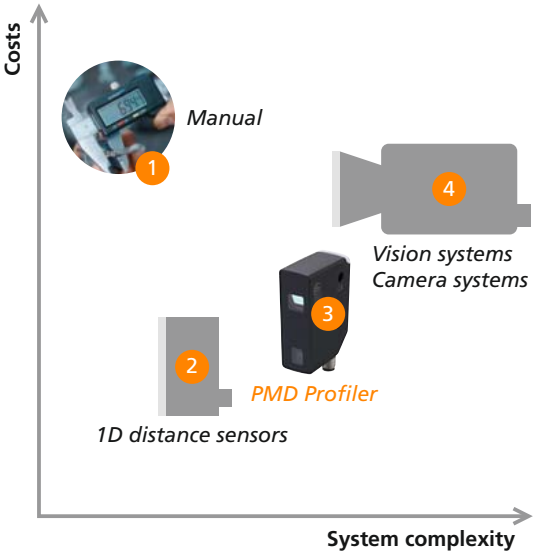
For industrial applications

Flexible and suitable for a wide range of applications

The Profiler reliably ensures correct use and installation of components. Thanks to its accurate contour detection, the line scanner verifies whether the object to be recognised is the component to be used. Besides, the correct orientation and processing of the component can be checked by comparing the detected and the specified height profile.

Thanks to the ROI function, the detection range can be limited to relevant sections of the component. Two green markings on the laser line visualise the selected ROI. Both minimum gap deviations, e.g. in case of connectors not snapped in place, and the presence or absence of very small parts can be detected very reliably via the ROI function.

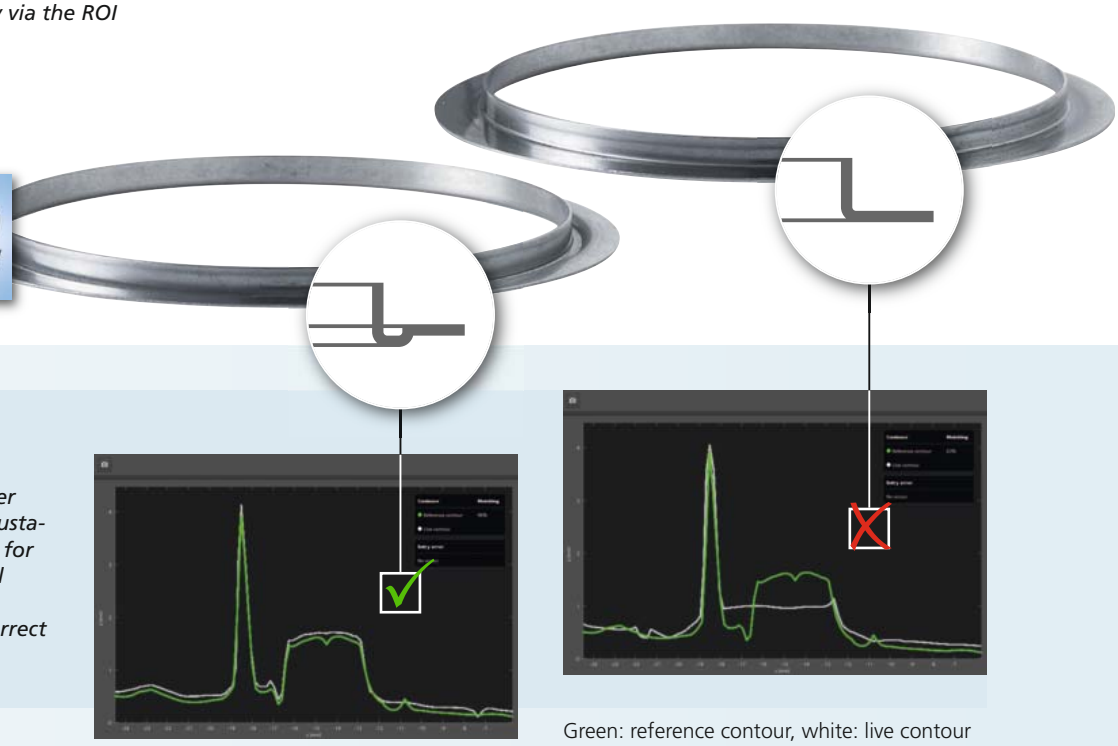
Comparison of quality control.



1. ***Manual check***
   Prone to errors, expensive
2. ***Check with 1D distance sensors***
   Distance-dependent
   Difficulties with the orientation of small objects
   No classification as good part or bad part
3. ***PMD Profiler***
4. ***Check with vision system***
   Sensitive to ambient light
   Hood against extraneous light required
   Trained service personnel needed (software)

IO-Link

PMD Technology



Quality assurance

The per cent value of the match from which the reference object is no longer acceptable can be defined via the adjustable limit value. This makes it possible, for example, to detect whether the metal ring of a bearing has a slot or not. It can also be checked whether the correct installation direction is adhered to.

Green: reference contour, white: live contour

Type [mm]	Measuring distance (Z direction) [mm]	Width of the measuring range (X direction) [mm]	Output	Order no.
88 x 65 x 28.5	150...300	100 (for a maximum distance of 300 mm)	PNP / NPN	**OPD100**

Accessories description	Order no.
Mounting set OPD, 12 mm	**E2D118**
Mounting rod, 100 mm, stainless steel	**E20938**

For more information, technical data, accessories, application videos or prices please go to ifm.com/gb/profiler

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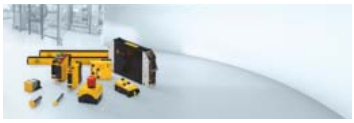

Safety technology

Process sensors

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IO-Link

Identification systems

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Systems for mobile machines

Connection technology

Software

Power supplies

Accessories

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