



# Accurate profiles detection for inline quality checks: the new PMD profiler

Position sensors



[ifm.com/gb/profiler](http://ifm.com/gb/profiler)

# The revolution in inline quality control

## Precise:

Detects height profiles to ensure correct assembly of parts.

## Uncomplicated:

Quick set-up without software.

## Flexible:

Distance and colour independent measurement for high tolerance in object positioning.

## Cost-saving:

Immunity to extraneous light – no screening or external illumination required.

## Optional:

Profile visualisation and output of measured values, e.g. displacement of an object for simplified error analysis.

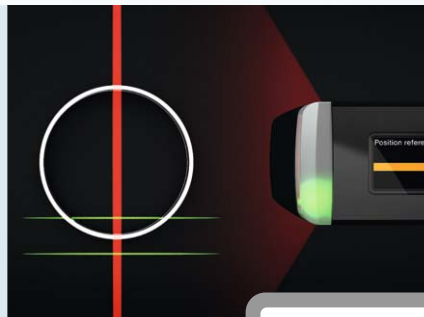


Set-up can be done in three steps directly on the sensor...

- teach good part\*
- set ROI
- define threshold ...done



Connection with IO-Link.



Precise object scan.

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

Reject rate

Detected object profiles

Profile visualisation

\*The OPD101 can even store up to 10 correct parts to simplify the inspection of changing objects on the same production line



**For industrial applications**

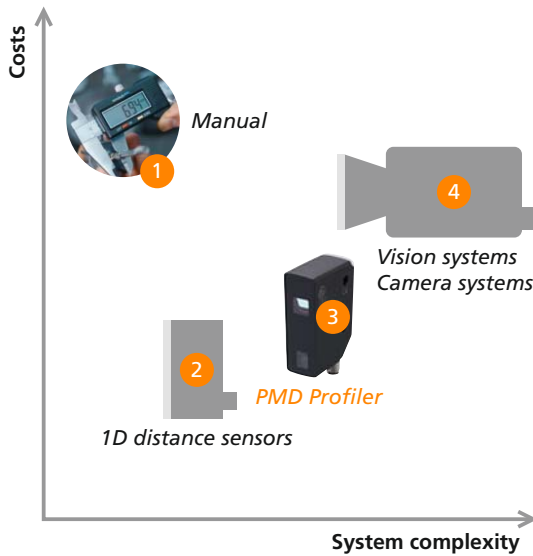


**Flexible and suitable for a wide range of applications**

The Profiler reliably ensures correct use and installation of components. Thanks to its accurate profile 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. With the OPD101, 2 ROIs can be defined in the ifm Vision Assistant, e.g. to precisely detect both elevations of a ball bearing.

**Comparison of quality control.**

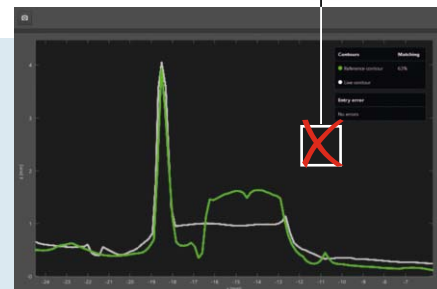
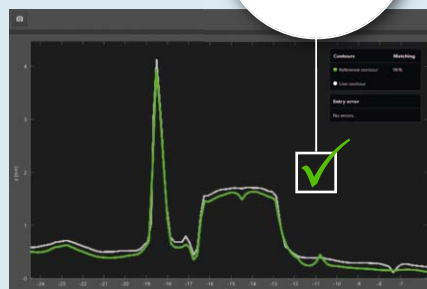


- 1 **Manual check**  
Prone to errors, expensive
- 2 **Check with 1D distance sensors**  
Distance-dependent  
Difficulties with the orientation of small objects  
No classification as good part or bad part
- 3 **PMD Profiler**
- 4 **Check with vision system**  
Sensitive to ambient light  
Hood against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



**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 profile, white: live profile

Type [mm]	Measuring distance (Z direction) [mm]	Width of the measuring range (X direction) [mm]	Region of Interest (ROI)	Storable profiles	Order no.
<b>PMD profiler · Laser protection class 1 · M12 connector · Output PNP / NPN</b>					
88 x 65 x 28.5	150...300	90 (for a maximum distance of 300 mm)	1	1	<b>OPD100</b>
88 x 65 x 28.5	150...300	90 (for a maximum distance of 300 mm)	1 (on the unit) or 2 (via VA)	10	<b>OPD101</b>

Accessories description	Order no.
Mounting set OPD, 12 mm	<b>E2D118</b>
Mounting rod, 100 mm, stainless steel	<b>E20938</b>

For more information, technical data, accessories, application videos or prices please go to [ifm.com/gb/profiler](http://ifm.com/gb/profiler)





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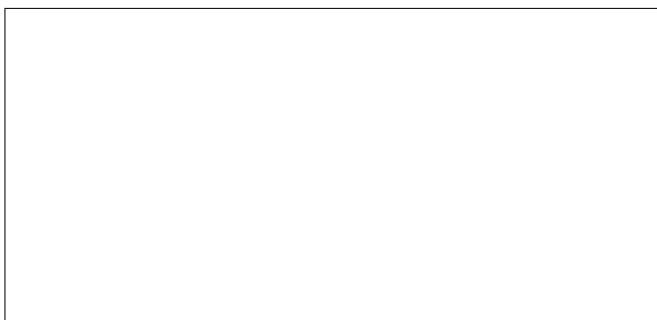
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