

## PSD

### PROFILE SENSOR PSD FOR FINE WIRES AND MONOFILAMENTS

Ultra-fast inspection of short-term surface faults and diameter irregularities for continuous monitoring of fine wires and monofilaments in two planes.

Advanced miniaturised optoelectronic components combined with fast analogue signal processing offer a new dimension in surface fault visualisation. Even at line speeds of 2000 m/min, the Profile Sensor allows accurate measurement and characterisation of micrometric short-term defects in real time. Together with the SENSYSTEM controller, it provides

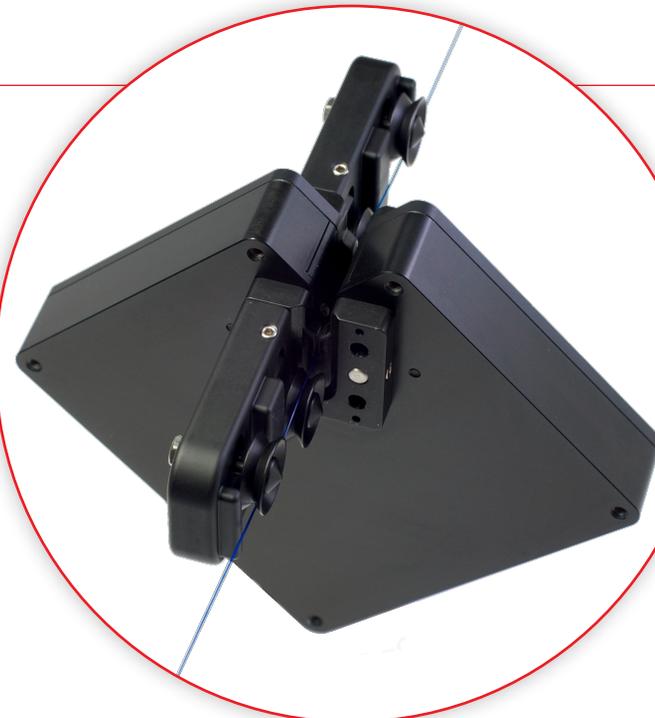
a unique tool for quality control in production and in laboratory. Industrial on-line monitoring applied to enamelling, extrusion, drawing, coating, jacketing and colouring processes running at high line speeds. Precision detection and characterisation of lumps, neck-downs, blisters, bubbles, slubs, flaws, scratches, coating dropouts, contusions and surface roughness.

#### FEATURES

- ⊗ Optical measurement in two planes
- ⊗ Analogue output signals
- ⊗ Immune to stray light
- ⊗ Continuous IR-LED light beams
- ⊗ Continuous real-time monitoring
- ⊗ Compact and rugged construction
- ⊗ 200 kHz ultra fast response
- ⊗ Integrated signal pre-processing
- ⊗ Precision roller bearing guides
- ⊗ Micrometric resolution
- ⊗ Reliable and user-friendly
- ⊗ Unsentitive to filament vibration

**Typology:** dual axis  
**Range:** 0.01 mm to 0.4 mm

The PSD Profile Sensor is used in  
**Sensystem**

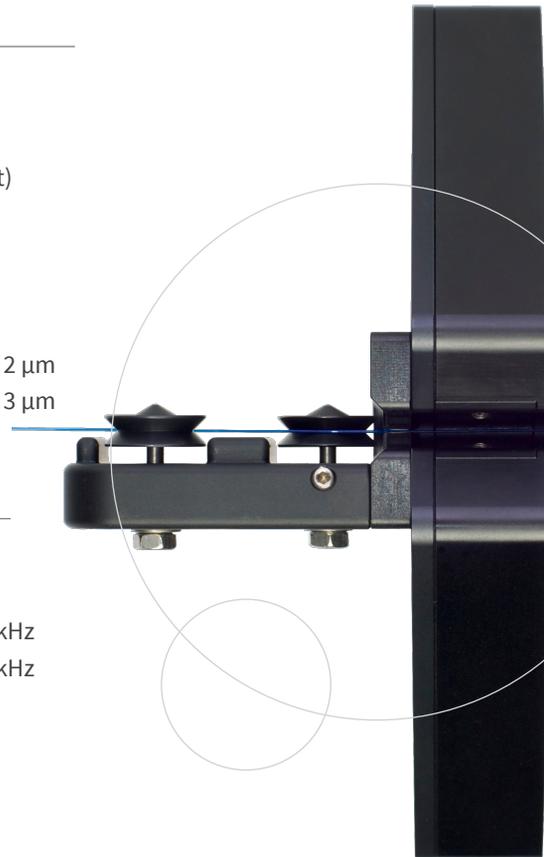


**DETECTION SPECIFICATIONS**

Diameter measuring range:	EA: 0.01 mm to 0.2 mm FM: 0.1 mm to 0.4 mm (other ranges available upon request)
Measuring slit apertures:	EA: 1.2 mm x 0.28 mm FM: 2 mm x 0.35 mm
<b>Sensitivity at 2000 m/min</b>	
For a fault length of 0.28 mm:	EA: minimum fault height change of 2 µm
For a fault length of 0.35 mm:	FM: minimum fault height change of 3 µm

**ELECTRONICAL SPECIFICATIONS**

Continuous total light signal range (DC):	0 to 10 V
DC-signal set value, bandwidth:	EA: 7 ± 0.25 V, DC to 200 kHz FM: 9 ± 0.25 V, DC to 200 kHz
Lump and neckdown output signals:	0 to 10 V
Supply Voltage, power consumption:	18 to 36 V DC, 5 W



**MECHANICAL SPECIFICATIONS**

Housing dimensions (without wire guides):	115 x 115 x 25 mm <sup>3</sup>
Wire-guides:	precision bearing pulleys
Housing and wire-guides material:	black anodised aluminium
Net weight:	700 g



Specifications are subject to change without notice.