

PSM

PROFILE SENSOR PSM FOR MONOFILAMENTS AND FINE WIRES

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

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 SENSYSYSTEM 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 one plane
- Ultra fast analogue output signals
- Minimum line separation of 8 mm
- Continuous real-time monitoring
- Compact and rugged construction
- Immune to stray light
- Precision roller bearing guides
- High resolution at 2000 m/min
- Integrated signal pre-processing
- Micrometric resolution
- Reliable and user-friendly
- Unsentitive to filament vibration

Typology: single axis
Range: 0.05 mm to 0.4 mm

The PSM Profile Sensor is used in
Sensystem



DETECTION SPECIFICATIONS

Diameter measuring range:	0.05 mm to 0.4 mm (other ranges available upon request)
Measuring slit aperture:	1.8 mm x 0.5 mm
Sensitivity at 2000 m/min For a fault length of 0.5 mm:	minimum fault height change of 3 µm

ELECTRONICAL SPECIFICATIONS

Continuous total light signal range (DC):	0 to 10 V
DC-signal set value, bandwidth:	8 ± 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

Number of measuring heads:	2, separated by 16 mm
Measuring head dimensions (without guides):	12 x 25 x 16 mm ³
Minimum line-to-line separation:	8 mm
Roller wire-guides:	2 high-speed precision bearings
Housing and wire-guides material:	black anodised aluminium
Electronic case dimensions:	24 x 121 x 54 mm ³
Net weight including electronics:	340 g



Specifications are subject to change without notice.