Ultra-fast detection of short-term surface faults and dimensional irregularities for continuous monitoring of round and flat targets.

Advanced miniaturised optoelectronic components combined with fast analogue signal processing offer a new dimension in surface fault visualisation. Even at line speeds of 1000 m/min, the PXL 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, drawing, coating, extrusion, jacketing and colouring processes. Precision detection and characterisation of lumps, neck-downs, blisters, bubbles, slubs, flaws, scratches, coating dropouts and contusions. Examples of targets are: round and flat magnet wires, extruded wires and cables, multistrand litz wires, technical monofilaments, multifilament and yarns.

**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
- 100 kHz ultra fast response
- Integrated signal pre-processing
- Precision roller bearing guides
- Micrometric resolution
- Reliable and user-friendly
- Unsensitive to filament vibration

**Typology:** dual axis  
**Range:** 0.1 mm to 5 mm

The PXL Profile Sensor is used in both Sensystem and Sensoptic Vision
DETECTION SPECIFICATIONS

Target dimensions:
- GA: 0.1 mm to 2.5 mm
- VL: 2 mm to 5 mm

Measuring slit apertures:
- GA: 10 mm x 0.25 mm
- VL: 14 mm x 0.25 mm

Sensitivity at 1000 m/min
- For a fault length of 0.25 mm:
  - GA: minimum fault height change of 8 µm
  - VL: minimum fault height change of 14 µm

ELECTRONICAL SPECIFICATIONS

Continuous total light signal range (DC):
- 0 to 10 V

DC-signal set value, bandwidth:
- GA: 7 ± 0.25 V, DC to 100 kHz
- VL: 8 ± 0.25 V, DC to 50 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):
- 160 x 140 x 40 mm³

Wire-guides:
- precision bearing pulleys

Housing and wire-guides material:
- black anodised aluminium

Net weight:
- 1500 g

Specifications are subject to change without notice.