# SENSOPTIC

# PROFILE SENSORS  PSM-MX FOR MONOFILAMENTS

## APPLICATIONS

On-line quality control applied to extrusion manufacturing processes of precision monofilaments. Ultra fast inspection and monitoring of surface faults and diameter irregularities. Continuous detection of slubs, lumps, thin places and neck-downs on fine technical fibers running in parallel at high line speeds and with small line-to-line distances.

paper machine clothing - screen printing - woven fabrics - filtration and separation industry

## FEATURES AND BENEFITS

- optical non-contact measurement
- continuous real time monitoring
- high resolution at 1000 m/min
- ultra fast analogue output signal
- integrated signal processing
- compact and rugged construction
- minimum line separation of 6 mm
- precision roller bearing guides
- reliable and user-friendly



## INNOVATIVE CONCEPT

Advanced miniaturised optoelectronic components combined with fast analogue signal processing offer a new dimension in diameter fault detection. Even at line speeds of 1000 m/min, the Profile Sensor PSM allows accurate measurement and characterisation of micrometric defects in real time. Thanks to its compact design, monofilaments can be monitored in parallel having line-to-line separations down to 6 mm.
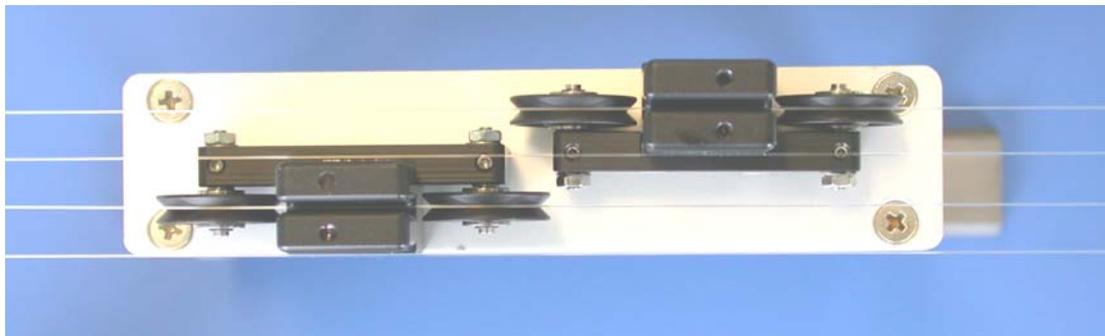
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## DETECTION SPECIFICATIONS

Diameter measuring range:                           0.1 mm to 0.4 mm

Filament insertion aperture:                     1 mm

<u>Sensitivity at 1000 m/min</u>:

For a fault length of 1 mm:                      $5\,\mu$m minimum diameter change

## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| DC output signal, bandwidth: | 0 to 10 V , DC to 50 kHz |
| AC output signal, bandwidth: | ± 10 V , 2 Hz to 50 kHz |
| Lump and neck-down output signals: | 0 to 10 V |
| Supply voltage, power consumption: | 24 V, 5 W |



actual size

## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Number of measuring heads: | 2, 12 mm line distance |
| Measuring head dimensions (without guides): | 12 x 25 x 16 mm$^3$ |
| Minimum line-to-line separation: | 6 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 |