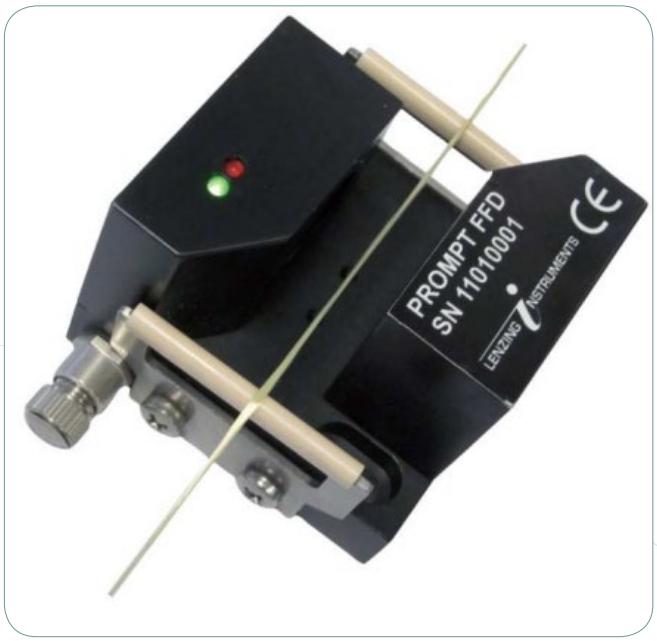
Measure Improve Service

# PROMPT FFD




Filament producers are aware of the importance of accurate feedback to broken filaments and fluff in real time. The collected information makes it possible to react to various production malfunctions immediately, thereby reducing second grade quality and waste. PROMPT FFD enables quick reactions to any deviations from the normal state of the filament. With PROMPT FFD, the generated signals are evaluated to give feedback with a clear distinction between broken filaments and fluff.

This vital distinction is made by Lenzing Instruments broken filaments- and fluff sensor PROMPT FFD, which not only offers precise classification of broken filaments and fluff, but also a number of additional features, which makes PROMPT FFD unique on the market. PROMPT FFD offers highest reliability by means of a plausability control and lightning control for correctevaluation of incoming signals.

The sensor signals are transformed and parameterized either by applying a PLC or a PC-system. The PLC version is the choice for a cost optimized production control, whereas a parameterisation through a PC system is the choice when a complete visualisation and quality management system of the production control process is required. The sensor itself is equipped with an LED display in two colours for indication of sensor status. As for indication of the quality status of the winders, a quality indicator (QI) can be combined with PROMPT FFD. The quality module is individually set for various quality indicator (QI) and colour indications.

PROMPT FFD is a fully encapsulated optical sensor, which can be fitted to almost all types of machines. It has been designed for use in rough production environments by means of a contamination compensation. PROMPT FFD is fully compatible with previous versions of the Fraytec sensor

## Scope

Online, real time detection of broken filaments and fluff.

## Method

The filament is guided through the PROMPT FFD sensor, which features 6 light barriers with fault trip level selectable at 3; 4.5 and 6 mm from the yarn. Depending on which light barriers are blocked, a defect could be classified by length.

One central light barrier is used for fluff classification. The sensor performs the calculations (evaluation) and all quality state via the integrated LED display.

## Results

The results presentation of the received sensor signals depends on if PROMPT FFD is used together with a PC system or a PLC. If the parameterisation of the sensor signals is carried out through a PC, the results will be presented in the PROMPT Visualization software, which also offers numerous analysis possibilities. In the case of the parameterisation through a PLC, the active sensor status is given by means of the LED display and digital signals. In addition a quality indicator module can be connected.

## Specifications

- Detection range: Broken filaments down to 5 µm
- Production speed: Up to 8000 m/min
- Production class: IP 68
- Fault trip level: 3; 4.5; 6 mm from the yarn
- Sampling rate: 80 kHz
- Yarn guide: Ceramic (exchangeable)
- Ambient temperature: 15 to 50 °C
- Relative humidity: Max. 90 %, not condensing
- Input voltage range: 12 VDC up to 36 VDC
- Measuring principle: Optical
- Communication BUS: Can BUS
- Dimensions:
  Height: 58 mm - Width: 66 mm - Depth: 44 mm
- Housing: Aluminium, anodized in black

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