



The yarn tension determines the performance of the yarn in various processes such as winding, twisting, weaving and knitting. Continuous monitoring of the yarn tension enables quick reactions to problems due to tension fluctuations, such as quench zone issues, finish tip, guide wear, winder variation, contaminated finish and human error.

With Lenzing Instruments **PROMPT OLT**, the absolute yarn tension of multifilament yarn is measured online with direct feedback to any deviations of set tolerances. The positioning of the yarn is of no relevance, which makes the integration of the sensor in any yarn production easy. Special yarn guides may be applied for a constant deflection angle.

**PROMPT OLT** is designed for applications in rough production environments and features a splash guard, which protects the sensor against finish and cleaning agents. An integrated stainless steel guard protects the ceramic yarn guide and works as an overload protection. Extra protection from dust, dirt and humidity variations as well as reduced thermal sensitivity is ensured by an optional air pressure module with cooling function.

Depending on the specific requirements of each customer, the generated sensor signals are either evaluated in the **PROMPT Visualization** software or via the Digital Tension Sensor Amplifier (DTSA).

## Scope:

Accurate and reliable online monitoring of the absolute line tension of filament yarn, from high denier technical yarn down to micro-denier and delicate filament yarn.

## Method:

The absolute line tension on the yarn is measured by means of a strain gauge transducer. Thereby, the varying forces acting on the sensor pin generate changes in the electrical resistance and in the output voltage, which correspond to a certain change in force. These electrical signals are then further evaluated for real time feedback about the tension variations.

## Results:

The generated sensor signals of PROMPT OLT are either processed in combination with the optional Digital Tension Sensor Amplifier, DTSA, or in combination with a PC. The DTSA is available with or without a CAN Bus interface for digital signal analysis. If PROMPT OLT is used in combination with a PC, the results will be presented in the **PROMPT Visualization** software, which offers numerous analysis possibilities.

## Nominal load:

0 - 50 / 0 - 100 / 0 - 250 g /  
0 - 500 g  
0 - 1000 g or higher on request

## Accuracy:

0.5 % of measuring range

## Linearity:

0.1 % of measuring range

## Temperature range:

0 to 90 °C

## Temperature compensation:

Designed for an operating range of 20 to 65 °C

## Relative humidity:

Max. 90 %, not condensing

## Overload protection:

200 % of measuring range by a stainless steel guard

## Measuring principle:

Strain gauge transducer, dual beam bridge

## Calibration:

Shunt calibrateable with built in zero and full scale calibration

## Yarn guide:

Ceramic (exchangeable)

## Dimensions:

Height:	44 mm
Width:	10 mm
Depth:	74 mm

## Housing:

Aluminium, anodized in grey and stainless steel guards

## Options:

- DTSA-amplifier for signal evaluation and winder control, featuring:
  - an on-board 16-bit digital micro-processor
  - built-in digital filtering for clean signals
  - auto-tare feature for simplified zero calibration
  - programmable range of outputs; 0 - 5 or 0 - 10 VDC
  - two LEDs for indication of calibration- and operational status
  - power supply: 12 - 28 VDC
- CAN interface
- Push buttons for Zero and Full Scale

Technical data and pictures are subject to change!