



# SP 5000 TR

*Product information*

Triple-beam laser interferometer for simultaneous and precise length, pitch and yaw angle measurements

# Laser interferometer measurement system

## SP 5000 TR

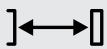
Many applications in industry and research require high-precision simultaneous displacement and angle measurements. Fast set-up and uncomplicated adjustment are particularly important.

Triple-beam laser interferometers are precision length measuring devices that combine three interferometers in one device. The same highly stable laser frequency is used in all three measuring channels. Thus, three length values can be measured simultaneously with nanometer accuracy. The corresponding angle can be determined with high precision from the difference between two length values and the calibrated beam distance. The system has a modular design and can therefore be adapted to a wide variety of measurement tasks.

The fiber optic coupling of the sensor head and the optionally integrated beam direction detection support easy handling and adjustment.

The design of the three-beam interferometer is compact and robust. This makes it ideal for high-precision measurements in industry and research and as an OEM instrument.

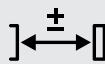
For large measuring ranges or calibration tasks, the use of wireless temperature sensors or the climate measuring station LCS is recommended.



0 m to  $\geq 5$  m



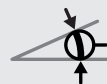
20  $\mu\text{m}$



0.15 ppm

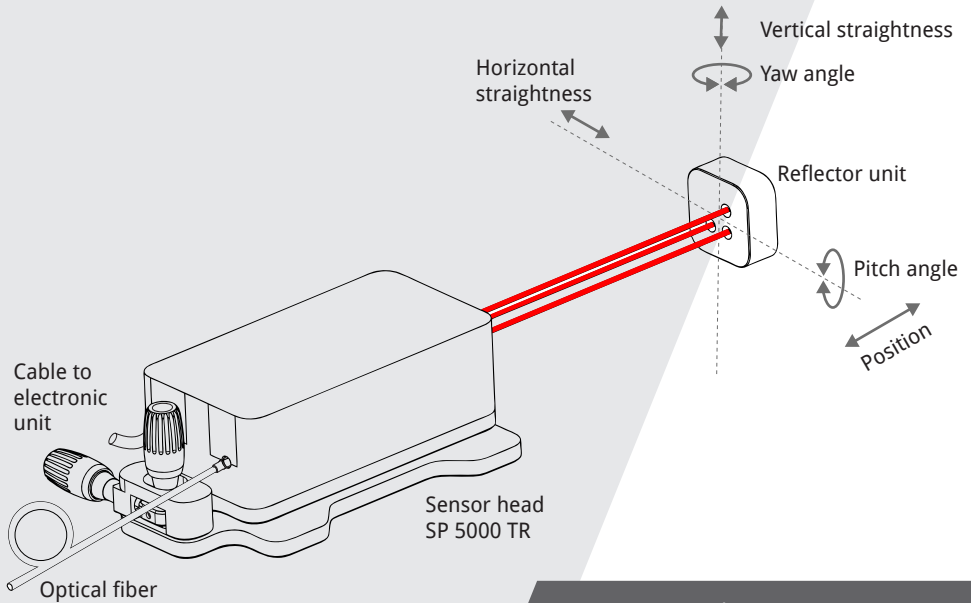


$\pm 12.5^\circ$   
with reflector  
 $\pm 430 \mu\text{rad}$   
with plane-mirror



0.01  $\mu\text{rad}$

## MEASURING PRINCIPLE



Simultaneous measurements  
of lengths and angles  
with highest accuracy

### Further possible applications:

- High-precision pitch and yaw angle correction for two- and multi-coordinate measurements
- Differential measurements (dilatometry, material testing, etc.)
- Dynamic angle measurements, acquisition of angle vibrations
- OEM and vacuum versions of the device are possible

### Ideal for

- Quality assurance
- Calibration
- Development
- Science and research
- OEM applications

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MADE IN GERMANY

**For customer-specific versions, OEM applications or integration in special measurement stations, please contact us.**

**We will be happy to personally assist you in finding solutions to your measuring tasks.**

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