Pivot dendrometer set
based on diameter sensor PDS40P
and datalogger Minikin PTi

Main features:
• Pivot design
• Step-less reading
• Easy and fast non-invasive fixing
• Datalogger internal temperature
• Waterproof
• IR data access
• Manufactured by EMS

Specifications:
• Working range from 5 to 40 mm
• Resolution 1.24 µm
• Accuracy 0.5% of full scale
• Tightening strength up to 3 N
• Temperature dependence better than ± 3 µm/K
• Datalogger memory for 50,000 readings
• Battery lifetime 9 years at one-hour measurement
• Datalogger internal temperature accuracy ± 0.3 °C

General description:

PDS40P is designed for the measurement of diameter of small stems or branches in the range between 5 and 40 mm. Sensor output is calibrated directly in millimeters of stem diameter.

The sensor is designed with respect to easy and fast installation. It is fastened on the measured object by means of three pressure levers; the central jib turns the rotary position sensor proportionally to the object diameter.

Adherence pressure is set as a compromise between the influence on plant tissues and stability of position. The bearing of position sensor is carefully shaped for minimal effect of temperature and axial forces.

Each sensor is individually calibrated in 3 points over the whole range for desirable sensors linearity.

Installation notes:

Sensor should be placed on a relatively straight and regularly shaped stem or branch. The cable must be fastened to the stem in order to avoid influence of datalogger weight on the sensor position. The label on the black plate on the jib must be visible - it must point outwards of the stem.

Specification

Measuring range	5 to 40 mm
Accuracy	better than 0.5 mm
Linearity	± 0.5 % of full scale
Resolution	1.24 µm
Tightening strength	1.5 to 2 N lateral levers, 2 to 3 N central sensing jib
Temperature measurement accuracy	± 0.3 °C
Memory size	128 kB
Memory capacity	ca 50,000 values
Measuring interval	1 min to 4 hrs
Battery capacity	Few years according to measuring intervals
Power supply	SAFT LS14250CNA
Sensor weight	160 g
Datalogger weight	40 g
Datalogger size (diameter x length)	21 x 100 mm
Protection	IP 68
Temperature working range	-40 to 60 °C

Software: Mini32 universal software running under Windows® 7, 8 and 10. The software assures all necessary operations – system setup, data saving, data processing. It includes basic statistic features, creates and prints graphs and exports data to different file formats.

Two-year full warranty.