

## LOGGING BAND DENDROMETER DRL26

The band dendrometer enables continuous, non-invasive monitoring of changes in stem circumference. Its stepless reading allows precise monitoring of stem growth. The measurement range for changes in circumference is 65 mm; by resetting the band, the dendrometer can be readjusted to measure a larger overall circumference. The dendrometer is suitable for stems with a minimum diameter of 8 cm; with an optional base plate upgrade, stems with diameters from 4 to 8 cm can also be measured. There is no upper limit for stem diameter. The dendrometer is easy to attach non-invasively with a tension force of 15 to 20 N. Linearity is  $\pm 1\%$  over the full measurement range.

### MAIN FEATURES DRL26

- Memory capacity 100,000 readings
- Battery capacity ca 5 years when measuring each hour
- Fully enclosed dendrometer housing without a connector
- Communication via an infrared interface using an IR reader
- Optional internal temperature logging



## TECHNICAL SPECIFICATIONS

| PARAMETERS                                  | SPECIFICATIONS                                                                                                                                        |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions (L × W × H)                      | 100 x 70 x 100 mm                                                                                                                                     |
| Weight                                      | ~350 g                                                                                                                                                |
| Housing protection class                    | IP 63                                                                                                                                                 |
| <b>SENSOR</b>                               |                                                                                                                                                       |
| Sensor type                                 | Rotary position sensor                                                                                                                                |
| Measurement range (change in circumference) | 65 mm                                                                                                                                                 |
| Minimum diameter of trunk                   | 8 ... ∞ cm<br>(optionally 4 ... 8 cm with base plate upgrade)                                                                                         |
| Linearity                                   | ±1% of full scale                                                                                                                                     |
| Resolution                                  | <1 µm                                                                                                                                                 |
| Reading                                     | stepless                                                                                                                                              |
| Internal temperature measurement accuracy   | ±0.3 °C                                                                                                                                               |
| <b>POWER SUPPLY</b>                         |                                                                                                                                                       |
| Battery                                     | Lithium LS14250CN 3.6 V; 1000 mAh                                                                                                                     |
| Battery life with 1 hour interval           | approx. 5 years                                                                                                                                       |
| <b>CONNECTION / COMMUNICATION</b>           |                                                                                                                                                       |
| Connector                                   | Fully enclosed dendrometer housing without a connector                                                                                                |
| Cable length                                | no cable                                                                                                                                              |
| Communication / Output                      | Data transfer: <ul style="list-style-type: none"> <li>• Wireless infrared transmission</li> <li>• special USB/infrared data transfer cable</li> </ul> |
| <b>DATA LOGGER</b>                          |                                                                                                                                                       |
| Measuring and storing interval              | 5 min ... 24 h                                                                                                                                        |
| Storage capacity                            | ca. 100,000 values                                                                                                                                    |
| Internal clock accuracy (-10 to 40 °C)      | better than ±15 sec. per month                                                                                                                        |
| <b>ENVIRONMENTAL CONDITIONS</b>             |                                                                                                                                                       |
| Operating temperature                       | -40 ... 60 °C                                                                                                                                         |
| Air humidity                                | 0 ... 100 %                                                                                                                                           |
| <b>STAINLESS STEEL TAPE</b>                 |                                                                                                                                                       |
| Tape length                                 | 20 m                                                                                                                                                  |
| Tape width and thickness                    | 12 x 0.2 mm                                                                                                                                           |
| Tension force                               | 15 to 20 N in the entire area                                                                                                                         |
| Tape temperature coefficient                | 16 µm/(m·K)                                                                                                                                           |