Point Dendrometer Installation Guide

Specifications

Span	8 890 µm
Resolution	0.27 µm
Linearity	< 5 %
Battery life	~ 10 years
Memory capacity	~ 14 years in 15-min intervals

Video tutorials on YouTube available at:
Point Dendrometers
@romanplichta2626

Installation

Choose your installation area, debark it, and clean it. Select an appropriate installation area on the tree stem, ensuring it is free from wounds, knots etc. If necessary, carefully remove any dead layers of thick secondary bark (rhytidome) using an appropriate tool, such as a drawknife, large knife, chisel, or sharp axe.


Drill a hole into the tree stem using a suitable drill bit. Create a hole with a minimum depth of 40 mm, using a 5 mm (3/16") drill bit. Ensure the hole is drilled perpendicular to the tree stem's surface. You can use the Point Dendrometer as a guide here. First, select the position where the Point Dendrometer will be placed. Then, turn the device so that the potentiometer (with the spring) faces outward, away from the tree. Drill through its installation hole, then remove the Point Dendrometer and deepen the drilled hole if necessary. While drilling, move the hand drill back and forth to clear away drill shavings.



Drive the mounting screw into the drilled hole. Ensure that the metric thread of the mounting screw is positioned outside the hole. You may use two nuts and a wrench to secure the screw or use a hand drill with a properly tightened drill bit to drive it in.



Install the Point Dendrometer. Loosen one hexagonal nut from the mounting screw and fully tighten the other to the end of the metric thread. Slide the Dendrometer onto the screw with the spring facing the tree, allowing the spring to lightly touch the trunk without compressing it. Screw the second nut onto the mounting screw until it touches the Dendrometer body, then adjust it to the final position and preload the spring by turning the outer nut one or two full rotations. Hand-tighten the inner nut against the Dendrometer body and secure both nuts with a wrench. Make sure to keep holding the Dendrometer steady to prevent rotation.



Check the installation. Gently apply pressure on the spring to allow it to settle freely on the trunk surface to ensure the potentiometer's shaft is not bent. Visually inspect the back of the Dendrometer to confirm that the shaft has slightly extended compared to its position before installation. The optimal preload is approximately 1 mm. You can also use the Lolly Manager to check the current preload value. Ideally, the shaft should not protrude from the Dendrometer body—if it does, the preload is too high, reducing the measuring span.

Maintenance. Check the Dendrometer regularly, at least once a year, or more frequently for fast-growing trees. Adjust the preload by gently pulling the Dendrometer outwards and tightening it securely. To clean the potentiometer shaft, press it in several times—do not use any lubricants!

Useful Tips

Resin ducts – Be wary of placing the Dendrometer close to or below any disrupted resin ducts.

Large trees – For larger trees, install several Dendrometers from different sides of the tree.

Temperature – If possible, avoid installing the Dendrometer on the side of the tree that receives the most sunlight throughout the day.

Annual growth – Make note of the span of the Dendrometer and compare it with the expected annual growth of the tree. A good rule of thumb is to check and reinstall the Dendrometer at least once a year.

Check the tree's reaction – If the cambium is reacting excessively to the mounting screw of the Dendrometer, reinstall it only after some time.

Move potentiometer shaft – With each re-installation, make sure to move the potentiometer by gently applying pressure on the spring to clean it from dust.

Installation graphic: