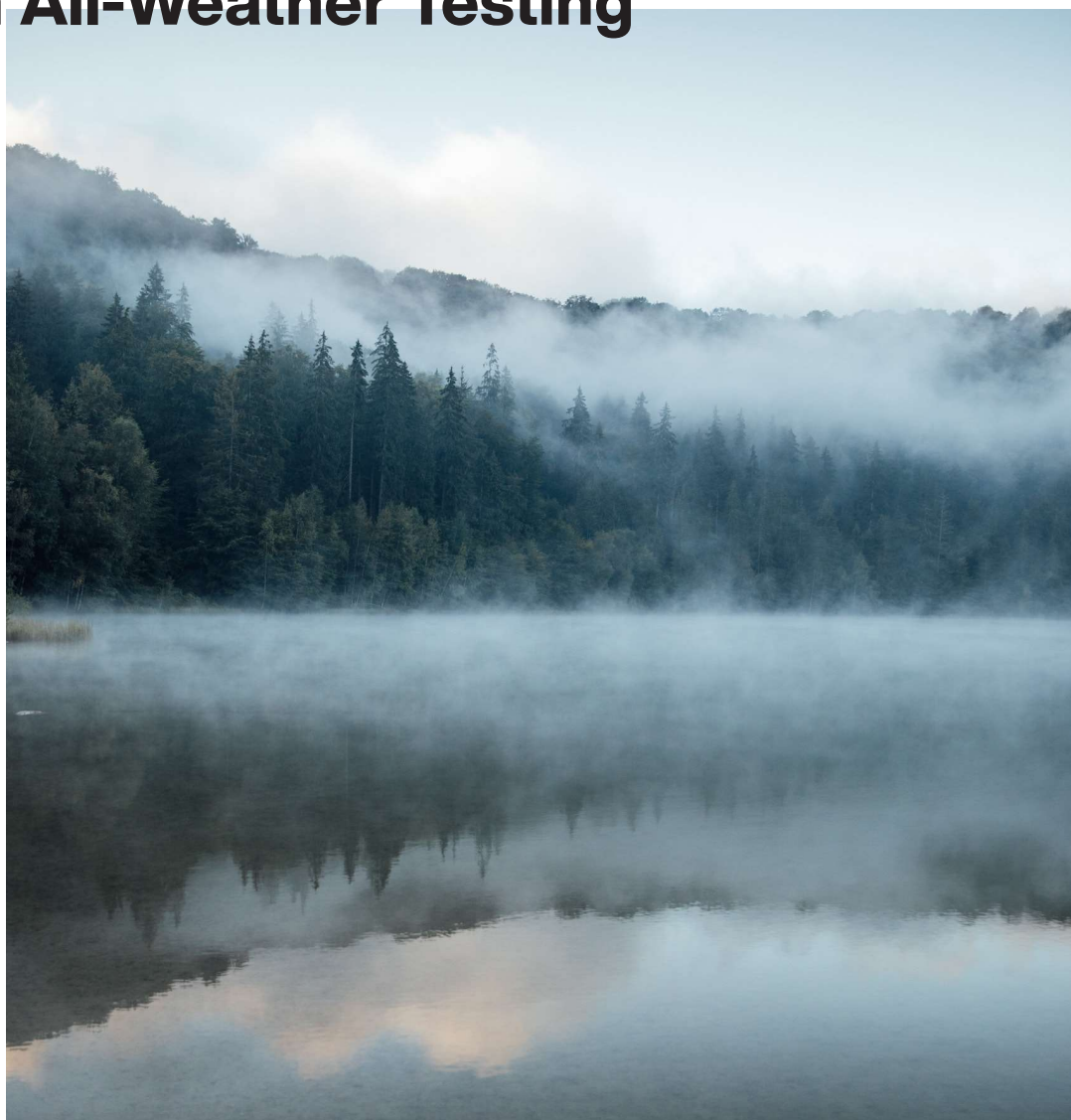


+ Durability in Harsh Environments: E+E Elektronik's HTS801's Performance in All-Weather Testing



The Challenge

Outdoor and extreme-condition sensors and instruments require rigorous engineering to ensure long-lasting durability. Without adequate protection against elements like fog, rain, ice, and extreme heat, internal electronics are susceptible to corrosion, which can lead to device failure. While some users opt to install such controls within electrical cabinets as a safeguard, systems specifically engineered to endure harsh environments make these additional measures unnecessary.

The Solution

E+E Elektronik's **HTS801** enclosure demonstrates this level of durability with its IP65/NEMA 4X protection ratings:

- + **IP65:** Ensures that the enclosure is resistant to dust and can withstand low-pressure water jets from any direction, making it highly suitable for outdoor use.
- + **NEMA 4X:** Specific to outdoor electrical enclosures and requires the use of a gasket seal to prevent both liquid and solid ingress. Additionally, NEMA 4X mandates corrosion resistance, ensuring durability in harsh, exposed environments.

The Results

Together, these ratings guarantee that the enclosure can withstand direct exposure to extreme outdoor elements. While additional protection, such as a small roof to minimize direct rain on the transmitter, may offer extra assurance, it is ultimately superfluous. All enclosures manufactured by E+E meet rigorous standards. Outside the factory in Engerwitzdorf, Austria, these sensors undergo extensive testing in full exposure to all weather conditions.



EE310 unit after several years of outdoor operation: minimal weathering and fully functioning display, which is typically the first component to show wear.



HTS801 unit (without display) after several years of outdoor testing: showing equally positive durability and performance results as the **EE310**

For Sawmill Applications

The HTS801 is the best solution on the market. Its remote probe monitors extreme conditions inside the kiln while the transmitter remains safely installed outside. The optimal model for this setup is the HTS801-M1T5F5K2E6J3PC7, which includes:

- + A weather-resistant HTS801 enclosure
- + Standard remote probe with PTFE filter cap to minimize residue accumulation
- + 2-meter cable from probe to transmitter
- + Dual integrated plugs for power and communications
- + RS485 communication
- + Military-grade quick disconnect for the probe

When mounted on the outside of the kiln, this configuration allows the probe to be positioned inside, directly above the lumber. This setup also eliminates the need for water piping to a wet bulb chamber, significantly reducing maintenance.

Recommendations for Configuring a Durable E+E Device Housing

The diagram shows an E+E device housing with a cable connected to a probe. Four green plus signs in circles highlight specific recommendations:

- Omit the Display**
Choosing a display-free model eliminates a potential failure point.
- Select Integrated Quick-Connect Plugs**
These plugs are sealed into the housing to prevent moisture intrusion.
- Optimize Cable Length**
Measure the distance from the probe location to the transmitter housing, and choose a cable length that closely matches. Power and communications use standard automation cables, which can be extended as needed at a lower cost.