



INCA Ground Sensor™

Smarter decisions
for a safer tomorrow

Measure environmental conditions even
in tough environments.

The INCA WFS® Ground Sensor provides precise,
real-time measurements of air temperature and
relative humidity – ideal for wildfire risk monitoring.
Reliable, wireless and built for the outdoors.



MEASURE

Real-time air temperature
and relative humidity



ALERT

Intelligent, customizable alarms
for critical conditions



CONNECT

Instant alerts and regular status
updates to the INCA WFS® Digital Hub



PROTECT

Enable faster, more accurate
decision-making for wildfire risk

Modern, elegant, functional

Designed for harsh environments, INCA offers reliable performance
in a sleek, modern form. Fully wireless, energy-efficient, and
software-ready – proving that smart technology can also be
elegant and user-friendly.



WILDFIRE RISK
MONITORING



AIR TEMPERATURE AND
HUMIDITY MEASUREMENT



BUILT FOR
HARSH ENVIRONMENTS



WIRELESS AND
ENERGY-EFFICIENT



SUPPORTS FASTER
DECISION-MAKING



SUSTAINABLE
PROTECTION

INCA Ground Sensor™ and WFS net®
Working together for a safer future.

inca | **WFS**

OVERVIEW

The INCA WFS® Ground Sensor provides precise, real-time measurements of air temperature and relative humidity through a rugged external probe—ideal for wildfire risk monitoring. Its intelligent alarm system can be configured to trigger alerts based on customizable conditions, such as exceeding a specific temperature threshold or detecting a rapid temperature rise over a short time span. When triggered, alarms are instantly sent to the INCA WFS® Digital Hub, while regular status updates are transmitted at scheduled intervals.

Combined with other data sources, WFS® Ground Sensors support accurate and faster decision-making.

Designed for harsh environments, INCA offers reliable performance in a sleek, modern form. Fully wireless, energy-efficient, and software-ready, it blends seamlessly into its surroundings—proving that smart technology can also be elegant and user-friendly.

The Device

Elegant and Functional

All sensors are fully sealed within an IP67 casing. Built to withstand harsh outdoor conditions, the WFS® Ground Sensor is both robust and reliable.

Energy-efficient by Design

With intelligent power management, the WFS® Ground Sensor can operate for over 5 years on a single set of batteries under typical conditions—maximizing uptime while minimizing maintenance.

Reliable, Low-power Connectivity

The INCA WFS® Ground Sensor supports 4G Cat-M1 (LTE-M) and NB-IoT for robust, low-power, long-range communication—offering flexible connectivity options to meet the demands of diverse and remote deployment scenarios.



Why INCA WFS® Ground Sensor?

Modern, elegant, functional

- » Independent and maintenance free
- » Completely wireless—Over-the-air updates and device management
- » Plug-and-Play—Functional, ready with software, ready to use
- » Shock- and waterproof, robust

Example Use Cases

Measure environmental conditions even in tough environments

- » Real-time environmental monitoring during wildfire events
- » Predictive alerts based on rising fire risk conditions
- » Detection of sudden fluctuations in temperature and humidity

Device Management

All INCA WFS® Ground Sensor settings can be configured remotely over-the-air. Using the INCA WFS® Digital Hub, devices can be updated, managed, and reconfigured, ensuring efficient and scalable deployment in the field.



Technical specifications

» **Dimensions:** 90 x 90 x 28.5 mm

» **IP rating:** IP67

» **Device orientation:** 360°

» **Powering:** 1 x 3.6 V C Primary battery

» **Battery lifetime:** Over 5 years at 12 measurements / day
Actual battery life may vary depending on configuration, including reporting frequency and positioning.

» **Radio connectivity:** 4G-Cat M1 (LTE-M) & 5G NB-IoT
» NFC 13.56 MHz

» **Operating temperature:**
» -25 to +60 °C
» -40 to +85 °C (reduced accuracy, see diagram to the right)

» **Measurement range:**

» **Air temperature:** from -40 to +125 °C (see diagram below for accuracy)
The sensor probe is capable of measuring beyond the device's rated operating temperature. For best results, ensure the device remains within its specified operating limits.

» **Humidity:** Accuracy of ± 1.5 %RH and ± 0.1 °C
• Resolution 0.01 %RH
• Hysteresis at 25 °C ± 0.8 %RH

» **Positioning:** IoTrack (NB-IoT)

» Cellular positioning
» Accuracy up to one meter (5G) or between 50 and 250 meters (4G)

Temperature accuracy $\pm$ Celsius



