


# CONTEMP

## CELLULAR CONCRETE TEMPERATURE & MATURITY MONITORING

CONTEMP is a smart concrete temperature and maturity monitoring system designed for simplicity, accuracy, and cost-efficiency. It connects directly to cellular networks, eliminating the need for site visits, Bluetooth pairing, or extra hardware. CONTEMP continuously tracks concrete curing conditions, calculates maturity, sends real-time alarms, and generates detailed reports, all with no subscription fees.

-  **Built-In Direct Cellular Connectivity**
- No** Base Stations Needed
- No** Gateway or Mobile Bluetooth Required

**No** Subscription Fees  
 Unlimited **FREE** Global Data Plan included



Sensor Cable Extendable up to **7.5 Meters (25 Feet)**

**Affordable, High-Precision Sensors**  
 Available with **NIST** Traceable Calibration Certificate upon Request

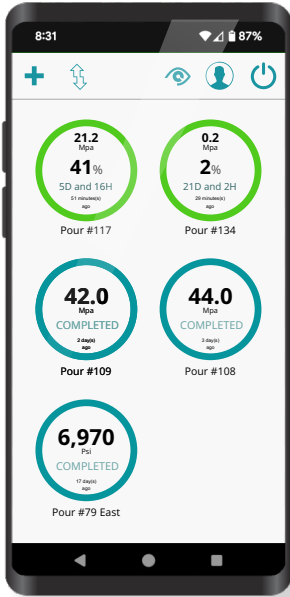
### Sensors and Features



- 2 x Temp Probes
- Ambient Temperature
- Multi Project Management
- Calibration curve
- Multi-Sensor Data Consolidation
- Maturity Report
- Geo Location

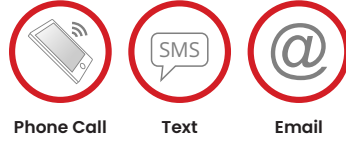
- Built-in **Ambient Temperature** Sensor
- **Two** External Waterproof, Replaceable **Digital Temperature Probes**
- Optional **NIST-Traceable** Calibration Certificate for Probes
- Independent **Maturity** Calculation for Each Sensor
- Unlimited **Calibration Curve** Entry (manual or file upload)
- **Merge Data** from Multiple Sensors and Devices by Timestamp
- Automatic PDF **Maturity Report** with Optional **Pour Image**





## Real-time Alarms

- **Min/Max Alarm:** Alerts if temperature goes outside set limits.
- **Core-Surface Delta T:** Alarm for excessive core-to-surface difference.
- **Core-Ambient Delta T:** Warns of high core-to-ambient variance.
- **Surface-Ambient Delta T:** Notifies on surface-to-ambient imbalance.



## Maturity Function

CONTEMP features an intelligent concrete maturity monitoring system that estimates strength development in real time using the Nurse-Saul maturity equation. By continuously recording temperature data from embedded sensors, the system calculates the maturity index and correlates it with compressive strength through user-uploaded calibration curves specific to each concrete mix design. This allows for accurate prediction of in-place strength without destructive testing. The web application visualizes live graphs of both maturity and strength progression, providing a clear picture of curing performance over time. When the concrete reaches the target strength, the system sends instant alerts via email, text, or call. CONTEMP also enables multi-sensor data consolidation across different locations or pours, allowing for in-depth comparison of temperature gradients and strength development. These insights can be exported as detailed reports to support documentation, quality control, and compliance with construction standards.

## Technical Specifications

Built in sensors		Temperature and Relative Humidity (RH)
Operation Temperature range	°C	-20 to +70 (-35°C with Lithium Batteries)
	°F	-4 to +160 (-31°C with Lithium Batteries)
Temperature Reporting Resolution		0.1
RH measurement range		0-99% non-condensing
RH Measurement Accuracy		±1.8% RH (at 25°C, 10-90%)
Interface		Cellular LTE-M & 2G (all band - Global)
Temperature Probes (x2) Measurement Range	°C	-55 to +125
	°F	-67 to +257
Temperature Probes (x2) Measurement Accuracy		±0.5°C (±0.9°F)
FCC ID		2AJYU-8VC0001
Power Supply		4 x AA batteries
Internal Memory Capacity		64,000 Record of each measured Parameter
Recoding interval		1 to 30 minutes
Syncing interval (sending data to the cloud)		Real-time Alarms - 10 minutes to 7 days