

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.

CONTEMP

-  **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

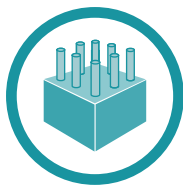
Sensors and Features



2 x Temp
Probes



Ambient
Temperature



Multi Project
Management



Calibration
curve



Multi-Sensor
Data Consolidation



Maturity
Report

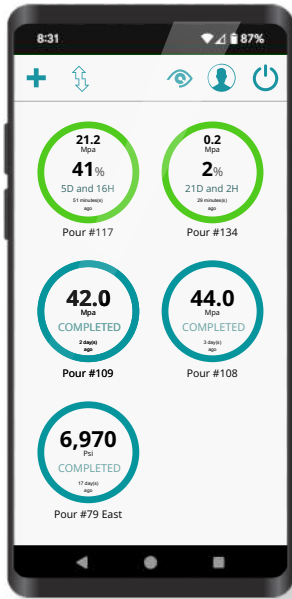


Geo
Location

- 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**



CONTEMP



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 minutess to 7 days