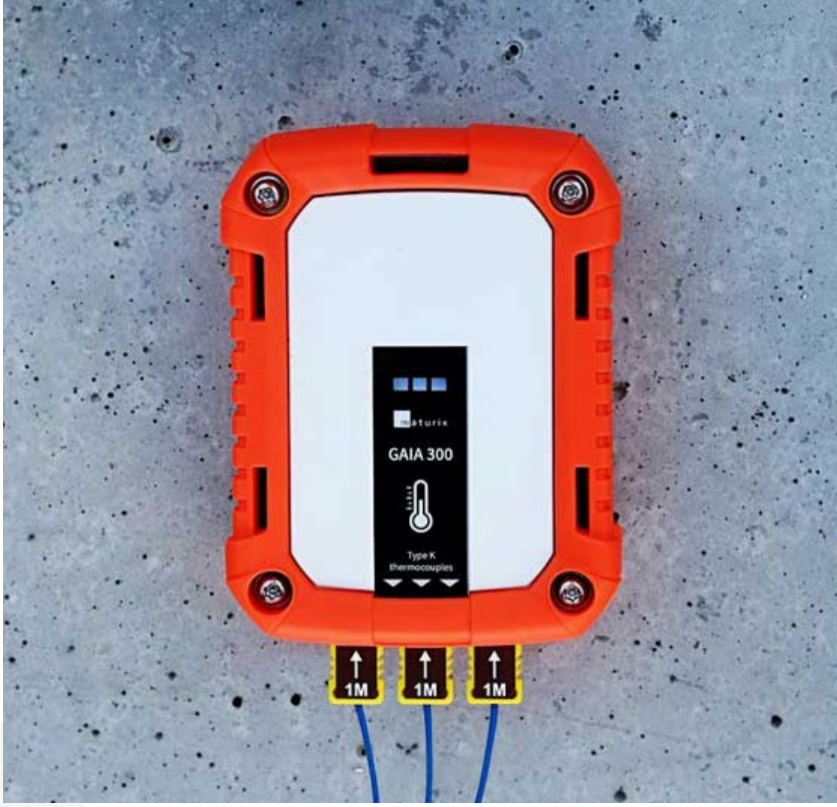
Datasheet

# Gaia 300

## Wireless Transmitter for Maturix® Temperature and Strength Monitoring




## Overview

Gaia 300 is a 3-channel wireless transmitter designed for temperature measurements using type K thermocouples. The device transmits temperature readings wirelessly to the cloud using the Sigfox network or Bluetooth®. Sigfox is a global wireless network dedicated to the Internet of Things (IoT).

The transmitter is designed to withstand harsh environments and outdoor use. It is IP64 rated, meaning it ensures dust-tight protection and can withstand water spray from any direction. The rubber frame offers increased shock absorption and better handling.

Gaia 300 has innovative features, including integrated Bluetooth capability and internal memory backup able to store 35.260 measurements equal to a full year of operation, to help ensure that data is not lost in case of limited coverage.

The temperature readings can be accessed in real-time and remotely in the Maturix® Web Portal. The concrete strength is estimated based on the temperature history using the Maturity Method (ASTM C1074).

### Features

- Measure temperature in up to three positions using type K thermocouples
- Long-range wireless data communication
- Internal memory backup and Bluetooth®
- Weather-resistant and rugged design
- Low power consumption for extended usage
- Replaceable and universal AA batteries
- Multiple mounting slots for easy installation
- Three multicolour LED status indicators

### Benefits

- Real-time insight into concrete curing
- Remote monitoring from any device with internet
- Cost-efficient temperature & strength monitoring
- Cloud software for easy reporting and data export
- Sync past data through Bluetooth®

### Maturix® Temperature and Strength Monitoring

Maturix combines durable hardware, smart wireless technology and user-friendly software into a powerful concrete monitoring tool. The system provides in-depth insights into the curing status and shows real-time temperature, maturity and strength data.

maturix®

Version: 1.0 • March 2024 • English

# Specifications

## Temperature measurements

| | |
|---|---|
| Sensors | 3 x type K thermocouples (not included), 1 x internal temperature |
| Range | Type K thermocouple: -200 to 1260 °C (-328 to 2300 °F) [1] |
| Tolerance | Type K thermocouple: ±1.5 °C (±2.7 °F) [2]<br>Internal digital sensor: ±0.3 °C (±0.54 °F) |
| Resolution | ±0.1 °C (±0.18 °F) |
| Thermocouples supported | Type K (Ni-Cr / Ni-Al) |

## Data transmissions

| | |
|---|---|
| Measurement interval | Cable connected: Once every 15 min.<br>No cable connected: In standby |
| Transmission interval | Cable connected: Once every 15 min.<br>No cable connected: Once every 6 hr. |
| Network | Sigfox, Bluetooth® |
| Coverage | Sigfox RC1, Sigfox RC2, Sigfox RC4, BLE |

## Use and storage

| | |
|---|---|
| Temperature | -30 to 50 °C (-22 to 122 °F) |
| Humidity | 0 to 100 %RH |
| Ideal storage conditions | Indoor, 20 to 30 °C (68 to 86 °F) |

## Mechanical specifications

| | |
|---|---|
| Dimensions (L x W x H) | 148.3 x 113 x 50.7 mm (5.84 x 4.45 x 2 in) |
| Materials | Body: ASA plastic (white)<br>Protective edge: TPU elastomer (orange) |
| Battery type | 4 x AA, 1.5 V alkaline/lithium or 1.2V rechargeable [3] |
| Socket type | Miniature, type K, female |
| LED | 3 x multi color LED |
| IP rating | IP64 |
| **Certifications** | CE, Radio Equipment Directive (RED), RoHS |
| **Compatible software** | Maturix® In-situ<br>API |

| **Part no.** | **Models** |
|---|---|
| 20300-1 | Gaia 300 (Sigfox RC1) |
| 20300-2 | Gaia 300 (Sigfox RC2) |
| 20300-4 | Gaia 300 (Sigfox RC4) |

**HS code** 8517 6990 00

[1]Dependent on type K thermocouple. Max. temperature difference between device and thermocouple measurement is -200 °C and +1260 °C.
[2]The tolerance depends on the type K thermocouple.
[3]Alkaline batteries included.