



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 an alternative short-range communication technology. 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 such as built-in wireless connectivity 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
- 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 wirelessly

Maturix® Temperature and Strength Monitoring

Maturix combines innovative 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.

Specifications

Temperature measurements

Sensor	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 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. No cable connected: In standby
Transmission interval	Cable connected: Once every 15 min. 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) Protective edge: TPU elastomer (orange)
Battery	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 API

Part no:

Models

20300-1

Gaia 300 (Sigfox RC1⁴)

20300-2

Gaia 300 (Sigfox RC2⁵, Sigfox RC4⁶)

HS Code:

8517 6990 00

¹Dependent on type K thermocouple. Max. temperature difference between device and thermocouple measurement is -200 °C and +1260 °C.

²The tolerance depends on the type K thermocouple.

³Alkaline batteries included.

⁴Sigfox RC1: Uplink 868.130MHz, Downlink: 869.525MHz; EIRP 16dBm

⁵Sigfox RC2(Region-specific model): Uplink 902.200MHz, Downlink: 905.200MHz, EIRP 24dBm

⁶Sigfox RC4(Region-specific model): Uplink 920.800MHz, Downlink: 922.300MHz, EIRP 24dBm

