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 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**

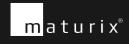
- Measure temperature in up to three positions using type K thermocouples
- Long-range wireless data communication
- Internal memory backup
- Weather-resistant and rugged design
- Low power consumption for extended usage
- Replaceable and universal AA batteries
- Multiple mounting slots for easy installation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

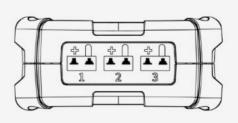
Maturix combines innovative hardware, smart wireless technology and user-friendly software into a powerful concrete monitoring tool. The system provides in-depth insights into the curing status and shows real-time temperature, maturity and strength data.



## **Specifications**

#### **Mechanical specifications Temperature measurements** 3 x type K thermocouples (not **Dimensions** Sensor 148.3 x 113 x 50.7 mm (5.84 x 4.45 x 2 in) included), 1 x internal temperature $(L \times W \times H)$ Type K thermocouple: -200 to 1260 °C Body: ASA plastic (white) Range Materials (-328 to 2300 °F)1 Protective edge: TPU elastomer (orange) Type K thermocouple: ±1.5 °C (±2.7 °F)<sup>2</sup> 4 x AA, 1.5 V alkaline/lithium **Tolerance Battery** Internal digital sensor: ±0.3 °C (±0.54 °F) or 1.2V rechargeable<sup>3</sup> Resolution ±0.1 °C (±0.18 °F) Socket type Miniature, type K, female Thermocouples LED 3 x multi color LED Type K (Ni-Cr / Ni-Al) supported IP rating IP64 **Data transmissions** Measurement Cable connected: Once every 15 min. CE, Radio Equipment Directive (RED), interval No cable connected: In standby Certifications RoHS Transmission Cable connected: Once every 15 min. Compatible Maturix® In-situ interval No cable connected: Once every 6 hr. Software Sigfox, Bluetooth® Network Part no: **Models** Sigfox RC1, Sigfox RC2, Sigfox RC4, BLE Coverage Gaia 300 (Sigfox RC14) 20300-1 Use and storage 20300-2 Gaia 300 (Sigfox RC2<sup>5</sup>, Sigfox RC4<sup>6</sup>) Temperature -30 to 50 °C (-22 to 122 °F) **HS Code:** 8517 6990 00 Humidity 0 to 100 %RH <sup>1</sup>Dependent on type K thermocouple. Max. temperature difference between device and thermocouple measurement is -200 °C and +1260 °C. <sup>2</sup>The tolerance depends on the type K thermocouple 3Alkaline batteries included. <sup>4</sup>sigfox RC1: Uplink 868.130MHz, Downlink: 869.525MHz: EIRP 16dBm <sup>5</sup>Sigfox RC2(Region-specific model): Uplink 902.200MHz, Downlink: 905.200MHz, EIRP 24dBm Ideal storage Indoor, 20 to 30 °C (68 to 86 °F) conditions





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

