

SIGNAL SENSOR V2.1 TECHNICAL DATASHEET

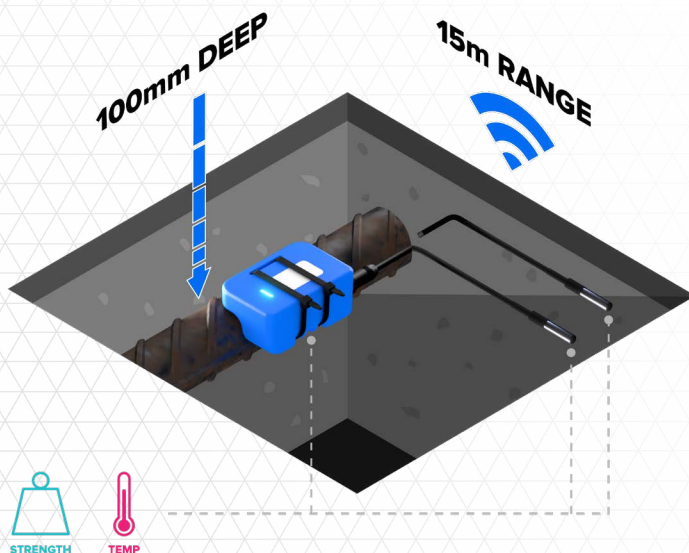


OVERVIEW

The Converge Signal Sensor v2.1 is a wireless, waterproof monitoring device designed for embedding in concrete to provide real-time temperature and strength data. With Bluetooth connectivity and a range of up to 15 metres, it supports multiple measurements and is built for the harsh conditions of construction sites.

FEATURES

- Waterproofed and robust design to be fully embedded in concrete.
- Wireless, continuous and real-time data: can communicate to the Converge Signal Live Hub or to your smartphone using Bluetooth.
- Option of getting multiple temperature measurements points using one single device: temperature tails can be attached to the body to get data from different points along one single element.
- Data collection range of up to 15m when submerged 100mm in concrete.



SAFETY INSTRUCTIONS

WARNINGS

- This device is intended for use as a construction monitoring sensor and not for use in domestic or commercial settings.
- The connection of incompatible devices to the Signal Device connector may affect compliance or result in damage to the unit and invalidate the warranty.
- This product should only be connected to thermal, tails distributed by Converge.

INSTRUCTIONS FOR SAFE USE

- Avoid using metal fixings, this may impair the functionality and safety of the device.
- Install the device away from areas which may be saw cut, cored or drilled through.
- Do not attempt to open or modify the device. Any modifications may impair the functionality and safety of the device.
- Do not store at a temperature greater than +45°C or lower than -20°C.
- Unless attached to a tail, keep the cap on the connector at all times.
- Avoid applying high pressure or impact to the connector (for example by standing on it).

TECHNICAL SPECIFICATIONS

SKU	CSS-210	CSS-211
Description	Temperature device with no tail option	Temperature device with option to attach tail with a single or multiple probes
Device dimensions (LxWxH)	74x48x35mm (2.9x1.9x1.4in)	83x48x35mm (3.2x1.9x1.4in)
Weight	111g	114g
IP Rating	IP68 (Not certified)	IP68 (Not certified)
Operational reading range	-40°C to +85°C (-40°F to 185°F)	-40°C to +85°C (-40°F to 185°F)
Temperature sensor accuracy	±0.2°C	±0.2°C
Enclosure materials	Enclosure: Nylon PA6 Grip: Nylabond® 6091-70A BLACK	Enclosure: Nylon PA6 Grip: Nylabond® 6091-70A BLACK Connector: SA8 Anodised Aluminium
Bluetooth version	v5.1	v5.1
Wireless range	Up to 15m (49.2ft)	Up to 15m (49.2ft)
Measurement frequency	Every 20 mins	Every 20 mins
Max RF Power (reduced in certain regions to comply with local laws)	+21dBm	+21dBm
Battery chemistry and voltage	Lithium Manganese Dioxide 3V (Not replaceable)	Lithium Manganese Dioxide 3V (Not replaceable)
Maximum recommended shelf life	2 years	2 years
Active battery life	At least 6 months	At least 6 months
Internal battery capacity	1700 mAh	1700 mAh
Internal battery voltage	3 Volts	3 Volts
Internal battery Wattage	5.1 Wh	5.1 Wh
Compatible Tails (sold separately)	N/A	Single probes - 10ft (3m) Multi probes - 6ft (2m) Lengths up to 32ft (10m) available upon request
Applicable Products	ConcreteDNA	ConcreteDNA

REGULATORY INFORMATION

Device certified for FCC, ISED, CE, UKCA, RCM, ACMA, NZRSM, IMDA, OFCA and WPC ETA.

FEDERAL COMMUNICATIONS COMMISSION (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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FFC: 2A7VH-CSS-210

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ISED CANADA STATEMENTS

This device complies with Industry Canada's license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. l'appareil ne doit pas produire de brouillage;
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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IC: 28833- CSS-210

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Signal Live v2.1 is not recyclable, and should not be disposed of in general household or commercial waste or in landfill. Please speak to the manufacturer for repairs or returns for potential refurbishment or part reuse.

AUSTRALIA (ACMA)

This product complies with the requirements of the relevant ACMA Standards made under the Radiocommunications Act 1992 and the Telecommunications Act 1997.

NEW ZEALAND REGULATORY (NZRSM)

The product complies with the FCC 15.427 and EN 61326-1:2021 standards.

SINGAPORE (IMDA)

The product has been registered with the Info-communications Media Development Authority under regulation 20(6) of the Telecommunications (Dealers) Regulations (Cap 323, Rg 6) (the "Dealers Regulations") and approved for sale in Singapore.

INDIA (WPC-ETA)

The product has been registered to the Equipment Type Approval (ETA) through self-declaration issued under O.M. No. ETA-WPC/Policy/2018-19 dated 26 February, 2019.

Registration No: ETA-SD-20230201480

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