

HELIX NODE TECHNICAL DATASHEET



OVERVIEW

The Helix Node is a long-range, wireless sensor designed for high-precision concrete monitoring in challenging construction environments. With a compact, pocket-sized design, the Helix Node offers extended wireless communication up to 1.5 miles and features a rugged, IP67-rated waterproof and weatherproof build. Its customizable thermal tails provide multi-point temperature measurements, ensuring precise data capture across diverse conditions. The Helix Node integrates seamlessly with the Helix Hub for continuous data transmission, enhancing real-time insights and decision making on-site. Engineered for durability and ease of use, it is ideal for projects requiring reliable, accurate, and efficient concrete performance monitoring.

FEATURES

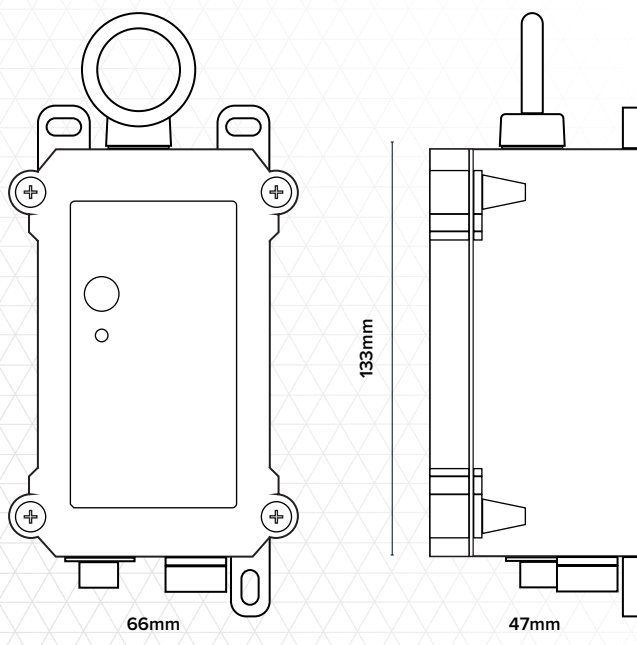
- Wireless, continuous data communicated via the Helix Hub.
- Long-range wireless communication up to 1.5 miles (Line-of-Sight).
- Waterproof and weatherproof design for outdoor construction environments.
- Compact design that fits in your pocket.
- Quick and easy attachment with in-built carabiner.
- Strong, IP67-rated connector for thermal tails to avoid unwanted disconnections.
- High-tech, high-accuracy thermal tails for precision data.
- Measure temperature in up to 3 places, with customisable thermal tails.
- Extended temperature range for global use.

TECHNICAL SPECIFICATIONS

Description	Long range sensor node
Device Dimensions (LxWxH)	133 x 66 x 47 mm
Weight	206g
IP Rating	IP67 Waterproof
Operational Temperature Range	-40 to 85°C
Enclosure Materials	Shell material: ASA Button material TPU
Bluetooth version	v5.1
LoRaWAN Range	Up to 1.5 miles (2.4km) in open space
Measurement Frequency	Every 20 minutes
Battery Chemistry / Voltage	3.6V Lithium Thionyl Chloride Battery (Not Replaceable)
Maximum Recommended Shelf Life	2 years
Internal Battery Capacity	8500mAh
Internal Battery Voltage	3.6V
Applicable Products	ConcreteDNA

RECOMMENDED SETUP PER USE CASE

- Use in conjunction with a Helix Hub.
- Install the Helix Hub outdoors and as high as possible.
- Ensure minimal interference between the Hub and the Node for best performance (avoid any metal obstructions).
- Do not install the Helix Hub in a metal site office or storage container.
- Setup configurations may vary based on your environment. Please refer to the customer manuals provided at the point of purchase or contact a sales representative for additional details.



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 Helix 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 or hit with a concrete pump.
- Do not attempt to open or modify the device, any modifications may impair the functionality and safety of the device.
- 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).

REGULATORY INFORMATION

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

Converge Helix is not recyclable and should not be disposed of in general household or commercial waste or in landfill.

