



Product Data Sheet: GeoWAN Millivolt Sensor Node

The GeoWAN Millivolt Sensor Node brings a wide variety of resistive bridge sensors into the GeoWAN system. It uses the integrated low range radio transceiver to report its measurements through Senceive's GeoWAN wireless communications network to a GeoWAN Gateway.

Examples of the sensors supported:

- Pressure sensors (differential, absolute)
- Foil strain gauges
- Torque sensors
- Load cells
- Load pins
- Moisture sensing
- Conductivity



Key Features

- Waterproof, robust connectors for simple installation
- Regulated sensor stimulus
- 24-bit sensing performance
- Integrated long life battery
- Up to 12 year battery life
- Integrated temperature sensor
- Versatile mounting options
- Waterproof to IP66 / IP67 / IP68

CONTACT US

For information on our award-winning wireless asset condition monitoring solutions, call **+44 (0) 207 731 8269**, email **info@senceive.com**, visit **www.senceive.com**

Specifications

Physical Specifications

Dimensions	90 x 90 x 60 mm (excluding antenna and vent) 90 x 96 x 60 mm (excluding antenna)
Total Mass	0.57 kg
Housing Material	Die cast aluminium body
International Protection Marking	IP66 / IP67 IP68 (1m for 24 hours)
Mounting Options	1/4" UNF holes in bottom, M4 blind holes in side Plates and brackets available for magnetic fixing, track bed, stake and pole mounting, and many other applications
Operating Temperature Range	-40°C to +85°C

Internal Battery

Battery Type	Lithium Thionyl Chloride, non-rechargeable
Nominal Voltage	3.6V
Nominal Capacity	19000mAh
Typical Battery Life	12 years at 30 minute reporting intervals when using radio preset 1 Consult with Senceive for your application

GeoWAN Radio Specifications

Communication Type	Star Topology
Frequency Band (868 variant)	863MHz - 870MHz ISM Band
Frequency Band (902 variant)	902MHz - 928MHz ISM Band
Frequency Band (915 variant)	915MHz - 928MHz ISM Band
Maximum Transmit Power (868 variant)	14dBm conducted
Maximum Transmit Power (902 variant)	18dBm conducted
Maximum Transmit Power (915 variant)	18dBm conducted
Maximum Antenna Gain	1.8dBi
Range	Up to 15km depending on the environment and fitted antenna Consult with Senceive for your application

Millivolt Sensor Interface

Range	±0.625V (±125mV/V)
Resolution	74.5nV (14.9nV/V)
Repeatability	±2.5µV (±0.5µV/V)
Stimulus	5.0 ±0.1V, 150mA max

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Sampling and Reporting

Maximum Reporting Frequency	30 seconds
Sample Storage	Stores the last 61 days of samples at a reporting interval of 30 minutes

Certifications

- Tested to conformity with all the essential requirements of the Radio Equipment Directive 2014/53/EU and RoHS Directive 2011/65/EU
- FCC Grant of Equipment Authorization: FCC ID 2AMFBLR3N
- ACB ISED Canada Certificate: 24373-LR3N
- RCM (Australia and New Zealand)
- Tested to conformity with IEC61010-1:2010/AMD1:2016 for CB Test Certificate GB EMT 1479

Ordering Information and Accessories

LR3N-MV5(868)	GeoWAN Millivolt Sensor Node Europe
LR3N-MV5(902)	GeoWAN Millivolt Sensor Node North America, South America
LR3N-MV5(915)	GeoWAN Millivolt Sensor Node Australia, New Zealand, Chile, Brazil
FS-MV5CON	Sensor Connector With screw terminals for easy installation
FF-MP-S360	Swivel mounting kit with 360-degree adjustment range Screw directly to vertical walls
FF-MP-V	Vertical mounting plate Use U-bolts to fix to poles or stakes Use glue to fix to walls where drilling is not permitted (Order with FF-MP-S360)
FF-MP-H	Horizontal mounting plate
FF-MP-HM	Horizontal magnetic mounting plate
FF-MP-T2	Track bed mounting plate kit
FF-MP-M2	Magnetic mounting kit High degree of adjustability, perfect for cast iron lined tunnels
FA-LR-WPS	Waterproof straight antenna Overall node height 168mm (approx) when antenna fitted Maximum gain +1.8dBi

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