



## Product Data Sheet: Digital Interface Node



The Digital Interface Node is a robust IP66/IP67 rated digital data logger that transforms your data collection from manual to automated sampling. This wireless digital data logger is compatible with a large variety of sensors that carry a digital output and enables a simple connection to the Senceive back-end & front-end platforms. Interact and manage your data online and change reporting times and thresholds remotely.

### Ideal for many applications including:

- Understanding diaphragm wall movements when installing in-place inclinometers in large excavation and construction projects.
- Managing your geotechnical assets in mining, railways & highway using piezometers, extensometers and inclinometers.
- Environmental applications such as continuous logging of weather station data including precipitation, wind strength and temperature.

### Key features

- Versatile mounting options
- NFC compatibility, enabling on the spot adjustments to the node
- “Sleep mode” functionality
- Power sensors requiring up to 20 Watts
- Configurable output voltage enabling longer sensor chains
- Waterproof to IP66 / IP67
- Hardware support for these connection protocols: RS232, RS422, RS485, SDI-12, MODBUS and CAN
- Low power, long battery life with changeable batteries
- Automatic power sharing and switchover between battery and external DC supply



# Digital Interface Node



## Compatible Sensors

Manufacturer	Product	Known Limitations
GeoSense	In-place Inclinator	TBD  Validated with 50x bi-axial IPI sensors with battery powered Digital Interface Node  ModBus variant only
Geokon	Model 6180 Vertical IPI System Model 6185 Horizontal IPI System	Validated with 64x IPI sensors with battery powered Digital Interface Node
Sisgeo	BH-Profile In-place Inclinator MD-Profile Array Horizontal In-place Inclinator MEMS In-place Inclinator	TBD
Osprey measurement systems	In-place Extensometer	TBD  Validated with 50x extensometer segments with battery powered Digital Interface Node
Vaisala	WXT530 Series	None

## Physical Specifications

Parameter	Value
Dimensions excluding antenna and bracket	246 x 137 x 88 mm
Dimensions including antenna and bracket	246 x 303 x 106 mm
Total Mass	836 g without batteries 1090 g with 2 batteries 1346 g with 4 batteries
Housing Material	Polycarbonate
Protection	IP66 and IP67
Mounting Options	Pole mount, wall mount
Operating Temperature Range	-40°C to +85°C

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# Digital Interface Node



## GeoWAN Radio Specifications

Parameter	Value
Communication Type	Star Topology
Frequency Band (868 variant)	863 MHz - 870 MHz ISM Band
Frequency Band (902 variant)	902 MHz - 928 MHz ISM Band
Frequency Band (915 variant)	915 MHz - 928 MHz ISM Band
Frequency Band (923A variant)	922.0 MHz - 923.4 MHz ISM Band
Frequency Band (923B variant)	923.2 MHz - 924.6 MHz ISM Band
Maximum Transmit Power (868 variant)	14 dBm conducted
Maximum Transmit Power (902 variant)	18 dBm conducted
Maximum Transmit Power (915 variant)	18 dBm conducted
Maximum Transmit Power (923A variant)	14 dBm conducted
Maximum Transmit Power (923B variant)	14 dBm conducted
Maximum Antenna Gain	1 dBi
Range	Up to 15 km depending on the environment and fitted antenna Consult with Senceive for your application

## Auxiliary Power Input

Parameter	Value
Connector	M12 Male 3-pole A-coded Screw clamp
Input Voltage (DC)	10 V to 28 V (recommended 24 V)
Maximum Input Current (A)	4A fuse limited
Power (W)	Minimum 40W recommended Max Limitation: <100W Limited Power Source

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# Digital Interface Node



## Internal Batteries

Parameter	Value
Battery Type	Primary lithium-thionyl chloride (Li-SOCI2) with Hybrid Pulse Capacitor (HPC) Consult with Senceive for battery recommendations for extremely low temperature climates
Nominal Voltage	3.6 V
Nominal Capacity	19Ah
Cable and Connector	75mm 22AWG UL1007 onto JST-PAP-02V-S
User serviceable	Yes
Quantity	2 or 4 required

## Sensor Interface

Parameter	Value
Connector	M12 Female 8-pole A-coded Screw clamp
Output Voltage (DC)	0.8 V to 22 V
Output Current	Up to 2A
Digital Interfaces	RS232 RS422(1) RS485(1) SDI-12 CAN  (1): With software-controlled termination and biasing

## Certifications

- CE, FCC, IC, ACMA

Registered design DM/232 478

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# Digital Interface Node



Digital Interface Node Supported Devices - Battery Life in Years

Manufacturer	Product Family	Product Name	Max no. sensors	External power required	5-min sampling	1-hour sampling		6-hour sampling	
					5 sensors	5 sensors	25 sensors	5 sensors	25 sensors
Osprey Measurement Systems	In Place Extensometer	IPX	50	No	5.5 years	15 years	9 years	15 years	15 years
Geokon	In Place Inclinator	Model 6180/6185	64	No	2 years	9 years	3 years	15 years	10 years
Geosense	In Place Inclinator	IPI	50	No	2 years	7 years	3 years	15 years	10 years
Sisgeo	MD Profile	MD00	50	No	1 years	6 years	2 years	12 years	9 years
Sisgeo	BH Profile IPI	S430	50	No	1 years	6 years	2 years	12 years	9 years

## Vaisala weather station

Number of sensors in chain	Estimated Battery Life at Reporting Rate		
	30 minutes	1 hour	6 hours
1 (WXT532, 533, 536)	50 days	50 days	50 days
1 (WXT531, 534, 535)	6 months	6 months	6 months

# Digital Interface Node



## Ordering Information and Accessories

Model	Description
L3N1 - DIN (868)	GeoWAN Digital Interface Node (excluding batteries) Europe
L3N1 - DIN (S) (868)	GeoWAN Digital Interface Node (including standard batteries) Europe
L3N1 - DIN (902)	GeoWAN Digital Interface Node (excluding batteries) North & South America
L3N1 - DIN (S) (902)	GeoWAN Digital Interface Node (including standard batteries) North & South America
L3N1 - DIN (915)	GeoWAN Digital Interface Node (excluding batteries) Australia, New Zealand, Chile, Brazil
L3N1 - DIN (S) (915)	GeoWAN Digital Interface Node (including standard batteries) Australia, New Zealand, Chile, Brazil
L3N1 - DIN (923A)	GeoWAN Digital Interface Node (excluding batteries) Asia 923A Region
L3N1 - DIN (S) (923A)	GeoWAN Digital Interface Node (including standard batteries) Asia 923A Region
L3N1 - DIN (923B)	GeoWAN Digital Interface Node (excluding batteries) Asia 923B Region
L3N1 - DIN (S) (923B)	GeoWAN Digital Interface Node (including standard batteries) Asia 923B Region
L3N1 - DIN (LT)	GeoWAN Digital Interface Node (including low temperature batteries)
FS-DIN-SENCON	Connector for Digital Interface Node sensor
FF-MP-DIN-WM	Wall mount
FF-MP-DIN-WMK	Magnetic wall mount
FF-MP-DIN-PM	Pole Mount (with jubilee clip)
SP-C03168-2	Standard batteries (2 pack)
SP-C03169-2	Low temperature batteries (2 pack)
FX-C-5M FX-C-2M FX-C-1M	N-type antenna extender (5 m) N-type antenna extender (2 m) N-type antenna extender (1 m)
FA-MK-CB	N Type Antenna Bracket for 6.35 mm screw / tie wrap / jubilee clip
FA-MK-CBM	N Type Antenna Bracket with magnets
FP-AC40DIN-UK FP-AC40DIN-EU FP-AC40DIN-US FP-AC40DIN-ANZ	Mains power supply with pre-fitted connector to power the Digital Interface Node Choose plug to suit
FP-DIN-SP45	45W Solar Panel for Digital Interface Node
FP-DIN-PWRCON	Female Cable Mount, IP67-Rated, M12A Connector Plug

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