Pluto



Radio temperature, humidity, differential pressure datalogger for DeepWave: wireless monitoring system based on LoRa (Long Range) for a very long distance transmission that allows to have only one Helios receiver to cover all systems. The Pluto module has an ePaper screen (like that of ebooks), 2 inputs for **Smart Sensors** chosen from those available, audible alarms via buzzer. The Smart Sensors (not included) are supplied with an **Accredia traceable calibration certificate** and allow immediate, economic and simple recalibration of the system, without intervention. Pluto also has the connector for external power supply (the batteries have a backup function, the power supply is not included). Batteries are easily replaceable by the user.



Main features

- Lora radio module for long distances transmission (up to 3 km in open field)
- Accepts up to two Smart Sensors of temperature, humidity, differential pressure, light
- 2.9" wide ePaper display
- External power connector (power adapter not included)
- 4-buttons for display screen scrolling
- User replaceable batteries
- Certificate traceable to a national standard included with the Smart Sensors

Plus

- Easy to install and configure
- Thanks to the external power you forget to change the batteries
- Quick recalibration with the Smart Sensors
- Wide and low energy ePaper display
- Sound local alarm for immediate intervention
- Covers long transmission distances
- Validatable DeepWave LoRa system in pharmaceutical and healthcare environment

The system

Pluto is part of the Lora Wan DeepWave system that is made up by:

- DeepWave radio modules (LoRa nodes)
- Helios receiver (LoRa gateway)
- TSLog 21 software

Applications

Pharmaceutical

Cosmetics

Medical

Healthcare

Cold Chain

Warehouses

Environment

Food & Beverages

Laboratories

Constructions

Validation

Accessories

- TSLog 21
- Helios - LoRa Gateway
- Surface Support for DeepWave Node
- Wall Mounting support for DeepWave Node
- Temperature Smart Sensor
- -80°C temperature Smart Sensor
- 200 temperature Smart Sensor
- Temperature Smart Sensor with thin cable
- Temperature and humidity Smart Sensor
- Differential Pressure Smart Sensor
- Light Smart Sensor (On/Off)
- Temperature Smart Sensor with internal sensor
- Smart Sensor / ZED IT adapter cable extensions
- Flat DeepWave Node / Smart Sensor cable extension
- LoRa Node / Smart Sensor cable extensions

Technical specifications

Dimensions	151.6 X 88 x 33 (mm) (with connectors) / 146.6 X 88 X 33 (mm) (without connectors)
Weight	280 g
Materials	ABS, Rubber
Sensors	2 X Smart Sensor inputs
Temperature range	-20 °C ÷ +50 °C (non condensing)
Memory (n. of acquisitions)	16.383
Acquisition step	From one every 5 minutes up (in steps of 1 minute)
Display size	
Display and functions	Current values, Alarms, Diagnostics, Radio Signal Strength
Alarms	Local (acoustic)
Functions	Data recording, transmission, alarm
Communication	Radio
Protocollo Radio	LoRa
Available frequencies	868 MHz, 915 MHz, 920 MHz, 923-2 MHz
Antennae	Internal
Battery type	3 X AA 1,5 V batteries
Battery life	12 months with 15 minutes transmission step and 2 sensors connected
Power supply	6-26 V (adapter not included)
Protection degree	IP65
Software&Mobile App	TSLog 21
Regulation compatibility	CE, ROHS
Regulation compatibility	FDA 21 CFR Part 11, Annex 11, GAMP 5

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