WATTECO

SMART METERING

SMART INDUSTRY

MONIT'O

LoRaWAN

MONIT'O offers 2 analog inputs isolated from each other for the measurement of voltage (0-100mV and 0-70V). The measurements are transmitted periodically over the LoRaWAN® network.

APPLICATIONS

- Battery voltage monitoring
- Battery current monitoring (shunt not supplied)
- Rectifier monitoring for cathodic protection

BENEFITS & KEY FEATURES

- LoRaWAN®, Class A
- Easy to use and deploy
- Battery-powered device
- 2x analog inputs: 0-70V & 0-100mV
- More than 10 years of autonomy depending on configuration
- IP55

QUALITY & RELIABILITY

- RED, RoHS

CONCEPTION ET FABRICATION MADE IN FRANCE

MONIT'O offers a solution for the remote monitoring of batteries:

- with its 0-70V input, measures battery output voltage (12V, 24V, 48V).
- with its 0-100mV input, measures a voltage produced across a shunt through which the battery current flows. The remote application calculates the current using Ohm's law.

MONIT'O allows the monitoring of the electrical voltage and current quantities delivered by a cathodic protection rectifier:

- 0-70V input for voltage measurement.
- 0-100mV input for voltage measurement on shunt.

The measured data can be stored in the local memory and compressed before being transmitted over the LoRaWAN® public or private network.

This technique considerably reduces the amount of data transmitted while preserving the autonomy of the sensor.

MONIT'O runs on a 3.6V/3.6Ah Lithium battery, the autonomy of the sensor is 12 years with 1 measurement and 1 transmission per day (default configuration).

With a configuration that performs one measurement every 10 minutes and one transmission every hour, the autonomy is up to 7 years.

THE LARGEST IOT PRODUCTS RANGE FOR YOUR PROJECT

WATTECO is a European leader in the design and manufacture of smart IoT devices to suit all remote reading and data collection solutions.

WATTECO is a LoRa Alliance® member.

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TECHNICAL DATA

RADIOFREQUENCY	Frequency (MHz)	Transmit Power (dBm)	Receiver Sensitivity (dBm)
	EU: 863-870	+14	-140

FIRMWARE	
Protocol	LoRaWAN®, Class A.
Activation method	Activation by Personalization (ABP) or Over-The-Air Activation (OTAA)
Data encryption	AES128
Application layer	ZCL (ZigBee Cluster Library) – to be interpreted by the remote server
Measurements & Transmission cycles	Configurable from 10 minutes to 24 hours
Data compression	Yes (differential coding)

INPUTS	1x 0-70V	1x 0-100mV
Wiring	2 conductors (1 pair) 20-26 AWG stranded Length 1.5m	2 conductors (1 pair) 20-26 AWG stranded Length 1.5m
	Common mode voltage > 70 Volts	Galvanic insulation
Accuracy	± 70mV	± 1mV
Resolution	17mV	1mV

POWER SUPPLY	
Voltage	3.6V / 3600mAh – Non replaceable lithium battery
Autonomy in a range of +10°C to +25°C	> 12 years: 1 measurement & 1 transmission per day > 6 years: 1 measurement every 10 minutes & 1 transmission every 6 hours

USER INTERFACES	
NFC Tag	Product code, serial number, batch number
Buzzer	Configuration and network pairing
Magnetic switch	Reset, ON/OFF

ENCLOSURE	Size (mm)	Fastenings	IP rating	Fire resistance
	92 x 92 x 56	Supplied screws and anchors	IP55	UL94-V0HB

ENVIRONMENT	Operating temperature	Storage conditions
	-20°C to +50°C	+10°C to +30°C +20%rH to +60%rH

DIRECTIVES & STANDARD
Radio Equipment Directive 2014/53/EU, RoHS

PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-141	LoRaWAN® MONIT'O Sensor