WATTECO

SMART INDUSTRY

SMART METERING

ATM'O

LoRaWAN®

The **ATM'O** sensor measures temperature, relative humidity and atmospheric pressure in outdoor and industrial environments and transmits the data via a public or private LoRaWAN® radio frequency network.

APPLICATIONS

- Agriculture: supervision of greenhouses and vineyards
- Railway infrastructure: sending alerts when ice is detected on catenaries
- Roads: local weather information, prevention and optimisation of road salting in winter
- In industrial environments: regulation of air heaters

BENEFITS & FEATURES

- LoRaWAN®, Class A
- Battery life: 5 years minimum (with "real time" configuration)
- Operating range: -20°C to +55°C
- Measures temperature, relative humidity and atmospheric pressure:
    - Range: 90kPa/115kPa; -20°C/+55°C; 0%/100%rH
    - Accuracy: +/-1.5%; +/-0.1°C; +/-1.5%rH
- Tropicalised measuring board
- Vertical antenna
- IP68 outdoor enclosure

CERTIFICATION

- RED, RoHS

CONCEPTION ET FABRICATION
MADE IN FRANCE

The **ATM'O** sensor measures temperature and relative humidity as well as atmospheric pressure in outdoor or industrial environments. Data transmission over a public or private LoRaWAN® network is done periodically and in the event of a configured threshold being exceeded:

- Min. and max. temperature
- Min. and max. humidity
- Min. and max. pressure

In an industrial environment to determine the blowing conditions to maintain constant temperature and hygrometry in a room dedicated to an industrial process.

The sensor has been specifically designed for outdoor operation. The housing is waterproof and the electronic board that performs the measurements is tropicalised.

Commissioning is quick and easy. The **ATM'O** sensor is equipped with :

- an NFC identification tag (product code, serial number, batch number)
- a magnetic switch that allows the installer to easily activate/deactivate the sensor by placing a magnet on the upper dome of the **ATM'O** at the location indicated by the ILS label.

Ambient air pressure, temperature and relative humidity data can be stored in the local memory (aggregation) and compressed before being transmitted over the LoRaWAN® network. This reporting model significantly reduces the amount of data transmitted while preserving the autonomy of the sensor.

When powered by a 3.6V/7.2Ah battery, the sensor's autonomy ranges from 5 to 7 years for a "real time" configuration that performs 1 measurement every 10 minutes, transmitted immediately. If aggregation is used, the autonomy extends from 8 to 10 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.

ATM'O

TECHNICAL DATA

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

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

PRESSURE MEASUREMENT	Range	Accuracy
	90kPa to 115kPa	± 1.5% between 0°C and 55°C

TEMPERATURE MEASUREMENT	Range	Accuracy
	-20°C to +55°C	± 0.1°C between 0°C and 55°C ± 0.2°C between -20°C and 0°C

HYGROMETRY MEASUREMENT	Range	Accuracy
	0%rH to 100%rH	± 1.5%rH between 10%rH and 80%rH from 0°C to 55°C ± 2%rH otherwise

POWER SUPPLY	
Voltage	3.6V / 7200mAh – Lithium battery
Autonomy	> 5 years with 1 measurement transmitted every 10 minutes > 8 years with 2 measurements/hour and 1 transmission/hour

INTERFACE	
Magnetic switch	Reset, ON/OFF

ENCLOSURE	Size (mm)	Fastenings	IP rating
	150 x 150 x 250	U-bolt and mounting kit supplied	IP68

ENVIRONMENT	Operating temperature	Storage conditions
	-20°C to +55°C	+10°C to +30°C +20%rH to +60%rH

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

PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-099	LoRaWAN® ATM'O sensor