

IN'O is a LoRaWAN® Class A or Class C sensor designed to transform any type of binary I/O sensor into a remote wireless sensor that monitors and controls industrial equipment status.

APPLICATIONS

- Industry – Process control and automation, power line fault detection.
- Water treatment, agricultural irrigation – Monitor and control water valves and pumps, alarm status...
- Food production & distribution – Monitor and control cooling equipment, refrigerator door contact status, alarm status...
- HVAC & building management – Monitor and control air valves and pumps, heaters/coolers, alarm status, human presence, door contact status, lights...

BENEFITS & KEY FEATURES

- LoRaWAN®, Class A, Class C
- Easy to use and deploy
- Simultaneous monitoring and control of up to 10 inputs and 4 outputs
- Data compression for batch report
- Battery operated or external power supply
- Battery autonomy up to 10 years
- IP55

CERTIFICATION

- RED, RoHS



Sensors delivered without WATTECO marking

The IN'O sensor from nke Watteco is a long range, low power consumption, high performance and high quality LoRaWAN® Class A or Class C device that transforms any type of I/O sensor into a Wireless Sensor.

IN'O is specifically designed for users looking to remotely monitor (ON/OFF status, alarms...) and control (ON/OFF switching) industrial equipment such as pumps, fans, valves, heaters, coolers, motors, generators, lights, doors...

The IN'O sensor can operate either from a 3.6V/3600mAh Lithium battery or from an external 9V-24V/300mW power supply.

Ten sensors and four actuators can be simultaneously supported by a single LoRaWAN® IN'O device, thus allowing a significant reduction in installation and deployment costs.

The measured parameters can be locally stored, concatenated and compressed. This unique batch mechanism significantly reduces the amount of data transmitted for demanding applications and drastically increases the autonomy up to 10 years when operating on battery.

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.

TECHNICAL DATA

RF TRANSCEIVER

Frequency (MHz) EU: 863-870

Transmit Power (dBm) +14

Receiver Sensitivity (dBm) -140

FIRMWARE

Protocol LoRaWAN®, Class A, Class C

Transmission cycles Configurable through the network

Data history Available

Activation method Activation by Personalization (ABP) or Over-The-Air Activation (OTAA)

Data encryption AES128

INPUT CHARACTERISTICS

Number of inputs 10

Impedance (MΩ) >1

Capacitance (nF) 1; typical

Voltage (V) 0 - 30

Current (μA) 3.5

Frequency (Hz) 0 - 100

OUTPUT CHARACTERISTICS

Number of Outputs 4; optically isolated

Open Collector 1500mW, I_{dc}=100mA

Voltage 24 Volts

POWER SUPPLY

Voltage 3.6V / 3600mAh – Lithium battery
9V-24V / 300mW – External power supply

Autonomy in a range of +10°C to +25°C 10 years for 1 measurement & 1 transmission per day

INTERFACE

LED Indicator 3 LEDs for Configuration, Network pairing & Activity on inputs

Button / Magnetic Switch Reset, ON/OFF

ENCLOSURE

Size (mm) 92 x 92 x 56

IP Rating IP55

ENVIRONMENT

Operating temperature (°C) -20 to +50

Storage temperature (°C) -10 to +30

DIRECTIVES & STANDARD

Radio Equipment Directive 2014/53/EU, RoHS



PRODUCT NUMBER

REFERENCE

DESCRIPTION

50-70-016 LoRaWAN® In'O sensor Class A

50-70-087 LoRaWAN® In'O sensor Class C