

LoRaWAN™ IN'O SENSOR



IN'O is a LoRaWAN™ Class A sensor transforming 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 defect detection
- Water Treatment, Agriculture Irrigation – monitor and control water valves and pumps, alarm status...
- Food production & distribution – monitor and control cooling equipment, fridge door contact status, alarms status...
- HVAC & building management – monitor and control air valves and pumps, heaters/coolers, alarm status, human presence, doors contact status, lights...

BENEFITS & KEY FEATURES

- LoRaWAN™, Class A
- Easy to use and deploy
- Simultaneous monitor and control up to 10 inputs and 4 outputs
- Data compression for batch report
- Operation on battery or via external power supply
- Up to 10 years battery autonomy
- IP55

QUALITY & RELIABILITY

- RoHS compliant
- CE compliant
- FCC compliant



The IN'O sensor from nke Watteco is a long range, low power consumption, high performance and high quality, LoRaWAN™ Class A device transforming 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...

IN'O sensor can operate either from a 3.6V 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 allowing a significant reduction of installation and deployment costs.

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

NKE WATTECO, YOUR PARTNER IN SMART SENSORS & ACTUATORS

We are a European leader in designing and manufacturing highly reliable and low power consumption smart sensors, actuators and multiprotocol remote data solutions.


nke Watteco is an adopter member of the LoRa® Alliance

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TECHNICAL CHARACTERISTICS

RF TRANSCEIVER	
Frequency (MHz)	EU: 863-870 US: 902-928
Transmit Power (dBm)	+14
Receiver Sensitivity (dBm)	-140
FIRMWARE	
Protocol	LoRaWAN™, Class A
Transmission cycles	10mn, 1h, 12h or defined by network
Data history	Available
Activation method	Activation by Personalization (ABP) 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)	1 - 100
OUTPUT CHARACTERISTICS	
Number of Outputs	4; optically isolated
Open Collector	250mW, I _{cc} =500mA
Voltage	15V
POWER	
Power supply	3,6V / 3600mAh lithium battery 9V-24V / 300mW external power supply
Autonomy within a +10°C to +25°C temperature range	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
MECHANICAL FEATURES	
Dimension (mm)	84x82x85
IP Class	IP55 (IP68 on demand)
ENVIRONMENTAL	
Operating temperature (°C)	-20 / +50
Storage temperature (°C)	-10 / +30
DIRECTIVES & STANDARD	
EN, 61000-4-2 EN 300-220-1 V2-4-1, EN 301 489 V1-6-1 CE, FCC part 15.247 subpart C, RoHS recommendation compliant	
	

ORDERING INFORMATION

REFERENCE	DESCRIPTION
50-70-016	LoRaWAN™ In'O sensor Class A
50-70-087	LoRaWAN™ In'O sensor Class C