

## PRESS'O 0-5 V ATEX zone 1



The **PRESS'O 0-5V AtEx ZONE 1** sensor is used to analogue measurements of equipment in an AtEx 1 sensitive zone such as mechanical pressure switches, pressure transducers. It allows existing equipment to communicate over a public or private LoRaWAN® network.

### APPLICATIONS

- In hazardous areas it reads load curve monitoring, pressure sensors.
- Associated with a pressure probe, measurements on a gas/steam network.

### BENEFITS & FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- 2 analogue inputs: 2x 0-5V
- 1 power supply output: ~5Vdc
- SAFT LS17500 Lithium battery on holder
- Differential data compression
- IP55 or IP68
- Up to 8 years of autonomy

### CERTIFICATION

- RED, UKCA, RoHS
- AtEx Zone 1 certification according to marking:
  - Ex II 2 GD
  - Ex ib IIC T4 Gb
  - Ex ib IIIC T135°C Db
  - $-20 \leq T_{amb} \leq +50^{\circ}\text{C}$



The **PRESS'O 0-5 V ATEX zone 1** sensor enables all your existing equipment with analogue output in AtEx zone 1 explosive atmospheres to communicate via a public or private LoRaWAN® network.

Installation and commissioning are quick and easy.

The sensor has:

- a switch reed used for its activation and deactivation,
- 2 LEDs to monitor the configuration and pairing to the network.

Data can be stored in the local memory and compressed before being transmitted over the public or private LoRaWAN® network. This reporting technique is particularly suitable for transmitting load curves as it considerably reduces the amount of data transmitted while preserving the autonomy of the sensor.

When powered by a SAFT 3.6V/3600mAh Lithium battery, the autonomy of the sensor is 10 years (data compression mode) with a configuration that performs one measurement per day and one transmission per day.

Installation, maintenance and operation must be carried out exclusively by a technician qualified for the use of electrical equipment in explosive atmospheres as defined in EN 60079-14.

### 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 since 2015.

### TECHNICAL DATA

RADIOFREQUENCY	Frequency (MHz)	Transmit Power (dBm)	Receiver Sensitivity (dBm)
	EU: 868 - 870	+14	-140

#### FIRMWARE

Protocol	LoRaWAN®, Class A
Measurement periodicity	From 10 minutes to 24 hours (configurable)
Transmission interval	Immediate following measurement or batch at 30min to 48hrs (configurable)
Data compression	By differential coding (configurable)
Activation method	Activation by Personalization (ABP) ou Over-The-Air Activation (OTAA)
Data encryption	AES128

#### 0-5 V INPUTS: intrinsic safety parameters

$U_0=6.51V$ ;  $I_0=67mA$ ;  $P_0=108mW$ ;  $C_0=500\mu F$  [IIB];  $C_0=22\mu F$  [IIC];  $L_0=33mH$  [IIB];  $L_0=8mH$  [IIC].

#### POWER SUPPLY

Voltage	3.6V / 3600mAh - AtEx Zone 1 certification: battery replacement (only with IP55 version), use only SAFT LS17500 batteries. Transmitted battery voltage level (configurable in 0.1V steps).
Autonomy (in a range of +10°C to +25°C)	> 10 years with SF12, 1 measurement per day and 1 transmission per day

#### USER INTERFACE

Magnetic switch + LEDs	Network pairing; signalling of sensor states; visible through the openings
NFC tag	Product code, serial number, batch number
Cable connection	connection on 6 pins Amphenol connector; see references

ENCLOSURE	Size (mm)	Weight (g)	Fastenings	IP rating	Material	Fire resistance
	91 x 102 x 56	215	Wall mounting thanks to screws or adhesive tape (not supplied)	IP55 or IP68	Box : ASA200FR Cover : PC943A	UL94V2

ENVIRONMENT	Operation	Storage
	-20°C / +50°C ; +0%rH / +95%rH (non-condensing)	10°C / +30°C ; +0%rH / +60%rH

#### STANDARDS & REGULATIONS

Radio Equipment Directive 2014/53/EU, RoHS



CE 2900 Ex II 2 GD  
Ex ib IIC T4 Gb  
Ex ib IIIC T135°C Db  
-20 ≤ Tamb ≤ +50°C  
QPS 25ATEX7001 X

WARNING - DO NOT CHANGE THE BATTERY IN EXPLOSIVE ATMOSPHERE - ONLY USE TYPE OF BATTERY SAFT LS17500 - POTENTIAL ELECTROSTATIC CHARGING HAZARD - INTRINSIC SAFETY PARAMETERS FOR CONNECTORS - SEE INSTRUCTIONS

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### PRODUCT REFERENCES

REFERENCE	HS Code	Designation
50-70-151	85 17 62	PRESS'O 0-5 V ATEX ZONE 1, IP68 - LoRAWAN® EU868
50-70-246	85 17 62	PRESS'O 0-5 V ATEX ZONE 1, IP55 - LoRAWAN® EU868
18-40-263	85 36 69	Cable - 2 meters with Amphenol connector to 6 free wires
18-40-298	85 36 69	Amphenol connector - 6 pins