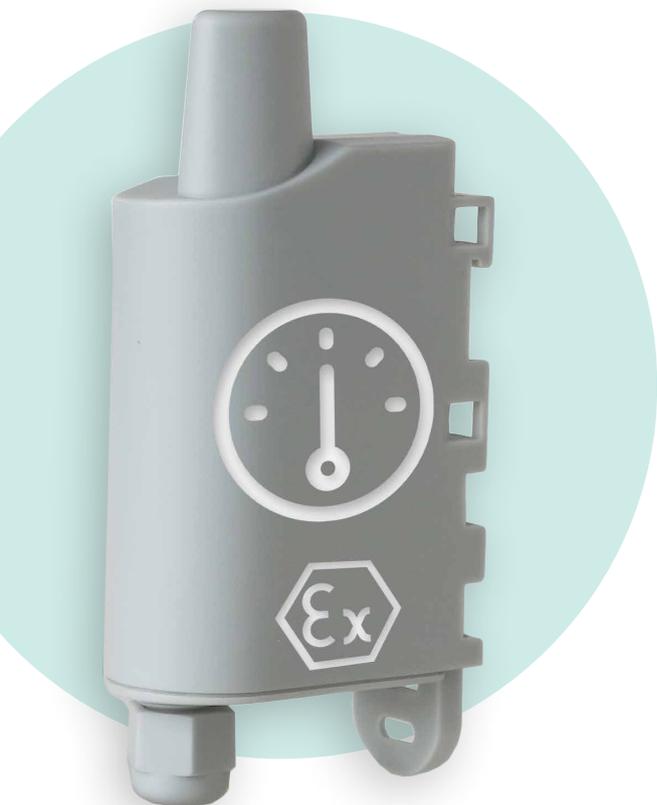# PULSE ATEX

adeunis
IOT PRODUCTS & SOLUTIONS

Make your meters communicate in ATEX zone 1.

ALERT

Alert when the flow rate exceeds a threshold

MONITOR

Reading of water and gas meters:
· Periodic transmission of the index
· Periodic monitoring of flow rates (min/max), fraud and leaks

Additional features:
· **Autonomy optimization:** historization
· **Accessibility of the data:** redundancy
· **Error or Default management:** Hardware error, configuration inconsistancy and low battery alert
· **Timestamp of the frame** (LoRaWAN)
· **Network Quality Test at start-up** (LoRaWAN)

ATEX
· **Gas &steam**
  Zone 1: immediate proximity to the sensitive area
  Groupe IIC: hydrogen gases and vapors, acetylene...
· **Dunst**
  Zone 21: immediate proximity to the sensitive area

Monitor your energy consumption in the immediate proxymity of your meter.

Count the opened / closed status or filling volume of a grain silo, placed on a SEVESO site.

TECHNICAL SPECIFICATIONS

LoRaWAN ARF8230FA | Sigfox ARF8230GA

Mechanical specifications

Weight	70 g (battery included)
Dimensions	105 x 50 x 27 mm
Enclosure	IP67, EMERGE™ PC 8731HH grey resin (casing), EMERGE™ PC 8430-15 transparent resin (sole)
Mounting	DIN Rail, Tube, Wall, Collar

Operating conditions

Temperature	-25°C / +70°C
Humidity	0 to 85% RH (non-condensing)

Device Power Supply

Battery Type	1 soldered battery
Expected Battery Life	For 1 index per hour and 1 transmission every 4 hours (6 frames/day), 10,000 pulses and Pull-Up activated: Sigfox: 4.7 years | LoRaWAN SF12: 9.3 years | LoRaWAN SF7: >10 years

Device configuration

Local device configuration	IoT Configurator
Remote device configuration	Downlink via the network or via the KARE platform
Configuration and firmware update from the air	KARE+ compatible (only with LoRaWAN)
Security	PIN/PUK Code protection

Radio/Wireless

Supported regions	LoRaWAN EU863-870 / Sigfox RC1
Wireless Security	AES-128 data encryption (LoRaWAN only)
Class	LoRaWAN: Class A | Sigfox: Class 0
Supported LoRaWAN features	OTAA, ABP, ADR, adaptive channel setup
RF transmit power	14 dBm
Sensitivity	-132 dBm LoRaWAN @SF12 | <-122 dBm Sigfox

Regulations and certifications

Standard	Directive 2014/53/UE (RED)
ATEX	2014/34/UE ATEX II 2 G D Ex ib IIC T4 Gb Ex ib IIIC T135°C Db -20°C < Tamb < +40°C $U_o \leq 3.9V$; $I_o \leq 6.1mA$; $P_o \leq 6mW$; $C_o \leq 440\mu F$; $L_o \leq 930mH$ $U_i \leq 15V$; $I_i \leq 1000mA$; $P_i \leq 3750mW$; $C_i = 0\mu F$; $L_i = 0.13mH$

Impulse input

Number of channels	1 or 2 channels configurable (eg: 1 counter with 5 wires or 2 counters with 3 wires)
Equivalent input pull-up	180 kΩ (water), 47 kΩ (gas)
Input frequency	<100 Hz

BUNDLE	LoRaWAN	Sigfox
PULSE + BINDER	ARF8230FA-B01	ARF8230GA-B01
PULSE + GAZPAR	ARF8230FA-B02	ARF8230GA-B02

CFA-V5