

# PULSE

Turn all your meters and pulse output into smart equipment.



**MONITOR**

Periodically report water, electricity and heat meter readings:

- programmable index acquisition time,
- configurable transmission frequency,
- flow monitoring (min/max).

Count the number of cycles of a piece of equipment and anticipate its maintenance.



**ALERT**

AND/OR Trigger an alarm when:

- a fraud is detected,
- the flow rate exceeds a threshold (high/low),
- a leak is detected.

Additional features:

- 2 configurable pulse inputs
- Fraud and leak detection
- Flow monitoring for a meter
- Data transmission modes: periodic and/or event-triggered
- Over 15 years of autonomy with standard configuration
- Autonomy optimization: data logging up to 23 samples per frame (depending on version)
- Local and remote product configuration
- Start-up pulse detection test
- IP68 protection rating



Monitoring energy consumption in a building (water, electricity, etc.).



Count the number of cycles of an equipment to anticipate its maintenance.

# TECHNICAL SPECIFICATIONS



## PULSE

### Current versions and associated part number

LoRaWAN	EU863-870	ARF8230ARA
	US902-928	ARF8230BRA
	AU915-928	ARF8230IRA
	AS923	ARF8230JRA
Sigfox	RC1	ARF8230CRA
	RC2	ARF8230DRA
	RC4	ARF8230KRA

### General specifications

Weight	103g (battery included)
Dimensions	132 x 62 x 34 mm
Enclosure	IP68, EMERGE™ PC 8731HH grey resin (housing), EMERGE™ PC8430-15 transparent resin (base)
Mounting	DIN rail, tube, wall, collar
Battery Type	Replaceable battery (4000 mAh)
Recommended operating conditions	-25°C / +70°C ; 0 to 85% RH (non-condensing)

### Device configuration

Local device configuration	IoT Configurator (Windows/Android)
Remote device configuration	Downlink via the network or via the KARE platform
Configuration and firmware update over-the-air	KARE+ compatible (only for LoRaWAN EU868 and Sigfox RC1)
Security	PIN/PUK code protection

### Impulse input

Number of channels	1 or 2 configurable channels (eg: 1 meter with 5 wires or 2 meters with 3 wires)
Equivalent input pull-up	180 kΩ (water), 47 kΩ (gas)
Input frequency	<100 Hz
Compatible pulse output type	S0, dry contact, open collector, reed relay
Pulse detection test on start-up	via LEDs

BUNDLE	PART NUMBER
PULSE 6 wired CBL	ARF8230xRA-CBL2



# TECHNICAL SPECIFICATIONS



## LoRaWAN PULSE

Zone	EU863-870 Mhz	US902-928 Mhz	AS923-1 Mhz	AU915-928 Mhz
Part number	ARF8230ARA	ARF8230BRA	ARF8230JRA	ARF8230IRA
<b>Autonomy</b>				
Expected Battery Life	1 index/hour and 1 transmission/3 hours, 2 channels activated, 500 pulses detected per channel per day, pull-up disabled. SF7   SF10   SF12: > 15 years			
<b>Radio/Wireless features</b>				
LoRaWAN spec.	1.0.4			
Wireless Security	AES-128 data encryption			
Class	Class A			
Supported LoRaWAN features	OTAA, ABP, ADR, adaptive channel setup			
Data time-stamping	EPOCH 2013 format (can be activated)	-	-	-
Joining phase	Can be customised (number of attempts, time between attempts), remote join re-launch			
Internal clock synchronisation	Automatic and daily with network time (function can be activated)			
Network quality test	Performed automatically when the product starts up (via LEDs)			-
RF transmit power	+ 14 dBm	+ 20 dBm	+ 14 dBm	+ 20 dBm
<b>Regulations and certifications</b>				
Standard	Directive 2014/53/UE (RED)	US: FCC- Title 47 CFR Part 15 Canada: RSS-247 Issue 2	AS/NZS 4268	AS/NZS 4268

## Sigfox PULSE

Zone	RC1	RC2	RC4
Part number	ARF8230CRA	ARF8230DRA	ARF8230KRA
<b>Autonomy</b>			
Expected Battery Life	1 index/hour and 1 transmission/3 hours, 2 channels activated, 500 pulses detected per channel per day, pull-up disabled. 7.3 years   >15 years   >15 years		
<b>Radio/Wireless features</b>			
Class	Class 0		
RF transmit power	+ 14 dBm	+ 20 dBm	+ 20 dBm
<b>Regulations and certifications</b>			
Standard	Directive 2014/53/UE (RED)	US: FCC- Title 47 CFR Part 15 Canada: RSS-247 Issue 2	AS/NZS 4268

