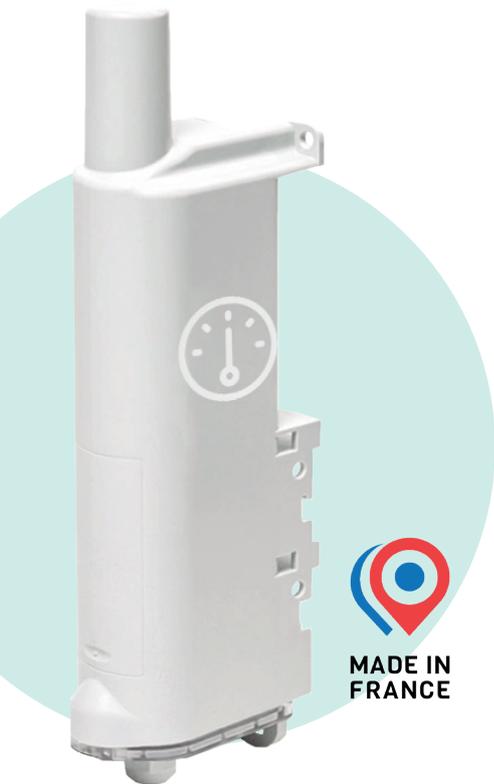


PULSE



A rugged, battery-powered pulse counter for water, energy and industrial meters.

PULSE continuously counts pulses, periodically stores meter indexes, and sends data to your IoT platform using MQTT(S) or LwM2M.



- **Global cellular compatibility**
(NB-IoT, LTE-M) with excellent indoor coverage.
- **Multi-platform integration**
via LwM2M 1.1 or MQTT/MQTTS.
- **2 configurable pulse inputs:**
connect 1 or 2 meters / pulse output devices (dry contact, REED, SO, open collector).
- **Supports 2-wire / 3-wire / 4-wire / 5-wire metering**, including flow direction / reverse flow use cases.
- **Fraud/tamper wire cut detection**
with configurable sampling and threshold.
- **Fast local setup & diagnostics**
with the IoT Configurator NB-IoT/LTE-M mobile app via NFC (before or after deployment).
- **Historization & buffering:**
batch transmissions for better battery life / lower data, plus data protection during outages (up to 800/400/300/400 stored values depending on meter type).



+ Reliable. Secure. Energy-optimized.

- **>15 years battery life** (depending on network & application configuration)
- **Acquisition time scheduling** (first sampling at a chosen UTC hh:mm)
- **Token-protected NFC access** (EN 18031-1) for controlled local operations
- **Made in France** (designed and manufactured)



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



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

TECHNICAL SPECIFICATIONS



ARF8428AAA

Mechanical specifications

Weight	175 g (battery included)
Dimensions	200 x 63,5 x 34 mm
Enclosure	IP68, EMERGE™ PC 8731HH grey resin (casing), EMERGE™ PC 8430-15 transparent resin (sole)
Mounting	DIN Rail, Pipe, Wall, Clamp

Operating conditions

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

Device Power Supply

Battery	Replaceable FANSO Li-SOCl ₂ dual battery pack Capacity: 8000 mAh + 38 mAh
Expected Battery Life	For 24 messages per day > 15 years on NB-IoT > 15 years on LTE-M

Update

Applicative configuration	Setup via NFC using "IoT Configurator NB-IoT/LTE-M" (Android/iOS), or remotely (LwM2M protocol)
Firmware	Locally via NFC, and remotely via FOTA with LwM2M

Networks and Protocols

SIM card	Nano SIM 4FF Class C (1.8V)
Module	Nordic nRF9151
Cellular standard	3GPP LTE Version 14
Cellular IoT networks	NB-IoT, LTE-Cat-M1
NB-IoT Frequency bands	B1-B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B65, B66, B85, B106
LTE-M Frequency bands	B1-B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66, B85, B106
Data transfer protocol	LwM2M, MQTT/s

RF characteristics

	NB-IoT	LTE-Cat-M1
Max. transmit power	+23 dBm	+23 dBm
Sensitivity	>-108 dBm -113 dBm typ	>-103 dBm -107 dBm typ

Regulations and certifications

Standard	Directive 2014/53/UE (RED)
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Pulse input

Number of channels	2 configurable pulse inputs
Equivalent input resistance	47 kΩ
Input frequency	<100 Hz
Type of compatible pulse output	SO, Dry contact, Open collector, Reed switch

