

# ECHO Pulser



- ✓ LTE Cat NB I – frequency band B20
- ✓ Compatible with utility meters that have pulse outputs
- ✓ Remotely updating firmware
- ✓ Meter with pulse output readout

ARSS ECHO Pulser is a module used for automated reading of meter consumption from utility devices (water, gas, electrical energy, heating etc.). The module is capable of reading meters equipped with pulse outputs. The collected data is transmitted over the NB-IoT network that has the advantage of good coverage, both inside and outside of buildings, over the already built-out network of mobile operators.

## ✓ KEY FEATURES

- Battery life time: up to 10 years (depending on device configuration and network radio signal quality)
- Protection type: IP68
- Operating temperature: -20°C ... 80°C
- Reading meters equipped with pulse outputs
- Adjustable and pseudorandom measurement delivery sending interval in order to avoid network congestion
- Adjustable periodic interval of measurement sampling
- Embedded Real-Time Clock (RTC)
- Tamper detection (manipulation alarm)
- Guaranteed measurement delivery even in the event of network failure (the device stores the measurements internally and delivers them once the network connection has been restored. In the event of an overflow, the device will delete the oldest one, first in first out principle)
- The devices deliver the measurements to the AURA cloud from which the readings are forwarded to the user or third party systems
- Possibility of remotely updating firmware
- Monitoring network and device performance through AURA cloud
- Remote configuration of the device

## TECHNICAL CHARACTERISTICS

### Pulse input data

Min. pulse duration (closed contact)	2 ms
Min. pause between pulses (open contact)	20 ms
Max. pulse frequency	45 Hz
Max. pulse frequency with 50% duty cycle	25 Hz
Contact voltage	2.5V ... 3.6V
Contact current	4µA
Contact resistance	1MΩ

### Radio interface

Frequency	LTE Cat Nb I - frequency band B20
Antenna type	Internal
SIM card	Chip SIM in MFF2 format (6 x 5 mm) compliant with ETSI TS 102.671

### General data

Power supply	Integrated battery; Battery life time (25°C): ~10 years (depending on the configuration)
Housing	Material: Thermoplastic Dimensions (w x h x l): 77 x 77 x 35 mm; Color: Light gray; Protection type: IP68 Mounting: Bolts on the mountable surface; Connecting cables length: ~1.5 m
Operating temperature range	20°C ... +80°C
Weight	168 g

