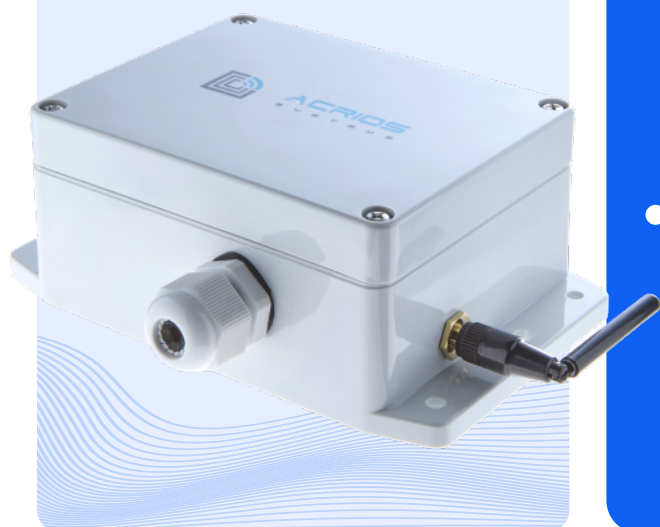


# Pulse Input S0 to the NB-IoT

Our converter with four inputs is designed to read devices with the pulse outputs, such as electricity meters, water meters and other measurement devices. It enables the integration of the traditional S0 meters into the NB-IoT wireless network, facilitating the data collection and analysis at intervals according to the user's needs.

## \\ Pulse Input S0 to the NB-IoT



- We can read any meter or device with a pulse output within your installation. The pulse output is currently one of the most common outputs on the existing meters and you can connect up to four devices to our unit simultaneously.
- The device stores the number of pulses and always sends the last three values in case of the network outage. Users can also set the alarm threshold values, where a message will be sent immediately regardless of the set reading interval to detect the sudden measurement anomalies.
- Our converters are manufactured in the Czech Republic with local subcontractors. Every unit produced undergoes final tests while focusing on the functionality of the individual communication interfaces and device power consumption. synchronization with the network.

## \\ Installation, Operation and Longevity without Worries

We can read any meter with a pulse input within your installation. You can connect up to four devices to our unit simultaneously. We have experience with projects for small businesses and large heating plants aimed to optimize the distribution systems and readings in compliance with the EED and the ESG

regulations. For all the NB-IoT devices, we can perform the firmware updates remotely via the NB-IoT network, so customers do not need to make any changes to the installation.

# Technical specifications

## General specification

|                |  |
|----------------|--|
| Dimension      | 145 x 90 x 55 mm   |
| Weight         | 336 g with single battery / 475g with double battery       |
| IP rating      | IP67   |
| Mounting       | 6 fixation points for mounting to the wall, tube or collar |
| Mounting holes | 4x M4 pan screw and 2x oval hole for zip-tie fixation      |
| HS code        | 85269200   |

## Operating conditions

|                          |                              |
|--------------------------|------------------------------|
| Operational temperature: | -30 to +60 °C                |
| Humidity                 | 0 to 85% RH (non-condensing) |

## Regulations and certifications

|          |          |
|----------|----------|
| Standard | CE, RoHS |
|----------|----------|

## Device configuration

|                                |   |
|--------------------------------|---|
| Local device configuration     | Over the cable via ACR-CONFIG and the configuration app |
| Remote device configuration    | Downlink via network or ACRIOS backend                  |
| FUOTA support                  | Yes, over the NB-IoT network                            |
| Configuration options          | Configuration via LUA scripting interface               |
| Can be supplied pre-configured | Yes   |

## NB-IoT

|                           |   |
|---------------------------|---|
| Bands                     | B1/B2/B3/B4/B5/B8/B12/B13/B14/B17/B20/B26/B28 |
| NB module                 | SIM7022                                       |
| Supported protocols       | UDP   |
| Antenna                   | External                                      |
| TX Power                  | 23 dBm  |
| SIM form factor           | 3FF, chip SIM on demand                       |
| Supported NB-IoT features | PSM, eDRX                                     |
| Maximum payload length    | 512 B uplink, 1024B downlink*                 |

\* might be dependant on the network. Tested with Vodafone network

## Ordering codes

|                    |                                  |
|--------------------|----------------------------------|
| ACR-CV-101N-I4-D   | S0 to NB-IoT single battery pack |
| ACR-CV-101N-I4-D2* | S0 to NB-IoT double battery pack |

\* Under MOQ

## S0 interface

|                              |   |
|------------------------------|---|
| A number of inputs           | 4   |
| Impulse counter              | 32 bits = 4 294 967 295 pulses                  |
| Minimum pulse duration (ms)  | 30  |
| Maximum input voltage (V)    | 24  |
| Maximum pulse frequency (Hz) | 33  |
| Logical 1 range (V)          | More than 2 (up to 24)                          |
| Logical 0 range (V)          | Less than 1                                     |
| Closed mechanical contact    | Resistance < 100kΩ                              |
| Open mechanical contact      | Resistance > 200MΩ                              |
| ESD rating                   | 16kV per Human Body Model                       |
| Connector                    | Euroclamp 2-piece connector with Philips screws |
| Auxiliary power supply       | 3.3V DC   |
| Functionality                | Message buffering, wake up on input change      |

## Battery specifications

|                            |                         |
|----------------------------|-------------------------|
| Battery size               | D-Cell / double D-Cell  |
| Capacity                   | 19 000 mAh / 38 000 mAh |
| Self-discharge             | <1%                     |
| Rechargeable               | No                      |
| Replacable by the customer | Yes                     |
| Battery connector          | JST-XH 2pin             |

## Packaging

|                               |                                   |
|-------------------------------|-----------------------------------|
| 1x wM-Bus to NB-IoT converter | 1x installation manual            |
| 1x Battery                    | 1x NB-IoT 2JW1024 antenna; 4G LTE |

## Optional accessories

|            |                     |
|------------|---------------------|
| ACR-CONFIG | Configuration cable |
|------------|---------------------|