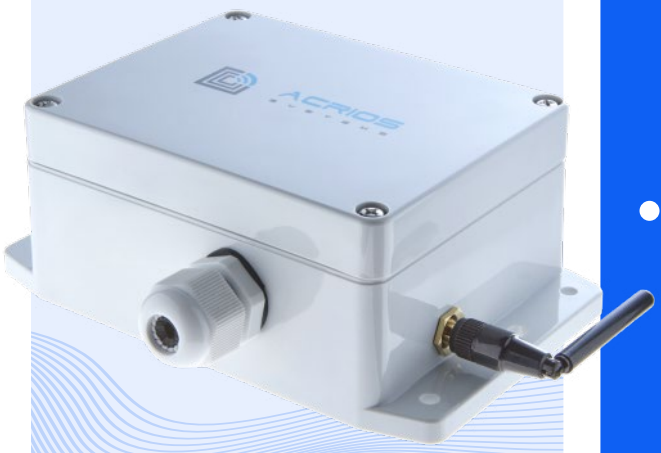
ACRIOS SYSTEMS

More on acrios.com

Pulse Input S0 to 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 integration of the traditional S0 meters into the NB-IoT wireless network, facilitating data collection and analysis at intervals according to the user's needs.

Pulse Input S0 to 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 a number of pulses and always sends the last three values in case of a 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 sudden measurement anomalies.
- Our converters are manufactured in the Czech Republic with the help of local subcontractors. Every unit goes through thorough testing after the assembly to ensure the functionality of the individual communication interfaces, synchronization with the network and to measure the power consumption.

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 firmware updates remotely via the NB-IoT network, so the 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	B3 / B8 / B20
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 dependent on the network. Tested with Vodafone network

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 Philis 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%
Rechargable	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

Ordering Codes

ACR-CV-102N-I4-D	S0 to NB-IoT single battery pack
ACR-CV-102N-I4-D2	S0 to NB-IoT double battery pack

ACRIOS SYSTEMS

+420 725 800 502

info@acrios.com

acrios.com

Meziříčská 2868,

Rožnov pod Radhoštěm,

756 61 CZ