

# APT-03A-3

## for Wireless M-Bus connectivity

The APT-03-3 is designed for apartment block water meter reading and wireless data transmission. Data is transmitted by Wireless M-Bus radio connectivity in accordance with the PN-EN 13757 standard. APT-03A-3 cooperates with devices working in OMS standard. The open communication protocol provides compatibility with a wide range of devices forming the remote data readout and transmission structure. The device is based on a microprocessor system, while the use of optical sensors enables, for example, data readout from water meters and detection of water flow direction, which provides complete consistency of radio-based readouts and water meter readings. The device is resistant to strong external magnetic fields, and the battery power enables continuous operation for up to 12 years. The device uses a data encryption method based on the AES-CBC algorithm with a 128 bit encryption key, which protects against unauthorised access to the measurement data and guarantees the integrity of data sent to the system.



### Application

The device is intended for installation on volumetric water meters of the following types: JS 6,3 Master+, JS 10 Master+, JS 10-G1¼ Master+, JS 16 Master+, JS 6,3 Master C+, JS 10 Master C+, JS 10-G1¼ Master C+, JS 16 Master C+, manufactured by Apator Powogaz S.A.

### Features

- Non-integrating and easy to install on water meters
- Quick and easy setting with mobile devices
- Operates in the 868 MHz unlicensed ISM band
- Data transmission encrypted using the AES – CBC encryption algorithm with 128 bit encryption keys, compliant with the PN-EN-13757-3 standard
- Real time clock with winter/summer time and leap year features
- Water meter type selection and configurable water meter-related properties
- Five operating modes enable adjustment of the data transmission interval to the user's individual requirements
- Detection, recording and signalling of irregularities in water consumption measurements and clip-on module operation using event signalling
- Option of storing and reading the volume from 1 to 16 months
- Water consumption readout using mobile terminals in a mobile data collection system or using a telemetry network in a fixed system
- Measurement data readouts from water meters are completely resistant to all interference caused by external magnetic fields
- Cooperates with devices working in OMS standard
- Optimum range achieved using an external omnidirectional antenna with counterweighting on the antenna track (for model 2.65.H.1.09)

## Event signalling

-  Maximum flow
-  Minimum flow
-  Backflow
-  No change in measurement
-  Leakage
-  Device disconnection
-  Magnetic field detection
-  Strong light detection
-  Low battery
-  Battery work time exceeded
-  Battery usage threshold exceeded
-  Tip error
-  Instruction completed
-  Processor reset
-  Incorrect log value in processor
-  Access error

## Device operating mode

- First hourly mode
- Second hourly mode
- Days of the week mode
- Days of the month mode
- Months mode

## Configuration options

- Measurement device factory number
- ID number
- UID number
- Measuring device positioning
- Volume
- Reading memorisation day
- Metering threshold unchanged
- Minimum flow threshold
- Maximum flow threshold
- Reverse flow threshold
- Leak threshold
- Auto-reset of events



## Dane techniczne

Model	2.65.1.1.03	2.65.H.1.09
Communication protocol	Wireless M-Bus	Wireless M-Bus
Transmission frequency	868 MHz	868 MHz
Consumption detection	optical	optical
Power supply	lithium battery 3,6 V; AA	lithium battery 3,6 V; AA
Ingress protection rating	IP65	IP65
Signal lead	internal antenna	external antenna on 2 m long antenna track
Power output	10 mW / 50 Ω	10 mW / 50 Ω
Power output level stability	+1 dB ÷ -3 dB	+1 dB ÷ -3 dB
Sensitivity	-102 dBm	-102 dBm
Battery life (depending on configuration)	up to 12 lat*	up to 12 lat*
Mounting	directly on the water meter	directly on the water meter
Dimensions	h = 44,1 mm; s = 65,5 mm	h = 44,1 mm; s = 65,5 mm
Weight	0,056 kg	0,065 kg
Operating temperature	0°C ÷ 55°C	0°C ÷ 55°C

\* for devices operating at 25°C ambient temperature