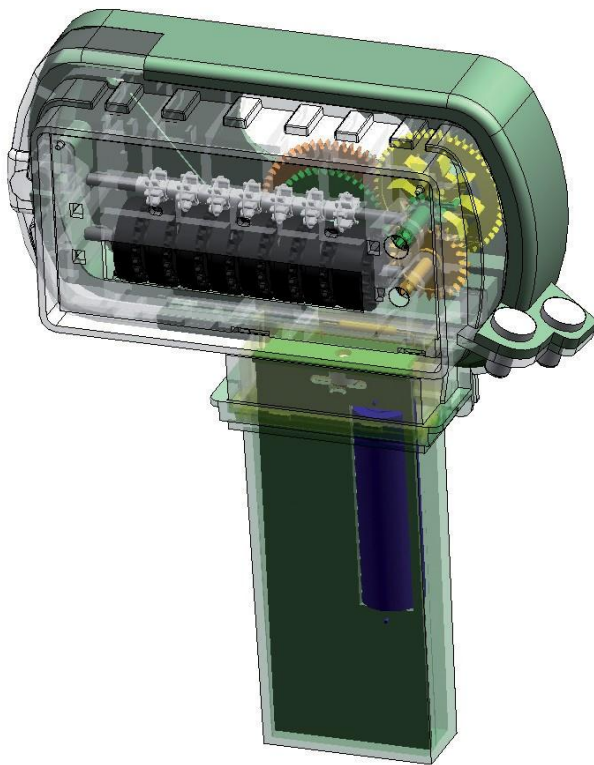




# UniSmart

## Communication module for gas meters



Functional, Universal,  
Trouble-free

UniSmart is the newest product of Apator Group dedicated for AMR systems in the gas industry and constitutes a cheaper alternative to the smart meter. It is designed for customers and uses not requiring full functionality offered by smart gas meters, and also where low gas consumption and lower frequency of reading requires the use of economic relevant technologies. At the same time, it is a product offering broad functionality for reading gas and its balancing in the network, in line with European standards. UniSmart is another proposition of our company to realize the challenge of widespread implementation of smart metering in the EU countries.

UniSmart is based on the experience of the production of hundreds of thousands of smart meters for the EU markets in recent years. We created it in order to adapt to the specifics of the Polish market with large number of users in tariffs W1 and W2, however, expand the functionality of UniSmart to registry data, predisposes it also for use in other groups of users.

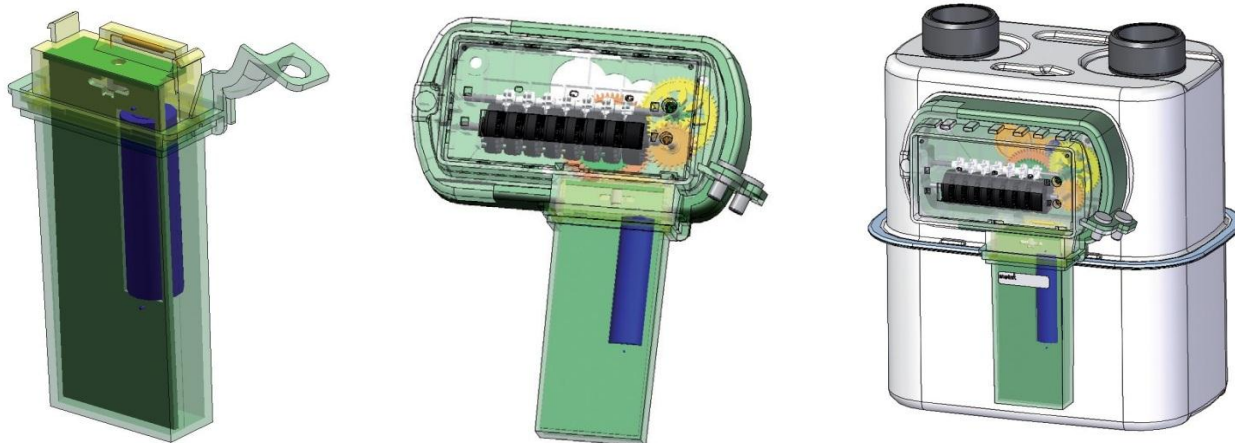
### THE BASIC FEATURES ARE:

**Versatility** – suitable to be connected to any type of meter equipped with an burglary Apator Metrix S.A. index, produced after 2005.

**Easy to install and setup** – connected as a standard impulse transmitter in the meter hanging in the network and configured wirelessly.

**Interoperability** – the usage of open communication protocol in accordance with standards EN 13757-3 and BS EN 13757-4 provides interoperability with devices of other manufacturers and the ability to communicate within a single system AMR. Reading is carried out by radio. The product is compatible with other existing technical specifications in the EU countries, such as OMS, and NTA.

**Flexibility** – can be used in walk-by or stationary systems. We also offer software for these systems operating on commonly occurring equipment (eg PSION WORKABOUT).



## FUNCTIONAL FEATURES

- An open, widely communication protocol used wireless M-Bus based on European Standard, PN-EN 13757-3 and PN-EN 13757-4.
- Modes
  - ✓ T1 (transmission frame with readings)
  - ✓ T2 (parameterisation module)
  - ✓ service mode
- Count the numer of pulses
  - ✓ 1 pulse means 1 rotation of the last drum with the least significant digit of mechanical index
  - ✓ an algorithm of elimination errors caused for example by vibration of drum in mechanical index
- Recalculation of pulses per volume ( $m^3$ )
- History of flows
  - ✓ hourly
  - ✓ daily
  - ✓ monthly
- The alarm log
  - ✓ interference by an external magnetic field
  - ✓ exceeding the maximum flow ( $Q_{max}$ )
  - ✓ no pulses
- Parametrization
  - ✓ Initial state
  - ✓ time (date, time)
  - ✓ definition of flow precision
  - ✓ definition of broadcast schedule the reading frame
  - ✓ definition of the contents of a sent frame
- Optional parameters sent in a radio frame:
  - ✓ volume of the last billing period
  - ✓ battery status
  - ✓ gas meter type
  - ✓ spacing of connector pipes
  - ✓ manufacturer
  - ✓ year of production
  - ✓ installation number
- Data Encryption AES-128 in accordance with NTA / OMS (with dynamic initialization vector), in accordance with PN-EN 13757-3
- Estimated time of battery discharge
- Power: 1x AA lithium battery
- Operation time without replacing the battery (above 10 years)
- Gas meters with UniSmart telemetry module can be read in the systems:
  - ✓ stationary
  - ✓ walk-by with the use of mobile terminals PSION WORKABOUT PRO running Windows Mobile 5.0 or later



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