

METERING SOLUTIONS



AT-MBUS-NE OVERLAY

WITH PULSE OUTPUT

Pulse overlay uses modern microprocessor system and makes a part of a remote system of transmitting measurement data from water meters produced by Apator Powogaz SA. The applied solution involving optic scanning of the reflective pointer of the counter eliminates inaccuracies of the reed relay pulse generator. It is completely resistant to the impact of strong external magnetic field

INTENDED USE

The pulse overlays can be mounted on the counters of water meters produced by Apator Powogaz as a standard suited for mounting of different types of overlays. Above mentioned overlays are widely applied in remote reads carried out in Water supply and Sewerage Companies, Housing Associations, Industry Plants and Shopping Centres.





SPECIAL FEATURES

- Possible use with water meters suited for overlay installation.
- Easy installation - mounting without interfering in the water meter verification features.
- Resistant to external magnetic field.
- Protection rating: IP65.
- Battery life 10 year + 2 year
- Possible configuration – programmable two pulse outputs,
- Possibility of optional setting of pulse value depending on water meter type,
- Pulse counting taking into account flow direction – forward or backward
- Optional configuration for alarm reading through outputs 3 and 4 (acc. to diagram).



PULSE OVERLAY
AT-MBUS-NE-01 /
AT-MBUS-NE-03

PULSE OVERLAY
AT-MBUS-NE-02

Table 1. TECHNICAL DATA

| Pulse overlay | AT-MBUS-NE-01 | | AT-MBUS-NE-02 | AT-MBUS-NE-03 |
|---|--|--|--|---|
| Water meter DN | DN40* ÷ DN125 | DN150 ÷ DN300 | DN15 ÷ DN20 | DN25 ÷ DN40 |
| Supported type water meter | MWN 40–300, MP 40–100, JS 50–100 | | JS 1,6–4 | JS 6,3–16 |
| Connection cable | 4-core, standard length 1,5m | | | |
| Number of pulse outputs | 2 | | | |
| Resistance of connections closing/opening state | 30Ω / 200MΩ | | | |
| Outputs | Open collector type (OD) [0,17A, 100V] | | | |
| Working temperature range | 0,1 ÷ 60 °C | | | |
| Storing temperature range | -10 ÷ 70 °C | | | |
| Maximum frequency of generated pulses | 4Hz (250ms – stable duration of pulse, change of frequency changes the repetition of signal) | | | |
| Pulse value (in range) | 0,1 ÷ 25 m ³ /imp with 0,1 m ³ hop | 1 ÷ 250 m ³ /imp with 1 m ³ hop | 1 ÷ 250 dm ³ /imp with 1 dm ³ hop | 0,1 ÷ 25 m ³ /imp with 0,1 m ³ hop |

* refers to flanges

SYGNALISATION I ALARMS

- Low battery
- Processor reset
- Self-diagnostics (detection of missed reading)
- Optic detector defects
- Flow signalisation min/max
- Detection of counter flow
- Detection of strong lighting
- Detection of external magnetic field

TWO PROGRAMMABLE PULSE OUTPUTS NO 1 AND 2 LIST OF POSSIBLE IMPLEMENTATIONS – pulse emission

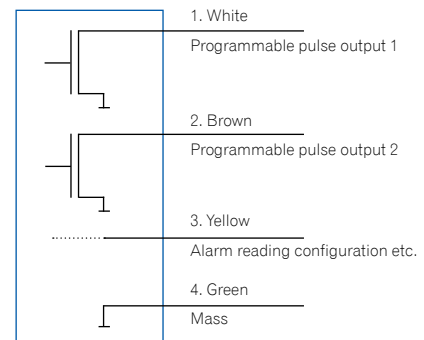
- Every full balance capacity (calculating of capacity as mechanical counter) – marking IB
- Every full pulse capacity (calculating of capacity as classical NK) – marking PR
- Every full capacity calculated with the flow in compliance with the direction marked on the water meter – marking WP
- Every full capacity calculated with the backwards flow – marking WS
- In case of failure – marking AW
- For flow direction (forwards, backwards) – marking SK

ORDER EXAMPLE

e.g.: for water meter type JS-1,6-02
Pulse overlay AT-MBUS-NE-02 with:

- pulse output No 1
– pulsing every balance capacity - IB
- pulse output No 2
– volume calculation as in the classic NK - PR
- pulse value - 1 dm³/imp

WIRING DIAGRAM



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