MEASURING SOLUTIONS

APT-MBUS-NA-4

For M-Bus connectivity

The APT-MBUS-NA-4 re-transmitter module is designed for collecting readings from water meters and for data transmission using the M-Bus communication standard, per PN-EN 13757-3. The use of this open communication protocol provides full compatibility with a wide range of devices which make up the remote data reading and transmission environment. It also enables event detection logging.

The APT-MBUS-NA-4 re-transmitter is based on a microprocessor system, while the use of optical sensors enables, for example, data reading from water meters and detection of the direction of the water flow, which provides complete consistency of water meter readings. Thanks to an integrated battery for emergency power supply, the re-transmitter module can operate for up to 5 years without power supply from the M-Bus.

USE

This module is provided for installation on MWN line water meters: MWN 40, MWN 50, MWN 65, MWN 80, MWN 100, MWN 125, MWN 150, MWN 200, MWN 250, MWN 300
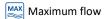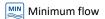
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APT-MBUS-NA-4

KEY FEATURES

■ Non-integrating and easy to install on water meters

■ Primary power is supplied from the M-Bus system (the re-transmitter's current draw is one load unit UL=1.5 mA)

■ Emergency power supply ensures continuity of operation in the case of a loss of power supply from the M-Bus system

■ Detection, recording and signalling of irregularities in water consumption measurements, and clip-on module operation using event signalling

■ Configuration of event thresholds and transmission rate

■ Reading measurement information from water meters is fully resistant to any interference caused by external magnetic fields

■ Compatibility with devices forming the remote reading and transmission of measurement data environment using the M-Bus communication protocol

■ IP65 ingress protection

APT-MBUS-NA-4

EVENT SIGNALLING

MAX	Maximum flow
MIN	Minimum flow
←	Reverse flow
0	No flow
	Leakage
	Device disconnection
	Magnetic field detection
	Strong light detection
	Low battery
	Tip error
	Detector fault
RESET	Processor reset

CONTENTS OF DATA FRAME

■ Device factory ID

■ Device date and time

■ Saved date of readout

■ Instantaneous volume

■ Saved volume

■ Measurement time

■ Flow rate

■ Current event flags

■ Diagnostics function for optics

■ Oscillator diagnostics

■ Power supply diagnostics

TECHNICAL SPECIFICATIONS

Parameter	
Communication protocol	M-Bus
Wear-out detection	optical
Basic power supply	from M-Bus
Emergency power supply	3,6 V Li battery
Battery capacity	1200 mAh
Ingress protection	IP65
Battery life	up to 10 years*
Transmission speeds	300, 2400, 9600 [b/s]
Wiring	YTLY 2 x 0,14 mm^2
Wiring lengths	1,5 m, 3,0 m, 6,0 m
Fixing	directly on a water meter
Dimensions	h = 44,2 mm; w = 65,5 mm
Weight	0,079 kg
Operating temperature	0°C ÷ 60°C
Adressing	secondary and primary

* operating time on battery supply at an ambient temperature of 25°C is 5 years

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APT-MBUS-NA-3

For M-Bus connectivity

The APT-MBUS-NA-3 re-transmitter module is designed for collecting readings from water meters and for data transmission using the M-Bus communication standard, per PN-EN 13757-3. The use of this open communication protocol provides full compatibility with a wide range of devices which make up the remote data reading and transmission environment. It also enables event detection logging.

The APT-MBUS-NA-3 re-transmitter is based on a microprocessor system, while the use of optical sensors enables, for example, data reading from water meters and detection of the direction of the water flow, which provides complete consistency of water meter readings. Thanks to an integrated battery for emergency power supply, the re-transmitter module can operate for up to 5 years without power supply from the M-Bus.

USE

This module is provided for installation on SV-RTK line water meters: SV-RTK 2,5, SV-RTK 2,5 kompozyt, SV-RTK 4,0, SVRTK 6,3, SV-RTK 10, SV-RTK 16
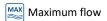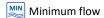
APT-MBUS-NA-3

KEY FEATURES

- Non-integrating and easy to install on water meters
- Primary power is supplied from the M-Bus system (the re-transmitter's current draw is one load unit UL=1.5 mA)
- Emergency power supply ensures continuity of operation in the case of a loss of power supply from the M-Bus system
- Detection, recording and signalling of irregularities in water consumption measurements, and clip-on module operation using event signalling
- Configuration of event thresholds and transmission rate
- Reading measurement information from water meters is fully resistant to any interference caused by external magnetic fields
- Compatibility with devices forming the remote reading and transmission of measurement data environment using the M-Bus communication protocol
- IP65 ingress protection

APT-MBUS-NA-3

EVENT SIGNALLING

- MAX Maximum flow
- MIN Minimum flow
- Reverse flow
- 0 No flow
- Leakage
- Device disconnection
- Magnetic field detection
- Strong light detection
- Low battery
- Tip error
- Detector fault
- RESET Processor reset

CONTENTS OF DATA FRAME

- Device factory ID
- Device date and time
- Saved date of readout
- Instantaneous volume
- Saved volume
- Measurement time
- Flow rate
- Current event flags
- Diagnostics function for optics
- Oscillator diagnostics
- Power supply diagnostics

TECHNICAL SPECIFICATIONS

Parameter	
Communication protocol	M-Bus
Wear-out detection	optical
Basic power supply	from M-Bus
Emergency power supply	3,6 V Li battery
Battery capacity	1200 mAh
Ingress protection	IP65
Battery life	up to 10 years*
Transmission speeds	300, 2400, 9600 [b/s]
Wiring	YTLY 2 x 0,14 mm^2
Wiring lengths	1,5 m, 3,0 m, 6,0 m
Fixing	directly on a water meter
Dimensions	h = 44,2 mm; w = 65,5 mm
Weight	0,079 kg
Operating temperature	0°C ÷ 60°C
Adressing	secondary and primary

* operating time on battery supply at an ambient temperature of 25°C is 5 years

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MEASURING SOLUTIONS

APT-MBUS-NA-2

For M-Bus connectivity

The APT-MBUS-NA-2 re-transmitter module is designed for collecting readings from water meters and for data transmission using the M-Bus communication standard, per PN-EN 13757-3. The use of this open communication protocol provides full compatibility with a wide range of devices which make up the remote data reading and transmission environment. It also enables event detection logging.

The APT-MBUS-NA-2 re-transmitter is based on a microprocessor system, while the use of optical sensors enables, for example, data reading from water meters and detection of the direction of the water flow, which provides complete consistency of water meter readings. Thanks to an integrated battery for emergency power supply, the re-transmitter module can operate for up to 5 years without power supply from the M-Bus.

USE

This module is provided for installation on JS Master line water meters: JS 6,3 Master+, JS 130-6,3 Master+, JS 10 Master+, JS 10-G1¼ Master+, JS 130-10 Master+, JS 130-10-G1¼ Master+, JS 16 Master+, JS 130-16 Master+, JS 6,3 Master C+, JS 130-6,3 Master C+, JS 10 Master C+, JS 10-G1¼ Master C+, JS 130-10 Master C+, JS 130-10-G1¼ Master C+, JS 16 Master C+, JS 130-16 Master C+.
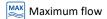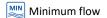
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KEY FEATURES

- Non-integrating and easy to install on water meters
- Primary power is supplied from the M-Bus system (the re-transmitter's current draw is one load unit UL=1.5 mA)
- Emergency power supply ensures continuity of operation in the case of a loss of power supply from the M-Bus system
- Detection, recording and signalling of irregularities in water consumption measurements, and clip-on module operation using event signalling
- Configuration of event thresholds and transmission rate
- Reading measurement information from water meters is fully resistant to any interference caused by external magnetic fields
- Compatibility with devices forming the remote reading and transmission of measurement data environment using the M-Bus communication protocol
- IP65 ingress protection

APT-MBUS-NA-2

EVENT SIGNALLING

- **MAX** Maximum flow
- **MIN** Minimum flow
- Reverse flow
- **0** No flow
- Leakage
- Device disconnection
- Magnetic field detection
- Strong light detection
- Low battery
- Tip error
- Detector fault
- **RESET** Processor reset

CONTENTS OF DATA FRAME

- Device factory ID
- Device date and time
- Saved date of readout
- Instantaneous volume
- Saved volume
- Measurement time
- Flow rate
- Current event flags
- Diagnostics function for optics
- Oscillator diagnostics
- Power supply diagnostics

TECHNICAL SPECIFICATIONS

Parameter	
Communication protocol	M-Bus
Wear-out detection	optical
Basic power supply	from M-Bus
Emergency power supply	3,6 V Li battery
Battery capacity	1200 mAh
Ingress protection	IP65
Battery life	up to 10 years*
Transmission speeds	300, 2400, 9600 [b/s]
Wiring	YTLY 2 x 0,14 mm^2
Wiring lengths	1,5 m, 3,0 m, 6,0 m
Fixing	directly on a water meter
Dimensions	h = 44,2 mm; w = 65,5 mm
Weight	0,079 kg
Operating temperature	0°C ÷ 60°C
Adressing	secondary and primary

* operating time on battery supply at an ambient temperature of 25°C is 5 years

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MEASURING SOLUTIONS

APT-MBUS-NA-1

For M-Bus connectivity

The APT-MBUS-NA-1 re-transmitter module is designed for collecting readings from water meters and for data transmission using the M-Bus communication standard, per PN-EN 13757-3. The use of this open communication protocol provides full compatibility with a wide range of devices which make up the remote data reading and transmission environment. It also enables event detection logging.

The APT-MBUS-NA-1 re-transmitter is based on a microprocessor system, while the use of optical sensors enables, for example, data reading from water meters and detection of the direction of the water flow, which provides complete consistency of water meter readings. Thanks to an integrated battery for emergency power supply, the re-transmitter module can operate for up to 5 years without power supply from the M-Bus.

USE

This module is provided for installation on JS Smart line water meters: JS 1,6-02 Smart+, JS 90-1,6-02 Smart+, JS 2,5-02 Smart+, JS 2,5-G1-02 Smart +, JS 90-2,5-02 Smart+, JS 90-2,5-G1-02 Smart+, JS 4,0-02 Smart+,   JS 90-4,0-02 Smart+, JS 1,6-02 Smart C+, JS 90-1,6-02 Smart C+, JS 2,5-02 Smart C+, JS 2,5-G1-02 Smart C+, JS 90-2,5-02 Smart C+, JS 90-2,5-G1-02 Smart C+, JS 4,0-02 Smart C+, JS 90-4,0-02 Smart C+.
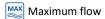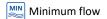
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KEY FEATURES

- Non-integrating and easy to install on water meters
- Primary power is supplied from the M-Bus system (the re-transmitter's current draw is one load unit UL=1.5 mA)
- Emergency power supply ensures continuity of operation in the case of a loss of power supply from the M-Bus system
- Detection, recording and signalling of irregularities in water consumption measurements, and clip-on module operation using event signalling
- Configuration of event thresholds and transmission rate
- Reading measurement information from water meters is fully resistant to any interference caused by external magnetic fields
- Compatibility with devices forming the remote reading and transmission of measurement data environment using the M-Bus communication protocol
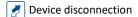- IP65 ingress protection

APT-MBUS-NA-1

EVENT SIGNALLING

- MAX Maximum flow
- MIN Minimum flow
- Reverse flow
- 0 No flow
- Leakage
- Device disconnection
- Magnetic field detection
- Strong light detection
- Low battery
- Tip error
- Detector fault
- RESET Processor reset

CONTENTS OF DATA FRAME

- Device factory ID
- Device date and time
- Saved date of readout
- Instantaneous volume
- Saved volume
- Measurement time
- Flow rate
- Current event flags
- Diagnostics function for optics
- Oscillator diagnostics
- Power supply diagnostics

TECHNICAL SPECIFICATIONS

Parameter	
Communication protocol	M-Bus
Wear-out detection	optical
Basic power supply	from M-Bus
Emergency power supply	3V Li battery
Battery capacity	1000 mAh
Ingress protection	IP65
Battery life	up to 10 years*
Transmission speeds	300, 2400, 9600 [b/s]
Wiring	YTLY 2 x 0,14 mm^2
Wiring lengths	1,5 m, 2,3 m, 3,0 m, 6,0 m
Fixing	directly on a water meter
Dimensions	h = 26,2 mm; w = 65,5 mm
Weight	0,061 kg
Operating temperature	0°C ÷ 60°C
Adressing	secondary and primary

* operating time on battery supply at an ambient temperature of 25℃ is 5 years

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