

# WM-E3S MBUS



## Cellular modem specifically designed for Honeywell®, Elster® AS3000 and AS3500 electricity meters and MBUS water meters

Our company develops cellular modems that work smoothly and are fully compatible with the Honeywell / Elster electricity meters, which represent a future-proof migration solution to the LTE network.

This modem can readout (the measured energy consumption of the connected electricity meters) remotely for the request of the HES center.

The device can also read out the alarms of the meters, then push them to the HES center by DLMS protocol.

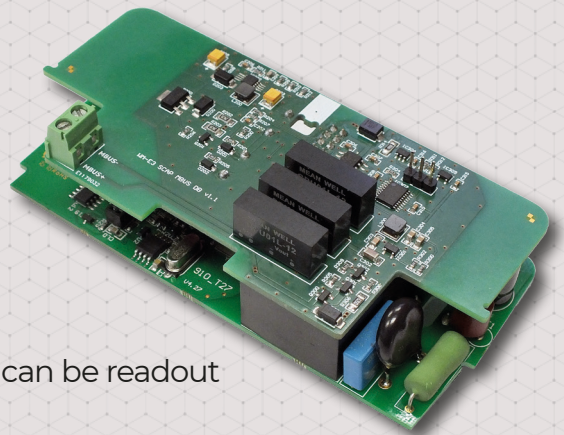
Connection possibilities:

- 1 electricity meter to the modem
- 4 water meters (MBUS) to the modem

The consumption values of connected MBUS water meters can be readout by our modem in „pull” mode via DLMS protocol.

The device was designed to fit under the terminal cover of the meter and it is compliant with the Honeywell / Elster standards.

Configuration and firmware updates can be done remotely by WM-E Term® software, minimizing the need for costly site visits.



## MAIN FEATURES

- LTE Cat.4 / 3G / 2G internet module
- Can be assembled into the meter enclosure (secure fastening)
- Power supply (AC) from metrology
- Compatible with Elster® / Honeywell® AS3000/AS3500 meters
- IEC / DLMS meter compatibility
- MBUS connection: 4 water meters can be connected
- Transparent data „push” to HES (by DLMS, alarm triggered)
- „Pull” data sending (for HES request)
- Usage of IEC 62056-21 and MBUS protocols
- Surge protection option (from 4kV up to 12kV)
- Remote & safe firmware update and configuration
- Supercapacitor option (for power outage notification)

## APPLICATION

- UTILITY COMPANIES
- SMART METERING
- METERING DATA TRANSMISSION TO HES
- INDUSTRIAL MEASUREMENT



# WM-E3S MBUS



## DESIGN AND OUTFIT

- The modem PCB can be installed inside the meter enclosure
- AC power by the metrology
- SMA antenna connector outfit

## COMPATIBILITY

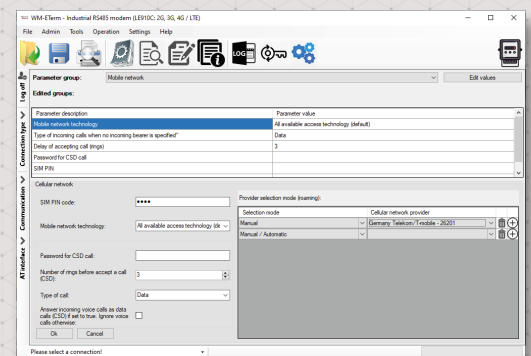
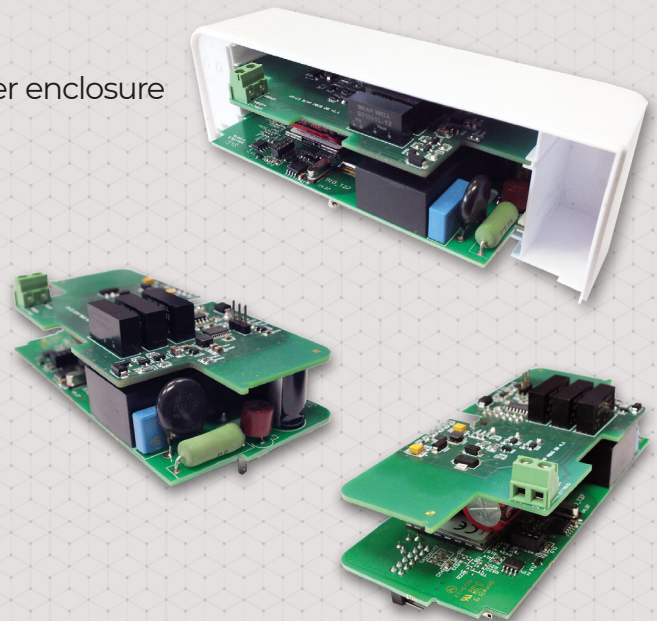
- Compatibility with Honeywell® / Elster® AS3000, AS3500 electricity meters
- 1-4 wired MBUS water meters
- IEC / DLMS compatible meters

## OPERATION

- Transparent „pull“ readout for electricity meters
- „Push“ data sending and alarm signaling to the HES (by DLMS protocol) - for electricity meters
- „Pull“ data request (via DLMS) for water meters

## ACCESSORIES (ORDER OPTION)

- Optional SMA antenna (50 Ohm)
- WM-E Term® software (mass fw updates, reconfiguration of settings)



WM-E3S MBUS*		LTE Cat.4
<b>Power Voltage / Nominal Frequency</b>		• -100 – 230V AC +15% / -15%, 50-60Hz +/- 5% (AC power supplied by the meter)
<b>Power Consumption / Current</b>		• Average: 2.9W, 230VAC • Stand-by: 24mA 100V, 12mA 230V / Average: 30mA 100V, 15mA 230V / Max: 0.15A @ 230V
<b>Nominal Input Voltage / AC max. Input Range</b>		• 110V / 230V +/-15% • 85 – 264V AC, 50 – 60 Hz
<b>Max Input Voltage THD</b>		• 5%
<b>Communication module</b>	Cellular technology	• LTE Cat.4 / 3G / 2G
	Internet module	• SIMCom A7602A
	Bands / Frequency (MHz)	• LTE-FDD: B1(2100) / B3(1800) / B5(850) / B7(2600) / B8(900) / B20(800) • LTE-TDD: B38(2600) / B40(2300) / B41(2500) • UMTS / HSPA+: 3G: B1(2100) / B2(1900) / B5(850) / B8(900) • GSM/GPRS/EDGE: B5(800) / B8(900) / B3(1800) / B2(1900)
	Speed (DL/UL)	• LTE: 150/50 Mbps • HSPA+: 42/5.7 Mbps • UMTS: 384/384 kbps • EDGE: 236/236 kbps • GPRS: 85.6/85.6 kbps
	SIM card slot	• mini SIM card (2FF type, push-insert SIM)
Antenna connector		• External antenna connector (SMA, 50 Ohm)
<b>Compatibility</b>	Meter type	• Honeywell® / Elster® AS3000/AS3500 meters • IEC compatible meters • MBUS water meters (1-4 meters)
<b>Interfaces</b>	Connectors	• 12-pins internal connector to the meter (meter connection and power connection - the AC power is supplied by meter) • MBUS transparent interface board (for water meters)
	Control	• Programmable function button
<b>Operation</b>	Protocol / Transmitting	• EN 62056-21, C mode • wired MBUS meter communication • Transparent „pull“ readout for electricity meters • „Push“ data sending and alarm signaling to the HES (by DLMS protocol) - for electricity meters • „Pull“ data request (via DLMS) for water meters
	Notification	• Immediate alarm notification (LastGASP - power outage event in case of supercapacitor presence)
	Configuration	• WM-E Term® tool (local/mass parameter configuration, local/mass firmware update) • Optional configuration by SMS messages • Device Manager software (order option)
	Indication	• 6 status LEDs
	RTC Backup Battery*	• Power outage <= 1 hour • After 1 hour the RTC will be supplied from the meter
Supercapacitor		• Supercapacitor (for Last GASP SMS notification from power outages) - order option
<b>EMC compatibility</b>	Surge withstand	• 4kV (peak), 12/50µs, line to line 2Ω • 6kV (peak), 12/50µs, line to earth (ground) 2Ω • 12kV, Rsource = 40Ω (12/50µs, impulse 1 min) • Dielectric test: 4kV, 1 min, 50Hz
<b>Environment</b>	Operating / Storage	• -25°C to +70°C at 95% rel.humidity • -40°C to +80°C at 95% rel.humidity
<b>Construction</b>	Enclosure	• PCB version, which fits into the meter coverage, and there it is installable, mountable
	Dimension / Weight	• 124 x 55 x 45mm • 90gr



The presented images on the datasheet are for illustration purposes only. The details on the data sheet are for general information purposes only. WM Systems LLC cannot be held liable for erroneous information on the datasheet. The announced information are subject to change without notice. For more details, please contact us.

**WM Systems LLC**

8 Villa str., Budapest, H-1222 HUNGARY

Phone: +36 (1) 310 7075

Support: +36 (20) 333 1111

Our website: [www.wmsystems.hu](http://www.wmsystems.hu)

Sales inquiry: [intersales@wmsystems.hu](mailto:intersales@wmsystems.hu)

Support: [support@wmsystems.hu](mailto:support@wmsystems.hu)