

## External transparent modem for universal meter connection

A compact and cost-effective modem for connecting meters, sensors into the AMI and Smart Grid infrastructure.

Our cellular modem has been designed specifically for the automatic readout of meters. It can be installed as a universal external modem and can be connected to any meter type.



With this device you can connect any kinds of meters, Mbus meters, industrial measurement systems, sensors with a central server by creating a transparent data link between them and the HES. The device can be ordered with various cellular module types.

Read consumption data from utility meters, sensors with a single modem! You can save money by using our modem, because there is no need further for manual readout of the meter systems, measurement environments.

The modem is equipped with several interfaces to connect multiple industrial equipment through the RS232 / RS485 port, CL (current loop), DI (2 digital inputs) interface and an M-Bus port.

Our device is suitable for remote readout of registers, consumption data of connected meters. The modem is fully configurable by our WM-E Term<sup>®</sup> software.

### MAIN FEATURES

- Cellular module order options:
  - LTE Cat.1 / 450MHz module 2G „fallback” feature
  - LTE Cat.M / Cat.NB / 450MHz with 2G „fallback” feature
- AC/DC power input
- Physical interfaces:
  - RJ45: RS232 and RS485 (2 or 4-wire)
  - Terminal block: CL (current loop) / DI (2 digital inputs) / M-Bus (for max. 4 slaves)
- Compatible with any meter, transparent communication
- Surge protection option (up to 4kV)
- Tamper switch for detecting the cover open (order option)
- Supercapacitor option (for power outage LastGASP notification)
- Remote & safe firmware updates
- Configuration: WM-E Term software; optionally by Device Manager (order option)
- Enclosure/Casing: IP52 plastic (according to DIN 43861 part 2)

### APPLICATION

- UTILITY COMPANIES
- SMART METERING
- INDUSTRIAL MEASUREMENT



## DESIGN AND OUTFIT

- IP52 plastic enclosure, removable port cover
- RJ45 connector: RS232 and RS485 (2 or 4-wire) connection
- Terminal block: CL (current loop (CLO), IEC1107, Mode C) / DI (2pcs logical inputs) / M-Bus for max. 4 slaves
- AC power input: ~85..300VAC, 50-60Hz ±5% / DC: 120..385VDC
- External antenna connector (FAKRA / SMA, 50 Ohm) - by order

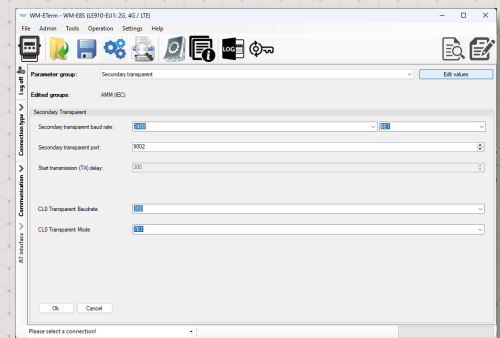
## COMPATIBILITY & OPERATION

- Universal external modem, compatible with any meter type
- Transparent communication
- Immediate alarm notification option (power loss, input changes)



## ACCESSORIES

- RJ45 connection cable (RS232, RS485) - order option
- RS232-USB adapter for configuration (order option)
- FAKRA or SMA antenna (50 Ohm) - by order
- WM-E Term<sup>®</sup> configuration software (mass firmware update, actualization of settings)
- You can manage the device by Device Manager<sup>®</sup> software (order option)



WM-E8S <sup>®</sup>		LTE Cat.1	LTE Cat.M / Cat.NB
<b>Power Voltage / Nominal Frequency</b>	~85..300VAC, 50-60Hz ±5% / 120..385VDC		
<b>Power</b>	Current	Stand-by: 10-12mA @ 230VAC · Average: 26-28mA @ 230VAC · Max: 35-44mA @ 230VAC	
	Consumption	Stand-by: 115-17W @ 230VAC (2.3-2.4VA) · Average: 3.0-3.6W @ 230VAC (6.0-7.2VA) · Max: 4.4-5W @ 230VAC (8.8-10VA)	
<b>Communication module</b>	Mobile Standards	· LTE Cat.1 / 450MHz - 2G "fallback"	· LTE Cat.M / Cat.NB / 450MHz - 2G "fallback"
	Modem type	· SIMCom A7676E	· SIMCom SIM7070E
	Bands / Frequency (MHz)	· LTE: B1(2100) / B3(1800) / B8(900) / B20(800) / B31(450) / B72(450) · GSM/GPRS/EDGE: B3(1800) / B8(900)	· LTE Cat.M: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B14(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B31(450) / B66(1700) / B72(450) / B85(700) · LTE Cat.NB: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B28(700) / B31(450) / B66(1700) / B85(700) · GSM/GPRS/EDGE: B2(1900) / B3(1800) / B5(850) / B8(900)
	Speed (UL/DL)	· LTE (UL/DL): 5/10 Mbps · GSM/GPRS/EDGE (UL/DL): 236.8/236.8 kbps	· LTE Cat.M (UL/DL): 589/1119 kbps · LTE Cat.NB (UL/DL): 127/158.5 kbps · GSM/GPRS/EDGE (UL/DL): 296/236.8 kbps
	SIM card slot	· mini SIM card (2FF type)	
	Antenna connector	· External LTE antenna connector (FAKRA or SMA, 50 Ohm) - antenna connector type by order	
<b>Compatibility</b>	Meter type	· Universal meter connection	
<b>Interfaces</b>	RJ45 connector	· RS232 and RS485 port (2-wire/4-wire)	
	Terminal block	· M-Bus master (for max. 4 slaves, it provides 24V-36V for connecting devices) · CL (current loop (CLO), 2-wire, IEC1107 Mode C) · DI (2 logical inputs, dry contacts, 3-wire)	
	Switch	· Tamper switch for detecting the cover open (order option)	
<b>Operation</b>	Protocol / Transmitting	· Transparent communication	
	Notification	· Immediate alarm notification (LastGASP - power loss) - order option · Notification of input status changes	
	Configuration	· WM-E Term <sup>®</sup> tool (local/remote single or mass parameter configuration, firmware update) · Device Manager software (remote configuration, firmware updates) - order option	
	Supercapacitor	· Presented to provide immediate notification in case of power outages (order option)	
	Indication	· 6 status LEDs	
	RTC Backup Battery	· Power outage <= 1 hour (optional)	
<b>EMC compatibility</b>	Surge withstand	· 4kV (peak), 12/50µs	
<b>Environment</b>	Operating / Storage	· -30°C to +70°C at 5-95% rel.humidity, non-condensing · -40°C to +80°C at 95% rel.humidity, non-condensing	
<b>Construction</b>	Enclosure	· IP52 plastic enclosure (according to DIN 43861 part 2) with 3-point mounting option and transparent terminal block cover (protect the ports)	
	Dimension / Weight	· 175 x 104 x 60 mm / 400gr	



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