WM-E1S

WM SYSTEMS

Cellular modem for Honeywell®, Itron®, Landis+Gyr® electricity meters

Wireless communication modem that has been designed specifically for the automatized remote readout of electricity meters. The device can be ordered with various wireless module types.

You can save money by using our modem because furthermore there is no need for manual readout of the meter systems.
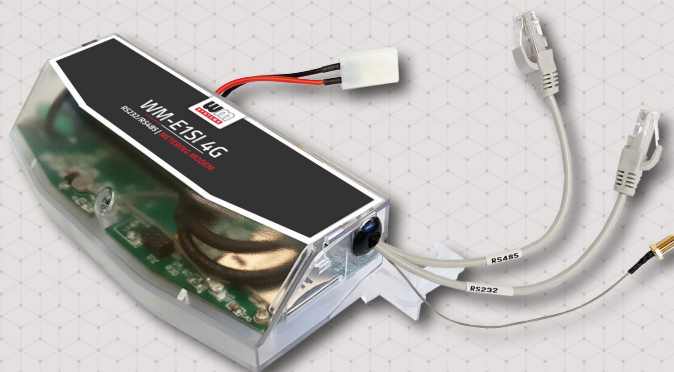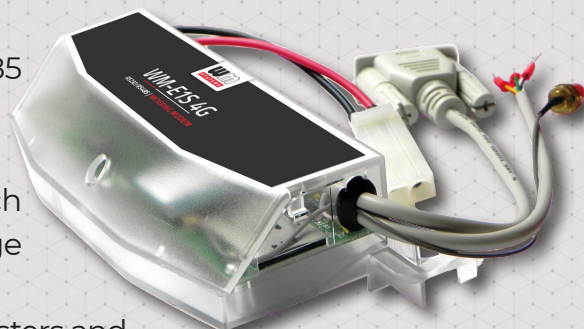
The modem is connectable through its RS232 and RS485 connection, it provides transparent data link to the HES, through the wireless network.
By option, the 2 digital input feature is also available, which can be used for input status monitoring and sabotage detection.
The device can be used to remotely read the meter's registers and modify the modem parameters. The readout takes place in „PULL" mode, the modem provides transparent communication between the meter and the electricity provider's HES center.
The modem can be installed under the terminal cover of the meter sealed by the service provider.
The device is configurable with our WM-E Term® application.

MAIN FEATURES

• Cellular module order options:
  • LTE Cat.1 module with 2G or 3G/2G „fallback" feature
  • LTE Cat.M / Cat.NB module with optional 2G „fallback" feature
• It can be assembled into the meter's enclosure and fastened
• DC power supply
• Inputs:
  • RS232 connector (D-SUB9 / D-SUB25 / RJ12 / RJ45)
  • RS485 connector (2/4-wire/ RJ12 / RJ45)
  • 2 digital inputs (monitoring / sabotage detection) - optional
• Compatibility:
  • Honeywell® Alpha A1500, A1700, A1800, A1140, A1160 meters
  • Itron® SL7000, EM600 (E620), ACE6000, ACE8000 meters
  • Landis+Gyr® ZMG type electricity meters
  • Installable to any meter as universal, external modem
• Surge protection option (from 4kV up to 12kV)
• Supercapacitor option (SMS notification of power outage)
• „Pull" mode, IEC 62056-21, transparent data transmission
• WM-E Term® application (mass configuration, FW refresh)
• Device Manager® software (order options)

APPLICATION

• UTILITY COMPANIES
• SMART METERING
• INDUSTRIAL MEASUREMENT

WM-E1S

DESIGN AND OUTFIT

- The modem is installable inside the meter enclosure
- RS232 connector options (D-SUB9 / D-SUB25 / RJ12 / RJ45)
- RS485 connector options (2- or 4 wire / RJ12 / RJ45)
- 2 digital input option (input status / sabotage detection)
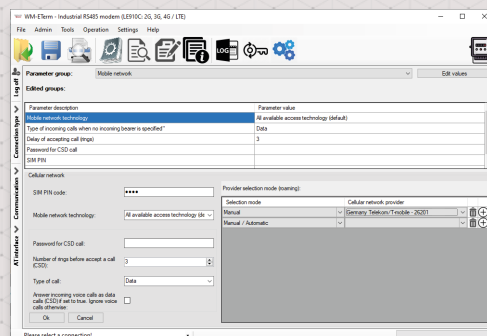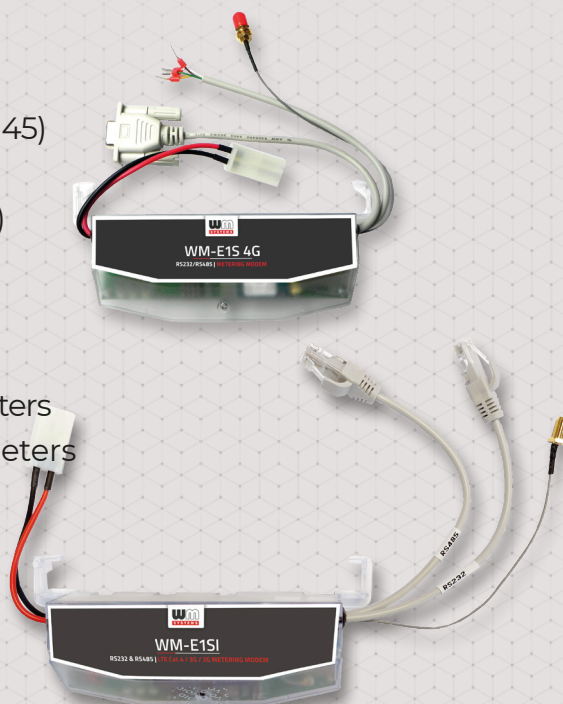- DC power

COMPATIBILITY

- Honeywell® Alpha A1500, A1700, A1800, A1140, A1160 meters
- Itron® SL7000, EM600 (E620), ACE6000, ACE8000 meters
- Landis+Gyr® ZMG electricity meters
- Installable to any meter as universal, external modem

OPERATION

- „Pull" mode
- IEC 62056-21 protocol, transparent data transmission
- CSData call (2G)

ACCESSORIES

- RJ45 cable, converter (for meter connection)
- External SMA or FME antenna (50 Ohm) - order option
- WM-E Term® software (mass fw updates, configuration)
- You can manage the device by Device Manager® software

WM-E1S®		LTE Cat.1		LTE Cat.M / Cat.NB		
Power Voltage / Nominal Frequency		· Input Voltage: 8...28V DC				
Power Consumption		· Stand-by: 0.7W · Average: 2.9W · Max: 5W (peak)				
Communication module	Cellular technology	· LTE Cat.1 - 3G/2G "fallback"	· LTE Cat.1 - 2G "fallback"	· LTE Cat.M / Cat.NB	· LTE Cat.M / Cat.NB	· LTE Cat.M / Cat.NB - 2G "fallback"
	Internet module	· Telit LE910C1-EUX	· Telit LE910S1-EA	· Telit ME910C1-E1	· Telit ME910G1-W1	· Telit ME910G1-WW
	Bands / Frequency (MHz)	· LTE-FDD: B1(2100) / B3(1800) / B7(2600) /B8(900) / B20(800) / B28A(700) · 3G: B1(2100) / B3(1800) / B8(900) · 2G: B3(1800) / B8(900)	· LTE-FDD: B1(2100) / B3(1800) / B5(800) / B7(2600) / B8(900) / B20(800) / B28(700) · LTE-TDD: B38(2600) / B40(2300) / B41(2500) · 2G: B3(1800) / B8(900)	· LTE M1 & NB1: B3(1800) / B8(900) / B20(800)	· LTE: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(800) / B19(800) / B20(800) / B25(1900) / B26(850) / B27(800) / B28(700) / B66(1700) / B71(600) / B85(700)	· LTE: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B14(700) / B18(800) / B19(800) / B20(800) / B25(1900) / B26(850) / B27(800) / B28(700) / B66(1700) / B71(600) / B85(700) · 2G: B2(1900) / B3(1800) / B5(850) / B8(900)
	Speed (DL/UL)	· LTE Cat.1: 10/5 Mbps · HSPA+: 42 Mbps · GPRS: 80/40 kbps	· LTE Cat.1: 10/5 Mbps · GPRS: 80/40 kbps	· LTE M1 UL/DL: 375/300 kbps · LTE NB1 UL/DL: 20-250/250 kbps	· LTE Cat.M: 1 Mbps/588 kbps · LTE Cat.NB: 160/120 kbps	· LTE Cat.M: 1 Mbps/588 kbps · LTE Cat.NB: 160/120 kbps · 2G (EGPRS): 210/264 kbps
	SIM card slot	· mini SIM card (2FF type, push-insert SIM)				
	Antenna connector	· External antenna connector (SMA, 50 Ohm)				
Compatibility	Meter type	· Honeywell / Elster® Alpha A1500 / A1800 / A1700 and A1140 / A1160 electricity meters · Itron® SL7000, EM600 (E620), ACE6000, ACE8000 meters · Landis+Gyr® ZMG electricity meters · External usage as universal modem for any compatible meter				
Interfaces	Connectors (order options)	· RS232 (D-SUB9 / D-SUB25 / RJ12 / RJ45 connector options) · RS485 (2-wire/4-wire connector or RJ12 / RJ45 connector options) · 2 digital input connector (for monitoring, sabotage detection) · DC power (pigtail connector or ferrule connector / 2-pins)				
Operation	Protocol / Transmitting	· EN 62056-21, Mode C - 300-115200 baud serial data speed · „Pull" mode, transparent transmission · CSData (2G) call				
	Notification	· Immediate alarm notification (LastGASP - power loss) · Notification of input status changes / sabotage detection				
	Configuration	· WM-E Term® tool (local/remote single or mass parameter configuration, firmware update) · DMSet® software - optional (remote config, parametring) · Device Manager software (order option)				
	Indication	· 3 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				
EMC compatibility	Surge withstand	· 4kV (peak), 1,2/50μs, line to line 2Ω · 6kV (peak), 1,2/50μs, line to earth (ground) 2Ω · 12kV, Rsource = 40Ω (1,2/50μs, Impulse 1 min) · Dielectric test: 4kV, 1 min, 50Hz				
Construction	Temperature	· Operating: from -40°C to +70°C at 95% rel.humidity · Storage: from -40°C to +80°C at 95% rel.humidity				
	Enclosure	· IP51 plastic transparent casing, mountable into the meter enclosure				
	Dimension / Weight	· 162 x 66 x 30mm (without antenna and cables) · 98-130gr (according to expansion board and cable outfit)				