

- GSM/GPRS packet transmission and SMS
- Integral GSM 850/900/1800/1900 with system for autonomic login to GPRS network
- 5 binary/counter inputs compatible with potential free contacts (eg. pulse outputs of flowmeters)
- 3 analogue 0-5 V DC inputs with configurable alarm thresholds and hysteresis
- 2 binary outputs
- Keyed power supply 0-5 V DC and 15/24 \*\* for external analogue converters
- Optional power supply 15/24VDC for external analogue converters
- Lid opening sensor (tampering protection)
- Measuring of internal temperature
- Intelligent data logger (4MB Flash RAM with min. write interval of 1 sec.)
- Configurable schedules and events initiating measurements and data transmission
- RTC real time clock
- Battery power supply (alkaline or lithium batteries), replaceable
- Intelligent power management
- USB port for local configuration
- Optional communication interface (RS-485)
- Optional GPS receiver
- IP-67 enclosure



- SMA antenna socket
- Operating temperature range -20° to +55°C
- User friendly communication and configuration software
- GPRS based application for remote management
- Remote firmware upgrade

MT-713 is a new generation of battery powered measuring, logging and transmitting device. Like other modules of MT family the module is a cutting edge design characterized by advanced innovative solutions, easy to configure and integrate with data collecting and processing systems. The spontaneous on event-based or scheduled data transmission helps to minimize energy consumption and transmission costs extending battery life time. Simple compact design in plastic enclosure with IP-67 protection makes the module ideal for harsh environment with no power lines (eg. water supply control wells and chambers). Integrated replaceable battery set may endure even for 10 years of operation (lithium batteries in conjunction with power saving configuration). Battery voltage is continuously monitored and reported along with measurement data. MT-713 is equipped with 5 binary/counter inputs (adopted to work with potential free contacts) and 3 analogue inputs allowing measuring of parameters like pressure, temperature, level etc. Keyed voltage source powering analogue inputs for measurement interval only and binary outputs capable to control power

supply of external sensors in conjunction with deactivation of GSM/GPRS modem reduces energy consumption to absolute minimum. Measurement data may be logged with precise time stamp in non volatile Flash memory according to configured schedule or on event. Besides measurements the module can report multiple alerts: tampering with enclosure, unauthorized opening of the chamber, long period of missing flow, crossing of predefined level or temperature threshold etc. MT-713 module's resources and functionality may be optimized for particular applications due to many available options (3 or 6\* lithium or alkaline battery packs, internal antenna, opaque cover, communication interface for external devices, GPS receiver). User friendly environment for configuration, communication with open interfaces for OPC/ODBC/CSV and remote management comes along with the purchased module, free of charge. The user may fully benefit from new versions of firmware thanks to remote firmware upgrade functionality.

\* in MT-713 HC with deeper enclosure

\*\* option



5DI/2DO

3AI



RS-485  
option

MT-713

**General**

Dimensions (HxWxD)	120x120x65(95)* mm
Weight (with batteries)	1030 (1430)* g
Mounting type	4 holes
Operating temperature	-20 to +55°C
Protection class	IP67 (IP68 optional)

**GSM/GPRS modem**

Modem type	Sierra Wireless AirPrime EDGE
GSM	QuadBand (850/900/1800/1900)
Frequency range:	
GSM 850	Sender: 824 MHz – 849 MHz Receiver: 869 MHz– 894 MHz
EGSM 900	Sender: 880 MHz – 915 MHz Receiver: 925 MHz– 960 MHz
DCS 1800	Sender: 1710 MHz – 1785 MHz Receiver: 1805 MHz– 1880 MHz
PCS 1900	Sender: 1850 MHz– 1910 MHz Receiver: 1930 MHz– 1990 MHz
Sender's peak power GSM850/EGSM900	33 dBm (2W) - class 4 station
Sender's peak power DCS1800/PCS1900	30 dBm (1W) - class 1 station
Modulation	0,3 GMSK
Channel spacing	200 kHz
Antenna	50 Ω

**Power supply**

Battery pack:	
- 3 alkaline batteries (6 alkaline batteries)* or - 3 lithium batteries (6 lithium batteries)*	4,5 V / 16 Ah (32 Ah)* 3,6 V / 39 Ah (78 Ah)*
Mean modem sleep current	250 μA typ.
Current consumption with GSM active and no transmission	50 mA typ.
Current consumption during GPRS transmission**	250 mA typ.

\* in MT-713 HC with deeper enclosure

\*\* Weak GSM signal level or unmatched antenna can increase current consumption during transmission significantly.

**Analogue inputs AN1–AN3 (potential, differential)**

Measuring range	0 – 5,0 V
Input resistance	>600 kΩ typ.
Resolution	12 bit
Accuracy	± 0,5 %

**Binary/counter inputs I1–I5**

Contact polarization	3 V
Counting frequency	250 Hz max.
Minimum pulse length	2 ms

**NMOS Q1, Q2 outputs**

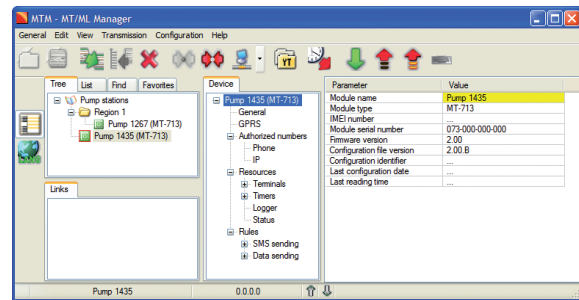
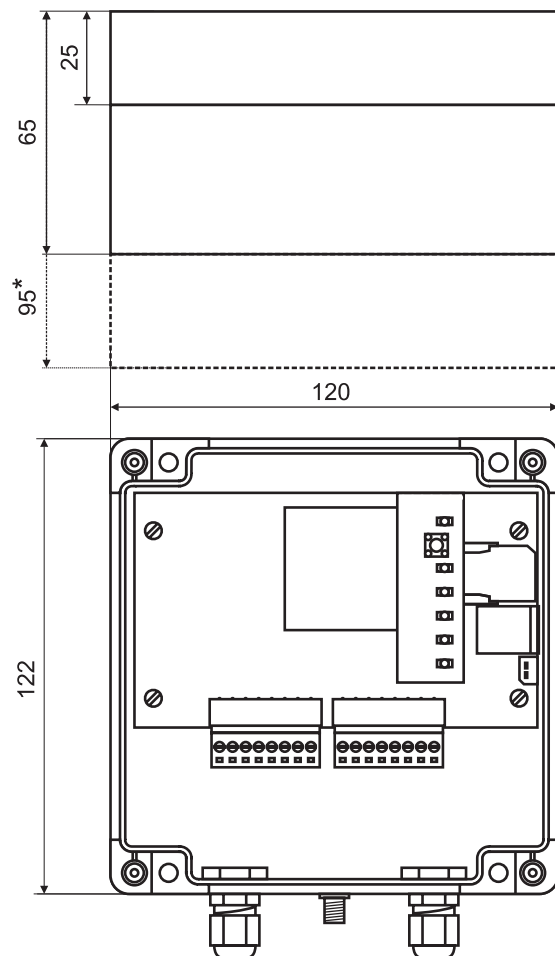
Maximum voltage	30 V
Maximum current	250 mA
Switch off current	< 50 μA
Resistance	1Ω

**Configurable voltage output**

Voltage range	0 – 5,0 V
Resolution	0,1 V
Accuracy	2 %
Maximum current	50 mA

**Logger**

Memory type	FLASH
Memory capacity	4 MB
Minimum recording interval	1 s

**Configuration environment****Drawings and dimensions (all dimensions in millimeters)**

\* in MT-713 HC with deeper enclosure

**Supplementary information:**

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