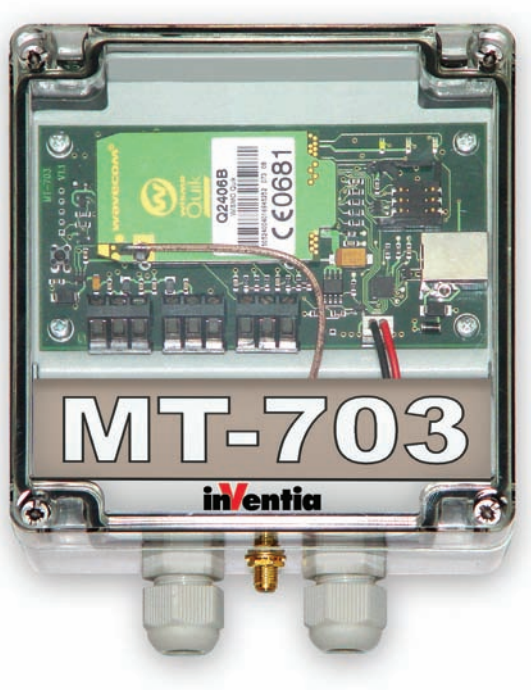
Battery powered, energy-saving telemetry module with GPRS

- GSM/GPRS packet data transmission and SMS messaging
- Integrated GSM 900/1800 modem with automatic login onto GPRS network
- 2 digital/counter inputs, self powered (ready to use with pulse outputs of flow meters)
- 2 analog inputs 0-3.3 VDC, self powered, configurable alarm levels and hysteresis
- Intelligent data logger
- Scheduled and event triggered data transmission
- Real time clock (RTC)
- Battery power supply (4,5 VCD alkaline cells), replaceable
- Intelligent energy management
- IP-67 housing (optionally IP-68)
- SMA antenna socket
- Operating temperature range -20°…+55°C
- User friendly configuration and communication software
- Software for remote management via GPRS



The MT-703 module is a new item on the list of INVENTIA achievements in GSM/GPRS telemetry (Golden Medal of AUTOMATICON Fair, GRAND PRIX of WOD-KAN Fair, over 10 000 installations in 16 countries worldwide). This product has been designed as a result of our long experience in development of measuring, automation and GPRS transmission systems as well as software for data visualisation, archiving and analysis. Similar to other MT family modules, this device features modern design, advanced technology and innovative solutions. The module is also easy to configure and integrate with data acquisition and processing systems by the user. The capability to initialise the data transmission (time based or event triggered) reduces the operational costs and saves energy consumption, allowing the longer life of an internal battery. Due to the robust and compact design together with sealed IP-67 protection class plastic housing (IP-68 as an option), the module can operate in harsh environmental conditions, in isolated, difficult-to-access sites without an external supply (e.g. measuring chambers of water supply systems). The integrated, user replaceable battery set can operate for 5 years (assuming one data transmission per day). The battery voltage level is continuously monitored and sent together with the measured data. The MT-703 module has two digital/counter inputs (for direct connection to potential-free contacts of a water flow meter). There are also two analog inputs that allow measurement of such values as pressure, temperature or liquid level. The module can also report alarm states such as unauthorised opening of a chamber, long lasting flow break, critical value of measured level or temperature, etc. Flash memory based data logger with RTC timestamps allows measured data to be securely stored till successful transmission, confirmed by the recipient.

Resources

- 2 analog inputs 0-3.3 VDC, self powered, with configurable alarm levels and hysteresis
- 2 digital/counter inputs, self powered (ready to use with pulse outputs of flow meters)
- Flash memory for the firmware storage with ability to remote update via GPRS
- Flash memory for storing the measurement results (576 data records)
- Real time clock (RTC) with calendar allowing for leap years
- Integrated GSM/GPRS 900/1800 modem with function of the automatic login onto GPRS network and a standby /transmission mode management
- SMA antenna socket

Functionality

- Communication modes: GPRS and SMS
- Data transmission methods: scheduled and/or triggered by events
- Configurable parameters for filtering, hysteresis, sampling, recording, alarm levels, operation modes, and events triggering the data recording or transmission
- Programmable time periods for recording and sampling
- Device access control using binary alarm input
- Powering: replaceable batteries
- Intelligent energy-saving system
- Operating temperature: -20°…+55°C
- User friendly configuration tools
- Software for remote management of MT-703 modules via GPRS

MT-703

General

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

GSM/GPRS modem

Modem type	WAVECOM WIRELESS CPU
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	50Ω

Power supply

Battery pack: 3 (6*) alkali batteries	4,5 V / 16 Ah (32 Ah)*
Mean consumption in standby mode	< 350 μA
Mean consumption in transmission mode	30 mA

Analogue inputs AN1, AN2 (voltage)

Input range	0-3,3 V
Input resistance	>100kΩ typ.
Resolution	10 bits
Accuracy	± 1 %

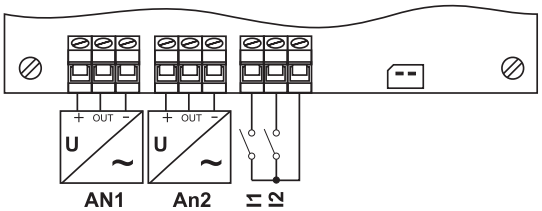
Digital/counter inputs I1, I2

Polarization for normally open contacts	2,5 V
Pulse frequency	30 Hz max.
Minimum pulse width	16 ms

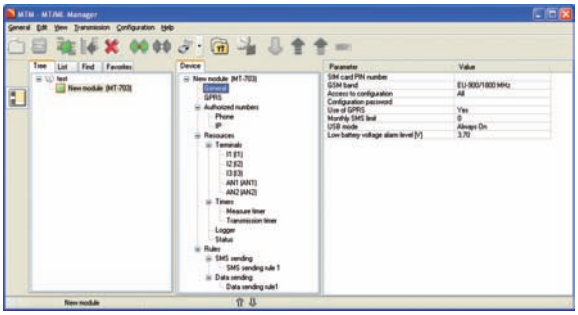
Data logger

Memory type	FLASH
Max. number of records	576
Min. write period	5 min.

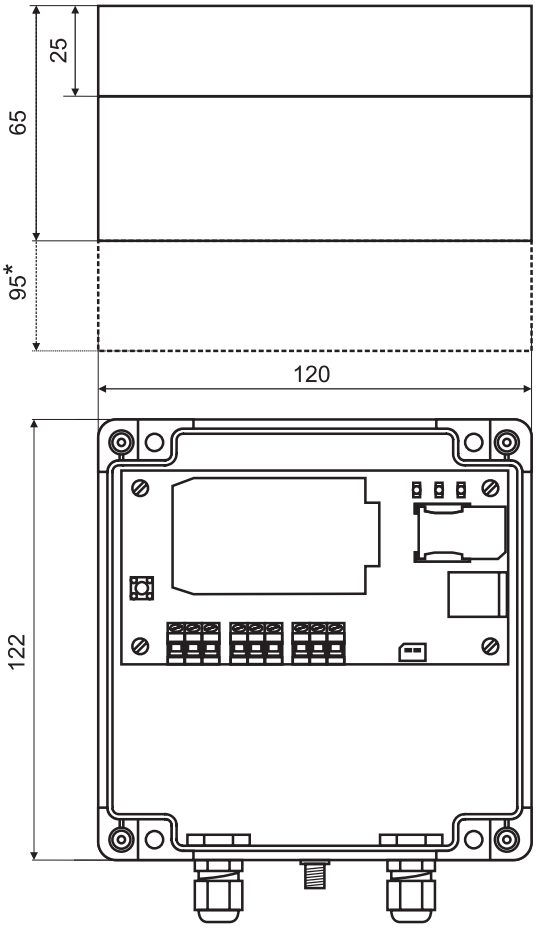
Digital/analog inputs



Configuration environment



Drawings and dimensions (all dimentions in millimeters)



** in MT-703 HC with deeper enclosure*

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INVENTIA complies with ISO 9001:2000 certified Quality Management System!
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