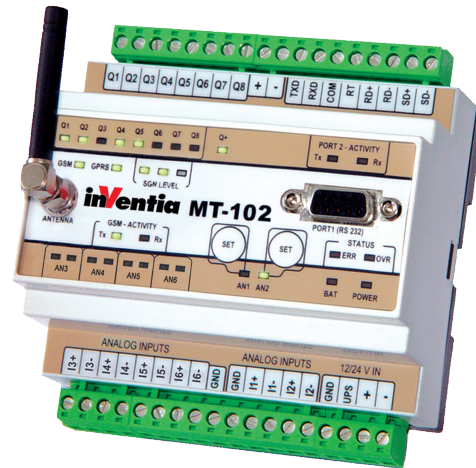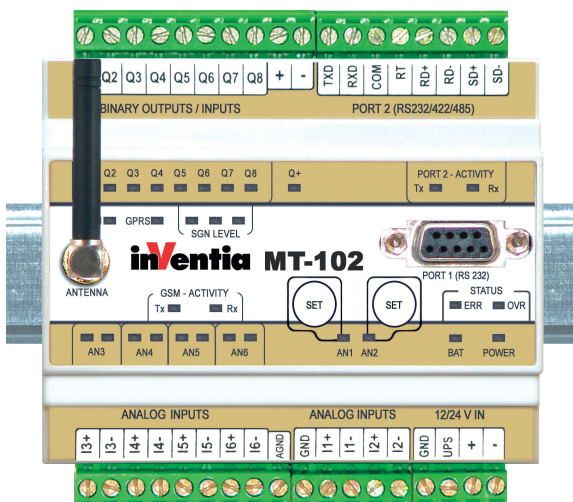- GSM/GPRS packet transmission
- Integral GSM 850/900/1800/1900 modem with automatic login onto GPRS network
- Binary inputs and outputs (8)
- Analog inputs 4-20 mA (6)
- Serial communication port for external devices (RS 232/422/485), isolated
- Data logger with 0,1 sec. resolution
- RTC Real Time Clock
- Programmable logic controller (PLC)
- Standard communication protocols (MODBUS RTU, GAZMODEM, M-BUS, NMEA 0183)
- Removable terminal blocks
- Easy configuration software
- FlexSerial mode for program based protocol handling

WARRANTY 3 YEARS

Telemetry Module MT-102 is a professional device combining functionality of programmable logic controller, data logger, protocol converter and wireless communication interface for GPRS packet transmission over GSM network. Compact, robust design, integral GSM modem, attractive technical features and easy to use configuration tools are important advantages of MT-102 in wireless, scalable, multi-node systems for telemetry, control, diagnostic, surveillance and alarming.

Resources

- 8 configurable binary outputs / inputs / counters 24V DC (Q1 - Q8)
- 2 optoisolated fast analog inputs 4-20 mA (1,5% acc./10 bit res.) with configurable hysteresis and filtration
- 4 optoisolated analog inputs 4-20mA with configurable hysteresis and conversion time (U/f conversion, accuracy 0,5%)
- Internal registers, flags and constants available to internal user program
- Isolated serial port RS232/485/422
- Firmware Flash memory with remote update capability
- RTC with external synchronization functions

Functionality

- Transmission modes:
    - GPRS - packet transmission
    - SMS
    - CSD - circuit switched data transmission (in modem mode only)
- All internal resources accessible with standard Modbus RTU protocol
- Intelligent packet routing and Multimaster in Modbus RTU mode
- Packet broadcasting or intelligent routing in transparent mode
- All binary inputs configurable as counters or frequency-to-analog converters (0 2kHz)
- Programmable control functions using I/O's and configurable, event triggered flags (SMS sending, data sending / logging, output control, call in)
- Unsolicited messaging on input/flag change, analog signal alarm level crossing or logical function evaluation.
- Event triggered Data Logger
- Dynamic SMS text insertion
- Simple, multipoint (4) alarm configuration for both binary and analog inputs
- Additional manual alarm level setting capability for analog inputs A1, A2 (front panel push buttons)
- Serial port emulated protocol in GPRS mode:
    - MODBUS RTU (Master and Slave)
    - Transparent, intelligent modem
- External module resource mapping to internal registers for data transmission improvement and event triggering
- Multibroadcast for transparent mode
- Remote (via GPRS) configuration and programming
- Configurable access security - IP and Tel. list , optional password
- DIN rail mounting
- Power supply 12/24V DC, 24 V AC
- Removable terminal blocks
- Diagnostic LED's (status, GSM transmission activity, GSM signal level, GPRS activity, serial communication activity, I/O status)

MT-102

General

Dimensions (length x width x height)	105x86x60 mm
Weight	300 g
Mounting	DIN Rail 35mm
Operating temperature	-20 ... +65°C
Protection class	IP40
Max. voltage at all connectors relative to device's GND.	60Vrms max

GSM/GPRS Modem

Modem type		CINTERION
GSM		QuadBand (850/900/1800/1900)
Frequency range:		
GSM 850	Transmitter: 824MHz – 849 MHz Receiver: 869 – 894 MHz	
EGSM 900	Transmitter: 880MHz – 915 MHz Receiver: 925 – 960 MHz	
DCS 1800	Transmitter: 1710MHz – 1785 MHz Receiver: 1805 – 1880 MHz	
PCS 1900	Transmitter: 1850 – 1910 MHz Receiver: 1930 – 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

Voltage range (DC) 12,24V		10,8 ... 36 V	
AC (24V)		18...26,4 Vrms	
Input current (A) (for 12V DC)	Idle 0,10	Active 0,60	Max 1,90
Input current (A) (for 24V DC)	Idle 0,06	Active 0,25	Max 1,00

Inputs Q1...Q8

Maximum input voltage	36 V
Input resistance	5,4 kΩ
Input voltage ON (1)	> 9V min.
Input voltage OFF (0)	> 3V max.

Outputs Q1...Q8

| Recommended average current for single output	50mA
Single output current	350 mA max.
Mean current for all outputs	400 mA max.
Voltage drop at 350mA	< 3,5 V max.
Off state current	< 0,2 mA max.

Analog inputs A1, A2 (4...20 mA)

Input current	4...20 mA
Maximum input current	50 mA max.
Dynamic input impedance	25Ω typ.
Voltage drop at 20mA	< 5 V max.
A/D converter	10 bits
Accuracy	+/–1,5% max.
Nonlinearity	+/–1% max.

Analog inputs A3...A6 (4...20 mA)

Input current	4...20mA
Maximum input current	50 mA max.
Dynamic input impedance	50Ω typ.
Voltage drop at 20mA	5,5 V max.
A/D converter	U/f
Accuracy	+/–0,5% max.
Nonlinearity	+/–0,2% max.

Configuration utility
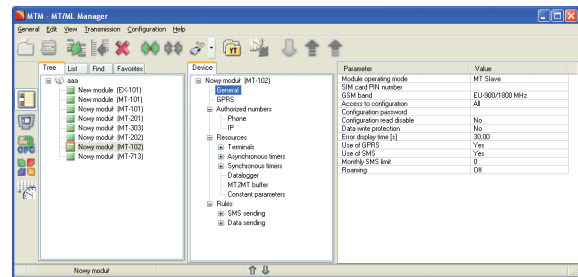
Drawings and dimensions (in millimeters)
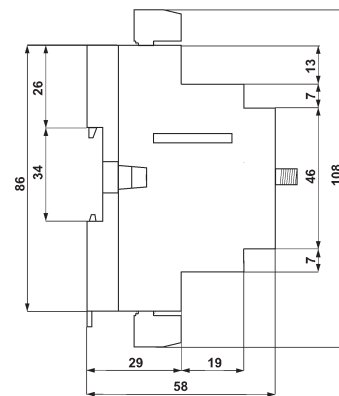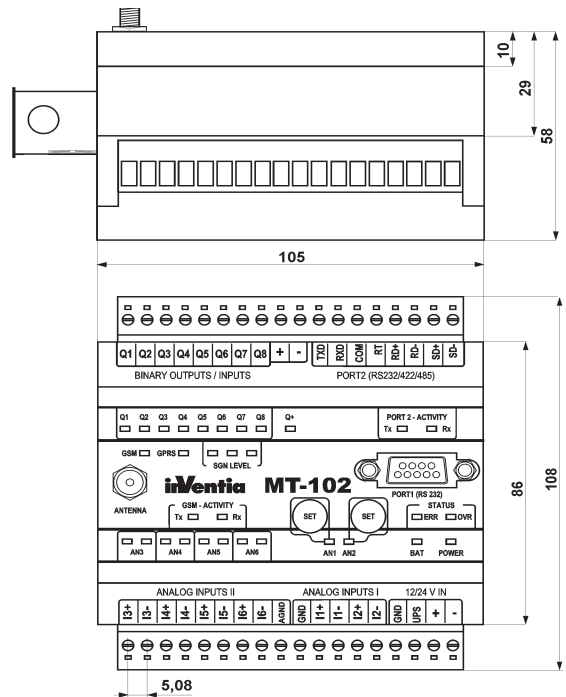
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