

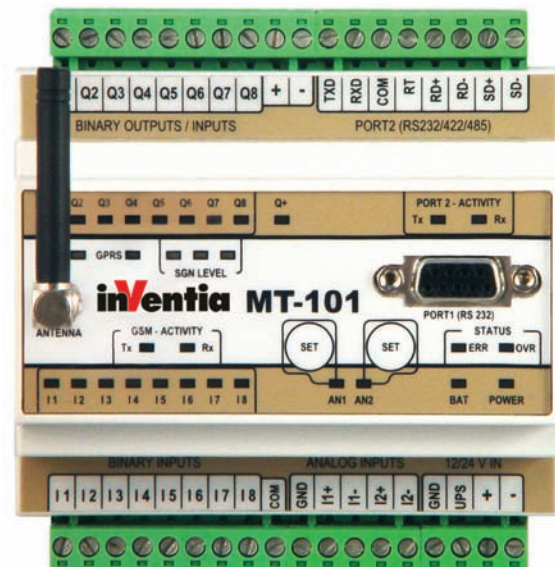
- GSM/GPRS packet transmission
- Integral GSM 850/900/1800/1900 modem with automatic login onto GPRS network
- Binary inputs and outputs
- Analog inputs 4-20 mA (2)
- Serial communication port for external devices (RS 232/422/485), isolated
- Data logger with 0,1 sec. resolution
- RTC Real Time Clock
- 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



Telemetry Module MT-101 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-101 in wireless, scalable, multinode systems for telemetry, control, diagnostic, surveillance and alarming.

Resources

- 8 optoisolated binary / counter inputs 24V DC (I1 - I8)
- 8 configurable binary outputs / inputs / counters 24V DC (Q1 - Q8)
- 2 optoisolated analog inputs 4-20 mA (8 bit acc./10 bit res.) with configurable hysteresis and filtration
- Isolated serial port RS 232/485/422
- 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 binary inputs can be configured 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
- Event triggered Data Logger
- Dynamic SMS text insertion
- Simple, multipoint alarm configuration for both binary and analog inputs
- Additional manual alarm level setting capability for analog inputs A1, A2 (front panel push buttons)
- External, optoisolated RS 232/422/485 serial port for data transmission
- Serial port emulated protocols in GPRS mode:
 - MODBUS RTU (Master and Slave)
 - Transparent, intelligent modem
- Smart MODBUS RTU routing
- Multibroadcast for transparent mode
- Local or 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)

General

| | |
|--|---------------|
| Dimensions (length x width x height) | 105x86x60 mm |
| Weight | 300 g |
| Mounting | DIN Rail 35mm |
| Operating temperature | -20 ... +55°C |
| Protection class | IP40 |
| Max. voltage at all connectors relative to device's GND. | 60Vrms max |

GSM/GPRS Modem

| | |
|-------------------------------------|--|
| Modem type | WAVECOM WIRELESS CPU |
| 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 I1...I8

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

Inputs Q1...Q8

| | |
|-----------------------|-------------|
| Maximum input voltage | 36 V |
| Input resistance | 5,4 kΩ type |
| Input voltage ON | > 9V min |
| Input voltage OFF | < 3V max. |

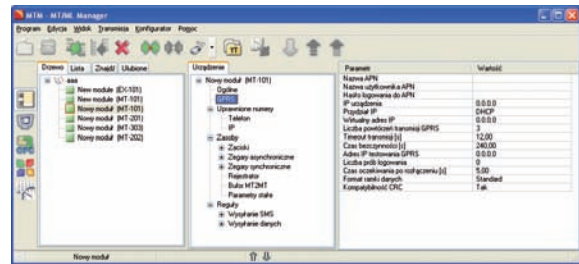
Outputs Q1...Q8

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

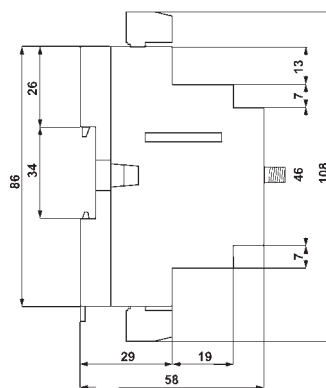
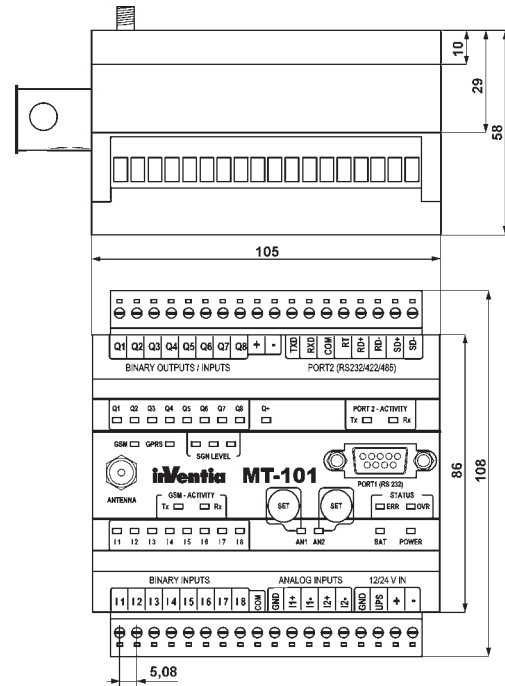
Analog inputs A1, A2 (4...20 mA)

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

Configuration utility



Drawings and dimensions (in millimeters)



Additional info:



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INVENTIA complies with ISO 9001:2008 certified Quality Management System!
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