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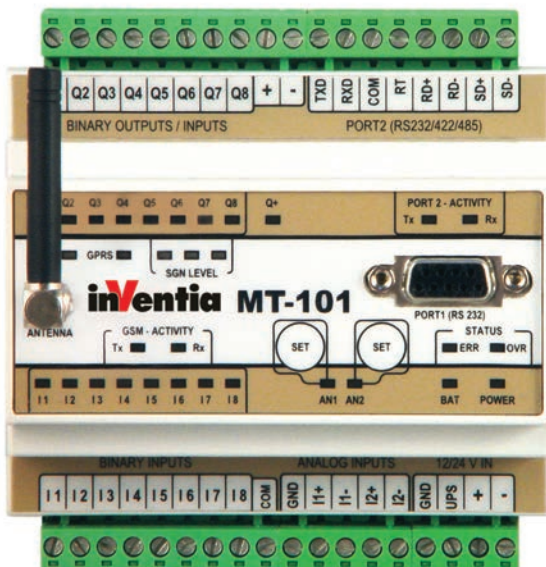
- GSM/GPRS packet transmission
- Integral GSM 850/900/1800/1900 modem with automatic login onto GPRS network
- Binary inputs and outputs
- Analog inputs 4-20 mA (2)
- Serial communication port for external devices (RS 232/422/485), isolated
- Data logger with 0,1 sec. resolution
- RTC Real Time Clock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

WARRANTY 3 YEARS

PLC

SMS

8-16DI /0-8DO

2AI

DIN RAIL

RS-232

RS-232/ 422/485

3G option

MT-101

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)

MT-101

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 TC63i
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

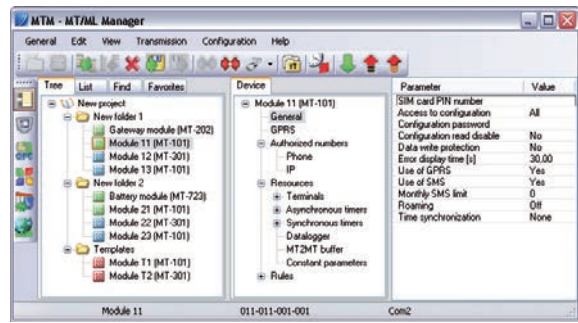|	
Maximum input voltage	36 V
Input resistance	5,4 kΩ typ.
Input voltage ON	> 9V min
Input voltage OFF	< 3V max.

Outputs Q1...Q8

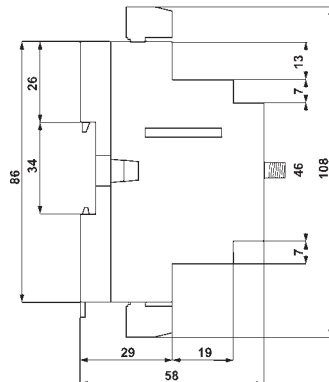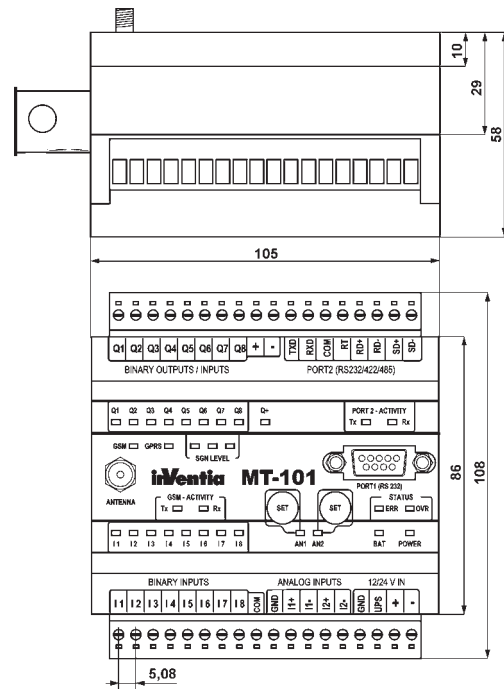|	
Recommended average current for single output	50mA
Single output current	350mA max.
Mean current for all outputs	400mA max.
Voltage drop at 350mA	<3,5V max.
Off state current	< 0,2mA max.

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

Input current	4...20mA
Maximum input current	50mA max.
Dynamic input impedance	25Ω typ.
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:

inVentia

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TÜV SÜD ISO 9001   UNION FOR ENTERPRISING PEOPLE

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