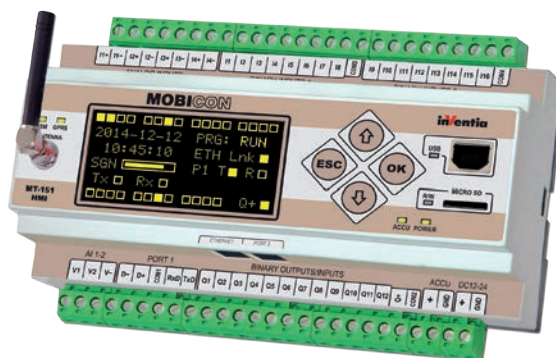


- GSM/GPRS packet transmission
- Integral quad-band modem GSM 850/900/1800/1900
- Dual-SIM technology – access to 2 independent GSM networks ensures superior availability
- 16 binary inputs (galvanic isolation)
- 12 binary outputs, selectively configurable as inputs (galvanic isolation)
- 4 analog inputs 4-20 mA (galvanic isolation)
- 2 analog inputs 0-10 V
- Ethernet port 10Base-T/100Base-TX
- RS-232/485 serial port for external devices (galvanic isolation)
- RS-232 port with 5 V feeding for operator panels
- OLED graphic display (128x64 pixels)
- Diagnostic LEDs
- Battery buffered power supply (SLA battery support)
- Data logger with 0,1 sec resolution (micro SD card support)



- Programmable logic controller (PLC)
- Standard communication protocols (MODBUS RTU, MODBUS TCP, M-BUS, NMEA 0183)
- FlexSerial – programmable handling of non-standard serial protocols
- Remote configuration, programming, diagnostics and firmware upgrade via GPRS

MOBICON is a family of new generation telemetry controllers for demanding tasks and applications. MT-151 HMI model is a professional, industrial design combining functionality of programmable logic controller, data logger, protocol converter and wireless communication interface for GPRS packet transmission over GSM network. Dual-SIM technology ensures superior level of GSM network availability, providing redundant channel of data transmission. Ethernet port provides powerful capabilities of integration with other devices and systems of the user. Graphic display is a convenient user interface for local diagnostics, supervision and monitoring – without use of external operator panel or portable PC. With compact, robust design, integral GSM modem, attractive technical features and easy to use configuration tools the MT-151 HMI controller is an optimal solution for demanding wireless telemetry, control, diagnostic, surveillance and alarm systems.

Resources

- 16 optoisolated binary/counter inputs 12/24 VDC (I1 - I16), positive and negative logic
- 12 optoisolated binary outputs 12/24 VDC (Q1 - Q12), positive logic – selectively configurable as inputs
- 4 optoisolated analog inputs 4-20 mA (accuracy 0,2%, 14-bit resolution @ 1 sec interval) with configurable hysteresis and filtration
- 2 analog inputs 0-10 V
- Ethernet port 10Base-T/100Base-TX
- Isolated RS-232/485 serial port
- RS-232 serial port with 5 V / 500 mA feeding
- USB port for local configuration and programming
- Interface for backup 12 V SLA battery – charging support
- 2 SIM holders - Dual-SIM support
- OLED graphic display (128x64) and status LEDs
- Internal flags and registers for user application program
- Firmware Flash memory with remote update capability
- Data and Event logger supporting micro SD card
- RTC with external synchronization functions

Functionality

- Transmission modes:
 - GPRS – packet transmission
 - SMS
 - CSD – circuit switched data transmission (in modem mode only)
- Access to module resources using standard protocols MODBUS RTU and MODBUS TCP
- Intelligent packet routing and Multimaster support in MODBUS mode
- Programmable control logic using I/Os, timers, counters, flags and registers for triggering events (data transmission/recording, SMS transmission, e-mail transmission, setting outputs and internal registers, making calls, etc.)
- Event based transmission (unsolicited messaging) triggered by change of binary input state, internal flag state, by reaching alarm level of analog input, by true condition.
- Configurable SMS messages triggered by alarms and scheduled
- Dynamic fields in SMS text
- Configurable alarm levels, hysteresis, deadband and filtration for analog inputs
- Data and event recording on micro SD card with 0,1 sec resolution
- Transmission of data from external devices connected to RS-232/485 serial port
- 5 V feeding provided for external device connected to RS-232 serial port (e.g. operator panel, GPS receiver)
- Configurable events based on mirrored resources of external devices
- Remote configuration and programming via GPRS
- Configurable access security – list of authorized IPs and tel. numbers, optional password
- DIN rail mounting
- Supply voltage 12/24 VDC (24 VDC required for battery buffered power supply operation)
- Built-in management of external SLA backup battery
- Built-in advanced auto-diagnostics
- Detachable terminal blocks



16-28DI
/12DO

6AI



DIN RAIL

RS-232

RS-232/485



General

| | |
|------------------------|----------------|
| Dimensions (L x W x H) | 157x86x58 mm |
| Weight | 450 g |
| Fixing | DIN Rail 35 mm |
| Operating temperature | -20 ... +65 °C |
| Protection class | IP40 |

GSM/GPRS Modem

| | |
|------------------------------|--|
| Modem type | Cinterion TC63i |
| Frequency bands | 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 |
| Output power GSM850/EGSM900 | 33 dBm (2W) - class 4 station |
| Output power DCS1800/PCS1900 | 30 dBm (1W) - class 1 station |
| GPRS class | 10 |
| Modulation | 0,3 GMSK |
| Channel spacing | 200 kHz |
| Antenna | 50 Ω |

Power supply

| | | | |
|--------------------------|----------------|------------------|----------------|
| DC (nom. 12/24 V) | 10,8 – 36 V | | |
| Input current (@ 24 VDC) | Idle 0,06 A | Active 0,25 A | Max. 1,00 A |

Inputs I1...I16

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

Inputs Q1...Q12

| | |
|-----------------------|-------------|
| Maximum input voltage | 36 V |
| Input resistance | 5,4 kΩ typ. |
| Input voltage ON (1) | > 9 V |
| Input voltage OFF (0) | < 3 V |

Outputs Q1...Q12

| | |
|------------------------|--------------|
| Maximum output current | 100 mA |
| Voltage drop @ 100 mA | < 0,5 V max. |
| OFF state current | < 10 μA max. |

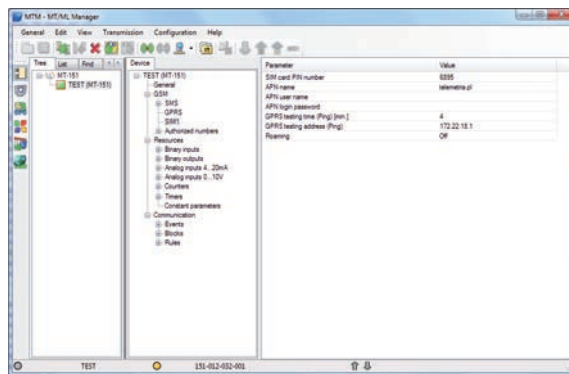
Analog inputs 4-20 mA (4)

| | |
|--------------------------|-----------|
| Input current range | 4 – 20 mA |
| Maximum input current | 50 mA |
| Dynamic input impedance | 55 Ω typ. |
| Voltage drop @ 20 mA | < 5 V |
| A/D converter resolution | 14 bits |
| Accuracy (@ 25 °C) | 0,2 % |

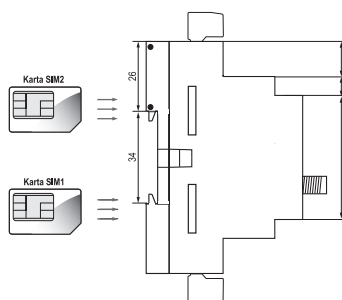
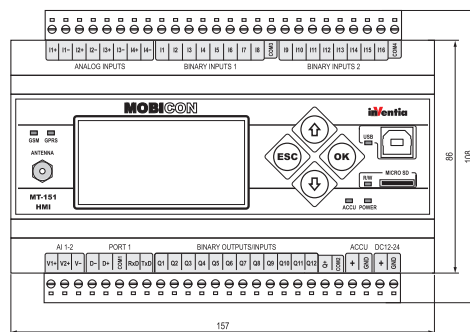
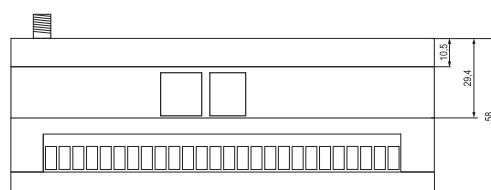
Analog inputs 0-10 V (2)

| | |
|--------------------------|-------------|
| Input voltage range | 0-10 V |
| Maximum input voltage | 20 V |
| Input impedance | 197 kΩ typ. |
| A/D converter resolution | 12 bits |
| Accuracy (@ 25°C) | 0,5 % |

Configuration utility



Drawings and dimensions (in millimeters)



Additional info:



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