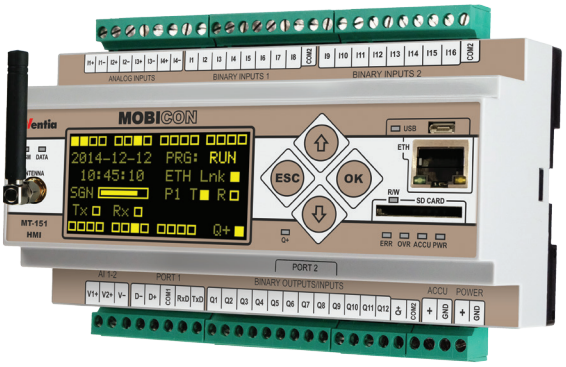
MT-151HMI V2 Mobile Controller for 2G/3G telemetry

MT-151 HMI V2

- 2G/3G data packet transmission
- Embedded GSM 2G/3G modem
- Dual-SIM technology (passive) – 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 (w/o galvanic isolation)
- 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, SNMP, IEC 60870-5-104)
- FlexSerial – programmable handling of non-standard serial protocols
- Remote configuration, programming, diagnostics and firmware upgrade via GPRS

MT-151 HMI V2 is a family of new generation telemetry controllers for demanding tasks and applications. MT-151 HMI V2 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 V2 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 logic
- 12 optoisolated binary outputs 12/24 VDC (Q1 – Q12), positive logic – selectively configurable as inputs
- 4 optoisolated differential analog inputs 4 – 20 mA (accuracy 0,2%, 14-bit resolution @ 1 sec interval) with configurable hysteresis and filtration
- 2 single-ended 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
- micro USB (AB) 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 SD card
- RTC with external synchronization functions

Functionality

- 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 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/HSPA
- Configurable access security – list of authorized IPs and tel. numbers, optional password
- DIN rail mounting
- Supply voltage 12/24 VDC (24 VDC in case of using connected external battery)
- Built-in management of external SLA backup battery
- Built-in advanced auto-diagnostics
- Detachable terminal blocks

WARRANTY 3 YEARS
PLC
MIM
SMS
16-28DI /12DO
6AI
DIN RAIL
RS-232
RS-232/485
3G

MT-151 HMI V2

General

Dimensions (L x W x H)	157 x 86 x 58 mm
Weight	382 g
Fixing	DIN Rail 35 mm
Operating temperature	-20 to +65 °C
Protection class	IP40

GSM/GPRS Modem

Modem type	Cinterion EHS6
Quad-Band GSM	bands: 850, 900, 1800,1900
Five Band UMTS	bands: 800, 850, 900, 1900, 2100
Antenna	50 Ω

Power supply

DC (nom. 12/24 V)	10,8 – 30 V		
Input current (@ 24 VDC)	Idle 0,06 A	Active 0,25 A	Max. 1,00 A

Inputs I1 – I16 *

Input voltage range	0 – 30 V
Input current	2,4 mA
Input voltage ON (1)	>9,4 V
Input voltage OFF (0)	<8,4 V

Inputs Q1 – Q12 *

Maximum input voltage	30 V
Input current	2,4 mA
Input voltage ON (1)	>9,4 V
Input voltage OFF (0)	<8,4 V

Outputs Q1 – Q12

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

Analog inputs 4 – 20 mA (4)

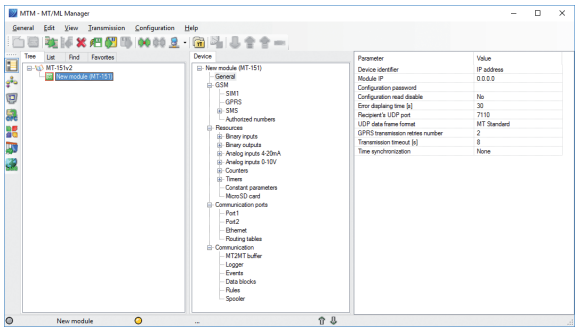
Input current range	4 – 20 mA
Maximum input current	50 mA
Dynamic input impedance	55 Ω typ.
Voltage drop @ 20 mA	< 5 V
A/D converter resolution	14 bits
Accuracy (@ 25 °C)	0,2 %

Analog inputs 0 – 10 V (2)

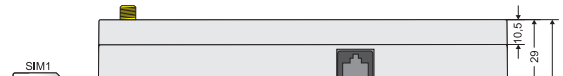
Input voltage range	0 – 10 V
Maximum input voltage	20 V
Input impedance	197 kΩ typ.
A/D converter resolution	12 bits
Accuracy (@ 25°C)	0,5 %

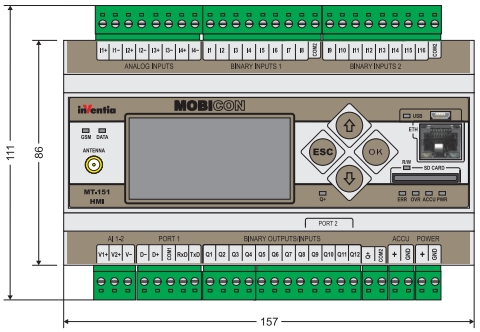
* according to IEC 61131-2 for switch type 1 and 3

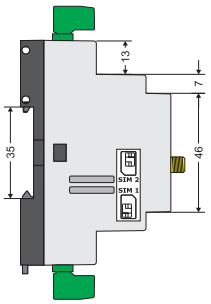
Configuration utility



Drawings and dimensions (in millimeters)







Supplementary information:

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