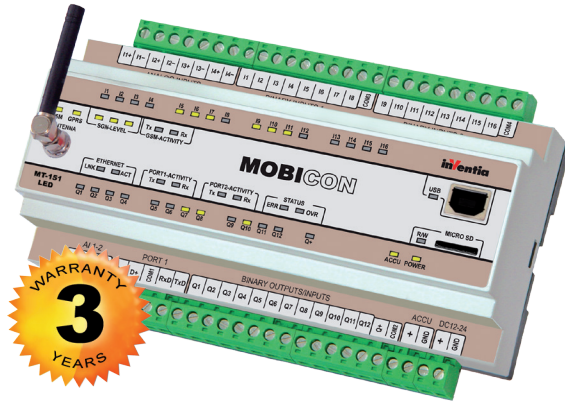


- GSM/GPRS packet transmission
- Integral quad-band modem GSM 850/900/1800/1900
- Dual-SIM technology – access to 2 independent GSM networks ensures superior availability
- 16 binary inputs (galvanic isolation)
- 12 binary outputs, selectively configurable as inputs (galvanic isolation)
- 4 analog inputs 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
- 48 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
- Firmware Flash memory with remote update capability
- Data and Event logger supporting micro SD card
- RTC with external synchronization functions

MOBICON is a family of new generation telemetry controllers for demanding tasks and applications. MT-151 LED 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, with redundant channel of data transmission. Ethernet port provides powerful capabilities of integration with other devices and systems of the user. 48 diagnostic LEDs annunciate clearly detailed information about actual status and operation of the module. With compact, robust design, integral GSM modem, attractive technical features and easy to use configuration tools the MT-151 LED 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, differential analog inputs 4-20 mA (9-bit accuracy, 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
- USB port for local configuration and programming
- Interface for backup 12 V SLA battery – charging support
- 2 SIM holders - Dual-SIM support
- 48 status LEDs (I/O states, successful login to GSM network, active GPRS session, GSM signal level, RX and TX activity of GSM modem, RX and TX activity of communication ports, operations on micro SD card, module status, primary and backup power source)
- Internal flags and registers for user application program

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 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

General

Dimensions (L x W x H)	157x86x58 mm
Weight	450 g
Fixing	DIN Rail 35 mm
Operating temperature	-20 ... +55 °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 min.
Input voltage OFF (0)	< 3 V max.

Outputs Q1...Q12

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

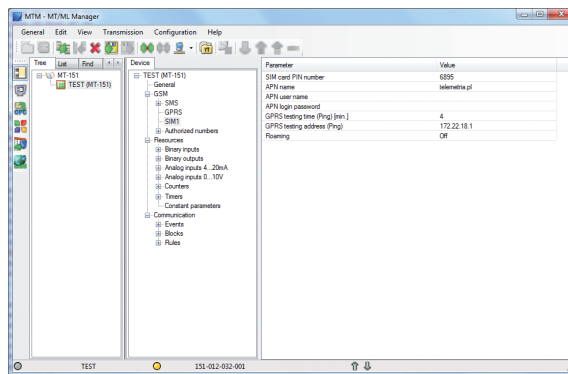
Analog inputs 4-20 mA (4)

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

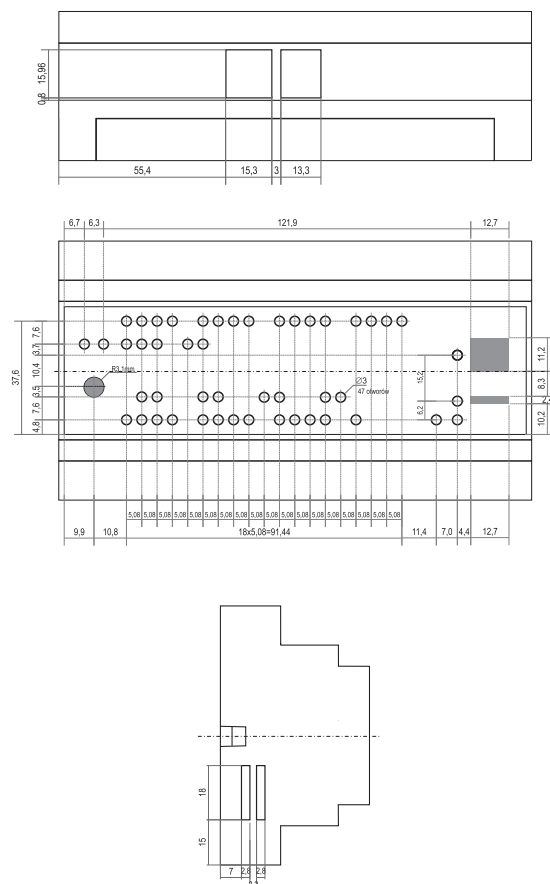
Analog inputs 0-10 V (2)

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:



INVENTIA Sp. z o.o.

ul. Kulczyńskiego 14, 02-777 Warszawa, POLAND
tel.: +48 22 545-32-00, fax: +48 22 643-14-21
inventia@inventia.pl, www.inventia.pl



INVENTIA complies with ISO 9001:2008 certified Quality Management System.
This project is co-financed by EUROPEAN UNION
from the European Regional Development Fund resources.