MT-570 HeatSens – A telemetry module designed for the heating industry

- 2G/4G or 2G/LTE Cat. M1/NB-IoT packet transmission
- Dual-SIM technology (passive mode) – access to 2 independent LTE networks ensures redundancy transmission infrastructure
- 8 binary/pulse inputs
- 4 binary inputs configurable as NO/NC outputs
- 2 analogue inputs 4–20 mA/Pt1000
- 4 analogue inputs 4–20 mA/0–10 V
- 2 Pt1000 temperature measurement inputs
- 1 Ethernet port 10Base-T/100Base-TX
- 1 M-Bus port
- 1 RS-232/485 port
- 1 RS-485 port
- 3 RSLV ports
- Diagnostic LEDs
- Redundant power inputs
- Real-time clock (RTC)
- Standard communication protocols (M-Bus, Modbus RTU, Modbus TCP, transparent mode)
- Data logger with 0.1 s resolution

- Remote configuration, programming, diagnostics and firmware updates (OTA)
- Industrial design, DIN rail mounting, screw terminals
- 3-year warranty

The MT-570 telemetry module is designed to read data from various types of sensors and to communicate with measuring and control devices. Thanks to its unique set of interfaces, it is an excellent solution for implementing telemetry systems in the heating industry, although its application is not limited to this sector alone. The device features a built-in data logger, a transmission protocol converter and a wireless communication interface enabling data transmission over 2G/4G networks. Dual-SIM technology ensures transmission reliability through access to two independent 2G/4G networks.
Its industrial design, carefully selected technical specifications and user-friendly configuration tools are key advantages that make the MT-570 the optimal solution for wireless telemetry, monitoring, diagnostics and control systems requiring a high level of reliability. The available Ethernet port allows connection to, amongst other things, a wide network of peripheral devices supporting Modbus TCP.

Features:

- Integrated, multi-band 2G/4G or 2G/LTE Cat. M1/NB-IoT communication modem
- 8 binary/pulse inputs
- Battery-backed backup for meter inputs during mains power failure
- 4 binary inputs configurable as NO/NC outputs
- 2 analogue inputs 4–20 mA/Pt1000
- 4 analogue inputs 4–20 mA/0–10 V
- 2 Pt1000 temperature measurement inputs
- Ethernet port
- 1 RS-232/485 port
- 1 RS-485 port
- 3 RSLV ports
- 2 x 24 V DC power supply inputs
- Internal non-volatile memory for configuration data with remote update capability
- Device operation log in Flash memory (8 MB)
- Dual-SIM (passive)
- Real-time clock (RTC)
- LED operation indicator
- USB-C port for configuration

Functionality:

- Communication modes:
  - » 2G/4G lub 2G/LTE Cat. M1/NB-IoT – data transmission
  - » SMS
  - » Ethernet
- Access to the module's internal resources via the standard MODBUS protocol
- Ability to transmit data to/from devices connected to the communication port
- Intelligent packet routing
- Packet forwarding in transparent mode
- Ability to use 8 binary inputs as counter inputs
- Ability to configure inputs IQ1-IQ4 as NO/NC normally open/normally closed outputs
- Option to select the operating mode of the analogue inputs between 4-20 mA current and 0-10 V voltage
- The ability to trigger alarm events (unsolicited messages) automatically in response to a change in the state of a binary input, the exceeding of a set analogue threshold, or the fulfilment of a logical function
- Protection against unauthorised access in the form of a list of authorised telephone numbers and IP addresses, and a configuration password
- Ability to send SMS messages in response to an alarm situation, triggered by a flag or according to a schedule
- Dynamic insertion of variable values into SMS text
- Programmable alarm levels, hysteresis and filtering constants for analogue inputs
- Ability to remotely change configuration parameters and the module's internal program
- User-friendly configuration tools
- LEDs (module status, LTE communication activity, LTE signal level, DATA activity, serial communication activity, status of binary I/O, activity of: USB port, Ethernet port, power supply inputs)
- Detachable terminal blocks with 3.5 mm pitch
- 24 V DC power supply
- Mounting on a 35 mm DIN rail

MT-570

WARRANTY 3 YEARS

SMS

8DI/4DO*

6AI

4PT1000

DIN RAIL

RS-232/485

RS-485

3RSLV

4G

M-BUS

** depends on the version ordered*

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General

Dimensions (L x W x H)	105 x 86 x 58 mm
Mounting method	35 mm DIN rail
Operating temperature (without internal battery backup)	-20 °C to +55 °C
Operating temperature (with internal battery backup)	+5 °C to +55 °C
Protection class (sealing)	IP20

Modem

Manufacturer / Type	SIMCom A7672G*	SIMCom SIM7070G*
Region	global	global
2G bands	850/900/1800/1900 MHz	850, 900, 1800, 1900 MHz
4G bands	B1, B2, B3, B4, B5, B7, B8, B12, B13, B17, B18, B19, B20, B25, B26, B28, B38, B39, B40, B41, B66	B1, B2, B3, B4, B5, B8, B12, B13, B14, B18, B19, B20, B25, B26, B27 (Cat M), B28, B66, B71 (Cat NB), B85
External antenna connector	50 Ω, SMA-F	

* *depends on the variant ordered*

Binary inputs I1–I8

Input type	Closed-circuit to GND, internal pull-up
Maximum pulse frequency in counter mode	250 Hz

Binary outputs IQ1–IQ4

Output type	Open-drain transistor type
Recommended average current per output	100 mA
Maximum current per output	250 mA
Output resistance when switched on	3 Ω max.
Maximum output voltage	24 V

Inputs AN3-AN6 – voltage measurement

Measuring range	0–10 V
Maximum input voltage	18 V
Input resistance	207 kΩ typ.
A/D converter	16 bits
Accuracy	±0,5 %

Inputs AN1–AN6 – current measurement

Measurement range	4–20 mA
Maximum input current	40 mA
Dynamic input impedance	51 Ω typ.
A/D converter	16 bits
Accuracy	±0,2 %

Analogue inputs for temperature measurement RTD1–RTD2 / AI1–AI2

Sensor type	Pt1000
Measuring range	Depends on the sensor used, -50 °C to +150 °C
Connection type	two-wire
Accuracy (at 25 °C)	±0.5 °C

M-Bus port

Port type	M-Bus
Maximum number of devices	4
Transmission speed	300 to 9600 baud
Standard peripheral device load	up to 1.5 mA

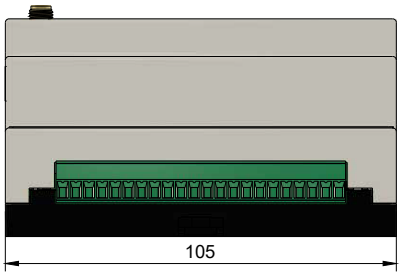
Communication ports PORT 1–PORT 5

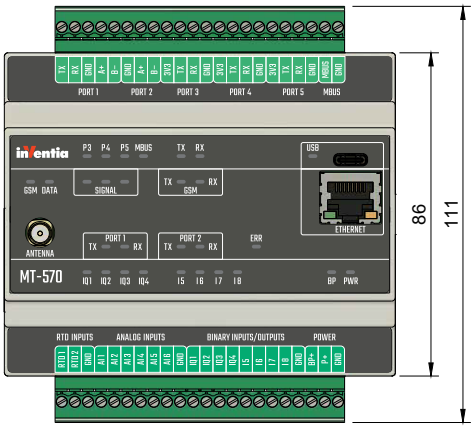
Port type	RS-232/485 (PORT 1) RS-485 (PORT 2) RSLV (Port3-5)
Transmission speed	1200 do 115 200 Bodów
Interface power supply (PORTS 3–5 only)	3,3 V

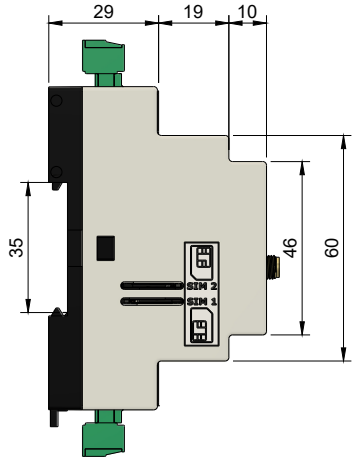
Power supply

DC voltage (nom. 24 V)	24 V

Drawings and dimensions (all dimensions in millimetres)







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INVENTIA operates a certified ISO/IEC 27001 Information Security Management System

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