

ENCO CONTROL

UNIVERSAL PROGRAMMABLE CONTROLLER

ENCO CONTROL is designed for control of processes in heating substation or boiler house, archiving data, remote meter reading and communicating the readings to ENCO MS information system.

- Data communication via Ethernet, GPRS.
- Control of 1, 2 or 3 heating substation circuits. (Heating, preparation of hot water, ventilation).
- Additional functional modules are easy to integrate.
- Technological parameters of heating substation and data of metering devices are recorded in internal archive.
- Error message generation.
- Extensive choice of analog and digital inputs / outputs, RS232/RS485 interface, MBus/CL, MODBUS.
- Integrated allarm function and RFID reader.
- Data acquisition from remote devices.
- Easy integration into other data control systems.



ENCO LOGGER

DATA LOGGER

ENCO LOGGER is data concentrator device for remote meter reading, temperature, pressure and other sensors monitoring and their subsequent storage in internal memory and transmission to ENCO MS system.

- Data communication via Ethernet or GPRS.
- Technological parameters of heating substation and data of metering devices are collected in internal archive.
- Message generation to management system in case of equipment failure.
- Extensive choice of analog and digital inputs and outputs: RS232/RS485 interface, Mbus/CL, MODBUS.
- Data acquisition from remote devices.
- Easy integration into other data control systems.
- Micro SD memory card.



ENCO SMART DATA LOGGER

Data logger ENCO SMART is designed as data collection device for remote meter reading, temperature, pressure and other sensors monitoring and their subsequent storage in the internal memory and transmission to the ENCO MS system.

- Data communication via GSM/GPRS/3G.
- Meter data reading.
- Meter data communication to metering data base.
- Monitoring of prescribed limits of sensor parameters: temperature, pressure, insulation state.
- Remote data management via TCP/RTU MODBUS.
- Communication interfaces MBUS\CL, RS232, RS485.
- Choice of analog and digital inputs / outputs.
- Easy integration into other data control systems.
- Internal battery or mains power supply option.
- Protection class IP 67.



ENCØ BOX

RADIO DATA LOGGER

ENCØ BOX is designed for remote reading of the data from meters with 868MHz communication interface.

- Power supply to the device: (8...24)V DC.
- Communication interface: M-Bus 2400bps, 8 e 1.
- Radio capacity 500 mW.
- RS232 communication interface.
- Remote configuration.
- Configurable WMBus mode: Axis (bidirectional communication), WMBus S1 and T1 mode.
- Protection class IP65.
- Internal memory for 950 meter readings.



ENCO TERMINAL

PORTABLE RADIO DATA LOGGER

ENCO TERMINAL is designed for remote reading of the data from meters with 868 MHz communication interface.

- Device power supply: rechargeable Li-Ion battery, charging via a Mini USB/230V adapter.
- Internal expandable memory: Micro SD Card.
- RF868 communication interface.
- Graphic display: 128x128 with lighting.
- Radio capacity 500 mW. Internal radio antenna.
- Configurable WMBus mode: Axis (bidirectional communication), WMBus S1 and T1 mode.
- Can be used as service tool for AMR radio network configuration.

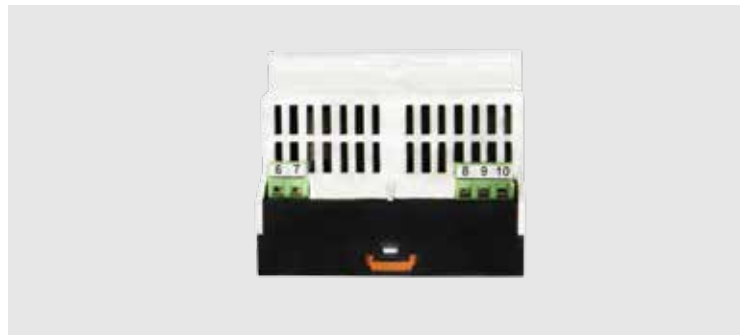
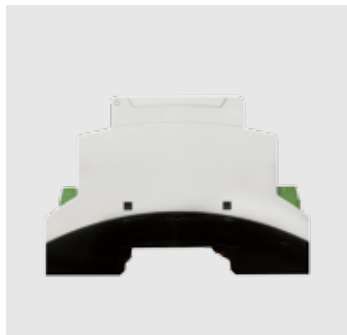


ENCO PULSE

PULSE ADAPTER

ENCO PULSE is a component of the automatic meter reading system. It is used when it is needed to collect data from meters equipped with pulse outputs. It may be used in combination with cold and hot water, power, gas and other pulse meters.

- Reception and summing up of pulses generated by pulse meters.
- Output of accumulated pulse values for the current moment and on the reporting date.
- Data communication via Mbus, RF 868MHz type interface.
- Powered by an internal 3.6V lithium battery.
- Operating time until next replacement of the battery: 12+1 years.
- Body protection class: IP65.



ENCO MASTER MB-6, MB-8

RS 232 -> M-BUS/CL/RS485 CONVERTER

ENCO MASTER MB-6/MB-8 is designed for physical-level conversion from RS232 into M-Bus/ CL/RS485 physical level. When used as a converter from RS232 into two-wire RS485, the direction is changed automatically.

ENCO MASTER MB-6

- Device power supply: ~230V AC.
- Maximum Mbus device quantity: up to 9 Mbus devices.
- Power supply output: 12V.
- Max output current: 0,6A.
- Interfaces:
RS232 -> M-Bus;
RS232 -> CL;
RS232 -> RS485.
- Mounting method: On DIN rail.

ENCO MASTER MB-8

- Device power supply: ~230V AC.
- Maximum Mbus device quantity: up to 20 Mbus devices.
- Power supply output: 12V.
- Max output current: 0,5A.
- Interfaces:
RS232 -> M-Bus.
- Mounting method: On DIN rail.





ENCO AI

ANALOG/MODBUS RTU CONVERTER

ENCO AI device is designed to convert analog signals to MODBUS RTU protocol.

- Device power supply: 8...24V DC.
- Pressure sensor type: 4-20mA.
- Input quantity: 2 pressure sensors.
- Input resistance: 120 Ohm.
- Interfaces: Analog signal -> MODBUS RTU RS485.
- Mounting method: On DIN rail.



ENCO TRACE

PIPELINE INSULATION MONITORING DEVICE

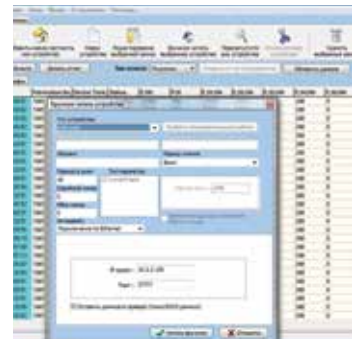
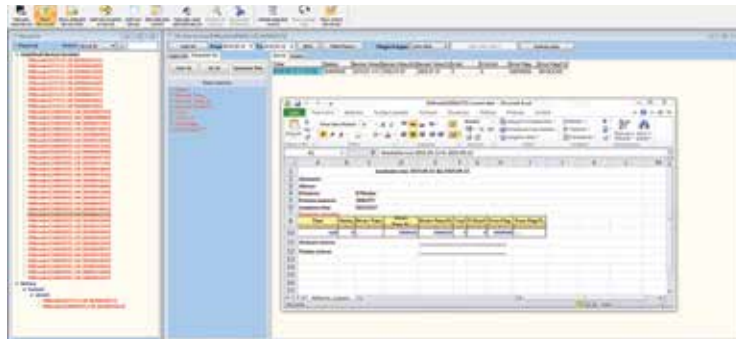
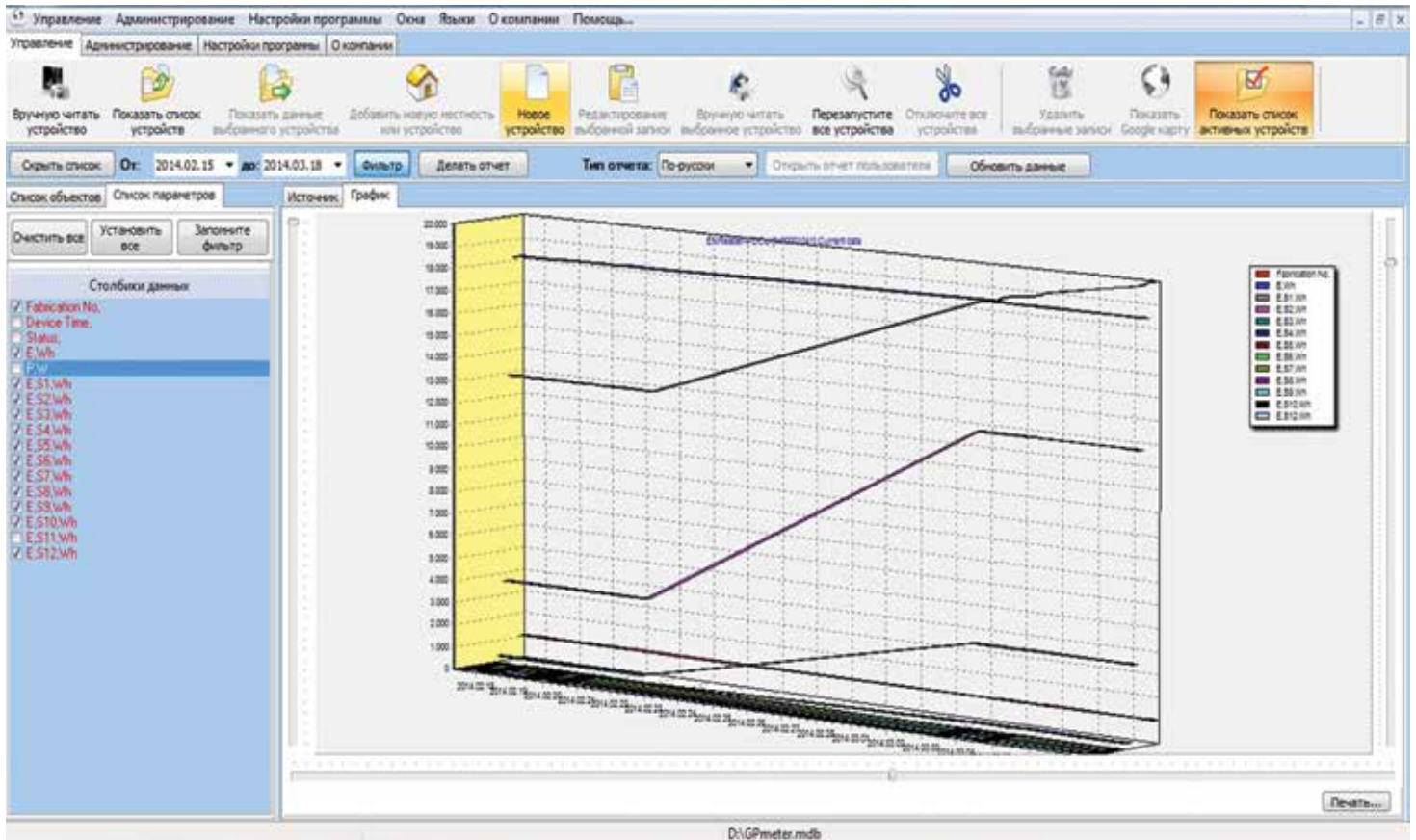
ENCO TRACE is designed for pipeline insulation quality monitoring during exploitation time. Four lines can be monitored simultaneously.

- Device measures permeability between the conductors installed in the pipe insulation.
- The method used in the device allows to identify 4 situations:
 1. Detached (connecting contacts or conductors in a pipe are detached);
 2. Short circuit (connecting

contacts or conductors in a pipe are short circuit);

3. Good (no moisture in pipe insulation);

4. Moisture (water in the pipe insulation);

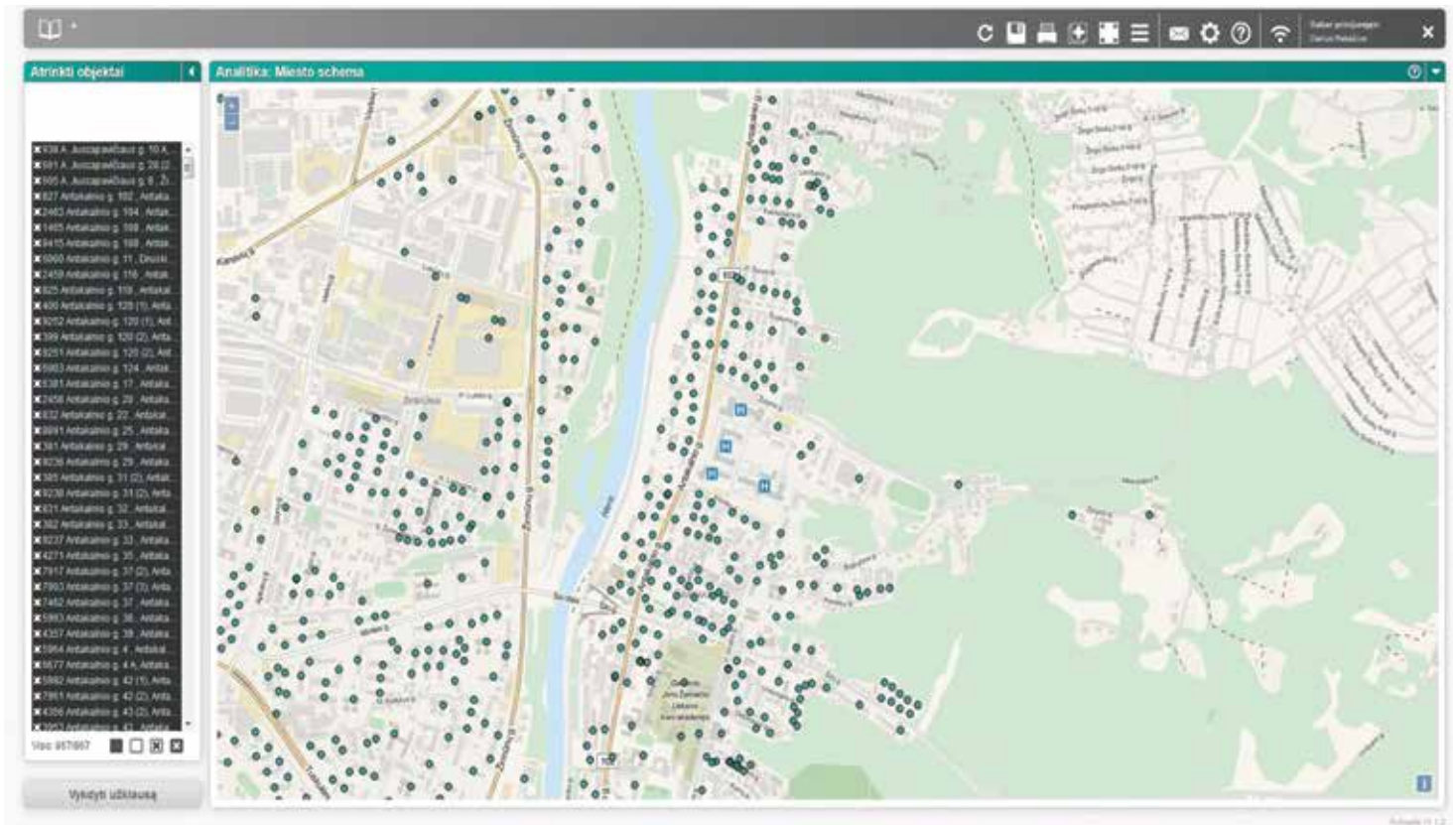


ENCO READER

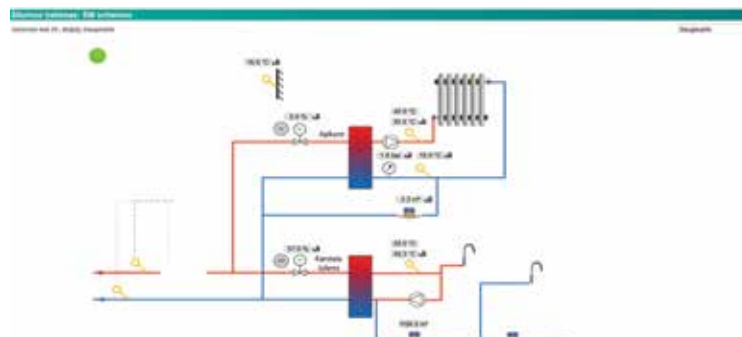
Software ENCO READER is designed for meter data reading, analysis and monitoring.

The software package consists of two programs: data collection program "ENCO READER" and data imaging program using the web browser "AXIS Webserver".

- Is used for automatic meter data collection from objects via Ethernet or GPRS communication.
- Supports standard and non-standard communication protocols of various devices.
- Independent software which operates as a service for automatic meter reading at time specified or at a set period.
- Hourly, daily and monthly statistics of metering data.
- Filtration of data by the object, address, location of the installation, measuring parameter, date and time.
- Generating events and notifications to ENCO MS system or e-mail.
- Visualisation using the web browser (WEBserver).



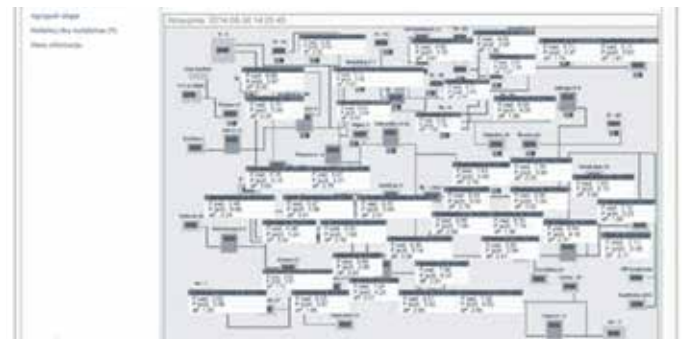
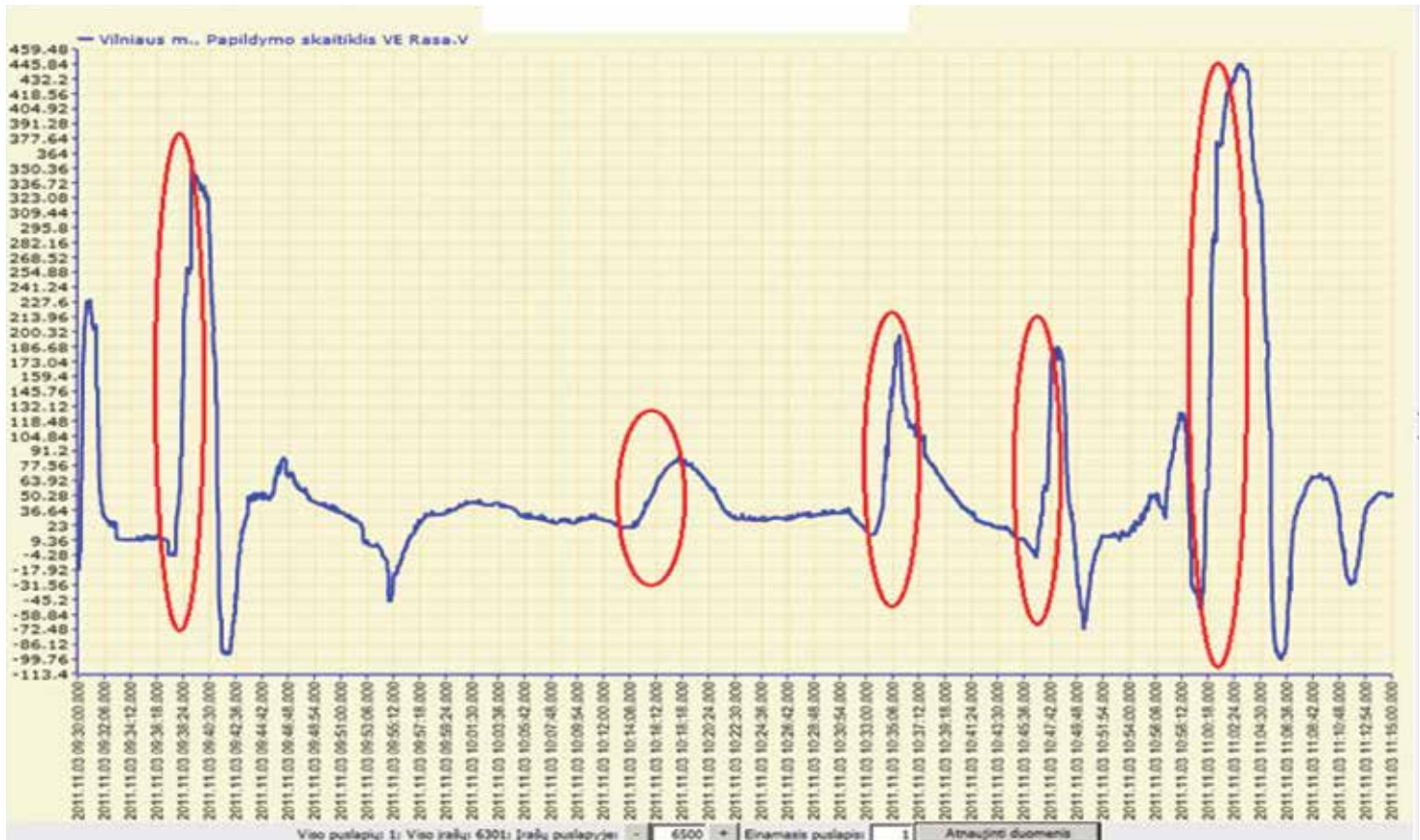
The screenshot shows the ENCO MS login page. It has a dark background with white text. The title 'ENCO MS' is at the top. Below it are two input fields: 'Enter username' and 'Enter password'. A 'Login' button is positioned below the password field. At the bottom, there are language selection options: 'LT EN RU PL RO LV EE'.



ENCO MS INFORMATION SYSTEM

ENCO MS information system is designed for meter data monitoring and object technological parameters control. ENCO MS information system may be applicable in heating, water, power and gas systems for the monitoring and control of machinery, collection of data, protection of premises and buildings and control of authorized and unauthorized access to utilities.

- Possibility to receive object data and analyze it at any chosen moment.
- Building administration cost, energy saving.
- Possibility to combine with other information systems via data exchange interfaces.
- Remote control of the devices equipped with standard interfaces.
- System is accessible via WEB interface. A user / client does not need to buy and install any specialized software.
- Supports various ways of data communication: GSM/ GPRS, TCP/IP, PSTN.
- Delivery of information notifications in the manner convenient to the user / client (SMS; WEB; e-mail).
- Convenient and quick data collection avoiding mistakes related to the "human factor".

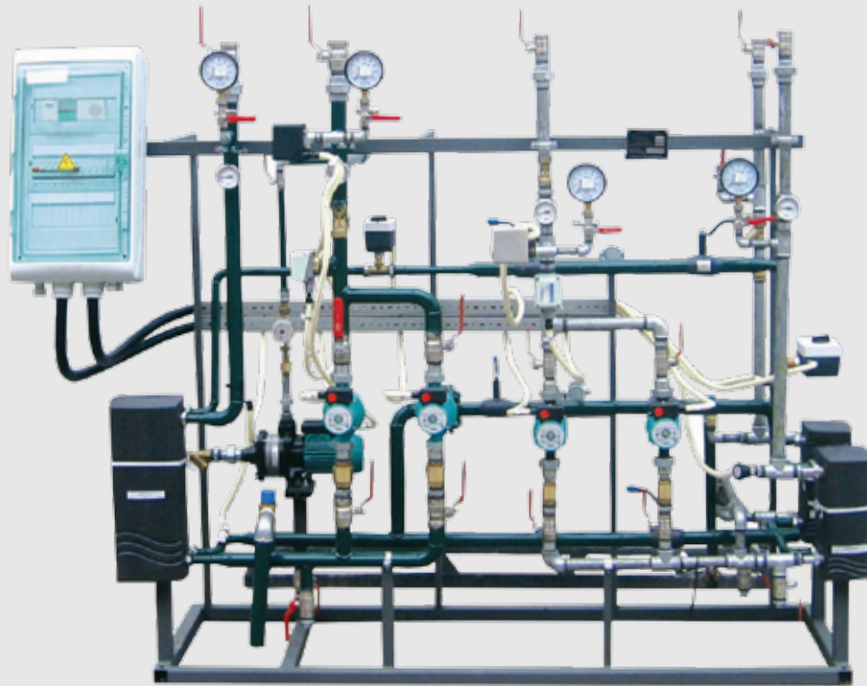


ENCO PIPE

The system "ENCO PIPE" is designed for monitoring the operating parameters of heating and other pipeline routes. Is a tool for parameter adjustment of pipeline routes, enables quick localization and reaction to accident.

- Intermittently monitors the parameters of the network, records and collects their data, enables analyzing the data collected.
- Parameters of monitored pipeline network are communicated to the central control panel.
- WEB interface enables easy adaptation of system (additional software is not

necessary when installing new workplaces).



ENCO STATION

AUTOMATIC HEATING SUBSTATION MODULES

Automatic heating substation modules are designed for effective control of the heating energy depending on the outside air temperature and consumer needs in:

- In residential houses
- Public buildings
- Production premises
- Control of following circuits: heating, hot water preparation, ventilation.
- Maintenance of temperature is set by customer and performed depending on the fluctuations of ambient temperature, by means of heat transfer medium temperature control.
- Maintenance of the heat consumption mode is set by customer independently from heat supplier's temperature diagram.
- Protection against legionella and freezing of the heating systems.
- Control of circulation pumps and technological equipment during non-heating season.
- Possibility to install dispatching and telemetric systems for parameter retrieval and control in remote mode.
- Manufacturing according to specific customer requirements and drawings.



ENCO TAMPER

SMART TAMPER DETECTOR

ENCO TAMPER device is designed to detect an unauthorized connections to power supply network and automatic user disconnection. The device allows monitoring of voltage, current consumption, leakage current and other electrical parameters.

- Enables the renewal of the electricity supply to the user as soon as the cause of disconnection is eliminated.
- Operates without an additional power supply source and disconnects users even when the voltage is disconnected (the neutral is interrupted).
- Can be either integrated into the electricity meter or used as an additional module.
- Insensitive to external, internal, variable or constant magnetic fields, which ensures protection against outages.
- Ensures protection against fire caused by deteriorated or worn insulation of the user's electric network or equipment.
- Can be used for the control and monitoring of the user's network parameters. Automatic disconnection of users in case of exceeding the set network parameters: network voltage U , current drawn I , and capacity P .
- The data can be transmitted using other data transmission devices.

