

LISSCOM

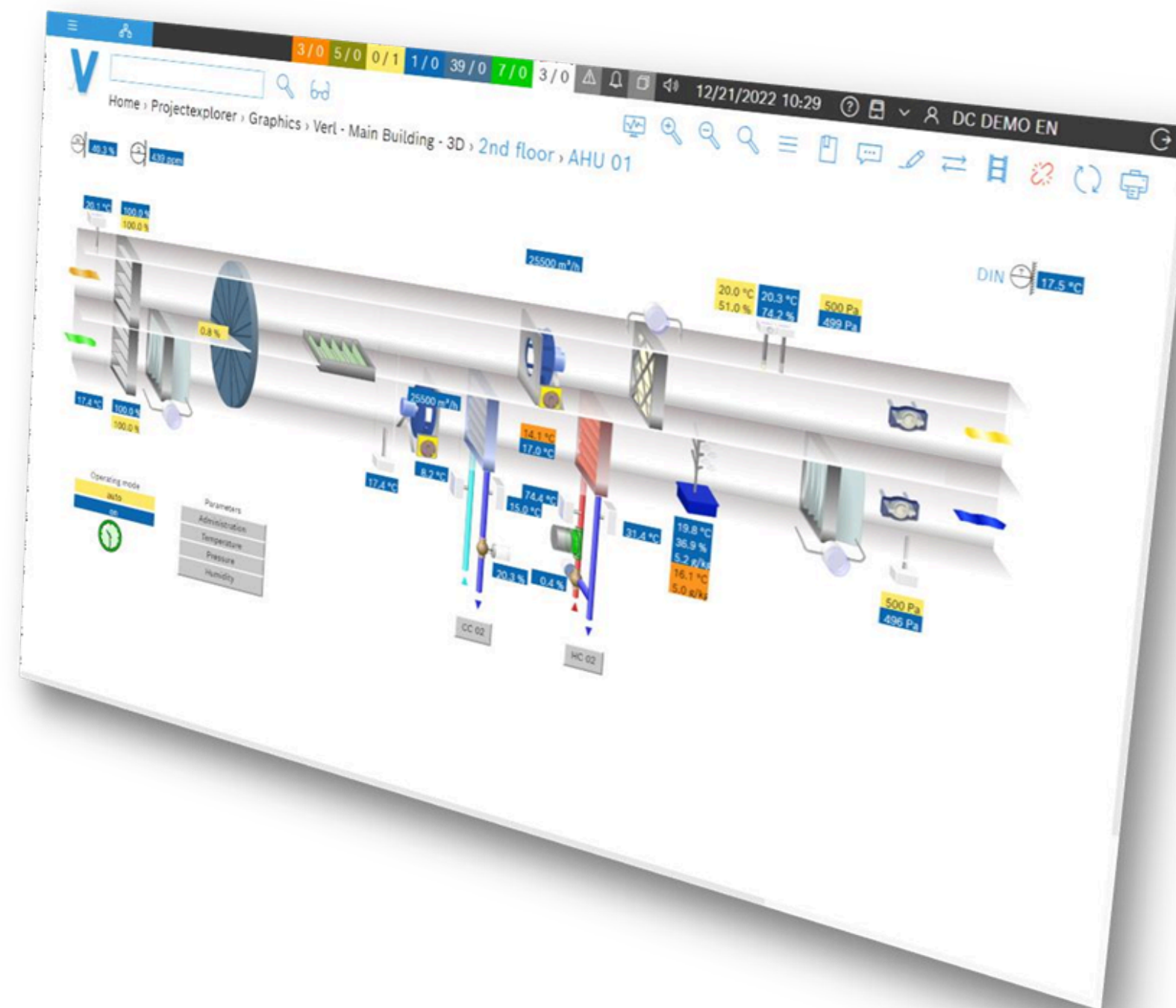
LISSCOM SOLUTION FOR
BUILDING MANAGEMENT
AND ENERGY EFFICIENCY

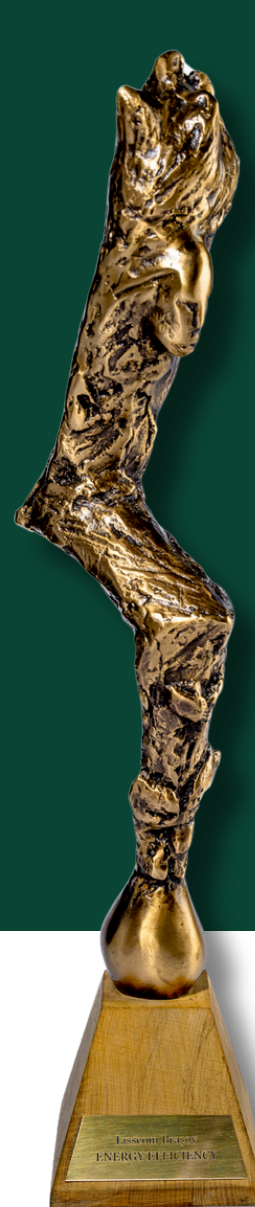
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Building Automation Partner





Awards

Overview



Since 1998, when we started on this path, our goal has been to provide our customers with integrated energy efficiency solutions. These solutions include:

- **design,**
- **implementation,**
- **operational maintenance,**
- **management of heating,**
- **air conditioning,**
- **ventilation,**
- **automation of technological processes,**
- **water,**
- **lighting,**
- **natural gas,**
- **metering systems.**

All these systems are managed through a BMS (building management systems).



Total number of employees: 50
Field of activity:

- **Electrical design and BMS automation systems**
- **Automation controller programming Graphic design**
- **Assembly of power and automation electrical panels**
- **in our own workshop Installation**
- **Service and maintenance**

Since 2008, LISSCOM has been the **Exclusive Partner and Integrator in Romania of Bosch Building Automation Germany** - a manufacturer of specialized components and applications for automation systems for smart buildings, building management, energy management, remote control equipment, and energy efficiency.

LISSCOM has been **ISO 50001 certified** since 2014 thanks to its thorough training, experience in designing and executing BMS systems, and their use in optimizing energy efficiency.



Definition of a BMS System



A Building Management System (BMS) is designed to supervise the equipment installed in a building in order to reduce energy consumption, optimize operation, and increase comfort and safety.

A BMS system can monitor and control:

- Air conditioning and heating systems,
- Interior and exterior lighting,
- Electricity, gas, or water supply systems,
- Various building automation systems, such as the opening of windows, hatches, doors, etc.

The information within BMS systems is monitored in real time via a **SCADA** system.

SCADA is short for Supervisory Control and Data Acquisition. The term refers to a comprehensive system that allows the user to interact with the BMS system in real time, viewing graphical information, operating statuses, alarm situations, etc.

The structure of a BMS system

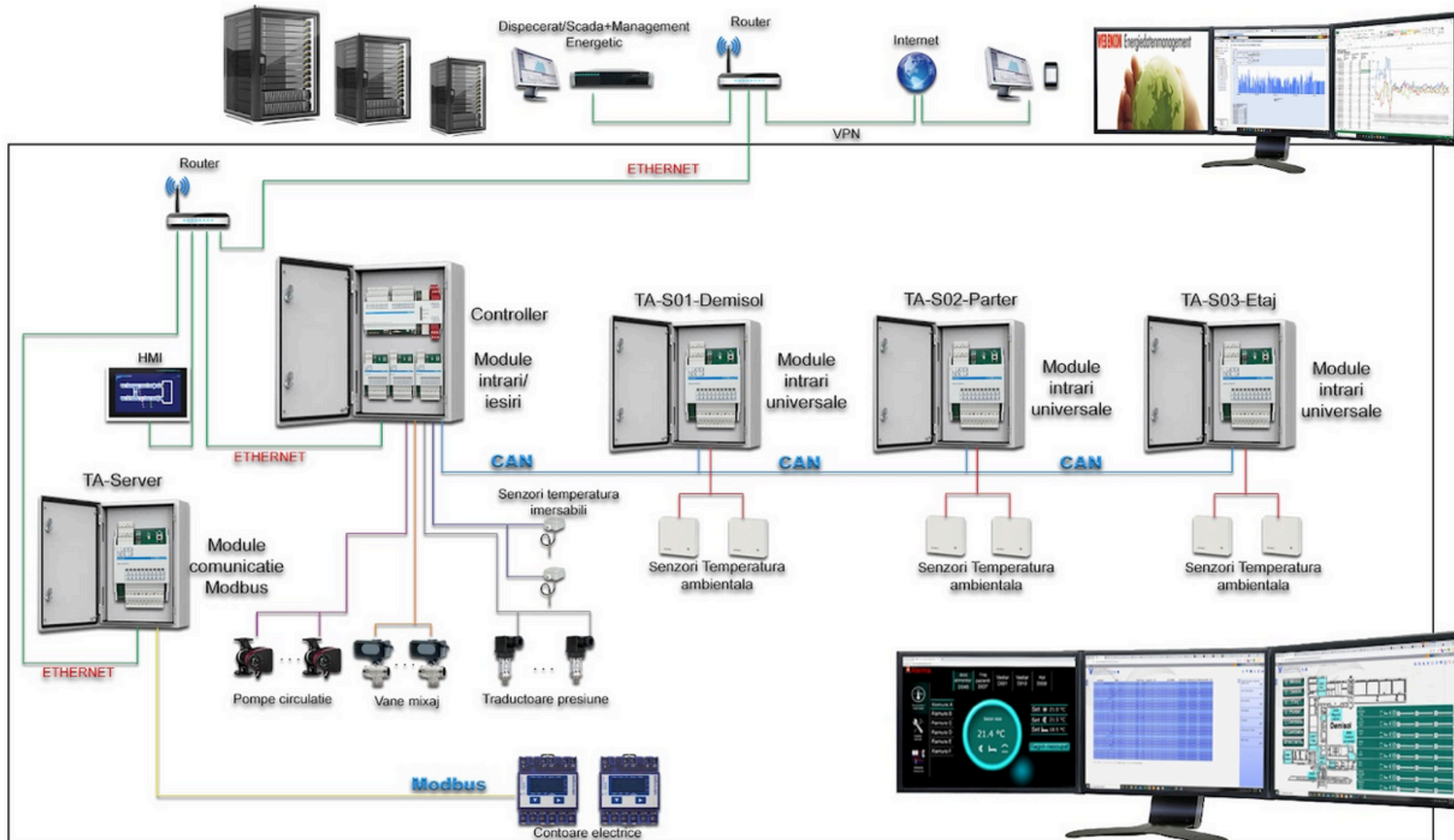
A BMS system consists of the following elements:

- **SCADA server**
- **Monitoring and control panel(s) equipped with PLC and extension modules**
- **Field equipment: sensors, servomotors, actuators, sensors, meters, etc.**

The **SCADA** server is sized according to the complexity of the BMS system and the number of targets within the system.

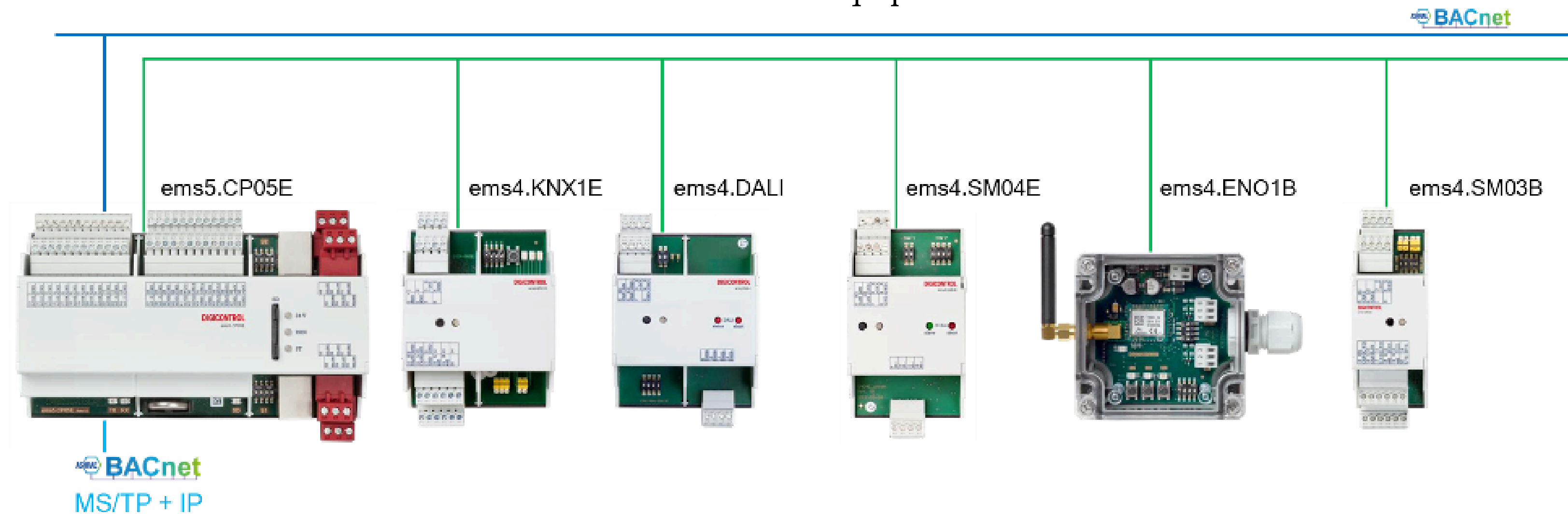
A single SCADA system can be used to monitor multiple BMS systems distributed at various locations in the country or abroad.

The SCADA system can be used to monitor and control the BMS systems, as well as to collect data from the BMS systems.



SCADA System

Command and control equipment used:

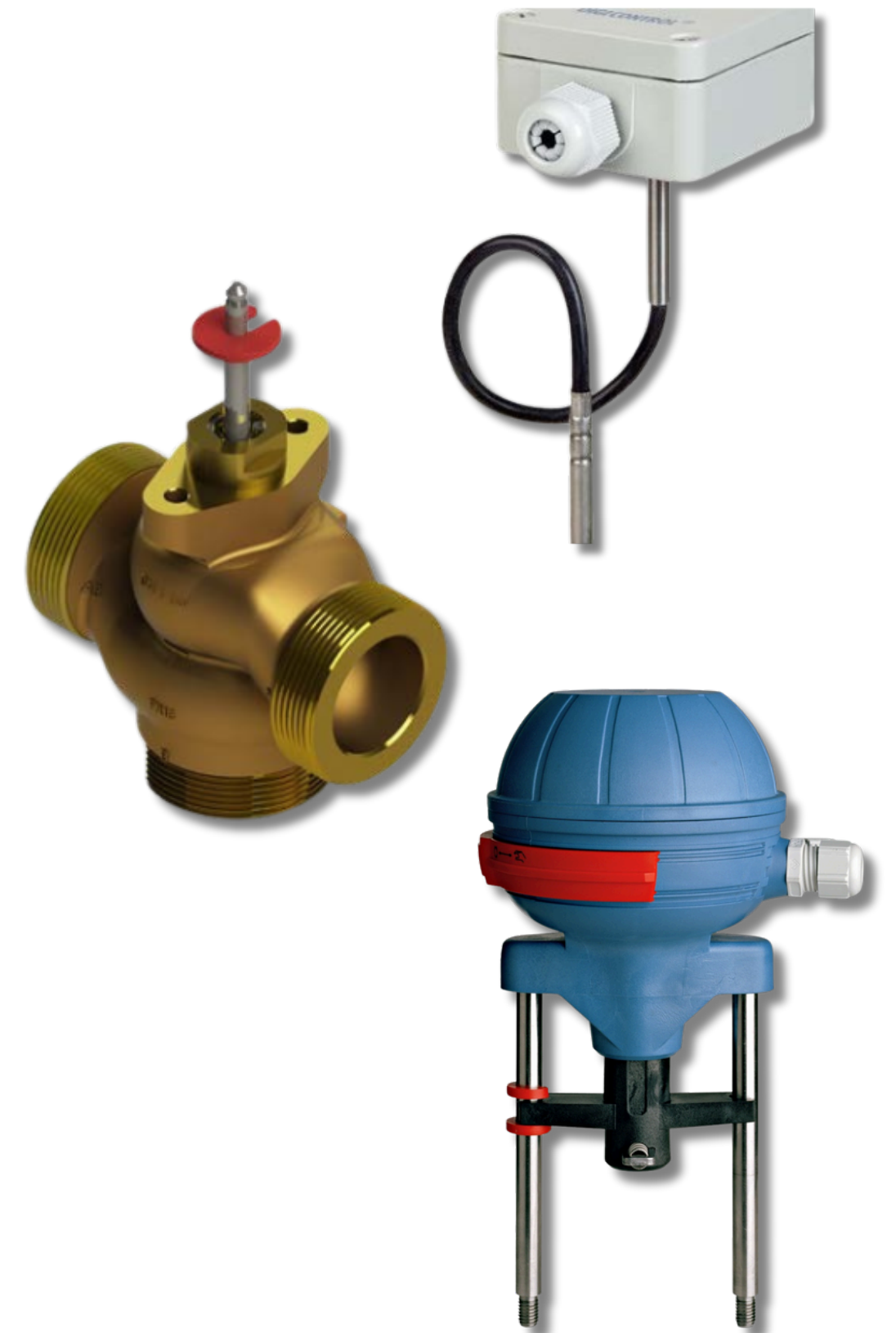


- Central management platform for installations and systems
- Complex data visualization and storage system
- Command and control center
- Dynamic and intuitive graphic symbols
- User interaction in case of alarms and events
- Visual and audible warning
- Graphical trends and export functions
- User and access rights management
- **ISO50001 certified**
- **BACnet certified**



Monitoring and control *-Heating systems-*

- Hot water production source: boilers, heat pumps, compressors, etc.
- Control elements: mixing valves and diverter valves
- Circulation pumps
- Heating system parameters: temperature, pressure
- DHW storage systems
- Control and monitoring systems



Heating systems



Text citita: 2.0°C

Regim functionare sistem: 3.0

Legenda

- 0-Sistem oprit
- 1-In functie de temp. exterioara
- 2-Calender
- 3-Iarna manual
- 4-Vara manual



Temperatura medie citita
boilere acumulare: 46.8°C

Setpoint temperatura
boilerea cumulare: vara 55.0°C iarna 60.0°C Sezon iarna

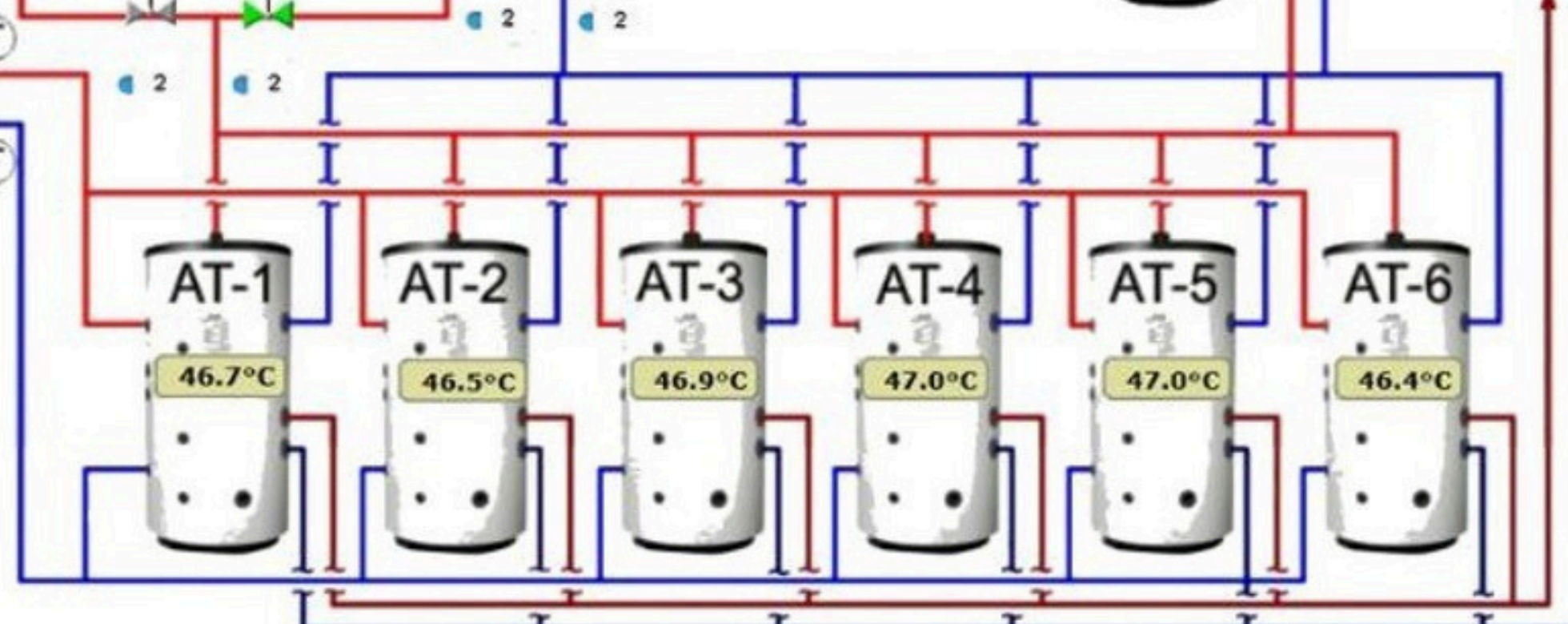
Chillere

Regim functionare automat Tablou Principal-CT
Regim functionare automat Tablou Secundar-CT

DI CI Circuite incalzire +Boiler



Panouri solare

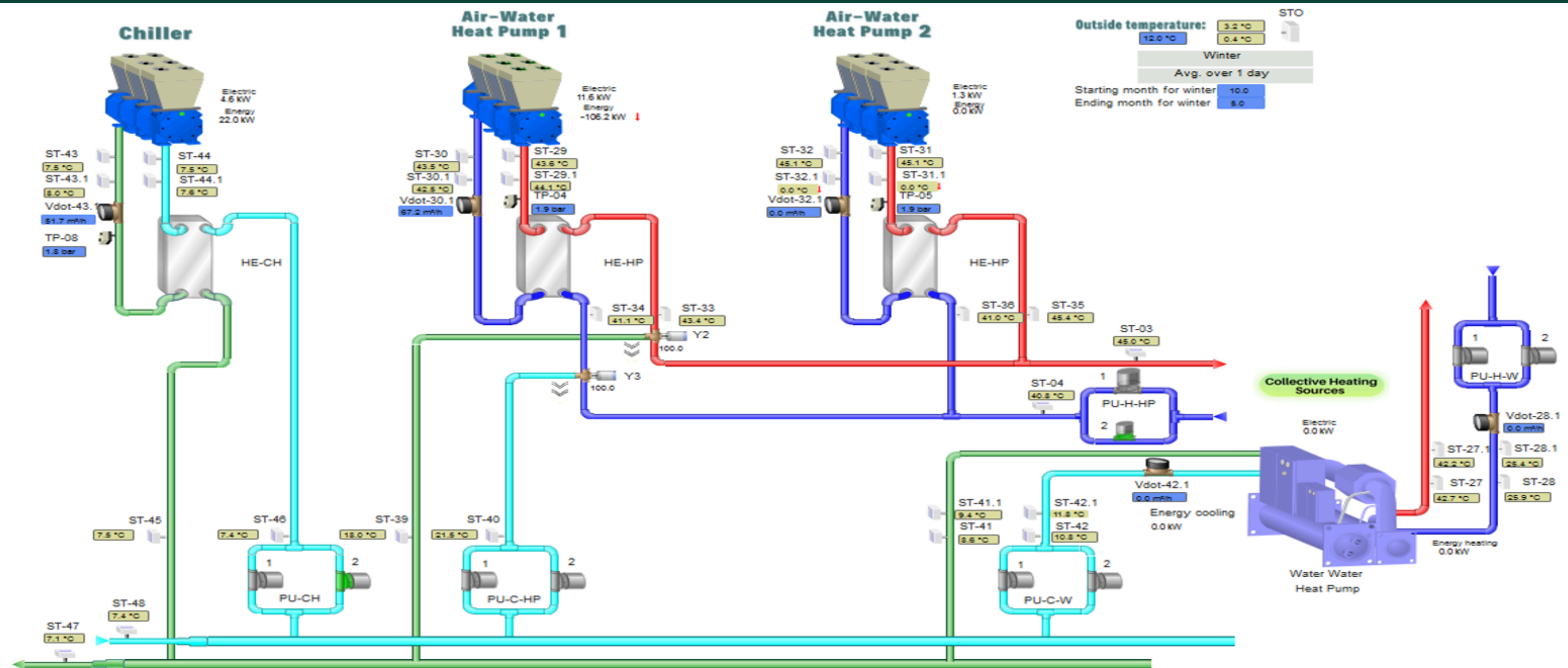


Timp ramas functionare instalatiei: 71.0h

Monitoring and control *-Cooling systems-*

- Cold agent production source: chiller, heat pump, cooling towers, dry cooler, etc.
- Control elements: mixing valves and bypass valves
- Circulation pumps and refrigerant distribution circuits
- Cooling system parameters: temperature, pressure





Monitoring and control *-Ventilation systems-*

- Air quality assurance: temperature, humidity, CO2 level
- Constant temperature of incoming air regardless of season (summer/winter)
- Heat recovery using rotary or plate heat exchangers
- Air flow control by adjusting fan speed
- Pressure level control: overpressure or underpressure
- Air damper control
- Monitoring of parameters and operating conditions
- Monitoring of filter clogging
- Ventilation shutdown in case of fire
- Program-based operation
- Alarm (SCADA, SMS, EMAIL)

AHU-04

 AHU parameters >

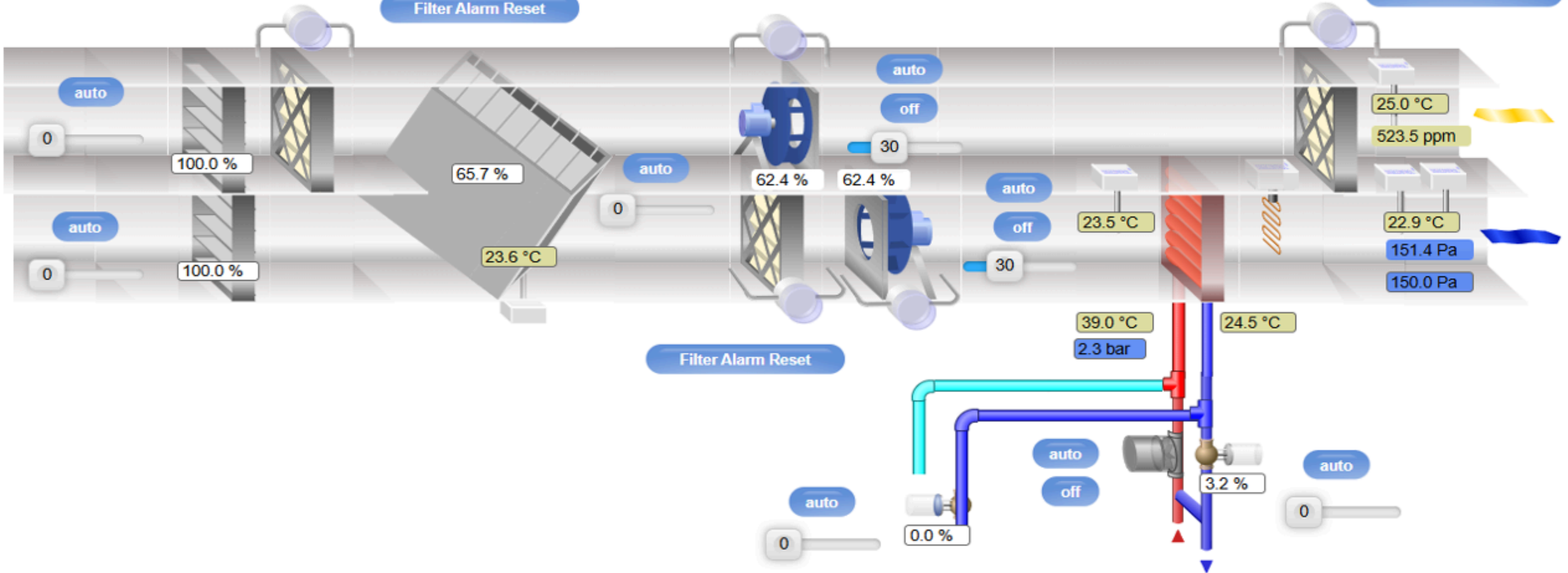
System Alarms Reset

Outside temperature:

21.6 °C

Filter Alarm Reset

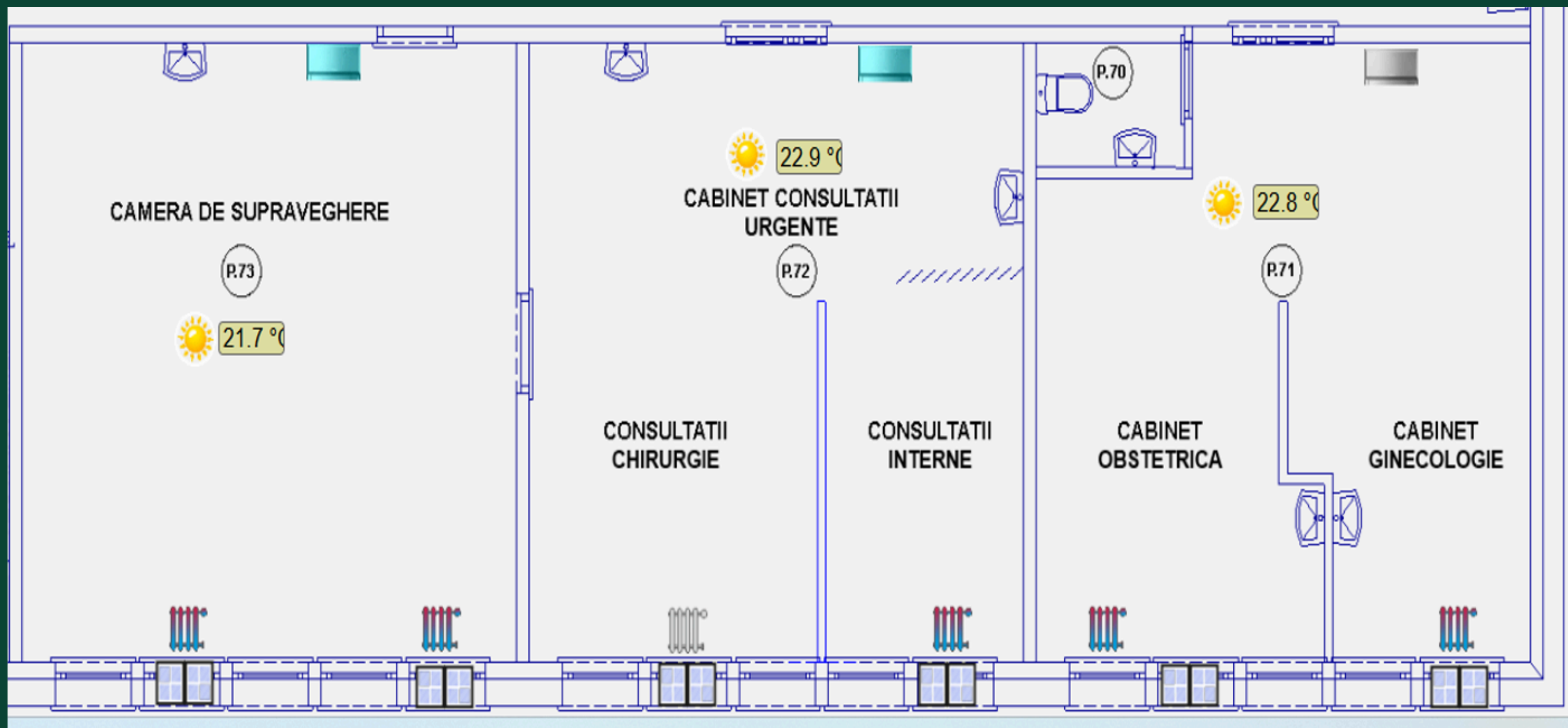
Filter Alarm Reset



Monitoring and control *-Indoor-*

- Heating and cooling system control
- Air quality assurance: temperature, humidity, CO2,
- Lighting control
- Shading (blind control)
- Time schedules/calendar
- Day/night setpoint





Metering

The BMS system performs real-time monitoring of consumers within a building:

- Water
- Gas
- Electricity
- Thermal energy

The values measured by the meters are recorded via the SCADA system. These values can be viewed in the form of graphical trends as well as in the form of reports exported from the SCADA system.

The BMS system offers the possibility of setting operating limits (min-max), so that when the limits set for one or more parameters are exceeded, the BMS system generates alarm messages: graphical alarm via the SCADA interface, SMS and/or e-mail alerts.



ELECTRIC METERS

HEAT METERS

AHU >

Heating & Cooling Systems >

Building air conditioning 1st Floor >

Building air conditioning Ground Floor >

Lighting >

Metering >

HM1 Gas Boiler

HM2 - Air water heat pump 2(Only heating)

HM3 Air water heat pump 1

HM4 Dry cooler

HM5 - Water/Water heat pump - heating

HM6 - Water/Water heat pump - cooling

HM7 Chiller

HM8 Compressor

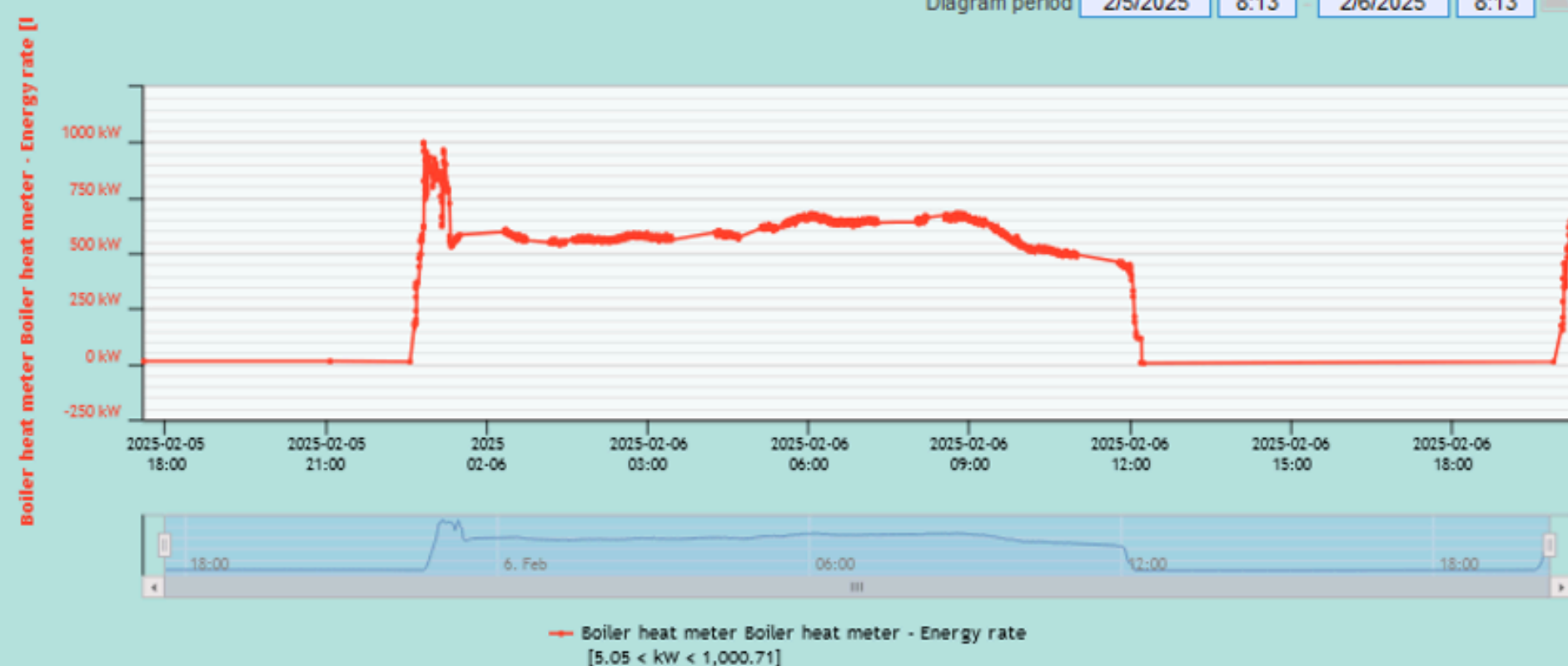
HM9 Heat water supply

HM10 Chilled water supply

Temperature 1 45.7 °C
Temperature 2 31.5 °C
Flow rate 62.7 m³/h
Fluid velocity 0.3 m/s

Energy rate 1054.4 kW
Total volume flow 24031.3 m³
Total energy flow 262.7 MWh
Signal quality 83.0 %

Diagram period 2/5/2025 8:13 2/6/2025 8:13



Operating and managing remotely





Remote operation using a mobile device.



Accessibility via a WEB browser



Accessed information is password protected.



Detailed event information messages are managed. SMS and email alerts



Visual warning for any alarm (event)

Achivments

The implementation of BOSCH BUILDING AUTOMATION systems by LISSCOM in Romania has brought the following results to date:



**Reducing
natural gas
consumption:**

20 - 30%



**Reducing
electricity
consumption:**

20 - 60%



**Reducing
water
consumption:**

10 - 70%



**Reducing
premature wear
and tear on
equipment:**

15 - 20%



**Reducing
service and
maintenance
costs:**

30 - 50%



**Reducing
production
losses and
perishable
goods:**

10 - 20%

Client portfolio

- PRESIDENTIAL ADMINISTRATION of Romania (Cotroceni Palace) VELPITAR - Braşov (bakery products factory)
- DR. MAX (medicine warehouse in Braşov)
- PROMAR TEXTIL Braşov (knitwear factory)
- AMANN ROMÂNIA
- BOSCH REXROTH - Ljubljana, Slovenia
- TROTUS REZIDENCE (IOLA clinic and luxury apartments)
- CATTIA (business center - Braşov)
- AVANTGARDEN (residential apartment complex - Braşov)
- REGIA AUTONOMĂ DE TERMOFICARE NAPOCA - 75 PUBLIC BUILDINGS (schools, university buildings, dormitories, sports halls, canteens, kindergartens, ANL blocks - centralized BMS-BEMS management system)
- BEIUŞ MUNICIPAL HOSPITAL (management of conventional and renewable energy sources through BMS system)
- SALONTA MUNICIPAL HOSPITAL (management of conventional and renewable energy sources through BMS system)
- D.S. SMITH Ghimbav



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