SIGMATEK

AUTOMATION FOR
ENERGY TECHNOLOGY

EN

MODULAR, FREELY PROGRAMMABLE, FUTURE-PROOF

ENERGY AUTOMATION

Using our highly modern, modular system toolkit, you can automate your energy management solutions – whether pellet heating, heat pumps or complex heating systems – flexibly and efficiently.

In addition to industrial automation, SIGMATEK has been active in energy automation for over 30 years. Manufacturers of boilers, heat pumps or small power plants profit from our extensive know-how and can choose from a broad selection of user-specific hardware. This is derived from the most modern industrial control technology and modularly designed.

COMPACT AND MODULAR

The increased need of sensors and the often restricted installation space directly on the unit to control are also included in hardware and housing concepts with individual solutions. The highly modern components come from a system toolkit. Customer-specific system constellations can therewith be implemented flexibly and efficiently. The modular construction enables simple expansion of the system at any time or the integration of additional modules such as for solar installations, floor heating, as well as for effective boiler and buffer management.

COMFORTABLE SOFTWARE

With the well-thought-out software tool LASAL, customer applications can be quickly and easily implemented; with user-friendly visualizations already included. Innovative features such as remote maintenance via Internet and smart phones increase operating comfort and provide convincing selling points.

Regardless of how you generate energy – SIGMATEK offers you flexible operating and control panels.

YOUR SYSTEM FOR ECONOMIC HEATING

Whether pellets, wood chip, firewood, or heat distribution: with the 7-inch ET 0710 multitouch control panels, you have the entire system in hand. The ET 0710-01 variant can also measure heat consumption via M-bus and is used in multiple-party houses due to its accurate heat volume measurement.

INTELLIGENT CONTROL

Complex heating systems with boilers, buffer tanks, solar energy connections and several heating circuits can also be controlled and regulated with the intelligent control panels. The HMI can be built directly onto the boiler and convinces with a modern graphic interface. Its intuitive 7-inch multi-touch widescreen display provides the highest operating comfort.

A micro SD card is used to store the operating system, application and application data. Several interface connections such as USB, RS232 or RS485, CAN bus, Ethernet and M-bus serve to exchange process data and for simple configuration. The actuators are controlled and the sensors are read using the boiler function module. The integration of Lambda sensors ensures optimal and clean burning.

FLEXIBLE EXPANSION

With various expansion modules, the ystem can be individually configured. In addition, the installation is expandable or scalable for any system size and complexity. The system communicates via CAN bus. Modern technologies such as Ethernet and LAN are being used increasingly.

YOUR MARKET ADVANTAGE

HIGH-TECH SOLUTION
Highly modern system toolkit – adapted from the industrial automation sector

FLEXIBLE AND OPEN
Components can be combined modular into individual solutions and easily expanded

SAVE TIME AND MONEY
Efficient software creation; modern tools for heat management, remote control and remote maintenance

ROOM CONTROL

The HZS 351 or 352 touch panel provides comfortable room control. With the 3.5-inch TFT color display, process data and parameters are easily entered. To save energy, the display is deactivated in sleep mode. When the panel is touched, it is immediately active. A wall mount can be installed with a flush-mounted box.

DECENTRAL CONTROL

For additional comfort, SIGMATEK offers a decentralized control solution outside of the boiler with specially designed modules. External extensions for the heating circuit, solar, buffer, boiler and floor heating are well protected in plastic housings and can be easily expanded via Plug & Play.

ONE TOOLKIT – MANY SOLUTIONS

The modern components come from a system toolkit: central unit, function modules and expansions for furnace, heating circuit, buffer, boiler and solar. For operation, different variants are available: from simple 3.5-inch room operating units to intelligent control panels with energy efficient EDGE technology CPUs and color touch displays from 7 to 19 inches. Customer-specific system constellations can also be easily and flexibly implemented.

PROGRAMMING AND VISUALIZATION

Room Operating Unit
HZS 351/352

- 3.5“ TFT color display
- Internal temperature sensor
- HZS 351: 230 V AC
- HZS 352: 24 V DC

Heating Control
ET 0710 / ET 0710-01 / ET 0710-02

- 7“ Multi-touch screen (HTML5, CSS3)
- EDGE3 Technology processor
- Interfaces: 1x Ethernet, 1x CAN, 1x USB 2.0 Typ A, 1x USB 2.0 Typ C, 1x RS485
- ET 0710-01: additional 1x Gigabit-Ethernet, 1x CAN, 1x RS232, 1x LP-Bus, 1x M-Bus
- ET 0710-02: additional 1x Ethernet, 1x CAN, 1x RS232

BOILER AND DECENTRALIZED MODULES

Boiler Function Module
execute sent commands

- Burners
- Pumps
- Mixer
- Motors
- Lambda sensor
- Relays, etc.

Universal Expansion
e.g. wood chip heating system

- Burners
- Relays
- Triac
- Temperature sensors
- Emergency stop
- STB-cutoff, etc.

Heating circuit, buffer & boiler, solar

- Relays
- Temperature sensors
- Triac, etc.

External expansion module
for decentralized control

- Relays
- Temperature sensors
- CAN, etc.

Expansion controller

- Relays
- Temperature sensors
- Triac, etc.

100 kW Expansion Module

- Relays
- Thermo element input
- Thermo resistor input, etc.

Auxiliary Board MP-bus

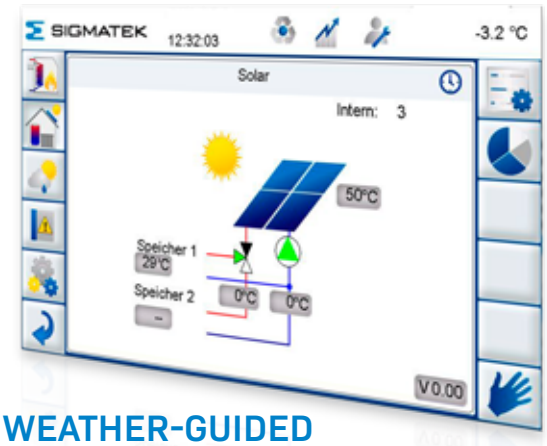
- 1x CAN bus
- 1x MP bus (8 participants)

Solarmodul

- 2x Relais, 1x Triac
- 4 analoge und 1 digital Eingang

EFFICIENT AND COMFORTABLE HEAT DISTRIBUTION

To ensure optimal heat distribution from, for example, a pellet boiler or heat pump to the dispensing units, SIGMATEK provides additional requirement-specific modules. This includes components for connecting heating circuits, buffer & boiler tanks and solar installations. The connection to the CPU in the operating panel is made over the bus system. To configure the heat management even more efficiently and economically, the intuitively designed operating surface provides numerous predefined functions such as system configuration, user administration, alarm system, manual mode, data logging and more. Heat management can therefore be designed more efficiently and economically.



WEATHER-GUIDED HEAT DISTRIBUTION

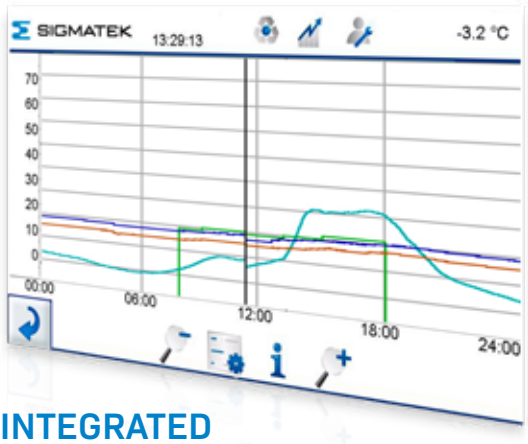
The user has the option to regulate heating guided by the weather, via the solar installation for example. The control retrieves the required weather data from the Internet automatically.

SAVE ENERGY AUTOMATICALLY

The energy gained from the solar installation can also influence the buffer storage directly. The control regulates the boiler temperature according to the weather data and thereby minimizes energy consumption automatically.

NOTIFICATION BY E-MAIL OR SMS

The actual heating status can be retrieved comfortably by e-mail or SMS. Error messages are shown directly on the display, including cause and location. This message can also be sent automatically to a selected recipient.



INTEGRATED TREND RECORDING

All relevant data can be recorded in detail and over a defined time with integrated trend recording. This increases the understanding of the correlations to energy use and simplifies optimization of the heating system.

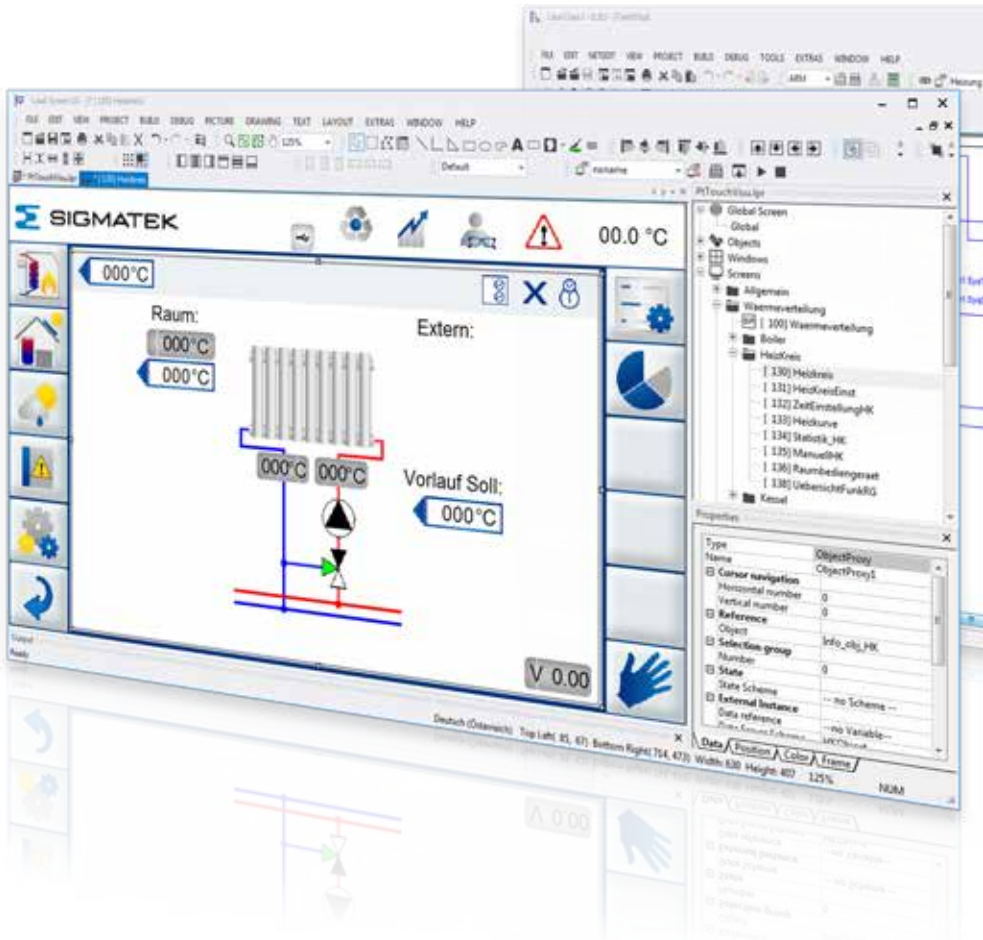
THE RIGHT SOFTWARE SAVES TIME AND MONEY

The software is increasingly becoming an essential competitive factor. A simple to operate engineering tool helps to reduce design costs and implement applications more quickly. The library provided contains predefined components for energy control such as ignition, burning, dosing, ash removal or heating circuit regulation. Our heating experts support you with extensive know-how in creating applications.

VISUALIZE CLEARLY

The visualization is platform-independent and perfectly displayed – whether on the control or operating panel, PC or smart phone. The intuitive menu helps the end user to understand energy-related technology and to actively influence the use of resources. Via graphic configuration, the installation can be easily prepared and tested. The specific configuration data can be comfortably loaded into the system from a USB stick. This can also be used to perform updates and for long-term data recordings.

An essential competitive advantage: the simple to operate LASAL software tool.



MODULARITY AND FLEXIBILITY

- Individual control solution based on proven industrial control technology
- Modular, decentral configuration of heating circuits possible, flexibly expandable for any installation size
- Programming with standardized software according to IEC 61131-3 norm
- Simple reusability of the software modules

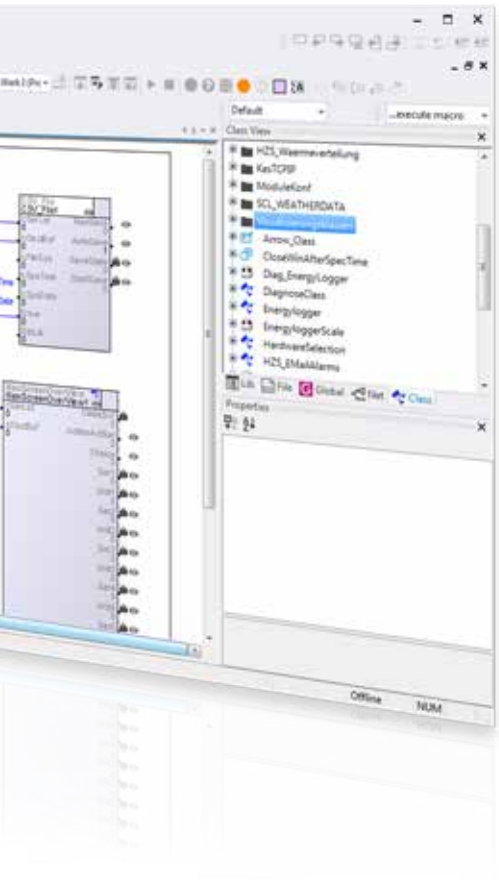
STATE OF THE ART

- Operating comfort with graphic touch display
- Integrated trend recording of all relevant data over a defined period
- Alarm notifications via e-mail and SMS
- Weather-guided buffer loading possible

ENERGY MANAGEMENT FROM ANYWHERE

The particular flexibility of the SIGMATEK solution can be especially seen after installation with the complete visualization over the network. Thanks to modern network technology, comprehensive remote maintenance and operation is possible. Over an Internet browser only, and without special programs, authorized personnel have (with password protection) access to all functions of the heating system. The system can thereby be accessed from any PC, error messages responded to and diagnostic reports viewed. Modern remote maintenance and operation can also be performed using a smart phone and tablet PC. This allows the solar installation to be reliably controlled with help from weather data and time settings – even during vacation.

For tablets and smart phones, VNC Client apps are available free of charge. The VNC server has a Repeater expansion. This is used to create the connection to VNC servers (controls), which may be located behind a firewall and are therefore not accessible in the network. SIGMATEK controls with the VNC servers and VNC clients form a connection to a repeater which then exchanges the data.



Regardless of where you are at the moment, thanks to tablet PCs and smart phones, you have your heating well in hand.

INTEGRATION, REMOTE MAINTENANCE & CO

- Incorporation into primary networks via common interfaces (i.e. Ethernet)
- Remote maintenance and operation can be comfortably performed via Internet browser, smart phone and tablet PC

CLOSE TO THE CUSTOMER

- Full-range support from our experienced branch experts: from conception through design and programming, to the initial start-up and service
- Our support team is quickly available for questions and problems

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