simex | POLISH PRODUCER

COMPACT AUTOMATION

SimModulo

Measure,
Control and Log Data

SimModulo Compact automation

- CONVERTER
- GAUGE
- REGULATOR
- CONTROLLER

all in one

SimModulo is an advanced device that allows you to measure, process, present and regulate parameters read from measurement sensors in many data channels simultaneously. It performs the functions of signal transducers and control units, typical for devices such as microcontrollers or programmable relays.

- system of signal transducers with control functions
- modular, multi-segment housing, from 1 up to 7 modules
- 16 cards: base, communication and I/O
- single- and multi-lane I/O cards
- submodular card for 1 up to 4 of any I/Os
- SimFlexSoft engineering software
- immunity to EMC interference 4/5 kV (optional)

SimModulo can work autonomously or cooperate with external measurement and execution modules.
The system is characterized by the possibility of modular scaling (with a scalable housing) and multi-level expansion of supported inputs and outputs. Thanks to the possibility of programming the operating logic and using specialized control functions, they are able to perform most activities related to monitoring and controlling industrial processes.

Wide range of applications thanks to the large number of inputs/outputs available in one system

Free expansion with local extension modules

Virtually unlimited combinations of basic units and expansion modules

AI / DI AO / DO

Mixed combination of AI / DI / AO / DO modules - flexibility in use

Ethernet connector - wide range of communication options

Dedicated SimFlexSoft software

Configurable drag & drop logic

BO AI AO BI

Submodular card - 4 ports for individual I/O configuration

Can be used worldwide

X Y

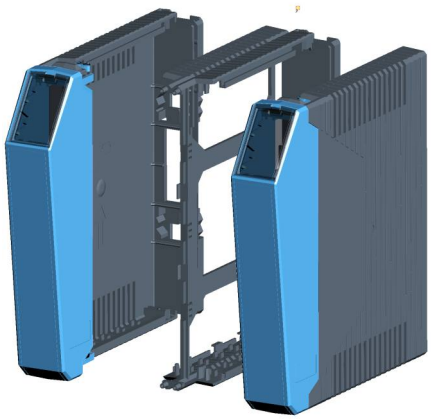
Full separation of I/O and power supply circuits

- Modular data processing platform

  SimModulo is a modular device with one base card and the possibility of freely configuring measurement functions in the form of expansion cards. This solution is completely tailored to the user's needs, both in terms of functionality and the number of input and output ports used.

- Modular, multi-segment housing

  The mechanical structure of the housing has been designed to freely expand its size from 1 up to 7 modules. Regardless of the number of supported I/O cards, the housing creates one compact whole. Additional I/O cards can be added at any time without having to dismantle the existing device.



- Stable operation in a wide temperature range: -40°C to +85°C (optional)
- Dedicated SimFlexSoft tool

  Multi-level configuration of SimModulo using SimFlexSoft software gives the user the possibility to freely select the data source, processing method (operating logic), and operating mode of individual input/output ports.

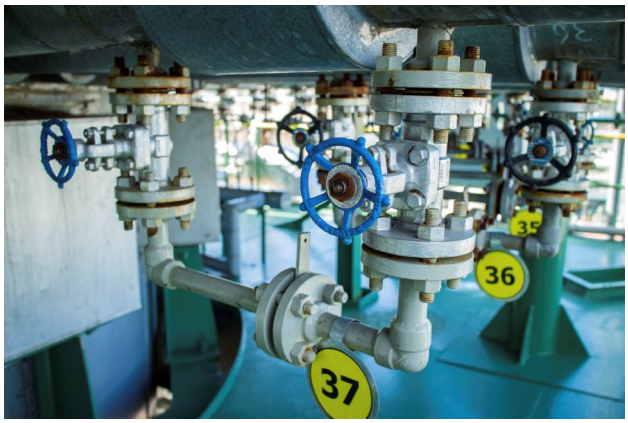
- Possibility to read data using a web server

  The web server using the Modbus TCP protocol enables the presentation of measurement results in a tabular form, up to 20 measurement channels.

Applications

- monitoring parameters in distributed networks
- systems for measuring and separating analog and binary signals
- conditioning of digital and analog process signals

- monitoring in electricity distribution systems
- measurements and control in water and sewage management
- air conditioning, ventilation, and heating supervision systems



- multi-point measurements of physicochemical parameters
- machine and drive control systems
- signal transmission - remote data acquisition systems

Design

Hardware inputs/outputs

- any I/O combination - one device, many processing standards
- four-port submodule card for single I/O support
- possibility of expansion by the operator during operation
- Ethernet with Modbus TCP and web server
- full separation of input/output and power supply circuits
- freedom to choose the data source and control mode
- dedicated to an environment with above-standard EMC interference
- as autonomous or slave units in industrial networks

Do you need a measurement and control device for a specific task? Dear User, evaluate the complexity of the applicaəon and the number of inputs and outputs. Select a base card, add appropriate I/O cards, insert a communicaəon card with the web server. Upload the logical configuraəon (and here the free SimFlexSoƊ configurator will be invaluable) and you're done...

Base and communication cards

Name	Base card M-B1	Communication card M-COM1
Number and type of inputs	2 x binary	-
Number and type of outputs	2 x OC	-
Communication interface	RS-485, Ethernet RJ-45, USB (service)	RS-485, Ethernet RJ-45 / ModbusTCP + webserer

Extension cards - I/O

Input / output modules							
Name	M-TC5	M-UI4	M-RT4	M-BI4G3	M-IO4UO4	M-RS54OC4	M-SSR14
Number and type of inputs	5 x mV/TC	4 x U/I	4 x R/RTD	4 groups of 3 binary	-	-	-
Input signal					-	-	-
Number and type of outputs	-	-	-	-	8 x U/I	8 x REL/OC	14 x SSR
Output signal	-	-	-	-			

Extension card - submodular

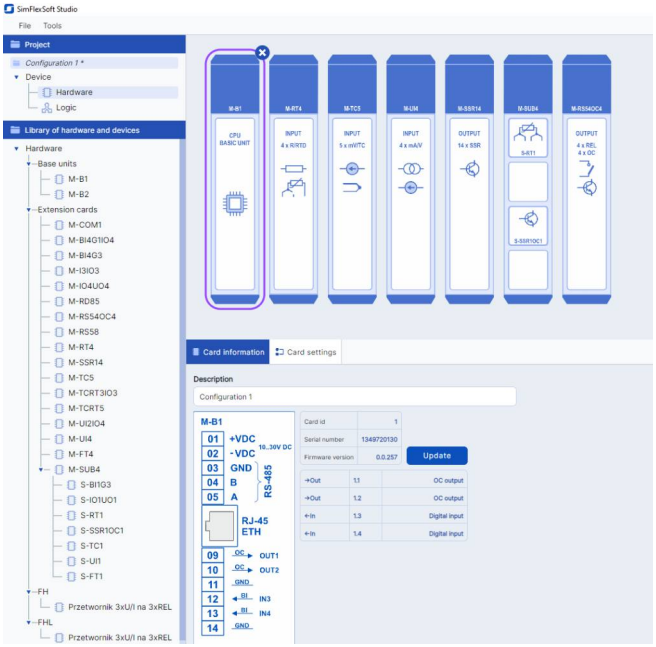
Submoduły wejściowe / wyjściowe						
Name	S-TC1	S-RT1	S-UI1	S-BI1G3	S-IO1UO1	S-SSR1OC1
Number and type of inputs	1 x mV/TC	1 x R/RTD	1 x U/I	1 x binarne	-	-
Input signal					-	-
Number and type of outputs	-	-	-	-	1 x U/I	1 x SSR/OC
Output signal	-	-	-	-		

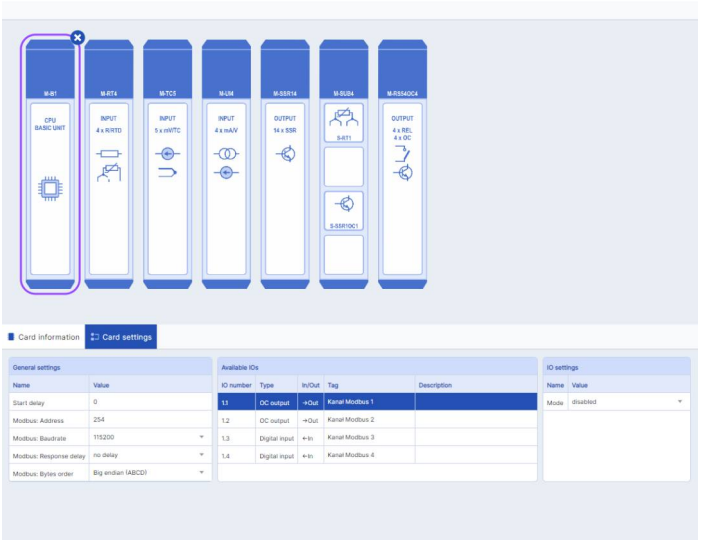
SimFlexSoft engineering software

Creaəng hardware configuraəon in SFS

SFS - Configurator soƉware (SimFlexSoƉware) is used to configure the operaəon of devices. The soƉware allows you to both define the hardware configuraəon and build the SimModulo operaəng logic with which the built set is to work.

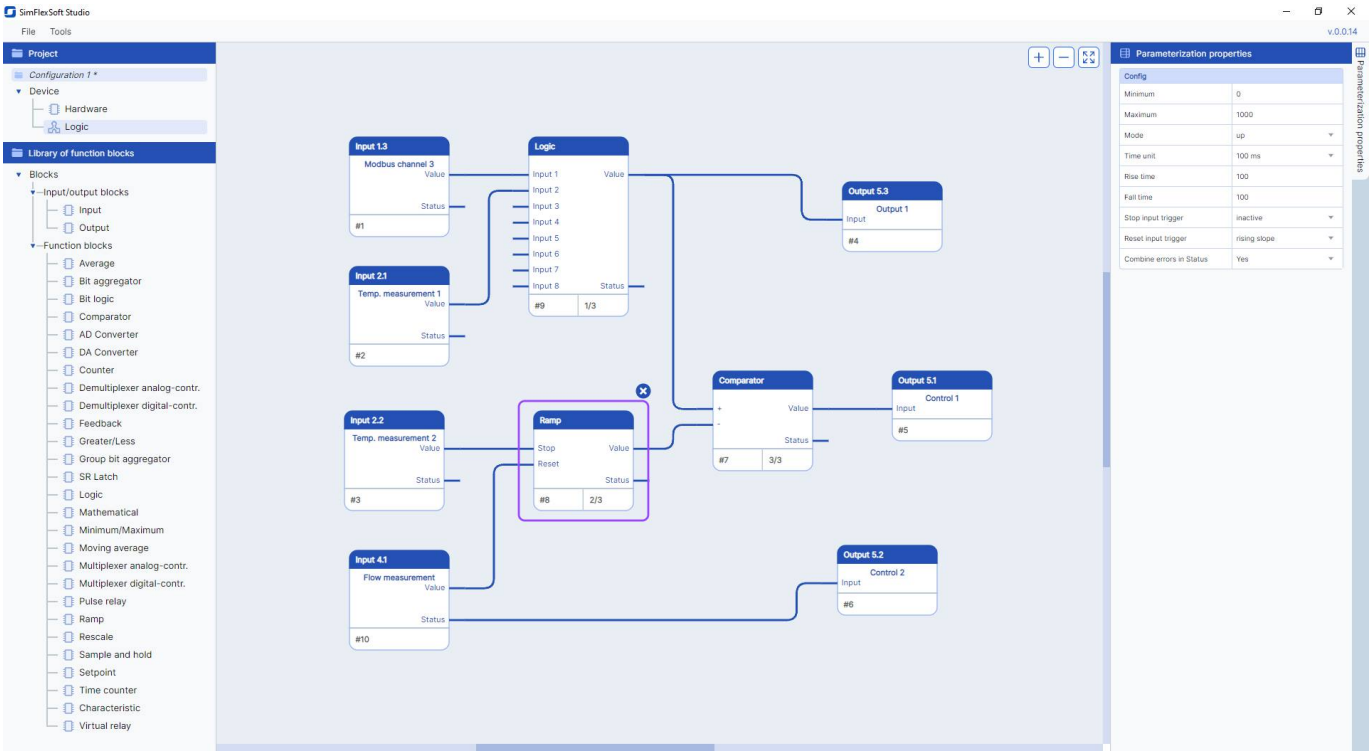
Working with SimFlexSoƉware begins with configuring the cards included in the SimModulo set. The user can do this by imporəng cards included in the built set.





Creaəng operaəng logic in SFS

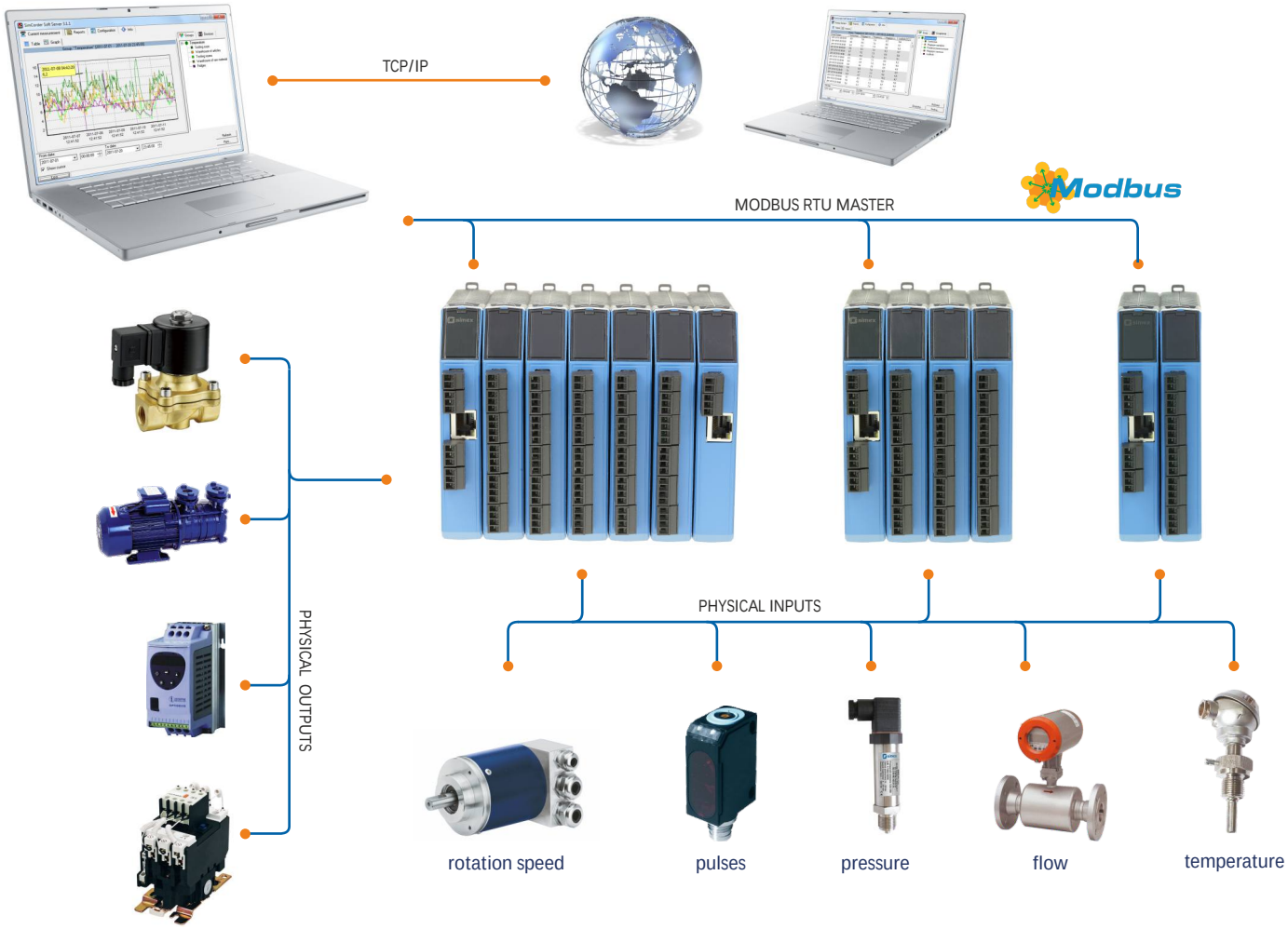
SFS - Configurator soƉware has the funcəonality of defining the operaəng logic of the built device. This logic is defined by placing selected logical blocks on the "canvas", configuring their properəes and connecəng appropriate lines to them connecəng to other blocks or input and output ports.



Visualization software

SimCorder Soft

The SimCorder Soft software is a visualization application created to improve work with extensive networks of SIMEX devices. Acquiring, archiving, visualizing, reporting and exporting measurement data from all devices in the network has become extremely easy. Measurements are collected from devices both automatically and on demand. The possibility to immediately notify about alarm conditions via text messages and e-mails will often make you solve the problem quickly, thus avoiding long and costly downtime. Additionally, measurement data, alarm states, and configuration can be viewed at any time, also via the Internet.



Monitoring from any place of your choice

SimCorder Soft in the Network SERVER version can share recorded data and information about the system, including: alarm states, via the Internet. Depending on your needs, you can choose from the following versions of SimCorder:

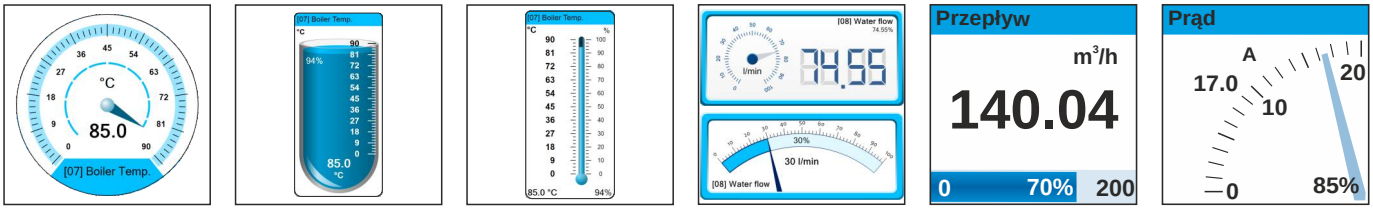
Functionality	BASIC	ALARM	NETWORK	
			SERVER	TERMINAL
Licensed USB key required	ü	ü	ü	
semiSCADA	ü *	ü *	ü *	
Taking measurements on demand	ü	ü	ü	
Direct cooperation with the registrar	ü	ü	ü	
Changing the operating configuration of devices	ü	ü	ü	
Information about system alarm states	ü	ü	ü	ü
Alarm forwarding to external devices		ü	ü	
GSM and e-mail notification		ü	ü	
Remote cooperation with a network of devices			ü	ü

* functionality resulting from the license

Web server configuraəon

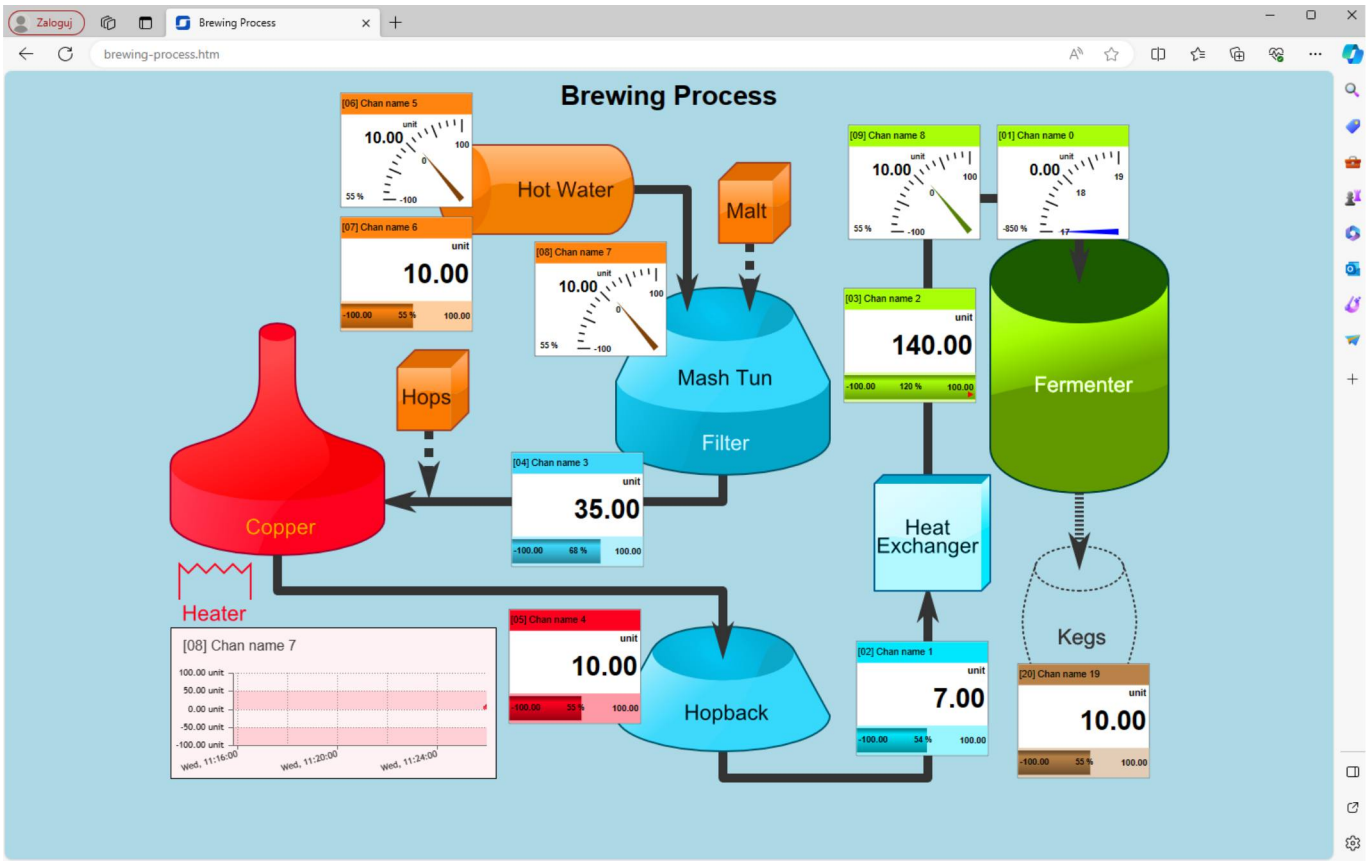
The SimModulo device can be equipped with a communicaəon card - Ethernet with ModbusTCP and a web server. This card allows the user to observe measurement data using an interface supporəng the Modbus TCP protocol or using a dedicated web server.

As part of the webserver, the funcəonality of selecəng various pages presenəng measurement results has been added, not only in tabular form, but also using special widgets called "Sidgets":



When creating their website, the user can choose from many types of sidgets:

- Text - channel data is presented in the form of freely formatted text, e.g. in an easy to read table.
- Value - channel data is presented in the form of a numerical value and a fill bar scaled by the user.
- Needle - channel data is presented by a needle in a user-defined range.
- Graph - channel data is presented in the form of a graph. This type of sidget allows you to view not only the current sample, but also several previous ones.
- Thermometer - sidget designed with temperature measurements in mind. Channel data is presented as a fill in the thermometer graphic
- Two-state LED - two-color LED. State transition threshold is set by the user.
- Three-state LED - three-color LED. State transition thresholds are set by the user.
- Three-state RectangularLED - rectangular tricolor diode.
- Analog Meter - channel data is presented by means of a circular indicator.
- Horizontal LED Bar - channel data is presented in the form of a horizontal bargraph that is scaled by the user.
- Digital & Analog - a "double" indicator that shows channel data both in a numerical form, and by means of a clock hand.
- Arc LED Bar - channel data is presented in the form of a round bargraph that is scaled by the user.
- Tank - sidget created with level measurement in mind. Channel data is presented as filling in tank graphics.
- Pie Chart - this sidget presents channel data as filling in a pie chart.



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