Ethernet/RS232/485/IO/TH control and measuring unit with automation control functionality

- 1x 10Mbit/s Ethernet – management/ monitoring
- ***1-wire*** interface to external sensors of temperature, humidity, other measurable values, dew point calculation, or multi-point internal temperature monitoring
- Relay output control, ***NO/NC ports***
- Digital inputs with "dry contact" optical isolation
- 2x ***RS232/RS485/RS422*** *virtual-com* interfaces with galvanic separation, for the transfer of RS contact for external device management or communication with sensors,
- Possibility of adding extension modules: additional inputs, outputs, size measurements
- Remote, full software update
- ***WWW, SNMP, SMTP, TELNET, SNTP, Syslog*** management
- ***USB CLI OTG***
- Operating temperatures from ***-40*** to ***+70°C***
- Durable metal casing ***IP-30 DIN***
- ***DC/AC*** power supply

Description of the device

Functionality

In its base functional application, **SETEBOS-2N** serves as control and measuring unit dedicated to object supervision and control, registering environmental parameters such as temperature and humidity. Additionally, the respective inputs allow building violation detection, flooding, etc. Furthermore, the device facilitates remote control of devices installed in the monitored facility via two relay contact outputs.

RS232/485/422 interfaces allow communication with external devices via Ethernet/IP networks, or connection of peripherals or extensions for the measuring and monitoring functions. The serial interface also allows the connection of additional external modules to further expand the device's functionality.

SETEBOS-2N, thanks to the serial interface, can be equipped with additional external modules allowing to expand the functionality of the device.

The device, depending on the version, can be powered directly from locally available DC power sources.

Management

The inclusion of a ***HTTP*** server, a ***TELNET*** server and ***SNMP v1*** agent facilitates free configuration of the devices parameters using a ***WWW*** browser or constant monitoring of the device's condition from any ***SNMP*** compatible management platform.
Moreover, the included **SMTP** support allows operator notification via email if any system-defined event is detected. The content of messages sent by the device via ***SNMP (TRAP)*** and ***syslog*** protocols is fully customisable.
Dedicated applications are provided with an application which, depending on the modules installed, can be used for object control and monitoring purposes as well as smart-building automation control based on the applicable algorithms.

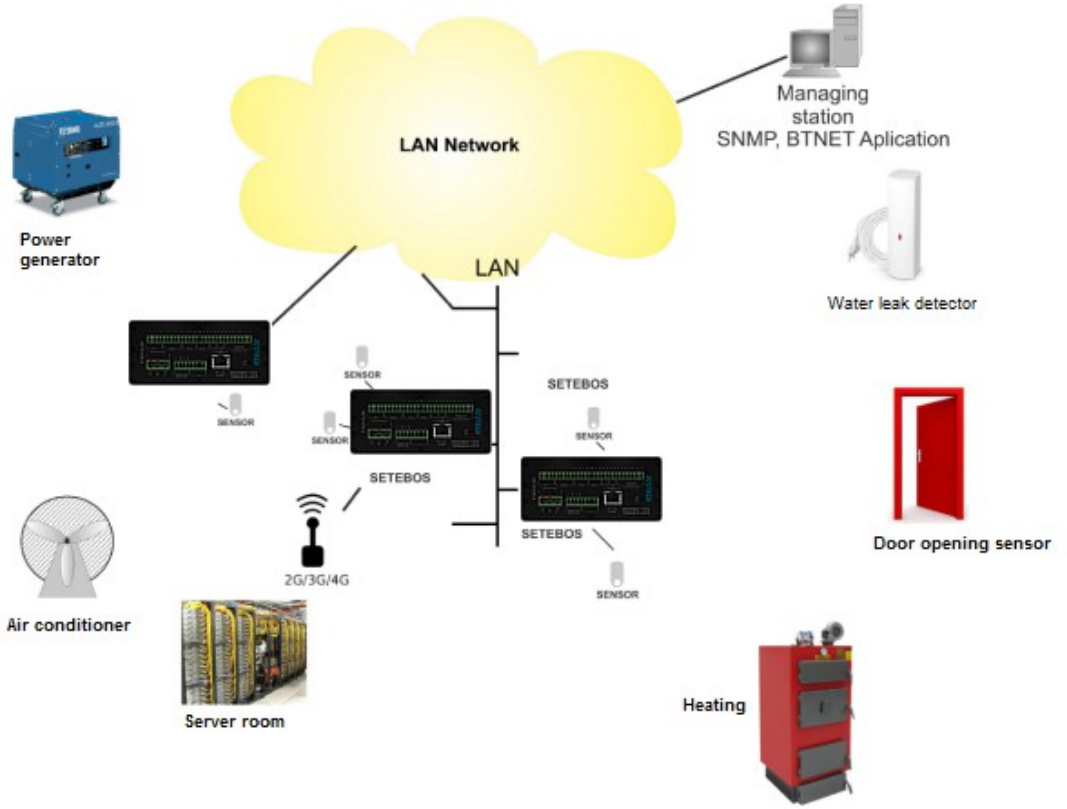


Figure 1. Example application illustrating the connection of peripheral systems for the measurement of detector state or environmental conditions in maintenance-free stations.

One of the possible usages is control and environment monitoring in server room. Example of such application is presented on the drawing below.

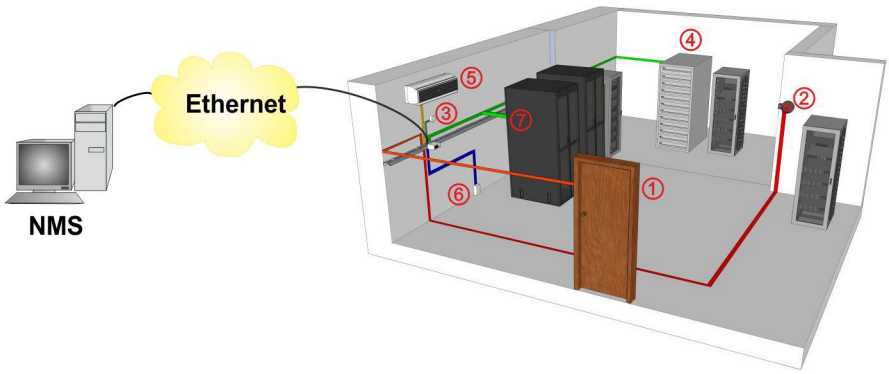


Figure 2. One example of device use is server room monitoring:

Sensor Group:

1. Door opening detector connected to digital input, informs about violation of the facility's space
2. Alarm sirene, can be switch on using digital output
3. Smoke detector, informs about fire presence
4. Temperature and humidity probe mounted in Rack
5. Air conditioner controlled by relay output, switched on automatically when the temperature rises above set point
6. Water leak detector
7. Telecom rectifier managed by RS232 virtual console

Units can be grouped to form a single control and management system supervised via the provided, free BTNET application or other management applications (e.g. via SNMP). BTNET software allows the user to gather alarm notifications, monitor the operation of a group of devices and generate measurement visualizations.

SETEBOS-2N, depending on the version, can be powered with direct voltage within the range of 10-60V DC. The total device power input does not exceed 6W.

Technical specifications

Ethernet interfaces:

- 1x RJ45 10Mbps – management/ monitoring

Temperature and humidity measurement interface

- Range of temperature measurement: -40 - +120 °C
- Accuracy of temperature measurements: +/- 0.4°C for 25 °C
- Range of humidity measurement: 0-100% RH
- Accuracy of humidity measurement: +/-3% RH
- Maximum number of sensors T = 4 and H=2
- Connector: screw terminals

RS232/485/422 interfaces

- Transmission speed:
  - 0-115.2 kbitps for RS232
  - 0-230 kbitps for RS 485 or RS 422
- Interface configuration:
  - RS422 – 4 wire
  - RS485 – 2 wire
  - RS232
- Connector: screw terminals

Management:

- SNMP v1, TELNET, SNTP, Syslog, SMTP
- HTTP protocol and web browser as a management application

Power supply

- Supply voltage range: 9 ÷ 60VDC
- Screw connection for wire up to 2.5 mm^2
- Up to 6W power consmuption

1-wire interface

- Transmission speed:0-16.3 bit/s
- Range < 100m
- Connector: screw terminals

Output contacts

- Number of outputs – 8
- Type - „relay contact”
- Maximum switched DC current – 0.5A, 48VDC
- Connector: screw terminals

Input contacts

- Number of input – 4
- Galvanically insulated inputs
- Input Type - dry contact
- Connector: screw terminals

Physical characteristics:

- Can be mounted on a DIN bus
- Metal IP-30 casing
- Dimensions: [135 x 120 x 68] mm
- Weight: 0,8 kg

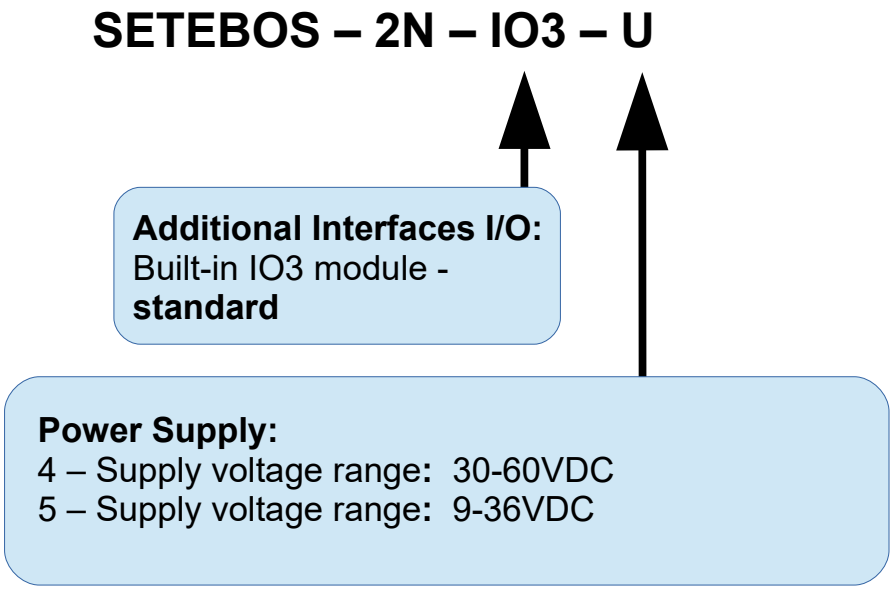
Environmental requirements:

- Operating temperature: -40 to +70°C
- There are no active cooling and heating elements in the unit and no external sources are required
- Operating humidity (non condensing): 5 - 95%,
- Location type: class C as per PN-EN60870-2-2 - covered location
- IP-30 protection rating

USB Host

- 1x USB CLI OTG

Code



List of available modules: SETEBOS-2N:

Symbol (IO)	Module designation	Description
IO3	MOD-SETEBOS-2N-IO3	Module: **Interfaces 4x digital inputs, 4x relay outputs,** power output 12V 100mA and on/off power output 12V 100mA for external sensors - **built**

Additional accessories:

List of proposed power supplies for BITSTREAM devices

Designation of the power supply	Output voltage range	Nominal output power	Working temperature C-standard T-industrial
	DC	W	
ZAS-24-25-W-C	24 V	25	0°C ~ +50°C
ZAS-48-25-W-C	48 V	25	0°C ~ +50°C
ZAS-24-20-R-T	24 V	20	-20°C ~ +70°C
ZAS-24-40-R-T	24 V	40	-20°C ~ +70°C
ZAS-48V56-40-R-T	48 - 56 V	40	-20°C ~ +70°C

Legend of markings: W - plug; S - standalone; R - for DIN rail

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