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BKT EMS Environmental Monitoring System

- the environmental parameters monitoring system

- installation and configuration manual
- version 11



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Warning:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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1 OVERVIEW

The BKT EMS system is designed to monitor environmental parameters (temperature, humidity, etc.) in a telecommunications cabinet or small rooms. Its purpose is to warn users about possible emergency situations and report any failures. The single system controller can support: up to 4 analogue sensors, 4 sensors with potential-free contacts and two signalling devices. With expansion modules there are up to 28 analogue sensors, 68 sensors with potential-free contacts, 10 sensors with CAN bus interface. To keep a satisfactory system performance, it is not recommended to connect more than 80 sensors to the controller.

2 SYSTEM COMPONENTS

2.1 EC335t controller



Hardware	
Analogue inputs	4 inputs (RJ12 sockets) for compatible analogue sensors. Any combination of 4 sensors can be connected
	to the device. Some sensors can be connected in stacks. The type of a sensor is detected automatically.
Inputs for potential-free	4 inputs (removable 6-pin terminal strip) for any sensors with potential-free contacts
contacts	
Outputs	2x 12V/250mA voltage outputs (removable 3-pin terminal strip)
CAN connector	Connector (RJ12 socket) for up to 10 CAN devices, e.g., extension modules for additional analogue inputs,
	additional inputs for potential-free contacts or CAN sensors
Other connectors	10/100Mbps (RJ45 socket) Ethernet port, USB 2.0 port (Mini-B socket)
Other	Optional card of a GSM module; SDXC 512GB slot
Power supply	External 12VDC/1A plug adapter, power consumption ≤ 10W. Power backup from additional power
	source 12VDC/1A
Dimensions	190x92x34 (width x depth x height)
Operating conditions	Temperature: 0°C - 60°C, Humidity: 0% - 90% RH (no condensation)
Storage conditions	Temperature: -25°C - 85°C, Humidity: 0% - 95% RH (no condensation)
Weight	700g
Part number	122EC003354
Software	
Operating system	Linux
Configuration	Through a web interface
Supported protocols	HTTP, HTTPS, VPN, PING, DHCP, RADIUS, SYSLOG, FTP, SNTP, SMTP, SNMP (v1,v2c,v3), MODBUS TCP
Alarm notification	E-mail, SNMP trap, internet SMS gateway, SMS (optionally with GSM modem)

2.2 Analogue sensors

Any sensors from the table below can be connected to 4 analogue inputs (A1-A4) of the controller or inputs (A1-A8) in additional EE321t extension modules (extension module with additional 8 analogue inputs). One controller can support up to 28 analogue sensors. If longer than included cable is needed, it is a UTP Cat5e cable suggested wit terminated RJ14 (6P4C) plugs. Warning: some analogue sensors e.g., ES363 require 6-wire cable terminated with RJ12 (6P6C) cable.



Туре		Description	Part number
Front	Rear	ES350 – Temperature sensor Measurement range: -10°C - +100°C Measurement uncertainty: ±1°C Measurement resolution: 0,1°C Power consumption: 60mW Connectors: 1x RJ12 socket Cable: RJ14(6P4C)-RJ14(6P4C), included 2m, maximum allowed length of a connection cable: 100m Dimensions: 60x18x18	122ES003500
Front	Rear	ES351 – Humidity sensor Measurement range: 0% - 100% RH Measurement uncertainty: ±5% RH for 10% - 95% RH Measurement resolution: 0,01% RH Power consumption: 60mW Connectors: 1x RJ12 socket Cable: RJ14(6P4C)-RJ14(6P4C) included 2m, maximum allowed length of a connection cable: 50m Dimensions: 60x18x18	122ES003510
		ES352 – 230V AC voltage sensor Measurement range: 90VAC - 250VAC Power consumption: 60mW Connectors: 1x USB-A socket Cable: USB-A-RJ14(6P4C) included 1,8m, maximum allowed length of a connection cable: 100m Dimensions: 63x66x30	122ES003520
Front	Rear	ES353 – Door sensor (reed relay + magnet) Stack connection of up to 10 sensors Power consumption: 60mW Connectors: 2x RJ12 socket Cable: RJ14(6P4C)-RJ14(6P4C) included 2m, maximum allowed length of a connection cable: 150m Dimensions: 60x18x18	122ES003530
Front	Rear	ES354 – Vibration sensor Stack connection of up to 10 sensors Power consumption: 60mW Connectors: 2x RJ12 socket Cable: RJ14(6P4C)-RJ14(6P4C) included 2m, maximum allowed length of a connection cable: 150m Dimensions: 60x18x18	122ES003540
		ES356 – Optical smoke sensor Stack connection of up to 10 sensors Power consumption: 100mW Connectors: 2x RJ12 socket Cable: RJ14(6P4C)-RJ14(6P4C) included 2m, maximum allowed length of a connection cable: 150m Dimensions: ¢100x45	122ES003560
Ö		ES357 – Passive infrared sensor Movement detection range: 100° x 12m Power consumption: 100mW Connectors: 2m long cable from the casing, terminated with a RJ14 (6P4C) plug, maximum allowed length of a connection cable: 50m Dimensions: 112x71x48	122ES003570
		ES358 – External temperature sensor Measurement range: -40°C - +100°C Measurement uncertainty: ±1°C Measurement resolution: 0,1°C Power consumption: 60mW Connectors: 15m long cable from the casing, terminated with a RJ14 (6P4C) plug, maximum allowed length of a connection cable: 100m Dimensions: φ7x30 + 15 m cable	122ES003580



	ES359 – Flood sensor Detection delay: 15s, Power consumption: 60mW Sensor dimensions: 60x18x18, detector dimensions: 37x20x9 Connectors: RJ14 (6P4C) for connection to thecontroller, maximum allowed length of a connection cable: 100m; RJ9 (4P4C) for connecting to the detector Liquid detector cable length: 1m	122ES003590
Front Rear	ES360 – Flood sensor for a water detection cable Detection delay: 15s Power consumption: 60mW Connectors: 1x RJ12 socket, 1x 2pin terminal block for ES361 wire Cable: RJ14(6P4C)-RJ14(6P4C) included 2m, maximum allowed length of a connection cable: 100m Dimensions: 60x18x18	122ES003600
	ES368 – Sensor detecting water and other conductive liquids An ES360 sensor is required for connection Available lengths: 3m (122ES003680), 6m (122ES003685), 10m (122ES003682), 15m (122ES003683), 25m (122ES003684)	122ES003680 122ES003685 122ES003682 122ES003683 122ES003684
Front Rear	ES362 - 4-20mA sensor Any sensors with 4-20mA output can be connected to the controller. Galvanic insulation 1kV between the input and the output. Measurement uncertainty: 2% (0,4mA) Measurement resolution: 0,1mA Power consumption: 100mW Input voltage: 5V Maximal input current: 24mA Connectors: 1x RJ12 socket, 1x 2pin terminal block for 4-20mA sensor Cable: RJ14(6P4C)-RJ14(6P4C) included 2m, maximum allowed length of a connection cable: 50m Dimensions: 60x18x18	122ES003620
Front Rear	ES363 - 75V DC voltage sensor Galvanic insulation 1kV between the input and the output. Measurement range: 0VDC - 75VDC Measurement uncertainty: ±1% (0,75V) Measurement resolution: 0,1V Power consumption: 100mW Connectors: 1x RJ12 socket, 1x 2pin terminal block as DC voltage input Cable: RJ12(6P6C)-RJ12(6P6C) included 2m, maximum allowed length of a connection cable: 50m Dimensions: 60x18x18	122ES003630

2.3 CAN digital sensors

These sensors are connected to the CAN interface of the EC335t controller. The CAN interface is a serial bus and allows connecting devices in a daisy chain (from device to device). A maximum of 10 devices can be connected to the controller via the CAN interface. The length of the CAN bus should not exceed 200m. It is a UTP Cat 5e suggested as a CAN bus cable.

Туре	Description	Part number
	ES340 - Integrated smoke, humidity, temperature sensors; CAN bus Temperature measurement range: -10 - +85°C Measurement uncertainty: ±0,5°C Measurement resolution: 0,1°C Humidity measurement range: 0% - 100% RH Measurement uncertainty: ±3% RH for 10-95% RH Measurement resolution: 1% RH Possibility to connect up to 10 devices in a daisy chain (sensor has 2 CAN ports); Power consumption: 1000mW Connectors: 2x RJ12 socket of CAN bus Cable: RJ12(6P4C)-RJ12(6P4C), included 2m, maximum allowed length of CAN bus: 200m; Dimensions: \$100x45	122ES003400



	ES341 - Integrated pressure 300-1100hPa, humidity 0% -100% RH (±3% uncertainty for RH 10% - 95% RH), temperature -40+85°C sensors; CAN bus. Possibility to connect up to 10 devices in a daisy chain. The sensor has 2 CAN ports for daisy chain connection. Measurement uncertainty: ±1,5°C Measurement resolution: 0,1°C Measurement uncertainty: ±3% RH Measurement resolution: 1% RH Measurement resolution: 1% RH Measurement resolution: 1hPa Connectors: 2x RJ12 socket of CAN bus Cable: RJ12(6P4C)-RJ12(6P4C), included 2m, maximum allowed length of CAN bus: 200m Dimensions: 78x66x27 mm.	122ES003410
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2.4 Extension modules and accessories

Expansion modules increase the number of available ports for sensors connected to one controller. The EE321t and EE322 modules must be connected to the CAN interface of the EC335t controller. The CAN interface is a serial bus and allows connecting in a daisy chain (from device to device). A maximum of 10 devices can be connected to the controller via the CAN interface. The length of the CAN bus should not exceed 200m. It is a UTP Cat5e suggested as a CAN bus cable.

Туре	Description	Part number
Front Rear	EE321t – Extension module with additional 8 analogue inputs. The module is connected to a CAN controller connector. The controller supports up to 3 EE321t devices. The module has no 19" brackets. Connectors: 2x RJ12 socket of CAN bus, 8xRJ12 for analogue sensors, power socket 12V@1A Dimensions: 129x29x56	122EE003211
Front Rear	EE322 – Extension module with additional 32 inputs for potential-free contacts. The module is connected to a CAN controller connector. The controller supports up to 32 inputs of potential-free contacts. 19" brackets included. Connectors: 2x RJ12 socket of CAN bus, 32 terminal blocks for potential-free contacts Dimensions: 215x40x40	122EE003220
Front Rear	EA313 - Relay 30VDC/5A Maximal contact voltage: 30VDC Maximal contact load: 5A Coil voltage: 12VDC Dimensions: 60x18x18	122EA003130
0 0	EA314t – 19" 1U bracket for EC335t (index 122EC003354) and EE321t module (122EE003211) Dimensions: 484x44x80	122EA003144
	EA315 – Light signal Flashing frequency: 1Hz Power supply 12V, 80mA Connectors: 1x 2pin terminal block Cable: 1.5m 2-wire cable included Dimensions: \$73x45	122EA003150
0 0	EA316t – 19" 1U bracket for 2x EE321t Dimensions: 484x44x80	122EA003161
	EA319t - LTE modem for EC335t (part number 122EC003354) The modem is mounted in a dedicated controller slot. The modem has SMA connectors for antennas. 2 bayonet antennas are included.	122EA003194



3 SYSTEM STRUCTURE

3.1 Number of sensors and wiring

In order to maintain optimal system performance, the number of sensors supported by the EC335t controller should be limited to 80. To connect the sensors with the controller, use the cable supplied with the sensor or use a UTP cat. 5e twisted pair cable terminated with connectors as in the figures below. Inside the IT cabinet, cables should be routed from the sensor to the controller along the cabinet frame or on dedicated cable routes. The cables should be secured using cable ties.

Device connected to	Restrictions	Type of connection cable	Maximum cable length
All sensors	Maximum 80 sensor of any type		
Analogue sensors	Up to 28 analogue sensors of any type connected directly to the controller and via extension modules EE321t .	UTP kat5e with RJ14 (6P4C) -RJ14 (6P4C) connectors RJ14(6P4C) 1 NC 2 12V 3 Sensor detection 4 Signal output 5 GND 6 NC For the ES363 sensor, use UTP kat5e cable with RJ12 (6P6C) -RJ12 (6P6C) connectors RJ12(6P6C) RJ12(6P6C)	A minimum of 50m. See the description of individual sensors 2.2 Analogue sensors
CAN devices	Up to 10 CAN devices (up to 3x EE321t and up to 2x EE322 and up to 10x ES340/ES341).	UTP kat5e with RJ14 (6P4C) -RJ14 (6P4C) connectors RJ14(6P4C) RJ14(6P4C)	The entire bus is up to 200m.
Sensors with potential-free contacts	Up to 68 sensors with potential-free contacts connected directly to the controller and via the EE322 extension modules. It should be assumed that each sensor with a potential-free output loads the controller as much as 0.5 analogue sensor.	UTP Cat 5e or other with 0.5mm wire diameter	50m for each sensor.



3.2 Example 1. Extension modules EE321t

Up to three EE321t modules (extension module with an additional 8 analogue inputs) can be connected to one controller.



Sensor type	Number of sensors as a load for the controller
Analogue sensors connected directly to the controller	4
Analogue sensors connected via EE321t extension modules	24
Tota	l 28

3.3 Example 2. Extension modules EE322

A maximum of two EE322 modules (extension module with an additional 32 inputs for potential-free contacts) can be connected to one controller. It should be assumed that each sensor with a potential-free output loads the controller as much as 0.5 analogue sensors.



Sensor type	Number of sensors as
	a load for the controller
Sensors with potential-free contacts connected directly to the controller	2 (in real 4)
Sensors with potential-free contacts connected via EE322 extension modules	32 (in real 64)
Tota	I 34



3.4 Example 3. CAN devices

Up to 10 CAN devices can be connected to one controller, but maximum 3 units EE	321t , 2 units EE322 or 10 units ES340.
	EE321t CAN EE321t
CAN ES340 ES340	ES340 ES340 CAN bus terminator must be enabled
CAN ES340 CAN EE322	EE322
The CAN bus connection, the length of the entire bus is up to 200m	The connection of an analogue sensor, the length for each sensor: minimum 50m

Sensor type	Number of sensors as a load for the controller
Analogue sensors connected to EC335t controller	4
Analogue sensors connected via EE321t extension modules	24
ES340 CAN sensors (temperature, humidity, smoke)	15 (5x3)
Sensors with potential-free contacts connected via EE322 extension modules	32 (in real 64)
Tot	al 75



3.5 Example 4. IT cabinet monitoring

An example of an environmental conditions monitoring system in cold aisle containment built of 6 cabinets: temperature (ES350) and humidity (ES351) in the aisle, temperature at the top of the cabinet, humidity and presence of smoke (ES340). A flood detection sensor was placed under the floor (ES360 + ES368).



Sensor type	Number of sensors as
	a load for the controller
Analogue sensors connected directly to the controller	3
ES340 CAN sensors (temperature, humidity, smoke)	18 (6x3)
Total	21



4 INSTALLATION OF DEVICES

4.1 EC335t controller installation

4.1.1 Package contents

EC335t box contains:



4.1.2 Controller dimensions



4.1.3 1U 19" bracket installation





4.1.4 Device connectors



1. Analogue sensor inputs	6. Mini-B USB for pendrive or camera	16. RS485 module slot		
2. CAN bus connector for extension units	7. RJ45 Ethernet connection	17. Power backup input for additional power		
3. Controller reboot button. Press and hold	8. SD card socket for measurements storage	source 12VDC/1A		
for 2s. Wait 60s for rebooting.	9. Working mode switch: N-normal mode,	18. Main power supply 12VDC/1A		
4. Restore factory settings button. Press and	R-factory programming (do not use)			
hold for 5s. Wait 60s for rebooting.	10. Voltage output status LEDs			
5. Status LEDs	11. Enclosure earthing (M4 thread)			
ACT- device status LED	12. Local temperature sensor			
ALARM – programmable LED,	13. Voltage outputs 12VDC 0.25A			
ERR – error LED,	14. Inputs for external voltage-free contacts			
CAN – CAN bus status LED	15. EA319t LTE modem slot			

4.2 Installation of EA319t – LTE modem

4.2.1 Package contents





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4.2.2 Assembly procedure

The method of assembling the modem is shown below.





4.3 Installation of EE321t module – 8 analogue inputs extension

You can connect 3 EE321t devices that extend the number of analogue ports to the controller.

4.3.1 Package contents

The packaging of the EE321t module includes:



4.3.2 EE321t dimensions



4.3.3 1U 19" bracket installation





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4.3.4 Device connectors



- 1. Signal LEDs (see in table 4.3.5 Connecting the EE321t module)
- 2. 8 inputs for analogue sensors
- 3. Switches: FR firmware update and TR bus terminator (see in the table 4.3.5 Connecting the EE321t module)
- 4. CAN bus connectors
- 5. Power connector 12VDC/1A



4.3.5 Connecting the EE321t module







CAN 1 CAN 2 TR-on TR-off	The bus terminator in the last device (from the controller) must be enabled. The bus terminator in the other devices must be disabled. The TR switch (activating the terminator) in ON and OFF position is shown in the drawing on the left.
RUN ERROR A1 A2	The EE321t module has two LEDs that signal the states: RUN (green) flashes - the EE321t module is not connected to the controller RUN (green) is on - the EE321t module is connected to the EC335t controller and is correctly configured in the controller ERR (red) is on - the EE321t module is connected to the EC335t controller but is not configured correctly in the controller

4.4 Installation of EE322 module- extension of 32 inputs for voltage-free contacts

Up to two EE322 devices, that extend the number of inputs for potential-free contacts, can be connected to the controller.

4.4.1 Package contents

The packaging of the EE322 module includes:



4.4.2 EE322 dimensions





4.4.3 1U 19" bracket installation



4.4.4 Device connectors



5. 5. FR switches - firmware update and TR - bus terminator (see in the table 4.4.5 Connecting the EE322 module)



4.4.5 Connecting the EE322 module







CAN 1 CAN 2 TR Image: Can 2 Image: Can	The last (from the controller) device must have the bus terminator turned on. The other devices must have the terminator turned off. The TR switch (activating the terminator) in the on and off position is shown in the drawing on the left. The FR switch is for service and must always be in the off position during normal operation.
CAN 1 CAN 2 TR RUN ERROR	The EE322 module has one LED indicating the status: LED off - the EE322 module is not connected to the controller Lights up in red - the EE322 module is connected to the EC335t controller but is not configured correctly in the controller Lights up green - the EE322 module is connected to the EC335t controller and is correctly configured in the controller

4.5 Installation of ES340 sensor – smoke, humidity, temperature

ES340 is a detector with three sensors integrated in one housing: optical smoke, temperature and humidity. The sensor is connected to the CAN bus connector on the EC335t controller.











4.6 Installation of ES341 sensor – pressure, humidity, temperature

The ES341 is a detector with three sensors integrated in one housing: pressure, temperature and humidity. The detector is connected to the CAN bus connector on the EC335t controller.





4.7 Installation of analogue sensors

Installation



Connection



The assembly of most analogue sensors is uncomplicated and consists in mounting the sensor in the selected location. You can use the hole in the sensor housing with a diameter of 5.5mm or an adhesive double-sided tape.

For mounting in IT cabinets, use a cage nuts and bolts with M4 or M5 size.

Analog sensors should be connected to the analogue inputs of the controller or inputs of the EE321t extension module. Use the cable supplied with the sensor or cable:

Supplied cable or UTP cat5e with RJ14 (6P4C) -RJ14 (6P4C) connectors



For the ES363 sensor, use supplied cable or UTP cat5e cable with RJ12 (6P6C) -RJ12 (6P6C) connectors



4.7.1 ES352 - 230VAC voltage sensor





For the next ES353 sensors

4.7.2 ES353 – door sensor





Sensors ES353 - door sensor, ES354 - vibration sensor, ES356 - a smoke detector can be connected in a cascade, that is, from the sensor to the sensor. Up to 10 sensors can be placed in one cascade. The entire cascade occupies only one analogue port in the controller, but the controller is then unable to distinguish the sensors in the cascade and determine from which of them an alarm was generated.

Front

Real

Front

4.7.3 ES356 – smoke sensor





Connection



The ES356 smoke detectors can be connected in a cascade, from the detector to the detector. Up to 10 detectors can be placed in one cascade. The entire cascade occupies only one analogue port in the controller, but the controller is then unable to distinguish the sensors in the cascade and determine from which of them an alarm was generated.



It is possible to test the operation of the optical smoke sensor by inserting, for example, an office paper clip into the hole shown in the picture. The detector should react by permanently lighting the LED. It is an alarm condition of the detector and to turn it off, disconnect the detector for a moment from the power supply or perform a reset via the web interface of the controller. Reset via the web interface disconnects power from all analogue sensors, which may result in additional alarms being generated during this time.

4.7.4 ES357 – PIR sensor





The detector should be mounted to the wall at a height of about 2.2 m using the attached adjustable handle.

Do not install the detector in the vicinity of heat or cold sources, or in direct sunlight, which may cause false alarms.

Connection



The ES357 detector has a cable permanently connected to the detector, which should be connected to the analogue input of the controller. This cable can be extended to a maximum of 50m.



4.7.5 ES359 – point leak sensor





The ES359 liquid detector should be mounted so that its metal probes are short-circuited by the liquid during a leak. If the surface is not conductive, the probes can touch the surface (Figure A). Otherwise, the detector must be mounted so that its probes are slightly above the surface (Figure B). To check the liquid level in the container, place a detector as in Figure C. The detector can be glued to the surface with double-sided tape or screwed on.

The sensor (its RJ14 connector) should be connected to the analogue input of the controller. This cable can be extended to a maximum of 100m. Connect a liquid detector to the sensor (its RJ9 connector).

4.7.6 ES360 + ES368 - linear leak sensor



ES360 – leak sensor for

vater sensitive cable

ES361 – water

sensitive cable



Use non-metallic fastening brackets to fasten the cable. You can use the attached plastic handles. Together with the cable, 1 holder is provided for every 2 m of cable. The conduit is even sensitive to condensed air when the air humidity is high and the temperature is around the dew point. This situation can cause false flood alarms.

For the ES360 sensor (flood sensor for the water sensitive cable), connect the ES368 water sensitive cable using the terminal block provided.



4.7.7 ES362 - 4-20mA current sensor

Installation



The sensor can be installed using a hole in its housing with a diameter of 5.5mm or use a double-sided adhesive tape.

For mounting in IT cabinets, use a cage nuts and bolts with M4 or M5 size.

The ES362 sensor should be connected to one of the analogue inputs of the controller using the supplied cable. A circuit in which the current from the 4-20 mA range will be monitored should be connected to the sensor's connector terminal, paying attention to the correct polarity. Use a 1mm^2 wire.

ES362 input voltage: 5V

ES362 maximum input current: 24mA

4.7.8 ES363 - 0-75VDC voltage sensor



4.8 Installation of accessories

4.8.1 EA313 - 30V/5A relay



The installation of the relay is similar to the installation of analogue sensors in the same housing. You can use the hole in the sensor housing with a diameter of 5.5mm or adhesive double-sided tape.

For mounting in IT cabinets, use a cage nuts and bolts with M4 or M5 size.



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Connection



The EA313 relay is used to isolate the EC335t controller output circuit from the circuit of the controlled device. To connect between the controller and EA313, use a wire with a cross-section of 1mm². The cable should not be longer than 100m



In the case of controlling an inductive load (e.g. an electromagnetic lock of the door), a diode connected in parallel with the load should be used. It protects the contacts of the relay against overvoltage.



4.8.2 EA315 - light signal





The method of mounting the device is shown in the above drawings. Connection



The light signal should be connected to one of the controller voltage outputs. Use the attached wire or cable with a cross-section of 1mm². The maximum length of the connecting cable should not exceed 100m.



4.9 An example of placing devices in the cabinet

The number and type of sensors in the cabinet should be selected depending on the parameters to be monitored and the conditions in which the devices in the cabinet operate. For example, if a rack is completely filled with high-power appliances or there is no forced ventilation, two or more temperature sensors may be appropriate. In server racks, sensors installed at the front of the rack will measure the temperature of the air entering the rack, and sensors at the back will measure the air leaving the rack. The temperature measurement on the back of the rack may be corrupted if the temperature sensor is installed directly in front of the active device fan.

Proposed arrangement of temperature sensors in the cabinet

Number of temperature sensors	Cabinet installation location
1	At the front, half the height of the cabinet
2	At the front and back of the cabinet halfway up
4	Two at the front and two at the rear of the cabinet at $1/3$ and $2/3$ of its height

The figure below shows a proposed arrangement of devices in the cabinet



Sensor cables should be neatly routed along the cabinet frame and fastened with cable ties.



5 CONFIGURATION

The configuration information provided is related to firmware version 7.0.1 b134. Devices with a different version of the firmware may have a user interface that is slightly different from the one described here.

5.1 Horizontal menu

	Show and hide the vertical menu.
ŗ.	Run the initial configuration wizard.
e.	Add a new element. This function is available only on certain screens selected from the vertical menu.
3	Refresh the view.
8	Additional settings. This function is availeble only on certain screens selected from the vertical menu.
Ъį	Creates desktop templates. The function is available only after selecting Dashboard from the vertical menu.
J	Reset the smoke sensors. This function is available only after selecting 'Reset the smoke sensors' from the vertical
Ð	Write the configuration to non-volatile memory of the module. Any configuration changes must be written to non- volatile memory, if they need to be kept after resetting the device.
•	Log out.

5.2 Vertical menu

88	Dashboard	Customizable dashboard.
88	Overall stats	General view of the system status.
Ŀ	System tree	View of all system components, incl. sensor values.
ी तापत	Dry outputs	View of the relay outputs status (not available in EC335t).
°∿ ™	Dry inputs	View of the potential-free contact status.
SMS	SMS messages	Text message settings (available only if modem is installed)
≡	Event log	View of the system event history.
Ð	Logic schemes	Creating relations between the sensors and potential alarms.
۲	Cameras	Camera image preview.
0	Мар	View of sensotr parameters against the room layout.
2.	Users	User management.
	CAN configuration	Configuration of extension modules.
<u>.h</u>	Graphs	Displaying sensor values on charts.
0	Reset smoke detectors	Resetting the smoke sensors following an alarm.
ŧį†	Preferences	System settings.
Ø	System menu	Firmware update and data export.



5.3 Saving settings into non-volatile memory



All new setting must be saved into FLASH non-volatile memory. Otherwise, they will only be valid until the next reboot.

5.4 Dashboard

■ Still Deshboard ← → C ▲ Not	x + - 0 X sours 152.1650.101/#jdatboard A* @ @	Selecting the Dashboard from the vertical menu allows you to view the
BKT	Ξ 2 + 3(4gent 5) ↔	previously configured views of the system. Each user can set their own
BB Dashboard	Dashboard	
BB Overall stats	Temperature Zin B Supply Zin B	desktop.
1 System tree		
Dry outputs	28.6 °C 11.9 V	
🚔 Dry inputs		
sws. SMS messages		
Event log	I V	
	Onboard temperature Voltage 1	
Cameras		
• Map		
L Users	Onboard Temperature Voltage 1 13.0 13.0	
E CAN configuration	200 125 275 120 1	
Graphs	22.0 115 015 015 015 015 015 015 015 015 01	
A Reset smoke detectors	255	
### Preferences		
System menu		
	Convrisit: BKT Siektronik © 2011	
	= ∕ Ŧ ジ ✿ <mark>멤</mark> 环 읍 ♥	additionally define templates that will be available to other users.
Tem	nplates ×	Diagonal - manage templates
Cre	ate template	
ter	nplate1 🖋 🖨	- add element to the template
ter	nplate2 🖋 🕯	×
		- save template
	Cancel	- end template editing
	+ 🖌 🗙	

5.5 General statistics

🖬 🧇 BKT: Overall stats	× +					- 0	
← → C ▲ Nots	cure 192.168.0.101/#!/ove	al				《信 位 ④ ⑧ -	
SBKT							
B Dashboard	Overall stats						
Overall stats	About system		State	of elements	Time		
System tree	Destantant	12110		Demonstrike Manne state	Parise time	227.43.84	
Dry outputs	Ermann werken	5016176		Elements in Warnion state	Local time	2-38-12 PM	
Dry inputs	Web Gill wreine	21/028		Elements in With alson state	Local office	3.36.12 PM	
s SMS messages	Operating under	Windows		Elements in Wish warning state	Right now		
Event log	Browner	Chrome 107	2	Elements in Normal state	0 Exercise in	Alarmatata	
2 Lonic schames	Total operation time	14.095		Elements in Low warning state	0 Events in	Warring state	
Cogeneration	Session time	04.01b.32m		Dements in Low sharm state	0 Events in	Events in Warning state	
Cameras	CBU unice (%)	26.4		Elements in On state	0 Events in	With warning state	
Мар	Memory urans (Mb)	22.00		Elements in Off state	e Events in	News datate	
Users	Total memory (Mb)	118.75	-	Elements in Not connected state	0 Events in	Low warning state	
CAN configuration	Consists	BKT Elektronik © 2022		Concerns in the contractor state	0 Events in	Low show state	
Graphs	Copyright	DET ENREIGHE 0 2022			Contrast of Contra		
Reset smoke detectors	Current log						
1 Preferences	•	Message			2022-11-02 1-05-34 PM		
> System menu	•	State change: Normal / Sys	tem / EC335i	ec335i 2022-114		2022-11-02 1-05-28 PM	



5.6 System tree (system components)

Control (1) Control (1) Control (1) </th <th></th> <th>- 0 X A & Ø @ @ = / 0 + April B / / / / / / / / / / / / /</th> <th>Select <i>System tree</i> from the vertical menu to display all system components. On this page, you can add, remove and modify settings of individual components.</th>		- 0 X A & Ø @ @ = / 0 + April B / / / / / / / / / / / / /	Select <i>System tree</i> from the vertical menu to display all system components. On this page, you can add, remove and modify settings of individual components.
Dry contact Settings Cha Name ID Type User defined type Class Hardware port Current state Current value Behaviour	rts All data	Dry-1 101951 dry no v discrete 1 Normal 0 Normal v	Each element of the system has an individual 6-digit ID number. This number can be used when configuring email or text messages. The first 3 digits indicate the type of element, and the remaining three the consecutive number of element of such type: 101xxx - input for potential-free contacts 201xxx - temperature sensor 202xxx - humidity sensor 203xxx - voltage sensor etc. The item ID number can be read after clicking on the item in the system tree.
Constraints Const			 In order to add a new component, click the '+' button in the horizontal menu. To maintain proper performance of the device, it is recommended to use max 200 components in the system. To maintain the settings after restarting the controller, write them to non-volatile memory.



Group	Add sensor groups
E-Mail	Add email notification content
SNMP SNMP Trap	Add SNMP Trap notifications
SMS SMS	Add SMS (text message) notifications
SMS Web SMS Send SMS via Web Service	- sent by the WEB gateway
SMS SMS Gate Send SMS via other device with GSM Module	- sent by a modem installed in another device
🐫 Dial Task	Add dial notification
HTTP HTTP request	Add REST notification
🔯 Timer	Add schedule
→□→ Trigger	Add triggers (flags)
Ping	Add PING query
GET SNMP Get (analog)	Add SNMP Get query for analogue value
SNMP GET SNMP Get (discrete)	Add SNMP Get query for binary value
RTU read Modbus RTU (reading)	Add Modbus RTU read query (not applicable)
RTU write Modbus RTU (writing)	Add Modbus RTU write query (not applicable)
TCP read Modbus TCP (reading)	Add Modbus TCP read query
TCP write Modbus TCP (writing)	Add Modbus TCP write query
(X) Math sensor	Add mathematical sensor
r IP Camera	Add IP camera
Dew point	Add virtual dew point sensor


5.6.1 Setting the sensor parameters

Name	Onboard Temperature	
D	201001	
Туре	temperature	
Class	analog	
Current state	Normal	
Current value	27.2 ℃	
Low alarm level	0	
Low warning level	5	
High warning level	45	
High alarm level	50	
	—	

Analog sensors are automatically recognized by the controller shortly after they are connected to the appropriate ports and then they are displayed in the system tree. In order for the sensors connected to the CAN bus to be visible in the system tree, the procedure *5.14 CAN configuration (extension module)* must be carried out beforehand.

After clicking on the sensor symbol in the system tree a window will pop up, where you can configure the basic parameters of the sensor.

Field	Description
Name	Name of the element in the system
Low alarm level	Threshold for low value alarm
Low warning level	Threshold for low value warning
High warning level	Threshold for high value warning
High alarm level	Threshold for high value alarm
Hysteresis type	Disabled – hysteresis and delay deactivated. The alarm will be generated immediately after exceeding the threshold value Value – hysteresis is on. The alarm will be generated immediately after exceeding the value = threshold value ± hysteresis value.
	Time – alarm delay is on. The alarm will be generated with a defined delay after exceeding the threshold value. The alarm will not be generated if the measured value falls below the alarm threshold within the specified delay.
Value	The hysteresis value in the unit of a given sensor
Low alarm	Delay time in seconds before low state alarm signalling
Low warning	Delay time in seconds before the low state warning signalling
Normal	Delay time in seconds before the normal state signalling
High warning	Delay time in seconds before the high state warning signalling
High alarm	Delay time in seconds before the high state alarm signalling
Formula type	Select the method of correction of the value read from the sensor. Linear – correction by linear function "y=kx+b" Simple – offset correction with value "b"
K z (k*x + b)	The k value of the function $y = kx + b$ that allows to recalculate the value read from the sensor before comparing it with the threshold values
B z (k*x + b)	The b value of the function $y = kx + b$ that allows to recalculate the value read from the sensor before comparing it with the threshold values



After clicking on the *Charts* tab, the graphs of the measurement values from the last 100 seconds (reading every 1s), 100 minutes (reading every 1 minute), 100 hours (reading every 1h) and 100 days (reading every 1 day) are available.

It is possible to export this data to xml or csv files.



5.6.2 Adding a new group

To add a new element, select	System tree 📴 from the vertical menu,	and then click on 🛨 in the horizontal menu.
Add a new group Settings Elements Modules Notifiers Group name Description of the group Image: Comparison of the group Image: Comparison of the group	Servers	By default, there is one group of devices in the system (system group). Additional groups divide the system into parts. It is then possible to assign individual elements (sensors) to the appropriate groups. You can give the user permission to manage a specific group. It is also possible to set individual email or text messages for individual groups. In the <i>Settings</i> tab, enter the unique name of the created group.
Add a new group Settings Elements Modules Notifiers Onboard Onboard Temperature Onboard Voltage DC Image: Construct of the set of t	Autodetect Analog-3 Analog-3	In the <i>Elements</i> tab, select individual system elements (sensors) that will belong to the given group.
Add a new group	Cancel	In the <i>Modules</i> tab it is possible to add to the group entire modules present in the system tree. It is recommended to add individual elements (sensors) to a group rather than entire modules, as notifications are then more precise. They apply to a single sensor, not the entire module.



Edit the group	X	In the Notifications tab, you can choose how to notify about any alarm conditions of any sensor in a given group.You must configure e-mail, sms or snmp trap notifications to make them visible in this window (see chapter 5.6.3 Adding an email notification and 5.6.5 Adding an SMS notification).Using tickboxes, you can choose in which emergency situations you want to send a notification.Low alarmExceeding the low alarm threshold Low warningLow warningExceeding the low warning threshold	
	High warning	Exceeding the high warning threshold	
		nign aidrin / Aidrin	alarm (for sensors without alarm thresholds)
	OK Apply Delete Cancel	Normal	Normal state of element
		On	Element on (e.g. Power output)
		Off	Element off (e.g. Power output)
		Not connected	Element disconnected from controller

5.6.3 Adding an email notification

To add a new element, select System tree 📴 from the vertical menu, and then click on 📩 in the horizontal menu.				
E-Mail Create copy		The system allows you to configure notifications that will be used to		
Name	my_mail	 Inform about alarm situations. 		
ID	601001	Each notification contains a configuration of the e-mail account and		
Туре	mailer	the content of the message. In order not to have to enter them each		
Class	notifier	time you can get the default mail settings (see chapter 5.17.12 SMTD		
SMTP server	smtp.bkte.pl	time, you can set the default man settings (see chapter 3.17.15 Swiff		
SMTP port	25	settings).		
Enable TLS		In order for the notification to be sent during an alarm, it should be		
Enable STARTTLS		placed in a logic scheme diagram (see chapter 5.10 Logical schemes) or		
Login	alarm@bkte.pl	in a group notification (see chapter 5.6.2 Adding a new group).		
Password	••••••			
Mail from address	alarm@bkte.pl			
Mail to address	user@bkte.pl			
Message subject	EMS notifications	v		
	OK Apply Test Delete Cancel			

Configuration of email notification

een Baration er ennan	
Field	Description
Name	The name of the notification. The system can have many different notifications. It is to facilitate their recognition.
SMTP server	The name or IP number of the SMTP mail server
SMTP port	Communication port of the mail server
Enable TLS	Use an encrypted connection
Enable STARTTLS	Start with an unencrypted connection and negotiate encryption
Login	The username of the e-mail account
Password	The password of the user of the e-mail account
Mail from address	The Email address of user
Mail to address	Email addresses of recipients. Up to 10 addresses to be separated by semicolon ";"
Message subject	Subject of email
Message text	The content of the email. The text of the message is limited to 1024 characters. The content may contain variables that will be inserted dynamically when the notification is activated. Dynamic variables:
	%1 Definition of logic scheme (see chapter 5.10 Logical schemes) or name of the group generating the notification (see chapter 5.6.2 Adding a new group).



%2	The status of system elements that have been entered as a condition of the logic scheme or state of the element in the element group which generated notification.
%3	Date and time of the event
%4	The name of the logical scheme or name of the group generating the notification
%5{id}	Sensor name with id or %8
%6{id}	Sensor status with id or %8
%7{id}	The value read from the sensor with id or %8
%8	The identifier of the sensor that generated the notification
\n	New line character

Examples of the dynamic content of an email notification message

Notification with information about the activated logic diagram, and the state of the system elements that were entered as the conditions of the logic scheme.

The content of the email notification configured	The content of the sent email
Logic activated:\n %4\n	Logic activated: 'Warning state'
System element status:\n %2	System element status: 'Onboard Temperature' (id=201001) in state 'normal' 'EC335t' (id=100) in state 'warning'

Notification with information on the status of selected sensors:

The content of the email notification configured	The content of the sent email
Status of system sensors:\n	Status of system sensors:
%5{201002} - %7{201002} - %6{201002}\n	'Temperature in cabinet 1' - '18,2°C' - 'normal'
%5{201003} - %7{201003} - %6{201003}\n	'Temperature in cabinet 2' - '17,1°C' - 'low warning'
%5{202001} - %7{202001} - %6{202001}\n	'Humidity' - '42%' - 'normal'

By default, a notification similar to the following is proposed in the notification:		
The content of the email notification configured	The content of the sent email	
Logic %4:\n \n Definition:\n %1\n	Logic 'Warning state': Definition: if 'Onboard Temperature' (id=201001) in state 'high warning' or 'EC335t' (id=100) in state 'warning' then 'email-service' (id=601001) changes to state 'on' immediately, once	
Current sensor state:\n %2\n \n System time: %3	Current sensor state: 'EC335t' (id=100) in state 'warning' System time: 12:18:04 2020/11/25	

5.6.4 Adding a trap notification

To add a new element, select System	m tree 📴 from the vertical menu,	and then click on 🕇 in the horizontal menu.
SNMP Trap	×	Trap is an alarm message used in the SNMP protocol. Such a message
Name	NMS trap	can be sent to the master monitoring system.
ID	-	In order for the notification to be sent during an alarm, it should be
Туре	snmp trap	placed in a logic scheme diagram (see chapter 5.10 Logical schemes) or
Class	notifier	in a group patification (see sharter E.G.2 Adding a new group)
SNMP server	10.10.10.18	In a group notification (see thapter 5.6.2 Adding a new group).
SNMP port	162	
SNMP version	1 🗸	
Community	public	
	OK Test Cancel	



Example Trap message

So	urce: 192.168.0.101
Tir	nestamp: 191 hours 30 minutes 1 second
SN	MP Version: 1
En	terprise: .iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification
Со	mmunity: public
Sp	ecific: 201999
Ge	eneric: enterpriseSpecific
Va	riable Bindings:
	Name: .1.3.6.1.4.1.47394.2.2.1.1
	(.iso.org.dod.internet.private.enterprises.bkt.ctlNotifiers.ctlNotifiersTrapsTable.ctlNotifiersTrapsEntry.ctlNotifiersTrapId.602001) Value: [Integer] 602001
	Name: .1.3.6.1.4.1.47394.1.5 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification)
	Value: [OctetString] Trap (name: trap, ID: 602001) was worked. Time: 14:30:00 2019/05/06 Logic: 'grupa-temp', Element: 'Analog-3', in state: 'normal', value: '21.40'
	Name: .1.3.6.1.4.1.47394.1.5.1 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroLogicDefinition) Value: [OctetString] group & apos;grupa-temp& apos; notification
	Name: .1.3.6.1.4.1.47394.1.5.2 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroStateOfSensors) Value: [OctetString] 'Analog-3' (id=201999) in state 'normal'
	Name: .1.3.6.1.4.1.47394.1.5.3 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroDataAndTime) Value: [OctetString] 14:30:00 2019/05/06
	Name: .1.3.6.1.4.1.47394.1.5.4 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroLogicName) Value: [OctetString] group-temp
	Name: .1.3.6.1.4.1.47394.1.5.5 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroSensorName) Value: [OctetString] Analog-3
	Name: .1.3.6.1.4.1.47394.1.5.6 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroSensorState) Value: [OctetString] normal
	Name: .1.3.6.1.4.1.47394.1.5.7 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroSensorValue) Value: [OctetString] 21.40
	Name: .1.3.6.1.4.1.47394.1.5.8 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.macroLastModifiedSens orID) Value: [Integer] 201999
	Name: .1.3.6.1.4.1.47394.1.5.20 (.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.trapID) Value: [Integer] 602001
	Name: .1.3.6.1.4.1.47394.1.5.21(.iso.org.dod.internet.private.enterprises.bkt.ctlUnit.ctlUnitTrapNotification.trapName) Value: [OctetString] trap

5.6.5 Adding an SMS notification

To add a new element, select System tree 🗧 from the vertical menu, and then click on 📩 in the horizontal menu.			
SMS	×	If an optional GSM modem is installed in the controller, it is possible to	
Name ID	sms	send an SMS notification. After installing the modem, configure it, see chapter 5.8 GSM modem settings.	
Type Class Phone number Message text %1 - Junit definition	sms notifier +48123456789 Logic %4, System time: %3	In order for the notification to be sent during an alarm, it should be placed in a logic scheme diagram (see chapter 5.10 Logical schemes) or in a group potification (see chapter 5.6.2 Adding a new group)	
97 - Hogin Cammun 962 - state of sensors 963 - date and time 964 - logic name 965[id] - sensor name (by identifier or %8) 966[id] - sensor state (by identifier or %8) 97(fid] - sensor value (by identifier or %8)	, a	in a group notification (see chapter 5.6.2 Adding a new group).	
%8 - Last modified sensor id Vn - new line	OK Test Cancel		



SMS notifications can also be sent via an SMS web gateway. A GSM modem is not required then. Get configuration data from your

Configuration of SMS notification

Field	Description				
Name	The name of the notification. The system can have many different notifications. It is to facilitate their recognition.				
Phone number	Up to 10 The numb	numbers in one notification, which should be separated by semicolon ";" pers should be in the format + 48xxxxxxxx			
Message text	The contended of the co	ent of the text message. The content may contain variables that will be inserted dynamically when the on is activated. variables:			
	%1	Definition of logic scheme (see chapter 5.10 Logical schemes) or name of the group generating the notification (see chapter 5.6.2 Adding a new group).			
	%2	%2 The status of system elements that have been entered as a condition of the logic scheme or state of the element in the element group which generated notification.			
	%3	%3 Date and time of the event			
	%4	%4 The name of the logical scheme or name of the group generating the notification			
	%5{id}	%5{id} Sensor name with id or %8			
	%6{id}	%6{id} Sensor status with id or %8			
	%7{id}	%7{id} The value read from the sensor with id or %8			
	%8	%8 The identifier of the sensor that generated the notification			
	\n	\n New line character			
	Examples <i>email not</i>	of the use of dynamic variables are similar to those used in email notifications. See chapter 5.6.3 Adding an <i>ification</i> .			

service provider.

5.6.6 Adding WEB SMS notification

To add a new element, select System tree 📴 from the vertical menu, and then click on 🕇 in the horizontal menu.

	websms
D	_
Туре	web sms
Class	notifier
Phone number	+48123456789
Message text	Logic %4, System time: %3
%1 - logic definition	
%2 - state of sensors %3 - date and time	
%4 - logic name	
%5{id} - sensor name (by identifier or %8)	
%6(id) - sensor state (by identifier or %8) %7(id) - sensor value (by identifier or %8)	
%8 - last modified sensor id	
\n - new line	
Web Service settings	
Login	mojekonto
Password	•••••
	http://dostwca.uslugi.websms.com
API string	
API string	
API string	

Configuration of web sms notification

Description			
The name of the notification. The system can have many different notifications. It is to facilitate their recognition.			
Up to 10 numbers in on	e notification, which should be separated by semicolon ";"		
The numbers should be	in the format + 48xxxxxxxx		
See chapter 5.6.5 Addin	g an SMS notification.		
The username of the we	eb-> sms service		
The user password of th	e web-> sms service		
The service provider's url, which sends an SMS message, for example:			
https://api.smsglobal.com/http-api.php?action=sendsms&user=user&password=secret&to=12345678&text=Hello			
The following variables can be used in the url address:			
\$LOGIN\$ User name from the <i>Login</i> field			
\$PASSWORD\$ User's password from the <i>Password</i> field			
\$PASSWORD_MD5\$ User password encrypted with the MD5 algorithm			
\$PASSWORD_SHA1\$ The user's password is encrypted with the SHA-1 algorithm			
\$PHONES\$	\$PHONES\$ The telephone number of the SMS recipient from the Phone number field		
\$MESSAGE\$	Message text from the <i>Message text</i> field		
	The name of the notifica Up to 10 numbers in on The numbers should be See chapter 5.6.5 Addin The username of the we The user password of th The service provider's u https://api.smsglobal.co The following variables \$LOGIN\$ \$PASSWORD\$ \$PASSWORD\$ \$PASSWORD_SHA1\$ \$PHONES\$ \$MESSAGE\$		



5.6.7 Adding sms gate notification

To add a new element, select System	em tree 🗧 from the vertical menu	, and then click on $\stackrel{\bullet}{}$ in the horizontal menu.
Bramka SMS	×	It is also possible to send SMS via a GSM module installed in another
Name	smsgate	controller (SMS Gate option).
ID	_	
Туре	sms gate	
Class	notifier	
Phone number	+48123456789	
Message text	Logic %4, System time: %3	
%1 - logic definition %2 - state of sensors %3 - date and time %4 - logic name %4 - logic name %5(ed) - sensor name (by identifier or %8) %6(ed) - sensor value (by identifier or %8) %6(ed) - sensor value (by identifier or %8) %6(ed) - sensor value (by identifier or %8) %8(e) - sensor value (by identifier or %8)		
External device settings		
Login	SmsUser	
Password	•••••	
IP Address	10.10.10.19	~
	OK Testuj Anuluj	

Configuration of sms gate notification

Field	Description		
Name	The name of the notification. The system can have many different notifications. It is to facilitate their recognition.		
Phone number	Up to 10 numbers in one notification, which should be separated by semicolon ";"		
	The numbers should be in the format + 48xxxxxxxx		
Message text	See chapter 5.6.5 Adding an SMS notification.		
Login	The name of the user who can log in to another EC335t device where a GSM modem is installed. Such user must have read and write permissions for the GSM modem and E-mail, SNMP and SMS notifications. See chapter 5.13 Users.		
Password	The password of this user		
IP Address	The IP address of the EC335t device with the GSM modem installed		

5.6.8 Adding phone call

To add a new element, select System tree 📴 from the vertical menu, and then click on 🕇 in the horizontal menu.				
Dial Task	×	It is also possible to get the user's attention by making a call to him.		
Name	CallAdmin	It is only a ringing tone. The device does not have a voice		
ID	_	communicator, e.g. playing a voice message.		
Туре	dial			
Class	notifier			
Phone number	+48123456789			
	OK Test Cancel			



5.6.9 Adding HTTP notification

To add a new element, select System	m tree 🔋 from the vertical menu,	and then click on 🕇 in the horizontal menu.
HTTP request	×	The controller enables sending an HTTP notification (GET, POST,
Name	http01	DELETE, POT) to a defined server, it can be used to serve e.g. an aratim
ID	-	value of defined sensor. Such feature can be used together with
Туре	http request	logical schemes (5.10 Logical schemes).
Class	notifier	
Server answer	-	
Login	user	
Password	•••••	
Recipient	192.168.0.100	
Message	time:%3\n value:%7{201001}	
	h.	
Request type	POST	
Server	\$RECIPIENT\$/form.php	
Head	Content-Type: application/x-www-form-urlencoded example; charset=utf-8	
Data	user=\$LOGIN\$&pass=\$PASSWORD\$&msg=\$MESSAGE\$	
	OK Test Cancel	

Field		Description		
Name	Element name.			
Login	User nam	User name – to the http query can be entered as: \$LOGIN\$		
Password	User pass	word – to the http query can be entered as: \$PASSWORD\$		
Recipient	Server ad	dress – to the http query can be entered as: \$RECIPIENT\$		
Message	Message	content - to the http query can be entered as: \$MESSAGE\$		
	The mess	age may contain the following characters:		
	%1	Definition of logic scheme (see chapter 5.10 Logical schemes) or name of the group generating the notification (see chapter 5.6.2 Adding a new group).		
	%2	72 The status of system elements that have been entered as a condition of the logic scheme or state of the element in the element group which generated notification.		
	%3	%3 Date and time of the event		
	%4	%4 The name of the logical scheme or name of the group generating the notification		
	%5{id}	%5{id} Sensor name with id or %8		
	%6{id}	%6{id} Sensor status with id or %8		
	%7{id}	%7{id} The value read from the sensor with id or %8		
	%8	%8 The identifier of the sensor that generated the notification		
	\n New line character			
Request type	Type of HTTP request: GET, POST, DELETE, PUT			
Server	Server path – may contain definitions: \$LOGIN\$, \$PASSWORD\$, \$RECIPIENT\$, \$MESSAGE\$			
Head	Header of HTTP request – may contain definitions: \$LOGIN\$, \$PASSWORD\$, \$RECIPIENT\$, \$MESSAGE\$			
Data	Body of HTTP request - may contain definitions: \$LOGIN\$, \$PASSWORD\$, \$RECIPIENT\$, \$MESSAGE\$			
	e.g. https	://\$RECIPIENT/agregate/cgi.php?action=put&user=\$LOGIN&password=\$PASSWORD&message=\$MESSAGE		

In fields Server, Head and Data the following variables can be used:

\$LOGIN\$	User name from the <i>Login</i> field
\$PASSWORD\$	User's password from the Password field
\$PASSWORD_MD5\$	User password encrypted with the MD5 algorithm
\$PASSWORD_SHA1\$	The user's password is encrypted with the SHA-1 algorithm
\$RECIPIENT	Server address from <i>Recipient</i> field
\$MESSAGE\$	Message text from the <i>Message</i> field



5.6.10 Adding a timer

To add a new element, select	System tree 📴 from the vertical menu, a	and then click on 🛨 in the horizontal menu.
Timer	×	Time dependencies can be added to the system. Timers (schedulers)
Name	weekdays	are used for this. The timer can be in an active (alarm) or normal
ID	-	state at defined times. The timer can be comigured as one-time of
Туре	timer	periodical weekly or monthly.
Class	devirt	
Current state	Normal	In logical schemes, they can be used as conditions for the execution
Period of operation	schedule v	of instructions
Schedule	AM PM 12 1 2 3 4 5 6 7 8 9 101112 1 2 3 4 5 6 7 8 9 101112 1 2 3 4 5 6 7 8 9 101112 1 2 3 4 5 6 7 8 9 1011 1 2 3 4 5 6 7 8 9 1011 1 1 2 3 4 5 6 7 8 9 1011 1 1 2 3 4 5 6 7 8 9 1011 1 <t< td=""><td></td></t<>	
	OK Cancel	

5.6.11 Adding a trigger

To add a new element, select System tree 🗧 from the vertical menu, and then click on 🕇 in the horizontal menu.				
Trigger ×		Trigger has a similar function as the flag. It can be in two states: alarm		
Name	alarm_flag	and normal state. It allows you to link two independent logic schemes.		
ID	_			
Туре	trigger			
Class	devirt			
Current state	Normal			
Reversed				
	OK Cancel			

5.6.12 Adding PING functions

To add a new element, select System	em tree 📴 from the vertical menu,	and then click on 🕇 in the horizontal menu.
Ping	×	The controller can control external devices by sending PING
Name	server_ping	periodically. In logic diagrams (see chapter 5.10 Logical schemes) or in
ID	_	notifications for groups (see chapter 5.6.2 Adding a new group), you
Туре	ping	can define e.g. sending an alarm email when the external device stops
Class	devirt	
Current state	Normal	responding to PING.
Current value	0 ms	
Server to ping	10.10.10.10	
Ping period (sec.)	60	
Estimated round-trip (sec.)	1	
IP address	_	
Packets sent	0	
Packets received	0	
	OK Cancel	



5.6.13 Adding an SNMP Get

To add a new element, select System	em tree 🗧 from the vertical menu, a	and then click on 📩 in the horizont	al menu.	
SNMP Get Settings Additional Charts All data Name ID Type User defined type Units of measurement Class Current state Current state Current value Minimum value Value for Low alarm' Value for Low warning'	× pressure pressure hPa analog Normal 0 300 1150 900 950	The controller can query the extent the SNMP v1 or v2 protocol. The from the defined one can generate There are two types of read variable Analogue value – the read integer of After being recalculated with the fo field, it is comparable to the four all the normal or alarm condition of the determined. Discrete (binary) – this variable can alarm. The current state is defined to	nal device for its parameters using values of this parameter deviating notifications. es – analogue and discrete: or String type numerical variable. rmula contained in the <i>Expression</i> arm thresholds and on this basis e SNMP Get element is exist only in two states: normal or using <i>Normal value</i> field entered on	
Value for 'High warning'	1050	Additional tab. The read Integer or String variable is compared to the		
Value for 'High alarm'	1100	string contained in the Normal value	e field. Then the SNMP Get element	
×	• • • • • • • • • • • • • • • • • • •	status is set.		
Hysteresis type Value	value 🗸	SNMP Get Create copy	×	
Expression (f(x), for instance: 2*x+123)	x	Settings Additional Charts All data		
operators +, -, *, /, %, ∧ functions alord, surt(exp(), In(), Iog(), sin(), cos(), tan(), asin(), acos(), atan() constants pi, e	OK Cancel	Status SNMP server SNMP port SNMP version Community Polling period (sec.) OID identifier	state error 192.168.0.102 161 2c public 20 seconds .1.3.6.1.4.1.47394.6.1.1.6.3.0	

Field	Description
Name	SNMP Get element name.
User defined type	Sets adequate icon for this element.
Unit	Unit of read variable.
Minimum value	Defines the range of changes of the read value.
Maximum value	Defines the range of changes of the read value.
Value for low alarm	Threshold for low value alarm.
Value for low warning	Threshold for low value warning.
Value for high warning	Threshold for high value warning.
Value for high alarm	Threshold for high value alarm.
Hysteresis type	Please see 5.6.1 Setting the sensor parameters
Expression f(x)	 Field available for the Analog variable type. The function enables the conversion of the read analogue value "x" before comparison with the alarm thresholds. The expression can contain the following characters: operators: "+", "-", "*", "/", "%" (the remainder), "^" (exponentiation); functions: "abs()", "sqrt()", "exp()", "ln()", "log()", "sin()", "cos()", "tan()", "asin()", "acos()", "atan()"; constants: "pi" (3.1415926), "e" (2.7182818)
Normal value	Field available for a discrete variable. In this field, enter the string that the read variable must contain in order for the SNMP Get element to be in the normal state.
SNMP Server	The IP address of the device being polled.
SNMP Port	Communication port of the device being polled (usually 161).
SNMP version	Version 1 or 2c can be chosen.
Community	SNMP password to read (read-only community string).
Polling period (sec.)	The frequency of sending queries to the device being polled (in seconds).
OID identifier	The identifier of the SNMP variable in the format ".1.3.6.1.2.1.1.3.0".



5.6.14 Adding Modbus TCP element

To add a new element, select System	em tree 🔋 from the vertical menu	, and then click on 📩 in the horizon	al menu.
Modbus TCP	×	The controller can query the extension the Modbus TCP protocol. It	ernal device about its parameters
Settings Additional Charts All data		the appropriate modbus register.	
Name	pressure		
ID	_		
Туре	modbus tcp		
User defined type	pressure 🗸	Modbus TCP (reading)	×
Units of measurement	hPa		
Class	analog	Settings Additional Charts All data	
Current state	Normal	IP address	192.168.0.15
Current value	0	Port	502
Minimum value	300	Slave address	1
Maximum value	1150	Register index (hexadecimal)	FF
Value for 'Low alarm'	900	Function code	Read Input Register (0x04)
Value for 'Low warning'	950	Data type	32 bits IEEE 754 floating point
Value for 'High warning'	1050	Data ordering	high byte first, high word first \checkmark
Value for 'High alarm'	1100	Polling period	30 seconds 🗸
*		Wake-On-LAN function	
	115	0	Test
Hysteresis type	value 🗸	Modbus raw answer	
Value	1	Modbus value	
Expression (f(x), for instance: 2*x+123)	x		
operators +, -, *,/, %, ^ functions abs(), sqrt(), exp(), ln(), log(), sin(), cos(), tan(), asin(), acos(), atan() constants pi, e			OK Cancel
	OK Cancel		

Field	Description
Name	Element name.
User defined type	Sets adequate icon for this element.
Unit	Unit of read variable.
Minimum value	Defines the range of changes of the read value.
Maximum value	Defines the range of changes of the read value.
Value for low alarm	Threshold for low value alarm.
Value for low warning	Threshold for low value warning.
Value for high warning	Threshold for high value warning.
Value for high alarm	Threshold for high value alarm.
Hysteresis type	Please see 5.6.1 Setting the sensor parameters
Expression f(x)	Field available for the Analog variable type. The function enables the conversion of the read analogue value "x" before comparison with the alarm thresholds. The expression can contain the following characters: operators: "+", "-", "*", "/", "%" (the remainder), "^" (exponentiation); functions: "abs()", "sqrt()", "exp()", "ln()", "log()", "sin()", "cos()", "tan()", "asin()", "acos()", "atan()"; constants: "pi" (3.1415926), "e" (2.7182818)
IP address	The IP address of the device being polled.
Port modbus	Communication port of the device being polled (usually 502).
Slave address	Modbus device slave address
Register index	Address of polled modbus register.
Function code	Modbus function code. Available: 0x01, 0x02, 0x03, 0x04 for reading and 0x05, 0x06 for writing
Data type	Type of the date being polled. Available: unsigned and signed 16 bit and 32 bit word, 32 bit float value.
Data order	The order of reading bytes from the register.
Polling period (sec.)	The frequency of sending queries to the device being polled (in seconds).



5.6.15 Adding virtual mathematical element

To add a new element, select	System tree 📴 from the vertical mer	u, and then click on $+$ in the horizontal menu.	
Math sensor Settings Additional Charts All data		The controller enables monitoring of a virtual variable created fro the conversion of the values of other variables monitored in the system. In this way, you can, for example, monitor the apparent pow	m าe er
Name ID Type User defined type	Apparent power math power	consumed by a device, with the following variables available: current consumption and voltage.	nt
Units of measurement Class Current state Current value	VA analog Not connected 0 VA	Math sensor Create copy Settings Additional Charts All data	×
Minimum value Maximum value Low alarm level	0 3800 0	Expression (flx), for instance: 2*x+123) A*B operators +, - 1, *, %, ^ functions ab(1, sprt), exp), leq), leq), leq), cou), tan(), acco(), stan() constants pi, e	
Low warning level High warning level High alarm level	0 2500 3000	Polling period 30 seconds · · · · · · · · · · · · · · · · · · ·	*
0	• • • • • • • • • • • • • • • • • • • •	A Voltage 1 Image: Current 1 B Current 1 Image: Current 1	
Hysteresis type Value	value 1		
	OK Cancel	OK Apply Delete Cancel	

Field	Description
Name	Element name.
User defined type	Sets adequate icon for this element.
Unit	Unit of read variable.
Minimum value	Defines the range of changes of the read value.
Maximum value	Defines the range of changes of the read value.
Value for low alarm	Threshold for low value alarm.
Value for low warning	Threshold for low value warning.
Value for high warning	Threshold for high value warning.
Value for high alarm	Threshold for high value alarm.
Hysteresis type	Please see 5.6.1 Setting the sensor parameters
Expression f(x)	Field available for the Analog variable type. The function enables the conversion of the read analogue value
	"x" before comparison with the alarm thresholds.
	The expression can contain the following characters:
	operators: "+", "-", "*", "/", "%" (the remainder), "^" (exponentiation);
	functions: "abs()","sqrt()","exp()","ln()","log()","sin()","cos()","tan()","asin()","acos()","atan()";
	constants: "pi" (3.1415926), "e" (2.7182818)



5.6.16 Adding a camera

To add a new element, select	t System tree 📴 from the vertical menu	u, and then click on $+$ in the horizontal menu.
IP Cam	×	The camera's handling function is treated as a gadget and is not
Name	Cam1	recommended for larger installations because it can affect system
ID Time		performance. In very small installations this gauget may be desirable.
Class	devhwr	The controller automatically recognizes a UVC (USB Video Class) camera
URL (IP address)	http://localhost:9098/axis-cgi/mjpg/video.cgi?camera=&resolution=	connected to a USP part that supports MDEC compression. It is
Username	admin	connected to a USB port that supports MPEG compression. It is
Password	1234	recommended to use Logitech type C210, C270, C310, C510 cameras.
Recommended FPS	strumień MJPEG 🗸 🗸	The controller also allows you to configure IP cameras transmitting IPEG
Preview		images or an MJPEG stream. The controller can handle up to 4 cameras.
		The preview of the image from the cameras is available after selecting
	Refresh	the Cameras (1) button from the vertical menu.
	OK Cancel	

Field	Description
Name	Camera name.
URL	The address for the video stream of the camera available via the http or https protocol.
Username	Username, if necessary.
Password	User password.
Recommended FPS	The frame rate refresh of the JPEG image or the direct MJPEG stream.

5.6.17 Adding a dew point

To add a new element, select	System tree 📔 from the vertical menu,	and then click on 📫 in the horizontal menu.
systree.analog.caption_dewpoint	ж	It is possible to add a virtual dew point sensor that calculates the
Settings Charts All data		condensing temperature based on temperature and humidity sensors
Name	Server room dew point	selected connected to the system.
ID	_	
Туре	dewpoint	
Class	analog	
Current state	Not connected	
Current value	0 °C	
Temperature sensor	Analog-4 🗸	
Humidity sensor	Analog-2 🗸	
Low alarm level	0	
Low warning level	5	
High warning level	25	
High alarm level	30	
0		
Hysteresis type	value	
Value	0.30	
	OK Cancel	

Field	Description
Name	Element name.
Temperature sensor	Selected temperature sensor.
Humidity sensor	Selected humidity sensor.
Low alarm level	Threshold for low value alarm.
Low warning level	Threshold for low value warning.
High warning level	Threshold for high value warning
High alarm level	Threshold for high value alarm.
Hysteresis type	Please see 5.6.1 Setting the sensor parameters



5.7 Dry contacts (binary inputs for potential-free contacts)

•)→	BKT: Wejścia biname X	+ 2.168.1.251/#!/drycon		🗑 🔂 🔍 Search		± II\ Œ	- 0 1 © 11
	•				¥ 0	+ A.g.	est 🖯
8	Dry inputs						
b l	Stan wejść binarnych			Dry Contacts			
à	4	11 0	× •		🖌 🟹 4	✓ 11 0	√ 🔀 0
à				Dry-1			Normalny
6				Dry-2			Normalny
				Dry-3			Normalny
2				Dry-4			Normain
Ð							
>							
L							
<u>}-</u>							
,							
	and the second second						

Select *Dry contacts* from the vertical menu to view the state of binary inputs for potential-free contacts.

5.8 GSM modem settings

	7 G W 0 🙆 192.16	6.1.251/#I/SMS					¥	II/ []]	e 1
	=						7 C	A guest	8
3	SMS messages								
•	SMS settings			List of SMS messa	iges				
1	Status	no connection		Date and time	To number	Message		State	
•	Operator Signal level	unknown no signal			Currently	here are no data to display			
	PIN code	1234							
	SMS center number	501100100							
	List of allowed phone numbers								
'									
۰			a.						
	Request current balance	USSD command	ĸ						
1	Clear SMS list	ОК							
1		Zapisz Ustawienia domyśli							
i									
	Ostatoja aktualizacia: 12:250	5 PM / Nasterona aktualizacia: 12:35:35 PM					Comei	obe BET Elsk	mails 0

The modem allows sending text messages by the device and receive SMS commands sent from authorized phone numbers.

The configuration of the GSM/SMS modem can be done by selecting *SMS Messages* from the vertical menu. This button is visible only when the modem is installed in the controller and the correct SIM card PIN has been entered.

There was a problem observed with SIM cards from some GSM providers that were protected with a PIN code. In this case, it is suggested to remove the PIN code from the SIM card before inserting it in the controller.

Field		Description							
PIN code	The PIN code must be entered before	ore inserting the SIM card.							
SMS center number	GSM provider number of short me country prefix.	VI provider number of short message system center. Usually in format +48xxxxxxxx or without the untry prefix.							
List of allowed phone numbers	one numbers List of telephone numbers from which you can send commands to the controller. The list can contain maximum of 10 phone numbers separated by a semicolon ";". The numbers should have format +48xxxxxxxx Available commands:								
	Command	Example	Response						
	Sensor status reading								
	get 'sensor ID' get 'sensor-name'	get 201001 get Onboard-Temperature	Onboard-Temperature[201001] state=normal value=23.5						
	Switching on the Power-1 output								
	set 'sensor ID' on set 'sensor-name' on	set 304001 on set 'Power-1' on	The element was switched on						
	Switching off the Power-1 output	t							
	set 'sensor ID' off	set 304001 off	The element was switched off						
	set 'sensor-name' off	set 'sensor-name' off set 'Power-1' off							
Request current balance (USSD code)	In the case of prepaid phones, you	In the case of prepaid phones, you can enter the balance inquiry code here or any other USSD code.							
Clear SMS list	Clears the list of sent text message	Clears the list of sent text messages.							



BKT: SMS messages	× +						- 0 ×	The device also allows you to send any SMS to any recipient directly
← → C ▲ Not se	cure 192.168	0.101/#i/sms				PRI	6 4 6 8	The device also allows you to send any only to any realplane allowly
SBKT							O Alguest E (#	from the web interface.
BB Dashboard	SMS me	essages						The function is socilable of the slipbing on the (a) but the
Overall stats	SMS sett	ings		List of SMS messi	ages		+	The function is available after clicking on the '+' button.
Tes System tree	Status		registered, home network, 4G LTE	Date and time	To number	Message	State	
Dry outputs	Operator		mode Virgis mobile		Currently there are	no data to display		
Dry inputs	Signal level		74%					
ses SMS messages	IMEI		861123059974970					
🔠 Eventlog	SMS center n	Cand OMC				× .		
Ø Logic schemes	List of allowe	Send SMS						
Cameras		To number		+48123456789				
• Мар		Message		This is a test message.				
LUSers								
G+ CAN configuration	Request curr							
di Graptis	Clear SMS list							
A Reset smoke detectors					ox	Canod		
111 Preferences								
System menu								
	Last update:	12:13:37 PM / Next update	: 12:13:52 PM				Copyright: BKT Elektronik © 2022	

5.9 Event log

	secure 192.168.0.101/#010g		
BKT	=	7 С 0 Вдие	1 E
Dashboard	Event log		
Overall stats	Event / Date and time	Event description	
g System tree	O 2017-01-01 2-06-33 AM	Massaga Settings of element (id=215001) has been changed by 'gant (id=1)'	
Dry outputs	O 2017-01-01 2-06-29 AM	Massaga Settings of element (id=211001) has been changed by 'gant (id=1)'	
Dry inputs	O 2017-01-01 2-06-04 AM	Massaga Settings of element (id=200901) has been changed by 'ganti (id=1)'	
Eventiog	O 2017-01-01 2-06-04 AM	Rename: Current 1 / Element / Voltage 2 Voltage 2 + Current 1	
Logic schemes	2017-01-01 2-05-45 AM	State charge: Normal / Element / Apparent power Not connected -Normal	
Cameras	2017-01-01 1-29-53 AM	State change: Normal / Module / SNMPGET sensors Not convected ~Normal	
Map	O 2017-01-01 12-42-20 AM	Matssaga Settings of element (id=200999) has been changed by 'guest (id=17	
Users CAN configuration	2017-01-01 12-42-17 AM	Message Settings of element fid=200999 has been changed by 'guest/id=17	
Graphs	2017-01-01 12-42-17 AM	State charge: Normal / System / EC335i Warning - Normal	
Reset smoke detectors	2017-01-01 12-42-17 AM	State change: Normal / Module / Onboard Warning - Normal	
Preferences	2017-01-01 12-42-17 AM	State charge: Normal / Element / Voltage 1 High working - Normal	
System menu	2017-01-01 12-39-05 AM	Message	

After selecting the Event Log from the vertical menu, logs of all system events are displayed. See also the chapter *5.17.5 Saving of events and measured values on a USB disk.*

The export of events to the file is possible after selecting

5.10 Logical schemes

💼 🤝 BKT: Logic schemes	× +									-	0	×
← → C ▲ Not 9	ecure 192.168.0.101/4	Pl/Togic						P	A 16	¢ @	8	
BKT									r a +	å guest		
BB Dashboard	Logic schem	nes										
BB Overall stats	Enabling logic scher	Tues				05						
E System tree	Disabiling logic sche	mes				1 hour	-	✓ ОК				
🚔 Dry outputs								_				
🚔 Dry inputs					c		Perdan		-			
sws SMS messages	Add new	logic scheme							×			
III Eventing	Scheme nar	~				system alarm						
<i>∂</i> Logic schemes	Disable schu	ome				10			v			
Cameras	Action	Element		State		(ineout (hhmmiss)	Repeat/Duration	Operator				
• Мар	1.1	SYSTEM	*	atarm	~	not used	not used	THEN	*			
L Users	THEN	Power-2	v	on	~	none	once	END	*			
- CAN configuration									Court			
Graphs												
Reset smoke detectors												
111 Preferences												
System menu												
· ·	Last update: 12:17:1	9 PM / Next update: 12:17:3	4 PM						Copyrie	pht: BKT Eloka	onik O 2	022

Creating links between system elements (sensors, inputs, outputs, etc.) is possible after selecting the *Logic Schemes* from the vertical menu. To add a new logical dependence, click on the "+" button in the horizontal menu. The IF THEN conditional sentence is used, as well as the logical functions AND and OR. The Timeout function means a delay in the execution of instructions. The Repeat function allows you to repeat the execution of an instruction after a defined time if the logic diagram still remains active. This can be, for example, for resending an email with information about the alarm.

In order for the settings to be kept after restarting the controller, they should be saved to non-volatile memory.



Attac State Nonething Nonething <t< th=""><th></th><th></th><th>Edit logic</th><th>scheme</th><th></th><th></th><th></th><th></th><th></th></t<>			Edit logic	scheme						
Addition Learning Addition Learning Mark Mark Mark Mark Addition Teachy deal at an annual and smis notifications when a warming state occurs in the system. Addition Control Mark <td< th=""><th>thoma name</th><th></th><th></th><th>CYCTEM ALA</th><th></th><th></th><th></th><th></th><th></th></td<>	thoma name			CYCTEM ALA						
Name	sable scheme				KIM				Γ	
Nome									L	
Note Used Down	Action	Element	State		Timeout		Repeat	C	perator	
Note Image defaultion I	1F	SYSTEM	✓ alarm	×				THEN		
Image details mer	THEN	IT-mail-global-state	send mail	✓ none		once		AND	Image: A state of the state	
Image:	THEN	IT-sms-global-state	send SMS	▼ none		once		END		
a sexuple of a logic scheme that sends an email and sms notifications when a warning state occurs in the system. a beam in the system in the system is an email and sms notifications when a warning state occurs in the system. a beam in the system is an email and sms notification when the sensors are disconnected from the controller. a beam in the system is an email and sms notification when the sensors are disconnected from the controller. a beam in the system is an email and sms notification when the sensors are disconnected from the controller. a beam in the system is a sense in the system is a sensor in the sensor is a set is a sensor in the sensor is a set in the set is a set in the set is a set in the sensor is a set in the set is a set in the sensor is a set in the sensor is a set in the set in the sensor is a set in the set in the in the sensor is a set in			ΟΚ Αρρίγ	Delete Canc	el					
Attem SYSTEM_WONDE Image: Control of the sense o	n example	of a logic scheme that sends ar	email and sms notifications Edit logics	s when a warn	ing state o	ccurs in the	e system.			
Note: Image:	cheme name			SYSTEM WAR	NING					
Atom State Tencot Report Operation # 1000 units units units units Units Tenco 1000 units units units units Tenco Tenco Tenco 1000 units units units units Tenco T	Isable scheme			no					Ŀ	
Name		Plana ant	S haha		-		D t			
IPAN If madgigidad data If windigidad data	Action	Element	State		Timeout		Repeat not used		perator	
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# Module 1225-112* • on consented • on consented • on consented on consented on consented on consented OR O	IF	Module: 'EE325-1106'	✓ not connected	~	not used		not used	OR	~	
# Medde 1125 113' in not connected in out connected in out connected ADD THEN If rems global state is rend mail in once ADD INEN If rems global state is rend mail in once in once IEDD INEN If rems global state is rend mail in once in once IEDD INEN If rems global state is rend mail in once in once IEDD INEN If rems global state is rend mail is re	IF	Module: 'EE325-1127'	v not connected		not used		not used	OR		
Itemal global-state is sed mail image of the set	IF	Module: 'FE325-1135'	not connected		not used		not used	OR		
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	5{107001} 55{201006} 55{201023}	-%0{10/001}\N -%7{201006}°C-%6{201006}\n -%7{201023}°C-%6{201023}\n _%7/202000}% %6/202000}\n		Cab_GPD_te	sea floor'-'ne mp_dn'-'23.0 mp_up'-'24.5 umi'-'27.00'*	ormal 06'°C-'norma 50'°C-'norma 6 'normal'	al' al'			



5.11 Cameras



Select *Cameras* from the vertical menu to view the image captured from installed cameras. Select *System tree* to configure the cameras. See chapter *5.6.16 Adding a camera*.

5.12 Map



The system provides a function of displaying the state of sensors against the building layout. Select *Map* from the vertical menu. Click *Settings* in the horizontal menu to configure this page. To maintain the settings after restarting the controller, write them to non-volatile memory.

5.13 Users

EKT: Uses C A Not secure Dathboard Use	x + 192.188.010(#)umm Sers	- 0 × 2 × 2 0 @ \$ - 7 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +	Select <i>Users</i> from the vertical menu to manage system users create new users, remove users and grant rights.
Nouid dati Synina tea dati Dy hyangan dati Dy hyangan dati Shana dati Dy hyangan dati Dy hyangan dati Shana da	gent soft d software Mathematical Mathem	yosh di genta genta	Click the '+' button in the horizontal menu to add a new user
estem menu	at update: 12:24:39 PM / Next update: 12:24:54 PM	Copyright: BKT Elektronik © 2022	





Interface Groups User login user01 Password ••••••• Password (once more) ••••••• E-Mail user01@btkte.pl Phone +48123456789	
OK Canzel	
Add a new user Setting Interface Setting Interface Mila Cess Oruge file Interface Mila Cess Interface Interface Interface Coupe Interface Interface Interface Interface appearance	On the second tab give the user permission to read and/or write to individual parts of the system.
Add a new user Settings Interface Groups Reading rights Writing rights all groups Servers servers	The last tab allows you to grant read and/or write permissions to individual groups of elements defined in chapter 5.6.2 Adding a new group. To maintain the settings after restarting the controller, write them to non-volatile memory.



5.14 CAN configuration (extension module)

Devices extending the number of analogue ports - EE321t , binary input ports for potential-free contacts - EE322 and ES340 sensors can be connected to the controller.





5.15 Graphs



Reset smoke detectors 5.16

\leftarrow BKT. Reset smoke detectors \leftarrow \rightarrow C^{a} \textcircled{O}	x +	¥ IN © ⊕ # ≡	Once triggered (smoke detection), the sensors require a manual
BKT	=	2′ Ω 13 ≜guest Β Θ	restart. This can be done through the controller web interface.
응 Overaltats S System tree S	Reset smoke detectors © ESM0-1521 each 153 made burney		Select <i>Reset smoke detectors</i> from the vertical menu. Resetting involves disconnecting the power supply from the sensors for a seconds. All analogue sensors connected to the device where smoke is will be disconnected from the power supply for a moment.
System menu	Last update: 11:57:15 AM / Next update: 11:57:45 AM	Copyright: BKT Elektronik © 2020	

5.17 Preferences (system settings)

Web interface settings 5.17.1

C C Ministeres	× +	- 0 X	Select Preferences \rightarrow Web GUI from the vertical menu.
GBKT		irin ing proteinge Iringenet ⊗ in-	Set the following web interface parameters:
원 Dashboard Overall stats System tree Dry outputs Dry Inputs SMS messages	Proferences Web Coll Network UII Time Logging DpicRis SMMP MCKUS Interface longuage Time consention	PP Jackey VPKClerit ModualTU (PA 5007 Bacing Depth v U v Usacosh v Stacosh	 Language time format 12h/24h automatic refresh rate
Eventlog Cogic schemes Cameras	Sour page	Convoltans v Characteristic of the second	temperature unit (Celsius or Fahrenheit degrees)default start page
CAN configuration			 activate an acoustic signal via the website when the alar are active
Reset smoke detectors Preferences System menu		Copyright SRT Distouris & 2022	



5.17.2 Network settings

Dashboard	Preferences					
Overall stats	Web GUI Network LTE Time Logging DynDNS SNMP RADRUS FTP Backup VPN Client Modbus RTU	GPS	SMT	p	Routing	
System tree						
Dry outputs	MAC address 4Ac3P-68-48/96-9F					
Dry inputs	Hostname hostname					
+s SMS messages	Enable DHCP					
Eventilog	IP address 192.168.0.101					
2 Lonic schames	Network mask 255.255.255.0					
B. Comuni	Gateway 192.168.0.1					
5 (1111)	Primary DNS 192.168.0.1					
Мар	Second DNS					
Users	Third DNS					
CAN configuration	HTTP port 80					
Graphs	Enable HTTPS					
Reset smoke detectors	Enable CNN					
Preferences						
System menu					_	and.

Select *Preferences* \rightarrow *Network* from the vertical menu.

- IP address, subnetwork mask, broadcast, gate, DNS to enter static network settings.
- HTTP port it determines an access port to the device via a browser (default: 80).
- Enable HTTPS activate encrypted connection via a browser.
- Enable DHCP activate automatic import of network settings from a DHCP server.
- Enable CAN this function must be checked if extension modules are to be used in the system.

Saving the settings will restart the controller. Wait until the ACT LED starts flashing on the controller front panel. Only then the controller will be available under the new IP address.

5.17.3 LTE modem settings

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Prefer

E 0.00

L Users

C A

If an LTE modem is installed in the device, it enables connection to the Internet. The LTE connection can serve as a failover to Ethernet or as a primary connection. For a remote connection to the EC335t controller via LTE connection, a global static IP address from the GSM provider is required.

From the vertical menu, select Properties-> LTE. The menu is only available when the modem is installed.

Field	Description
Enable LTE modem	Enables LTE connection
Connect at startup	It activates the LTE connection right after starting the controller. If checked, then LTE connection will be used as primary for all network services. If unchecked, the connection will only be activated after the Ethernet connection is lost. The Ethernet connection is tested by pinging the DNS server (see chapter 5.17.2 Network Settings). If any of the DNS servers respond to the ping, the controller considers the Ethernet connection to be active. For this reason, all DNS servers should be in the external network.
APN	Access point name – GSM provider name
PIN	Personal identification number if required by provider
Authorization type	Authorization type defined by GSM provider.
User name	User name if required by provider
Password	Password if required by provider
Enable routing for internal network	Enables Internet access for devices in the internal network. The controller does not automatically provide IP addresses for such a network, so the network settings of the devices must be entered manually.
Enable Watchdog	Enables checking the LTE connection. If checked, the modem sends a ping to the server defined in "IP Address or hostname of ping destination" with the frequency specified in "Watchdog period". If the modem does not receive a response within the time specified in the "Watchdog timeout", it recognizes the LTE connection as broken and will attempt to re-establish the LTE connection.
Watchdog period	The frequency of checking the connection to the server.
Watchdog timeout	Time for a reply from the server.
IP Address or hostname of ping destination	The IP address of the server used to test the LTE connection.
Enable logging	Enable logging of LTE connection status. Use this feature only for debugging when setting up a connection. During normal operation, logging should be turned off.
Save log to disk	Button to download LTE logs.

6 6 6 8



5.17.4 Time settings

🖬 🤝 BIC: Preferences	x + - 0	þ
← → C ▲ Not so	cure 192.168.0.101/#/prefs A 🙆 🏚 🖗	9 -
SBKT	E 7 Åguet	8
Dashboard	Preferences	
DO Overall stats	Web GUT Network LTE Time Logging DynDNS SNMP RADIUS FTP Backup VPN Client Modbus RTU GPS SMTP Routing	
System tree		
Dry outputs	Current device date and time 2017-01-01 3-20-12 AM	
Dry inputs	Davida Himanona III/I 4/0/00 Western Successo Time United Kinodom Jakard Rostumi Modeire	~
m SMS messages	Darlacht savins time	
Event log	Start March v, Schlast v Sunday v / 01:00 v	
Ø Logic schemes	End October V Sthlast V Sunday V / 02:00 V	
D Cameras	Presets by countries United Kingdom	v
Мар	Automatically synchronize time once a day	~
Users	Primary NTP server for time synchronization time windows.com	
CAN configuration	Secondary NTP server for time synchronization	
Graphs		· · · ·
Reset smoke detectors	Save NP	sync
1 Preferences		
System menu		
,	Copyright: BKT Elektroni	k o 203

It is possible to set the device clock time manually and to set cyclical synchronisation with NTP servers. Select *Preferences* \rightarrow *Time* from the vertical menu.

5.17.5 Saving of events and measured values on a USB disk or SD card

BCT: Preferences	× +	- 0 ×	In the vertical menu select: Preferences->Loaging->USB Flash Drive
← → C ▲ Not so	ecure 192.168.0.101/#/jprefs	A G D B 🖉	
	•	🗡 🛓 guest 🖄 🕪	Values read from the sensors and system logs can be saved to files
BB Dashboard	Preferences		on a LISB disk or SD card previously formatted to the EAT32 system
BB Overall stats	Web GUI Network LTE Time Logging DynDNS SNMP RADIUS	FTP Backup VPN Client Modbus RTU GPS SMTP Routing	on a osb disk of 5D card previously formatted to the FAT52 system.
"Eg System tree	SD Card USB Flash Drive HDD FTP Log Mail Log Seriog Sensors		After installing the USB drive or SD card you will be able to view its
m Dry outputs	to the contractions into the toy manage group prose		
Dry inputs	Current state Full size	normal 3812 MB	contents directly from the device's web interface after clicking on
sas SMS messages	Free size	3798 MB	Open Contents of the USP Elash Drive
Event log	Enable logging to USB Flash Drive	~	Open contents of the OSB Hush Drive.
& Logic schemes	Save video files		
Cameras	Enable detailed logging		
• Мар	Contents of the USB Bash Drive	United years	
L Users			
CAN configuration		Save Refresh Eject	
Graphs			
Reset smoke detectors			
222 Preferences			
System menu		Consider BT Debrook & 200	
		Copyright: BKT Elektronik © 2022	
			To save the values read from the sensors on the USB disk, on the
BCT: Preferences	× +	- 0 X	Preferences Nagging Sensors tab solast required concers and
← → C ▲ Not so	ecure 192.168.0.101/#//prefs	· · · · · · · · · · · · · · · · · · ·	Fregerences-Logging-Sensors (ab, select required sensors and
		Z ≜guest 🗈 💌	specify the measurement interval. The device can record measured
BB Dashboard	Preferences		· · ·
BB Overall stats	Web GL8 Network LTE Time Logging DynDNS SNMP RADIUS	FTP Backup VPN Client Modbus RTU GPS SMTP Bouting	values from up to 30 sensors.
E System tree			
🚔 Dry outputs	SD Card USB Flash Drive HDD FTP Log Mail Log Syslog Sensors		
a Dry inputs	Sensors	♥ Dry-1	
sws SMS messages		Dry-3	
III Eventing		Unyon Onboard Temperature Current 1	
€ Logic schemes		Voltage 1 Apparent power	
Cameras		pressure	
• Мар	Sampling rate	5 seconds V	
🌲 Users		Save Refresh	
CAN configuration			
di Graphs			
Reset smoke detectors			
and Preferences			
System menu			
		Copyright: BKT Elektronik © 2022	
	$ \widehat{\ \ } \ \ box{ box of /usbflash/EC335i-192.168.} $	- • × • • • • • • • • • 0.101/sensors/101951/	The values read from the sensors are saved on the USB drive in csv files.
			Direct access path to data on the SD card:
	2022.10.15_10-48-34.101951.csv 08-30.1201921.csv 08-30.10013	4 59931	http://{login}:{pass}@192.168.0.101/sdcard/
			Direct access path to data on the USB drive:
			http://[login]/[noon]@102.100.0.101/
	A B C D E	F G H I J	http://{login}:{pass}@192.168.0.101/usbriash/
	2 Device type: "EC3351"	• • • • • • • • • • • • • • • • • • •	
	4 Kernel: **		
	6 IP: "192.168.0.101"		
	Sensor name: "Onboard Temperature"		
	9 Date and Time UTS Value 10 Tue Oct 18 10:46:55 2022 1666090015 25.000		
	11 Tue Oct 18 10:46:56 2022 1666090016 25.000 12 Tue Oct 18 10:46:57 2022 1666090017 25.000		
	13 Tue Oct 18 10:46:58 2022 1666090018 25.000 14 Tue Oct 18 10:46:59 2022 1666090019 25.000		
	15 Tue Oct 18 10:47:00 2022 1664090020 25.000 16 Tue Oct 18 10:47:01 2022 1666090021 25.000		
	17 Tue Oct 18 10:47:02 2022 1666090022 25:000 18 Tue Oct 18 10:47:03 2022 1666090023 25:000		
	19 Tue Oct 18 10:47:04 2022 1866090024 25:000 20 Tue Oct 18 10:47:05 2022 1666090025 25:000		
	The second		



5.17.6 Sending logs and sensor values to FTP, MAIL

C BC Indexnos ← → C ▲ Not se	x + set 192.1660.101/#/prets	X 0 - - ይወቁ ል	The device enables the transmission of system events and
BKT	=	🗡 🏛 guest 🖄 🤤	measurement values to an FTP server and via e-mail. Install an SD
20 Octobered 20 Octobered 20 Optimum Tree 20 Marge 20 Optimum Tree 20 Optimum Tree 20 Optimum Tree 20 Optimum Tree 20 Optimum Tree	Preferences	FIF Balag VHOure Madu IIV 0'S M/P Ruing • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • •	card or USB flash drive in advance. Data is sent to the FTP server once a day at 00:00. The e-mail message with the data in the attachment is sent once a day at the selected time. <i>Preferences->Logging-> FTP Log</i> <i>Preferences->Logging-> Mail Log</i>
System menu		Conscipte BIT Distancia e 2022	
		Сарунуна, ина саявления о 2022	

5.17.7 Saving logs to SYSLOG



The device also allows transfer only system events to the SYSLOG server. Select *Preferences->Logging-> Syslog*

5.17.8 DynDNS settings

C D BICT: Preferences	x +	P 4	- 0 ×
SBKT	E	21 - 194 	7 🛦 guest 🗈 💌
BB Dashboard	Preferences		
BB Overall stats	Web GUI Network LTE Time Logging DynDNS SNMP RU	ADRUS FTP Backup VPN Client Modbus RTU GPS SMTP	Routing
Es System tree	Enable DynDNS	~	
Dry inputs	DNS service	Dyndris (www.dyndris.com)	~
sws SMS messages	Login Possword		
III Event log	Hostname		
<i>₽</i> Logic schemes			Sun
Cameras			
Map			
CAN configuration			
di Graphs			
8 Reset smoke detectors			
111 Preferences			
System menu		Cop	yright: BKT Elektronik © 2022



5.17.9 SNMP settings

C BC: helewoos ← → C ▲ Not	× +	o x
GBKT	E 2 ▲ gerst	
BB Dashboard	Preferences	
Overall stats	Web GUI Network LTE Time Logging DynDNS SHMP RADRUS FTP Backup VPN Client Modbus RTU GPS SMTP Routing	
TE System tree	Enable State	
🚊 Dry outputs	Version v1/v2c	~
Dry inputs	Community for read only public	
ses SMS messages	Community for writing private	
📰 Event log	Download MB ffe bit.mib	
Ø Logic schemes		iavo
Cameras		_
• Мар		
L Users		
- CAN configuration		
di Graptis		
A Reset smoke detectors		
111 Preferences		
 System menu 		
	Copyright: BKT Elektron	ik © 2022

The device supports the SNMP (Simple Network Management Protocol) in versions 1, 2c and 3. The default port to access the device via SNMP is 161. In this tab, a MIB (Management Information Base) with communication data can be downloaded. Select Właściwości \rightarrow SNMP Preferences \rightarrow SNMP) from the vertical menu.

Baza MIB systemu



The SNMP MIB database is a reflection of the system tree available from the vertical menu. All information required to establish communication with the controller is located in the MIB database.

ctlUnit - units in the system tree ctlUnitModulesTable - modules in the system tree ctlUnitGroupsTable - created groups of units ctlUnitElementsTable - elements (sensors) ctlUnitLogicsTable - created logical schemes ctlUnitTrapNotification – system SNMP Trap messsage ctlUnitSaveToFlash - saving settings to flash memeory ctlUnitSystem – device information (sn, mac, firmware etc.) ctlUnitReboot – device rebooting ctlNotifiers - created notifications ctlNotifiersMailersTable - created mail notyfications ctlNotifiersTrapsTable - created SNMP Trap notyfications ctlNotifiersSMSsTable - created text message notyfications ctlVirtualDevices - virtual elements ctlVirtualDevicesTimersTable - timers ctlVirtualDevicesPingsTable - pings ctlVirtualDevicesTriggersTable - triggers ctlVirtualDevicesSnmpgetsTable - SNMP Get (virtual sensors) ctlVirtualDevicesAnalogsTable - mathematical values ctlHardwareDevices – other devices ctlHardwareDevicesCamerasTable – USB and IP cameras ctlHardwareDevicesModemsTable – GSM modem ctlInternalSensors - details of system sensors ctlInternalSensorsDiscretsTable - inputs for potential-free contacts ctlInternalSensorsAnalogsTable – analogue sensors ctlInternalSensorsOutletsTable - output modules (relays) ctlCANSensors - details of CAN sensors ctlCANSensorsDiscretsTable - inputs for potential-free contacts ctlCANSensorsAnalogsTable - analogue sensors ctlCANSensorsOutletsTable - output modules (relays) ctlRsSensors – not available in current firmware



Section ctlUnit – system tree
This section contains the full system tree. Chapter 5.6 System tree (system components).
ctlUnitModulesTable – information about modules in the system tree, ie: Logics, Mails, SMSs, Traps, Pings, Timers, Triggers, etc.
ctlUnitGroupsTable – information about created groups of elements. Chapter 5.6.2 Adding a new group.
ctlUnitElementsTable – basic information about sensors in the system tree. Chapter 5.6.1 Setting the sensor parameters.
ctlUnitLogicsTable – information about created logic diagrams. Chapter 5.10 Logical schemes.
ctlUnitTrapNotification – object identifier OID of system SNMP Trap notification.
ctlUnitSaveToFlash - saving settings to the flash memory when set to "1"
ctlUnitSystem – device information informacje o urządzeniu (serial number, mac, firmware etc.)
ctlUnitReboot – device rebooting when seet to "1"
Section ctlNotifiers – created notifications
This section contains notifications that were created while programming the controller.
ctlNotifiersMailersTable – created MAIL notifications. Chapter 5.6.3 Adding an email notification.
ctlNotifiersTrapsTable - created SNMP Trap notifications. Chapter 5.6.4 Adding a trap notification.
ctlNotifiersSMSsTable – created SMS notifications. Chapter 5.6.5 Adding an SMS notification.
Section ctlVirtualDevices - virtual elements
This section contains elements that were created while programming the controller.
ctlVirtualDevicesTimersTable – created timers. Chapter 5.6.10 Adding a timer.
ctlVirtualDevicesPingsTable – created pings. Chapter 5.6.12 Adding PING functions.
ctlVirtualDevicesTriggersTable – created triggers. Chapter 5.6.11 Adding a trigger.
ctlVirtualDevicesSnmpgetsTable - created SNMP Get. Chapter 5.6.13 Adding an SNMP Get.
ctlVirtualDevicesAnalogsTable - created mathematical values. Chapter 5.6.15 Adding virtual mathematical element.
Section ctlHardwareDevices – other devices
This section contains other elements that have been connected to the system.
ctlHardwareDevicesCamerasTable – USB and IP cameras. Chapter 5.6.16 Adding a camera.
ctlHardwareDevicesModemsTable – GSM modem. Chapter 5.8 GSM modem settings.
Section ctlinternalSensors – details of system sensors
This section contains detailed information about sensors connected to the system, except for CAN sensors.
ctlInternalSensorsDiscretsTable – inputs for potential-free contacts.
ctlinternalSensorsAnalogsTable – analogue sensors.
ctlinternalSensorsOutletsTable - output modules (relays).
Section ctlCANSensors - details of CAN sensors
This section contains detailed information about CAN sensors connected to the system.
ctlCANSensorsDiscretsTable - inputs for potential-free contacts of CAN modules.
ctiCANSensorsAnalogsTable – analogue sensors of CAN modules.
ctiCANSensorsOutletsTable – output modules (relays) of CAN modules.

Example of query for a temperature sensor installed inside the controller

 Bith System tree 	× +		- 0 ×	Temperature		×
← ⇒ Q ▲ N	lot secure 192.168.0.101/#/systree		A G 🗢 🕲 —	Temperature		
BKT			2° C + ≜guest El (≉			^
BB Dashboard	Onboard		1	Settings Charts All data		
B Overall stats	Alarm LED					- 1
B System tree	슈կ Analog sensor power reset			Name	Onboard Temperature	
🚔 Dry outputs	V Current 1 Normal	ov		ID	201999	
Dry inputs	Onboard Temperature	28.60 °C		Type	temperature	
sws SMS messages	V Voltage 1	11.90 V		Class	analog	
Event log	⊘ Autodetect		1		analog	
	 Dry Contacts 		1	Current state	Normal	
Cameras	Dry-1			Current value	28.6 ℃	
• Map	ob Dry-2					
🌲 Users	Dry-3			Low alarm level	0	- 1
CAN configuration	IIIII Nermal					
di Graphs	Normal			Low warning level	5	
A Reset smoke detectors	O Relays		1	High warning level	50	
Preferences	D or					
System menu	Power-2 or			High alarm level	55	
	Cameras		1.		•	
The requ	ired temperatur	e sensor in the syste	em tree.	I -50	1	1 10
					OK Apply Cancel	
				Identifier of required senso	r.	



CilinternalSensors CilinternalSensorsDiscretsTable CilinternalSensorsAnalogsTable CilinternalSensorsAnalogsEntry CilinternalSensorsAnalogsEntry CilinternalSensorsAnalogModule CilinternalSensorsAnalogNum CilinternalSensorsAnalogNum CilinternalSensorsAnalogNum CilinternalSensorsAnalogNum CilinternalSensorsAnalogState CilinternalSensorsAnalogValue CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogNum CilinternalSensorsAnalogValue CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogMum CilinternalSensorsAnalogLowWarming CilinternalSensorsAnalogAt0 CilinternalSensorsAnalogAt0 CilinternalSensorsAnalogSpecific CilinternalSensorsAnalogHystType CilinternalSensorsAnalogHystType CilinternalSensorsAnalogHystLowAlar CilinternalSensorsAnalogHystHighMa CilinternalSensorsAnalogHystHighMa CilinternalSensorsAnalogHystHighMa CilinternalSensorsAnalogHystHighMa CilinternalSensorsAnalogHystHighMa CilinternalSensorsAnalogHystHighMa CilinternalSensorsAnalogHystHighMa CilinternalSensorsAna	n ning rm	Table ctlinternalS To ask for the sensor with the sensor ide ctlinternalSensors. value read from se The complete que	ensorsAnalogsTable from section ctlInternalSensors. For, use the SNMP object identifier (OID) extended after the dot entification number, eg: AnalogValue.201999 (.1.3.6.1.4.1.47394.5.2.1.7.201999) – ensor 201999. ry table for the 201999 sensor is given below.
OID – SNMP object identifier	Value	Г	Description
ctlinternalSensorsAnalogid.201999 .1.3.6.1.4.1.47394.5.2.1.1.201999	201999	1	dentifier of the element in the system
ctlinternalSensorsAnalogModule.201999	2020	ד נ	The identifier of the module to which this element belongs

.1.3.6.1.4.1.47394.5.2.1.1.201999	201999	identifier of the element in the system
ctlInternalSensorsAnalogModule.201999 .1.3.6.1.4.1.47394.5.2.1.2.201999	2020	The identifier of the module to which this element belongs (onboard sensors)
ctlInternalSensorsAnalogNum.201999 .1.3.6.1.4.1.47394.5.2.1.3.201999	-1	Consecutive number of element in the module
ctlInternalSensorsAnalogType.201999 .1.3.6.1.4.1.47394.5.2.1.4.201999	temperature	Type of element (temperature sensor)
ctlInternalSensorsAnalogName.201999 .1.3.6.1.4.1.47394.5.2.1.5.201999	Onboard Temperature	Name of element
ctlInternalSensorsAnalogState.201999 .1.3.6.1.4.1.47394.5.2.1.6.201999	normal	Element current status
ctlInternalSensorsAnalogValue.201999 .1.3.6.1.4.1.47394.5.2.1.7.201999	28.6	Temperature value read from sensor
ctlInternalSensorsAnalogMin.201999 .1.3.6.1.4.1.47394.5.2.1.8.201999	-50.0	Permissible minimum value of the alarm threshold
ctlInternalSensorsAnalogMax.201999 .1.3.6.1.4.1.47394.5.2.1.9.201999	110.0	Permissible maximum value of the alarm threshold
ctlInternalSensorsAnalogLowAlarm.201999 .1.3.6.1.4.1.47394.5.2.1.10.201999	0.0	Set value of the low alarm threshold
ctlInternalSensorsAnalogLowWarning.201999 .1.3.6.1.4.1.47394.5.2.1.11.201999	5.0	Set value of the low warning threshold
ctlInternalSensorsAnalogHighWarning.201999 .1.3.6.1.4.1.47394.5.2.1.12.201999	45.0	Set value of the high warning threshold
ctlInternalSensorsAnalogHighAlarm.201999 .1.3.6.1.4.1.47394.5.2.1.13.201999	50.0	Set value of the high alarm threshold
ctlInternalSensorsAnalogExpression.201999 .1.3.6.1.4.1.47394.5.2.1.16.201999	x	A function that converts the value read from the sensor into a value that will be processed in the system
ctlInternalSensorsAnalogSpecific.201999 .1.3.6.1.4.1.47394.5.2.1.17.201999	um="°C"	A unit of value read from the sensor
ctlInternalSensorsAnalogHystType.201999 .1.3.6.1.4.1.47394.5.2.1.18.201999	value	Hysteresis type (value – hysteresis enabled)
ctlInternalSensorsAnalogHystValue.201999 .1.3.6.1.4.1.47394.5.2.1.19.201999	0.30	Hysteresis value (0.30°C)
ctlInternalSensorsAnalogValueInt.201999 .1.3.6.1.4.1.47394.5.2.1.25.201999	2860	Inteager value read from the element (sensor) (sensor value multiplied by 100)



5.17.10 RADIUS settings

🖬 🗢 BKT: Preferences	× +														-	0	
← → C ▲ Not se	cure 192.168.0	0.101/#i/prefs											A1 16	51	¢	۲	L.
BKT	=													7	L guest	8	
DB Dashboard	Preferen	nces															
Overall stats	Web GUI	Network	LTE	Time	Logging	DynDNS	SNMP	RADIUS	FTP Backup	VPN Client	Modbus RTU	GPS	SMTP	Rou	ting		
System tree	Fachlad																
Dry outputs	Canona addeed								•								
Dry inputs	Server port																
as SMS messages	Server passw	ord															
Event log																	
Logic schemes																Save	
Cameras																	
• Мар																	
Users Users																	
- CAN configuration																	
Graphs																	
A Reset smoke detectors																	
Preferences																	
System menu																	
													Coj	yright: I	IKT Eleks	ronik O	2

The device supports the RADIUS (Remote Authentication Dial-In User Service) protocol. Select *Preferences* \rightarrow *RADIUS* from the vertical menu.

5.17.11 FTP backup settings

													~ 10		-00	
S BKT															🛎 guest	
20 Dashboard	Preferen	nces														
Overall stats	Web GUI	Network	LTE	Time	Logging	DynDNS	SNMP	RADIUS	FTP Backup	VPN Client	Modbus RTU	GPS	SMTP	Ro	ting	
System tree																
Dry outputs	Execution int	erval							daily							
Dry inputs	FTP server															
as SMS messages	PTP port															
Eventing	Password															
P Logic schemes	Target directs	жy														
Cameras	Time of back	ıp							00:00							
• Мар																
Users																Sav
CAN configuration																
Graphs																
Reset smoke detectors																
11 Professors																
11 Presentation																

Device settings can be saved to a file on an FTP server on a regular basis. Select *Preferences* \rightarrow *FTP Backup* from the vertical menu.

5.17.12 VPN client settings

C BC: Preferences ← → C ▲ Not:	* + ecure 192.168.0.101/#/prefs	× 0 – • 2 6 4 5 %	The device uses the OpenVPN library to provide a VPN client. The
BKT	÷	≯ Alguest S 👄	service configuration is available after selecting Preferences-> VPN
EE Dashboard EE Overall stats	Preferences		Client from the vertical menu.
System tree	Weolulo Netheolik Lite Inne Logging Lyncino Setter Helicos Satur Pladeesi Francesco Inne	PERSON PROVING MODULATIO UPS SMIP Houring Disabled Befresh	
Dry inputs UNS SMS messages	Connection time Enable VPN Client VPN Jacour address	•	
Event log	VPN server autoros VPN server port L2D compression		
 Cameras Map 	Authorization type CA certificate	certificates (TLS) v Upload	
LUsers	User certificate Private key	Upload Upload	
 Graphs Reset smoke detectors 	Enable TLS static key Enable Watchdog		
Preferences System menu	Enable connection log Save log to disk	ox	



5.17.13 SMTP settings

BCT: Preferences	x +	- 0 ×
← → C ▲ Not:	t secure 192.168.0.101/#/jprefs A 🖉 🏠) \$ @ \$
SBKT		
Dashboard	Preferences	
BB Overall stats	Web GUI Network LTE Time Looping DwDNS SHMP RADIUS FTP Backup VPN Client Modbus RTU GPS SMTP	Routing
E System tree		
Dry outputs	Outgoing e-mail server settings. Wil be applied as default for all new e-mail messages.	
🛱 Dry inputs	SMTP server	
ues SMS messages	SMTP port 25	
Event log	Enable TLS	
Logic schemes	Enable STARTTLS	
Cameras	Login	
0 Mag	Password	
. there	Mal rom address	
	Mail to Josephini	
E concomparation		Save
Graphs		
Reset smoke detectors		
Preferences		
System menu		
	G	opyright: BKT Elektronik © 2022

In the Properties-> SMTP menu it is possible to set the default mail server configuration for the email notifications created later.

5.18 System menu (system management)

5.18.1 Restoring default settings through a website



Select System menu \rightarrow About from the vertical menu, select Sensors or All settings and click OK next to Reset settings to default values.

Confirm to reset default values and wait until the process is completed. When resetting all settings, the device's IP number will be changed to the default (192.168.0.101).

5.18.2 Restarting the device

🖬 🗢 BCT: System meru	x +	- 0 X	C BC System menu	× +		- 0 ×
← → C ▲ Not	secure 192.168.0.101/#(/system	× G G G	€ → C AN	ot secure 192.168.0.101/#i/system		2 R G Ø @ @
BKT	=	Z Agues D 🔅	GBKT	=		Z ≜guest E) ⊕
BB Dashboard	System menu	í	BB Dashboard	System menu	•	
BB Overall stats	About Firmware Export		Overall stats	About Firmware Export	Are you sure you want to reboot the system?	
The System tree	Device type	C215i	The System tree	Device type	746 00	
B Dry outputs	Firmware version	5.0.1 b176	m Dry outputs	Firmware version	5.0.1 b176	
n Dry inputs	Web GUI version	2.1.028	Dry inputs	Web GUI version	2.1.028	
sws SMS messages	Operating system Browser	Windows Cheome 107	Event log	Operating system Browser	Windows Cheome 107	
III Event log	Copyright	BKT Elektronik © 2022		Copyright	BKT Elektronik © 2022	_
Logic schemes	Reset settings to default values	foral v ox	Cameras	Reset settings to default values	for sensors	× x
Cameras	metroor, the sporent		• Мар	MEMORY THE SPOREI		
• Мар	Third-party software		A Users	Third-party software		
🌲 Users	This product includes copyrighted third-party Open Source Software licensed under the	e terms of the GNU General Public License, BSD and BSD like licenses, MIT license and other licenses.	CAN configuration	This product includes copyrighted third-party Open So	surce Software licensed under the terms of the GNU General Public License, BSD and BSD	Tike licenses, MIT license and other licenses.
- CAN configuration	Specifically, the following parts of this product are subject to such license: snmp-utils, libraddi, nginx, fogi, libpcap, libpces, topdump, strace, chat, ppp, ppp-mod-p iofsables, istables, libblidd, libcomen, libert7b, libplight, libbgidt, libow, libow, capi, libor	appoe, base-files, block-mount, blockd, busybox, ddm-scripts, ddm-scripts, mo-ip, .com, e2fsprags, fitools, fwtool, ip-full, matrods, libes, libuuid, libatables, logd, migg-streamer, net/fd, openyon-openss), openynt-keyning, opka, partxuriis,	di Graphs	Specifically, the following parts of this product are subj snmp-utils, libradcli, nginx, fogi, libpcap, libpcre, topdur ip6tables, iptables, libbikid, libcomen, libext2fs, libip4ts	ject to such licenses: mp, strace, chat, ppp, ppp-mod-pppoe, base-files, block-mount, blockd, busybox, ddm-s, , Rispite, Elwaw, Bow-capi, Ibsmantols, Ibus, Ibuuid, Ibstables, logd, migg-streamer, r	cripts, ddns-scripts_no-ip_com, e2fsprogs, fstools, fwtool, ip-full, setifd, operwpn-openssl, operwrt-kesning, opkg, partx-utilis,
di Graphs	procd, resolveip, smstools3, ubox, usb-modeswitch, usbutils, wwar, uboot-envtools, libr libpthread, librt, libssp, libstdcpp, libf2fs, mkf2fs, libjpeg, firewall, jshn, jsonfiter, libblobr	vill, comgt, comgt-nom, libgrap, libiza, libmbedtki, libmettik, mitit, picocom, pingchecki, ugps, libreadline, tar, libc, libgcc, msg-json, libjson-script, libuclient, rpcd, rpcd-mod-rpcsys, uclient-fetch, usign, libicom-full, libmicroxmi, libni-tiny,	Reset smoke detectors	procd, resolveip, smitools3, ubox, usb-modeswitch, usl libpthread, librt, libssp, libstdcpp, libf2fs, mkf2fs, libjpe;	butils, wwar, uboot-envirolis, libvél, comgt, comgt-nom, libgrap, libita, libmbedth, libne g, frewall, john, joonfiter, libblobmog-joon, libjoon-script, libuclient, rpcd, rpcd-mod-rpcs	ttle, mtd, picocom, pingcheck, ugps, libreadline, tar, libc, libgcc, es, uclient-fetch, usign, libiconv-full, libmicrosmi, libni-tiny.
8 Reset smoke detectors	Ibubus, libuci, Ibush-1.0, Ibush-compat, ubus, ubusd, uci, curl, drophear, libcurl, libexp All listed software packages are copyright by their respective authors.	at, libjson-c, libncurses, terminfo, libnetsnmp, snmp-mibs, snmpd, libopenssi, openssi util, Hosqite3, sqifte3-cli, zlib.	III Preferences	Ibubus, Ibuci, Housb-1.0, Housb-compat, ubus, ubusd, All listed software packages are copyright by their resp	uci, curi, dropbear, libcuri, libexpat, libjson-c, libncurses, terminfo, libnetsnmp, snmp-mil ective authors.	bs, snmpd, libopenssl, openssl-util, libsqlite3, sqlite3-cli, zlib.
111 Preferences	You can find the full text for the exact terms and conditions of the licenses at our docum	sentation page: Licenses.	 System menu 	You can find the full text for the exact terms and condit	tions of the licenses at our documentation page: Licenses.	
6.000	The source code of the software packages are available upon request, please contact the	e support.		The source code of the software packages are available	upon request, please contact the support.	
 System menu 	This offer is valid for 3 (three) years from the date on which you purchased the product.			This offer is valid for 3 (three) years from the date on wh	Nch you purchased the product.	
Select S	ystem menu→About from	the vertical menu and click OK	Confirm	to restart the dev	ice and wait until the re	starting process is
	next to Reboot the system.				completed.	



5.18.3 Firmware update

Note:

- A file with a firmware update is available at <u>https://www.bkte.pl</u>.
- Make sure that the device will not be disconnected from the power supply while updating the firmware.
- After the upgrade, the device may need to be manually reconfigured.

1		Back up the current system settings, see chapter 5.18.4 Export data to a file (Download current settings).
2	V St Stansow V Stanso	 Sometimes the firmware updates consist of two files: system kernel update, e.g. <i>firmware-kernel.bkt</i> firmware update, e.g. <i>bkt_EC335t-7.0.1-b176.bkt</i> In this case, begin the update from the kernel file. From the vertical menu, select Menu system->Firmware and after clicking on Browse, point to the file with the firmware file update, eg <i>firmware-kernel.bkt</i>
3	Province Provinc	Click the Upload button and confirm to upload new firmware.
4	V St Otstranu V St O	Wait until information on the completed update is displayed and the device is restarted. Confirm.
5		Then, the automatic firmware update process will start, and the device will be restarted after the update is completed. The firmware replacing process is signaled by the flashing red ERR LED. The whole process can take several minutes. Do not disconnect the power supply at this time. If you are updating remotely and are unable to observe the LED indicator, do not refresh the page for more than a few minutes.



6	After a few minutes, when green ACT LED is flashing, refresh the browser using the CTRL + F5 keys. You may also need to clear your browser's Cache by clearing your browsing history.
7	If the update consists of two files, repeat the procedure with the second file (eg. <i>bkt_EC335t-7.0.1-b176.bkt</i>) from point 3.
8	It is recommended to restore the factory settings before uploading the configuration from the backuped file, see 6.3 Restoring default settings.
9	Restore the previous configuration. Try to use a file with a backup copy of the system settings, see section <i>5.18.5 Restoring settings from a file</i> or manually enter reqaired settings.

5.18.4 Export data to a file

C ← BCT: System menu ← → C ▲ Not	× +	- 0 ×	Select <i>Menu_Systemu</i> \rightarrow <i>Export</i> from the vertical menu.
S BKT		× ≜gunst ⊠ i+	Export sensor data in XML – save the sensor data to an XML fi
Control Contr	System menu And Immuse Equat Report the data IMM. Or Report them data IS/O Or Strate Is to data Report top data Report top data Denniskal compression Or Compression Denniskal compression Or Compre		The file contains max 400 readings from each sensor: 100 readings (every second) from the last 100 seconds 100 readings (every minute) from the last 100 minutes 100 readings (every hours) from the last 100 hours
Carneras Map Users CAN configuration Graphs Reset smoke detectors Preferences System menus			100 readings (every day) from the last 100 days Export sensor data in CSV – save the sensor data in a CSV file. Save log to disk – save system events to a TXT file. Export log in RSS – system events in the RSS format. Download current settings – save the current device settings to
		Copyright: BKT Elektronik © 2022	settings.bkt file.

5.18.5 Restoring settings from a file

The method of saving data to a file is described in 5.18.4 Export data to a file.

NOTE: The current setting will be overwritten by the settings included in the file. The IP address of the device will not be changed.

METHOD 1.

	and a second sec	13 1	
SBKT	-	2° Agent 1	h
Dashboard	System menu		
BB Overall stats	About Firmware Export		
Se System tree	Select a file with the firmware or a file with perviously saved rotters settings and upload it	to update the system. Do not restart the unit manually and do not turn off the power give the system time to up	
💼 Dry outputs	after which the reboot will happen automatically and the changes will take effect.		
Bry inputs	Upload source	from local filesystem	
Eventing	Select the firmware file or saved settings file to restore	Open settings.bit	
€ Logic schemes		Upload One	and
Gameras			
• Мар			
Lusers			
E CAN configuration			
di Graphs			
8 Reset smoke detectors			
111 Preferences			
 Systemmenu 			
		Constitute BVT Daimonak	0.2

Select *System menu*→*Firmware* from the vertical menu, click *Browse* and choose a settings file *settings.bkt*

Click the Upload button and confirm to upload new firmware.

Wait until the information about the file upload appears, then update and restart the device. Refresh the browser using the CTRL+F5 keys. You may also need to clear your browser's Cache by clearing your browsing history.

METHOD 2.

To restore the settings:

- 1. Copy the settings.bkt file to a USB flash drive (pendrive).
- 2. Connect the flash drive (pendrive) to the mini-B USB socket of the controller using an attached cable and wait for a while.
- 3. Start of the setting restoration process is indicated by the ERROR light, whereas successful completion of the same is indicated by the ACT light flashing.
- 4. Restart is restarting.
- 5. Remove pendrive
- 6. The device settings have been restored from the file.



6 QUICK START GUIDE

6.1 Connection

- 1. Connect the analogue sensors to any A1-A4 socket.
- 2. Connect the RJ45-RJ45 patchcord to the LAN socket and the other end to the computer.
- 3. Connect the power adapter to the POWER socket.

6.2 Commissioning

After connecting the power supply, the device starts up for several tens of seconds. The flashing ACT LED on the front panel signals that the Linux system on device is fully booted. Before starting the configuration, make sure that the ACT diode is flashing. The device may require a restart during configuration, e.g. after saving the network settings. In this case, proceed with the configuration only after the ACT LED lights up.

6.3 Restoring default settings

In order to make sure that all settings have default values, it is recommended to reset the default setting before the first start-up.

NOTE: All current settings will be deleted.

1. Connect the device to the power supply and make sure that the controller has fully started up (the ACT LED is blinking). It may take several tens of seconds to complete the booting.



2. Press and hold for 5 seconds the Reset button.



3. The ERROR LED should light up indicating the restore procedure.



- 4. When all the LEDs are off, wait for the device to restart.
- 5. The default settings have been restored. Start configuring the device when the ACT LED starts blinking.

Default settings	
IP address	192.168.0.101
Network mask	255.255.255.0
Network gate	192.168.0.1
DNS server	192.168.0.1
DHCP client	Disabled
Passwords	User: guest; password: guest

6.4 Initial configuration

Protokół internetowy w wersji 4 (TCP/IPv4) Properties X General You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. Qbtain an IP address automatically @ Uge the following IP address:	Configure the computer network card for operation in the same network as EC335t. For example, you can use settings as shown in the figure.
Image: Status Image: Status<	Run the browser and enter http://192.168.0.101 in the address bar. Enter the following in the login window: user: guest password: guest. Use the displayed wizard for initial configuration.
Wizard ×	Wizard ×
1 2 3 4 5	1 2 3 4 5
Language Time Network SNMP User	Language Time Network SNMP User
Language	Time
Interface language English •	Current device date and time 2020-03-31 4-47-05 PM
	Now Device timezone [UTC+02:00] Eastern European Time, Central Africa Time, Kaliningrad, Bulgaria, Greece, Cyprus, Finland Automatically synchronize time do not synchronize
Next Cancel Cancel	Previous Next→ Cancel Set the date and time.
Wizard ×	Wizard ×
13(s)	13
Language Time Network SNMP User	Language Time Network SNMP User
Network	SNMP
Hostname hostname	Version v1/v2c *
Network type static •	Community for read onlys
IP address 10.10.10.17	Community for writing write
Network mask 255.255.254	
Gateway 10.10.10.1	
Primary DNS 10.10.10.1	
Second DNS	
HTTP port 80	
∢Previous Next> Carcel	<previous next=""> Cancel</previous>
If necessary, change the network settings.	If necessary, change the SNMP protocol communication settings.





6.5 Identification of the controller IP address

📑 "system_report.info – Notatnik – 🗆 🗙 Plik Edytuj Wyświetł 🛞	It is possible to check the current IP address of the controller, if it been forgotten
# # Date and Time: "Tue Oct 18 10:35:41 2022"	Connect the FAT32 formatted USB flash drive to the powe
<pre># Device type: "EC3351", Firmware version: "5.0.1 b176", Kernel: "". # Hostname: "hostname", IP: "192.168.0.101", MAC: "7E:FB:FE:87:D8:05"</pre>	controller using the attached cable "mini USB B plug - USB A sock
# LTE IP: "no LTE connection" #	Wait until the ERROR LED flashes once. Disconnect the flash drive
	read its contents. There should be a file system_report.info contain
	the data as in the picture on the right.

6.6 User Logging out

BKT: Overall stats ×	+ 1.10.10.17/#i/overall			😇 🚖 🔍 Search	- a ×	You can log out when you click on the Logout button from horizo
GBKT					× Ω ≜guest Β ↔	menu.
Overall stats	Overall stats					
System tree	About system		State of elements	Time		
Dry outputs	Device type	EC3354DC	0 Elements in Alerm state	Device time	3:57:52 PM	
Dry contacts	Firmware version	2.8.1 bi226 (kernel	late	Local time	4/53:14 PM	
SMS messages		18.09.2019	Are you sure you want to log out?			
Event log	Web-GUI version	2.0.027	ing state	Right now		
Logic schemes	Operating system	Windows	OK Cancel Ke	0 Events in Alarm state		
Cameras	Browser	Firefox 74	0 Elements in Low warming state	4 Events in Warning st	tate	
Мар	Total operating time	1041d 08h	0 Elements in Low alorm state	0 Events in High alarm	a state	
Users	Session time	0d 06h 21m	2 Elements in On state	0 Events in High worth	ing state	
the second se	CPU usage (%)	16.8	2 Elements in Off state	15 Events in Normal sta	Ne	
Accession	Memory usage (Mb)	31.73	1 Elements in Not connected state	2 Events in Low warning	ing state	
 CAN configuration 	Total memory (Mb)	58.13		0 Events in Low alarm	state	
Graphs	Copyright	BKT Elektronik © 2019				
Reset smoke detectors						
Preferences	Current log					
> System menu	•	State change: Normal / System Warring - Normal	/EC335.4DC	2020-03-31 3-25-42 PM		

6.7 Configuration of sensor status email notifications

The following procedure allows you to quickly configure email notifications about changes in the status of sensors installed in the system.

💼 🗢 BKT: System tree	× +		- 0 >
	t secure 192.168.0.101/#(/systree		2 A G 🕲
BKT			
B Dashboard	SNMPGET sensors		1
BB Overall stats	 Virtual sensors 		/
Se future tree	O Web messages		1
till systemute	Modbus sensors		/
a Dry outputs	Dial tasks		1
Dry inputs	Onboard		/
ses SMS messages	Alarm LED or		
Event log	아내 Analog sensor power reset		
	Onboard Temperature	28.60 ℃	
Cameras	V Voltage 1 Namel	11.90V	-
• Мар	Voltage 2 Normal	٥V	
L Users	C Autodetect		/
CAN configuration	Ory Contacts		1
Graphs	ono Dry-1		
A Reset smoke detectors	ono Dry-2		
Preferences	Dry-3		
System menu	Cry-4		

Select System tree in the vertical menu.

Click on individual sensors visible in the system that require renaming or adjusting the default assigned alarm thresholds.





Temperature		Enter corrections to the names of sensors and alarm thresholds.
Settings Charte All data		Confirm the changes.
Settings Charts Airdata		For more information see section 5.6.1 Setting the sensor
Name	Unboard lemperature	Por more information, see section 5.6.1 Setting the sensor
ID Type	201999 temperature	parameters.
Class	analog	
Current state	Normal	
Current value	28.6 °C	
Low alarm level	0	
Low warning level	5	
High warning level	50	
High alarm level	55	
-50	110	
	OK Apply Cancel	
		-
C ≪ BCitystemine x + ← → C ▲ Not secure 192.160.0.101/#//outrine	- 0 2 2 4 4 4 4	Add email notification.
	r n te 3' te ∰ r Ω + Agent 8	a
Dashboard O SNMPGET sensors Add a new elem O Virtual sensors		
System tree Modbus sensors Modbus sensors		
Dry outputs Onlai tasks Onloard SNMP Trap		
see SMS messages Abarn LED SMS SMS		
Event log Orboard Temperature Orboard Temperature Sats Web SMS Set SMS Set Set Set Set Set Set Set Set Set Se	Aug.	
Cogle Rommer Cameras V Village 1 Second Secon	ior with SWI Muslei	
Map Voltage 2 Sorral Dial Task		
CAN configuration O Dry Contacts	st /	
Graphs Graphs Graphs Graph Graphs Graphs	• Cancel	
III Preferences		
System menu Normal		
E-Mail		Configure the email notification. Enter the details of the email
Name	alarm-email	account from which the messages will be sent. Enter the subject of
ID	_	the message and recipients (up to 10 in one notification). The text of
Туре	mailer	the message does not need to be changed, it can remain the default.
Class	notifier	
SWIP Server	smtp.mail.pi	Confirm the changes.
	387	For more information, see 5.6.3 Adding an email notification
Enable STARTILS		
Login	alert@mail.pl	
Password		
Mail from address	alert@mail.pl	
Mail to address	adminemaitpi	
Message subject	sensor alarm	
Message text	Logic %4:\n\nDefinition:\n%1\nCurrent sensor state:\n%2\n \nSystem time: %3	
%1 - logic definition %2 - state of sensors		
%3 - date and time %4 - logic name		
%5{id} - sensor name (by identifier or %8) %6{id} - sensor state (by identifier or %8)		
%7{id} - sensor value (by identifier or %8) %8 - last modified sensor id		
\n - new line		
	OK Test Cancel	





□ 05 (parsite x + - 0 X ← → C Δ (transmit 102,000,000,000,000,000,000,000,000,000,	Add group of elements.
BKT Z C + & good 2 - 4 good	For more information, see 5.6.2 Adding a new group.
Several seas. O Fings I Group /	
Dysouputs C Togers C End C SNRPGET services SNRPGET services SNRPGET services	
set SMS messages O Vinde messages O Vinde messages O Vinde messages O Vinde messages	
Eventing Other Basis	
Comeas AimmilD Comeas Comea	
When Obtacal Reportant Obtacal Reportant Other HTP reparts When Obtacal Reportant Obtacal Reportant When Obtacal Reportant Obtacal	
Contrologication Contrologication V Virtup 1 Geneta V Internal Control Contro	
Reat make detectors Venews OAddSteel OAddSteel	
Grytemmene Coll Contacts Coll Contacts C	
Add a new group	In the Settings tab, name the group of elements. This name will
Settings Elements Modules Notifiers	appear in the email notification.
Group name server_room_sensors	
Description of the group	
OK Cancel	
Add a new group ×	In the Elements tab, move all sensors that are to send notifications to
Settings Elements Modules Notifiers	the right pane.
Onboard Onboard Onboard Onboard Onboard Onboard Temperature Voltage 2 Analoa sensor nower reset Voltage 1	
Alarm LED Dry Contacts Dry Contacts Dry-1	
Dry-3 Dry-2 Dry-2 Relays	
Power-1 Power-2	
v	
UK Lanke	
Add a new group	From the Notifications tab, move the previously configured email
	notification to the right window.
Settings Elements Modules Notifiers	Check the types of concernation changes were used to be informed
alarm_email	check the types of sensor status changes you want to be informed
	about.
-	Confirm the changes.
v v v v v v v v v v v v v v v v v v v	
✓ Low warning On ✓ High warning / Warning Off	
High alarm / Alarm Not connected	
Enable notifications OK	
Disable notifications OK	
OK Cancel	



🖬 🗢 BKT: System tree	× +		- 0 3
← → C ▲ Not so	ecure 192.168.0.101/#i/systree		× 6 0 0
GBKT			2° C + âguest Β
BB Dashboard	Sam_emai		
Overall stats	SMSs		/
	♥ Traps		/
System tree	O Pings		/
Dry outputs	© Timers		/
Dry inputs	 Triggers 		/
	 SNMPGET sensors 		/
In SMS messages	 Virtual sensors 		1
Event log	 Web messages 		/
Ø Logic schemes	 Modbus sensors 		/
B. Comerce	 Dial tasks 		/
gr Cannara	Conboard		/
Мар	Alarm LED or		
Users	Analog sensor power reset		
CAN configuration	T1 On		
Graphs	Onboard Temperature Normal	28.60 °C	
Reset smoke detectors	V Voltage 1 Normal	11.90 V	
Preferences	V Voltage 2 Normal	ov	
 System menu 	 Autodetect 		1
	Ory Contacts		/

Save changes to non-volatile memory.

Notifications of changes to the selected sensors have been configured.

7 DOCUMENT REVISIONS

Version	Changes	Date
1	Initial version	May 2017
2	Updated with hardware modifications	January 2018
3	System structure section. General update	June 2018
4	EC335 controller in a new housing. Hardware part has been extended - assembly and connection of devices	February 2019
5	The device configuration description has been extended	May 2019
6	Updated with new software functionalities 2.8.2b177	September 2020
7	New controller version EC335i	October 2022
8	Corrected power backup information	March 2023
9	New version of the extension module - EE321t	September 2023
10	New controller version EC335t	November 2023
11	New version of point leak sensor ES359	February 2024