



CONVERTER FOR MONITORING STATION
SMET-256

USER MANUAL

Program version v1.07



smet256_en 04/11

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The SMET-256 converter is a solution offered to firms engaged in the monitoring of security alarm systems. It receives events sent through the TCP/IP network by devices manufactured by the SATEL Company (Ethernet module, GSM module with GPRS reporting support). Depending on the converter settings, the events will be sent to the reporting station by means of telephone cable or RS-232 communication bus.

1. CONVERTER FEATURES

- Support of static / dynamic IP address.
- Emulation of analog telephone line.
- Emulation of RC4000 VISONIC receiver.
- Emulation of SurGuard (MLR2/MLR2E) receiver.
- Emulation of RSM-02 receiver.
- Support of up to 256 subscribers in the extended mode (with control of communication with the subscriber).
- Support of unlimited number of subscribers in the simple mode (without control of communication with the subscriber).
- Acknowledgment of event receipt.
- Buffering the received events in converter memory until they are sent to the monitoring station.
- Configuring the converter and defining subscribers through the RS-232 port (SMET-256 Soft program) or TCP/IP network (web browser or SMET-256 Soft program).
- Control of the Ethernet cable presence.
- An option to receive transmissions only from devices with defined MAC numbers. This enables the converter to be secured against hacking attempts.
- Possibility to update the converter firmware.
- Power supply with 12V DC.

2. CONVERTER DESCRIPTION

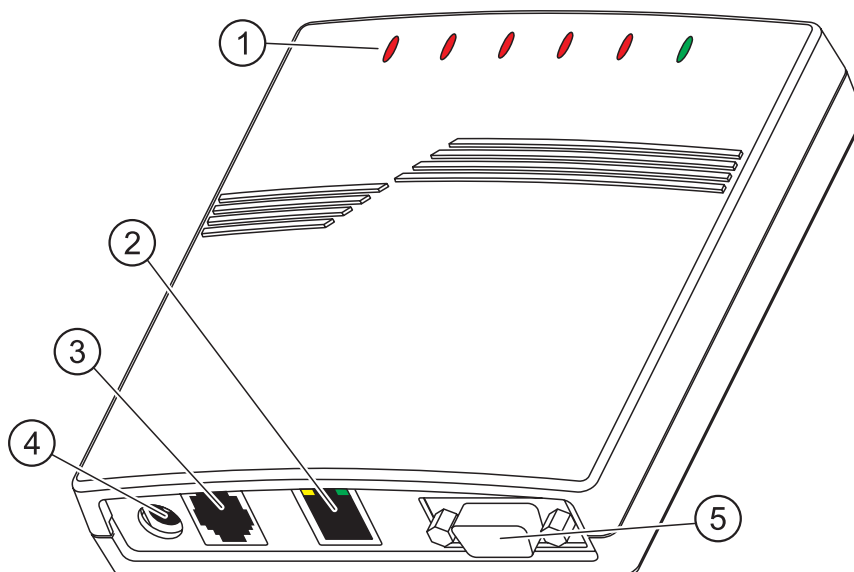


Fig. 1. Converter for monitoring station.

Explanations for Fig. 1:

1 – **LED indicators:**

PWR – **power indicator** – ON when power supply is connected

ST – **status indicator:**

- ON – RS-232 port working in RC4000 VISONIC, SurGuard (MLR2/MLR2E) or RSM-02 receiver emulation mode
- blinking fast – replacement of converter firmware
- momentarily dimming – wrong converter configuration data (also on the first-time run, before configuration)
- lights up momentarily – RS-232 port available for communication with the computer

RI – **ringing indicator** – ON when the converter is calling the reporting station

OH – **reporting station connection indicator:**

- ON – connection to the monitoring station
- blinking – timeout of reporting station connection (converter is sending no more data)

WT – **handshake / kiss-off indicator:**


- ON – waiting for handshake / kiss-off signal from the monitoring station
- blinking – there are data to be sent, but there is no kiss-off signal from the monitoring station

ERR – **trouble indicator:**

- blinking fast – no Ethernet network cable
- 1 short blink, followed by a pause – the station is not answering the call
- 2 short blinks, followed by a pause – the station went off-hook, but no handshake / kiss-off signal was received
- 3 short blinks, followed by a pause – the station hung up before all data were sent

2 - **RJ-45 socket** for connection of the Ethernet network cable. Use the same cable as the one for connecting computer to the network. The socket has two built-in indicator LEDs. The green one indicates connection to the network and data transfer, and the yellow one – negotiated transmission rate (ON: 100Mb; OFF: 10Mb).

3 - **RJ socket (6P2C)** for connection of the telephone cable, connecting the converter to the monitoring station.

4 - **power socket** for connection of the 12 V DC power supply unit . The power supply current capacity must be at least **750 mA**.

5 - **DB-9F socket (RS-232 port)** for communication with the reporting station (emulation of RC4000 VISONIC, SurGuard (MLR2/MLR2E) and RSM-02 receiver) or the computer.

3. CONVERTER INSTALLATION

1. Connect the Ethernet network cable to the RJ-45 socket.
2. Using telephone cable, connect the converter RJ socket with the reporting station (emulation of analog telephone line), or connect the converter DB-9 socket with the reporting station RS-232 port (emulation of RC4000 VISONIC, SurGuard (MLR2/MLR2E) and RSM-02 receiver).
3. Connect power supply.

4. CONFIGURING THE CONVERTER

Note: The device is only designed for working in the local computer networks (LAN). It cannot be directly connected to the public computer network (MAN, WAN). Connection to the public network should be established by using an xDSL router or modem.

There are two methods to configure the converter settings:

1. Through the TCP/IP network, by means of a web browser or the SMET-256 Soft program.
2. Through the RS-232 port, by means of the SMET-256 Soft program.

In both cases, the Java Virtual Machine, which can be found on the CD delivered with the device, must be installed on the computer. Additionally, the CD includes an installer for the SMET-256 Soft program.

4.1 WEB BROWSER

1. Start the web browser.
2. Enter the IP address of the converter in the "Address" field. By default, the static address 192.168.1.100 is set in the module.
3. The login page will be displayed in the browser. Enter the following information in the fields:
 - user name (by default: satel);
 - access code (by default: satel).

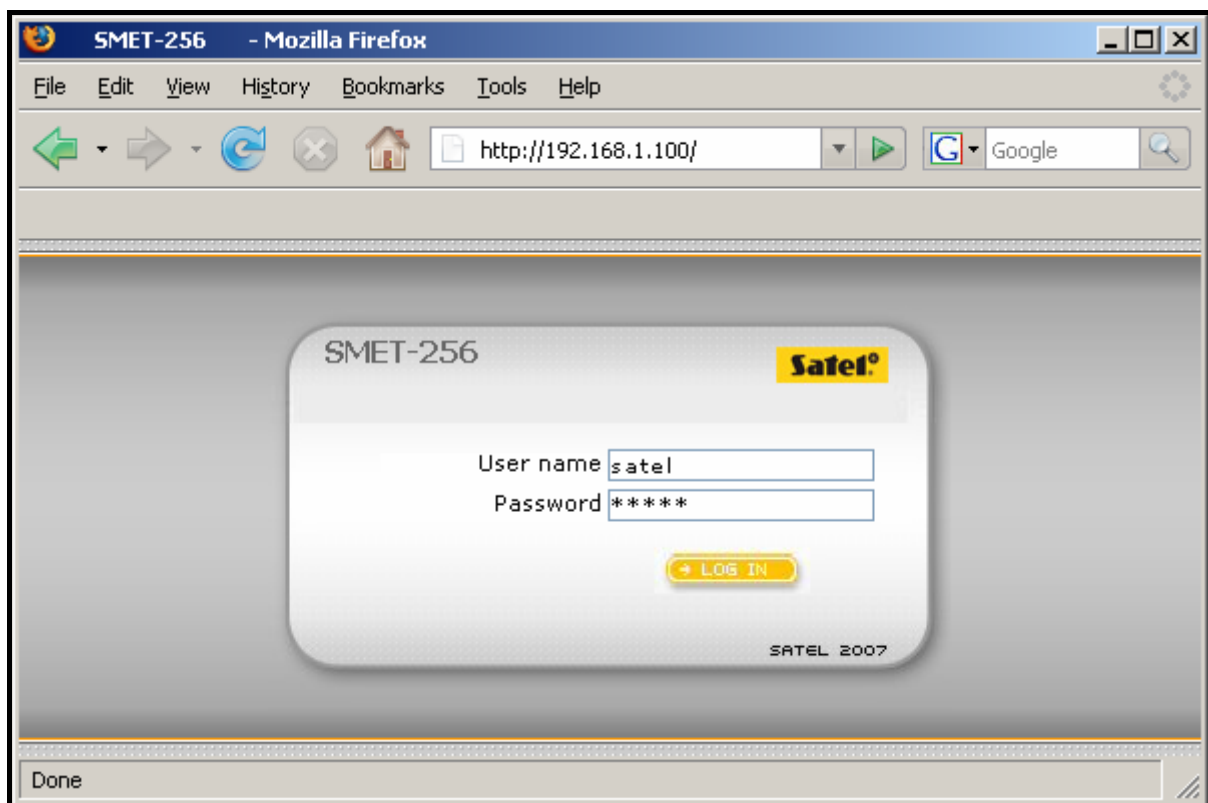



Fig. 2. Browser window with the login page.

4. Click with your mouse cursor on the "Log in" button. The browser will display the Java applet to enable configuration of the converter. The data will be automatically downloaded from the converter.
5. Configure the converter settings and define the subscribers.
6. Save the data to the converter.

4.2 SMET-256 SOFT PROGRAM

4.2.1 Configuration through RS-232 port

Note: The converter default settings provide for operation in the analog telephone line emulation mode, which enables communication with the computer through the RS-232 port. When these settings are changed and the converter emulates the RC4000 VISONIC, SurGuard (MLR2/MLR2E) or RSM-02 receiver, programming via the RS-232 port will be only available on condition that it is connected after power-up to the computer on which the SMET-256 Soft program is running. If the converter fails to establish connection with the program within 10 seconds of the power-up, the RS-232 port will be reserved for communication with the monitoring station.

1. Connect the converter DB-9F socket to the computer serial COM port.
2. Start the SMET-256 Soft program.
3. In the program window, select the computer COM port to which the converter is connected.
4. Click with your mouse pointer on the  symbol to start communication with the converter. The data will be automatically downloaded from the converter.
5. Configure the converter settings and define the subscribers.
6. Save the data to the converter.

4.2.2 Configuration through TCP/IP network

Note: Before you proceed to programming through the TCP/IP network, the converter must be configured by means of the RS-232 port. Open the "Configuration" window in "Program settings" tab and select the "TCP/IP" connection option. Then enter required values in the "Address" and "Port" fields (see "Program settings" tab) and click on the "Apply" button. After restarting the program, communication can be established through the TCP/IP network.

1. Start the SMET-256 Soft program.
2. In the "Login" window, enter the following information:
 - user name (factory default: satel);
 - password (factory default: satel).
3. Configure the converter settings and define the subscribers.
4. Write the data to the converter.

4.3 MAIN WINDOW OF SMET-256 SOFT PROGRAM

Explanations for Fig. 3:

- 1 - „Configuration” window (see chapter: „CONFIGURATION” window).
- 2 - data reading from a file (function not available in the web browser window).
- 3 - data writing to a file (function not available in the web browser window).
- 4 - data reading from the converter.
- 5 - data writing to the converter.
- 6 - language selection.
- 7 - selection of the computer COM port for communication with the converter.
- 8 - connecting and disconnecting button for communication with the converter.
- 9 - reading and writing progress bar.

10 - failure indication icon. To see description of the failure hover the cursor over the icon. The grayed out icon means lack of failure.

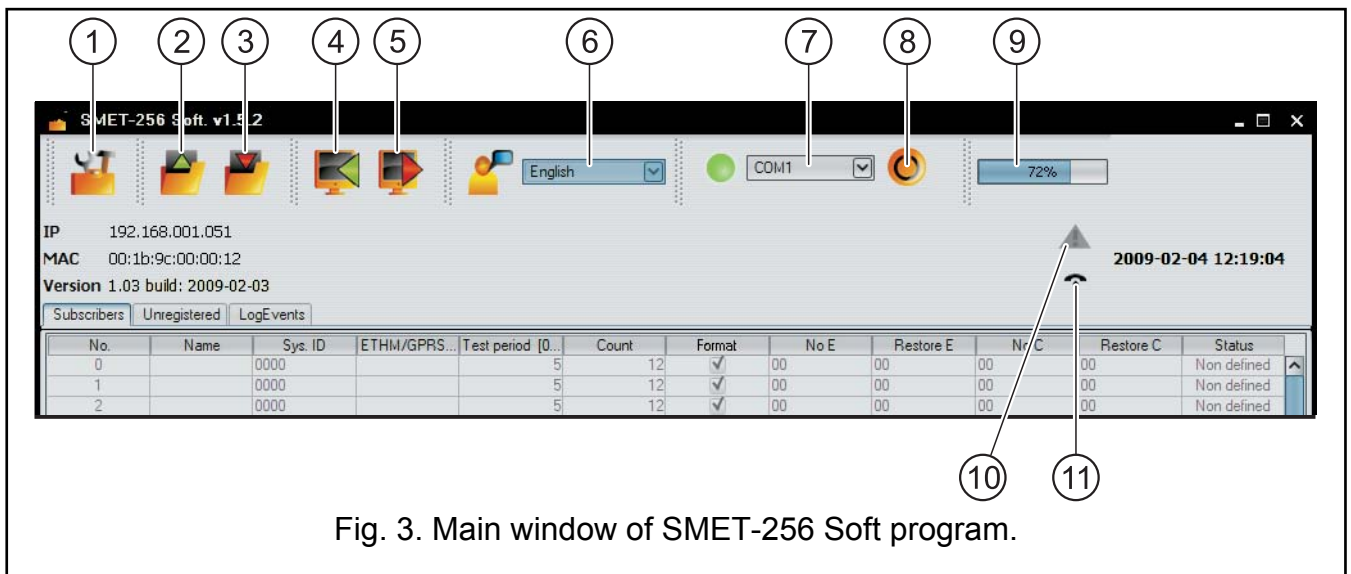






Fig. 3. Main window of SMET-256 Soft program.

11 - icon changes depending on the state of the telephone connection with reporting station:

-  – disconnected – ready state.
-  – calling.
-  – connection with the reporting station.
-  – emulation of telephone line disconnection caused by lack of the network cable.

In the window are also available three tabs described below.

4.4 "SUBSCRIBERS" TAB

No. – consecutive number.

Name – name assigned to the subscriber. It can be up to 10 characters long.

Sys. ID – enter in this field the system identifier defined in the device provided with reporting function (alarm control panel, GSM module). The identifier has the hexadecimal format (digits and letters from A to F).

Note: Using the digit 0 in the identifier is not recommended.

ETHM/GPRS key – enter in this field a sequence of 1 to 5 alphanumeric characters, identifying the device provided with reporting function (alarm control panel, GSM module). It must correspond to the key defined in this device for monitoring.

Test period [0-255] – define in this field the time between consecutive communication tests. Values from 0 to 255 seconds can be entered. To disable the communication test, enter 0. By default: 5 seconds.

Count – number of missing tests – determine in this field the number of unsuccessful communication tests, after which the converter will generate an event to inform about loss of communication with the device sending data through the TCP/IP network. Values from 1 to 15 can be entered. By default: 12.

For example, if value 6 is entered in the "Test period" field, and value 5 in the "Count" field, an event indicating loss of communication will be generated after 30 seconds (after 5 unsuccessful attempts, each of which will take place every 6 seconds).

Note: *Be careful when selecting parameters to be entered in the fields "Test period" and "Number of missing tests". Entering small values in both fields may result in loss of communication being frequently reported, which not necessarily must indicate actual communication troubles.*

Format – in this field you should select the format in which the converter generated events are to be sent (loss / restoration of communication with the device sending data through the TCP/IP network, loss / restoration of communication between the device sending data through the TCP/IP network and the control panel). There are the following formats to choose from:

- "Normal" – events will be sent in the format programmed in the "Outgoing format" field, "Reporting" tab, "Configuration" window. Two-character codes of these events must be entered manually in the following fields ("No E", "Restore E", "No C", "Restore C").
- Contact ID – the following codes will be sent:
 - No E – 1 350 01 000
 - Restore E – 3 350 01 000
 - No C – 1 354 01 000
 - Restore C – 3 354 01 000
- SIA – the following codes will be sent:
 - No E – YS
 - Restore E – YK
 - No C – YC
 - Restore C – YK.

By default, the Contact ID format is programmed for each subscriber.

No E – code denoting loss of communication with the device sending data through the TCP/IP network – if the "Normal" format has been selected, enter in this field 2 characters which will be sent to the reporting station if communication is lost.

Restore E – code denoting restoration of communication with the device sending data through the TCP/IP network – if the "Normal" format has been selected, enter in this field 2 characters which will be sent to the reporting station if communication is restored.

No C – code denoting loss of communication between the device sending data through the TCP/IP network and the control panel – if the "Normal" format has been selected, enter in this field 2 characters which will be sent to the reporting station if communication is lost.

Restore C – code denoting restoration of communication between the device sending data through the TCP/IP network and the control panel – if the "Normal" format has been selected, enter in this field 2 characters which will be sent to the reporting station if communication is restored.

Note: *In the fields "No E", "Restore E", "No C" and "Restore C", it is possible to use digits and letters from A to F. Entering 0 in any position means entering the single-digit code. By default, the "00" code is entered into all fields for each subscriber. This code is only sent in the Ademco Express format.*


Status – the field informs whether the subscriber has been defined, by means of the following pictograms:



- subscriber defined. In order to define the subscriber, it is sufficient to enter the data in the "Sys. ID" or "ETHM/GPRS key" field. If the "Status" field shows the "Defined" information, it also means that the converter controls communication with that subscriber in accordance with the rules defined in the "Test period" and "Count" fields.



- subscriber not defined.

 - subscriber defined, but there is currently no communication between the converter and the subscriber.

4.5 "UNREGISTERED" TAB

Displayed in the tab is information on receiving transmissions which are not coming from defined subscribers, but meet the following criteria:

- have been received after the connection with the converter and the SMET-256 Soft program was established;
- have been sent to the port and are coded with the key, both indicated in the "Reporting" tab, "Configuration" window, for the extended monitoring.

Receiving such transmissions may indicate that devices of those subscribers have already been configured for interacting with the converter, but the subscribers have not yet been added to the subscribers list.

The following information is displayed:

Time – the time when the last transmission was received.

Sys. ID – system identifier defined in the device provided with reporting function (alarm control panel, GSM module).

ETHM/GPRS key – ETHM or GPRS key defined in the device provided with reporting function (alarm control panel, GSM module).

Click the right-hand button on your mouse to display the menu with the following functions:

Add – based on the transmission selected, a new subscriber will be defined. The data contained in the received transmission will be automatically entered into the "Sys. ID" and "ETHM/GPRS key" fields. The other fields will be filled with default values or will remain blank.

Clear – the list of received transmissions will be erased.

Note: *No information on transmissions from the subscribers served in the simple mode is shown in the tab.*

4.6 „LOG EVENTS” TAB

Displayed in the tab are events received by the converter.

No. – consecutive number of the event.

Date – date and time when the event was received.

Ident. – identifier with which the event was received.

Description – depending on the format in which the events are sent:

- Contact ID – code and verbal description of the event,
- SIA – verbal description of the event,
- „Normal” – code.

S – event status:

- + –event sent to the monitoring station,
- –event waits to be sent to the station.

Note: *If the last event is marked, then the events list is refreshed without delay i.e., the list automatically skips up and the last incoming event is displayed.*

4.7 "CONFIGURATION" WINDOW

"Network" tab

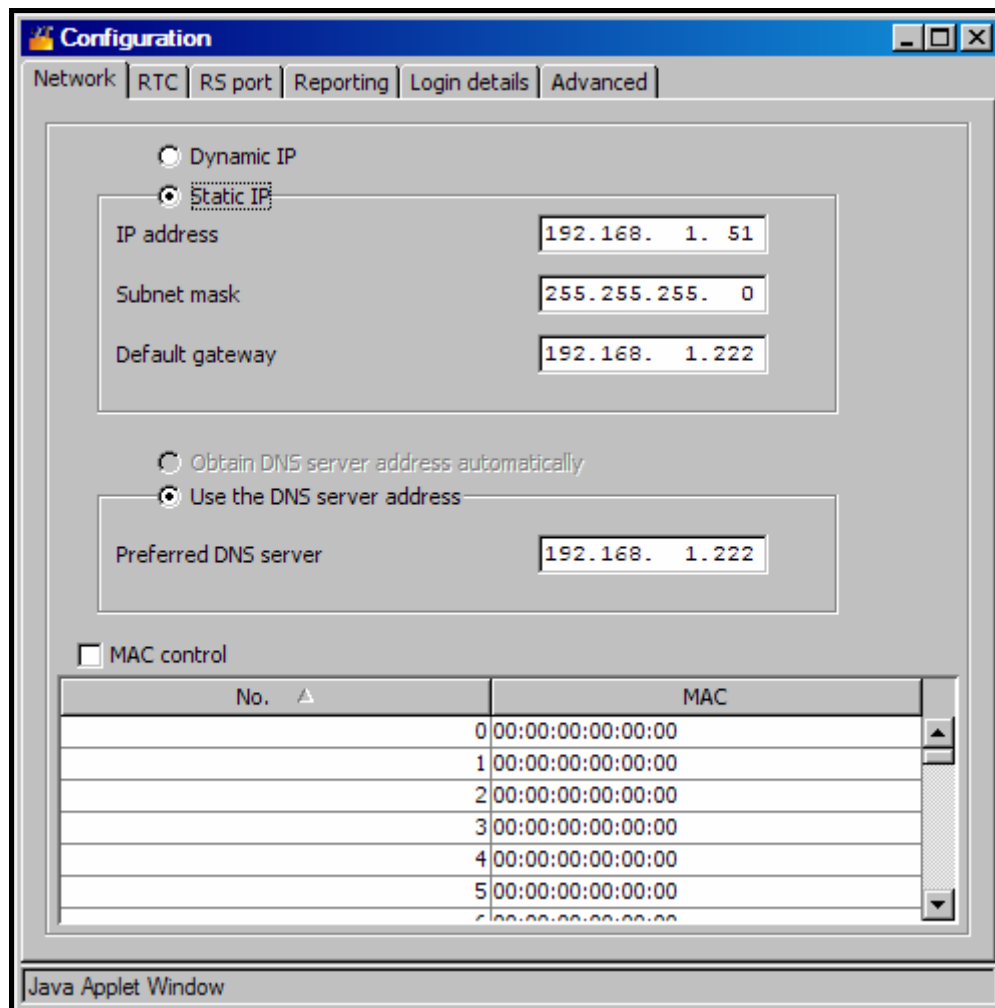


Fig. 5. The "Network" tab, "Configuration" window in the web browser (the window available in the SMET-256 Soft program differs only in graphic details).

Dynamic IP – select this option, if the data regarding the IP address, subnet mask and gateway are to be automatically downloaded from the DHCP server.

Static IP – select this option, if the data regarding IP address, subnet mask and gateway, and DNS server address will be entered manually.

IP address – IP address of the converter. The field is available when the "Static IP" field has been enabled.

Subnet mask – mask of the subnetwork in which the converter works. The field is available when the "Static IP" field has been enabled.

Default gateway – network gateway, i.e. IP address of the network device through which the other network devices communicate with Internet or other local networks. The field is available when the "Static IP" field has been enabled.

Get DNS server address automatically – the option is available when the "Dynamic IP" option is selected. If this option is selected, the DNS server address will be downloaded automatically.

Use DNS server address – select this option, if the data regarding the preferred DNS server will be entered manually.

Preferred DNS server – address of the preferred DNS server for the module. The field is available if the "Use DNS server address" option is selected.

MAC control – select this field if the converter is to receive transmissions only from the devices with defined MAC numbers. It will allow you to secure the converter against hacking attempts. The MAC numbers can be defined in the list below.

"RTC" tab

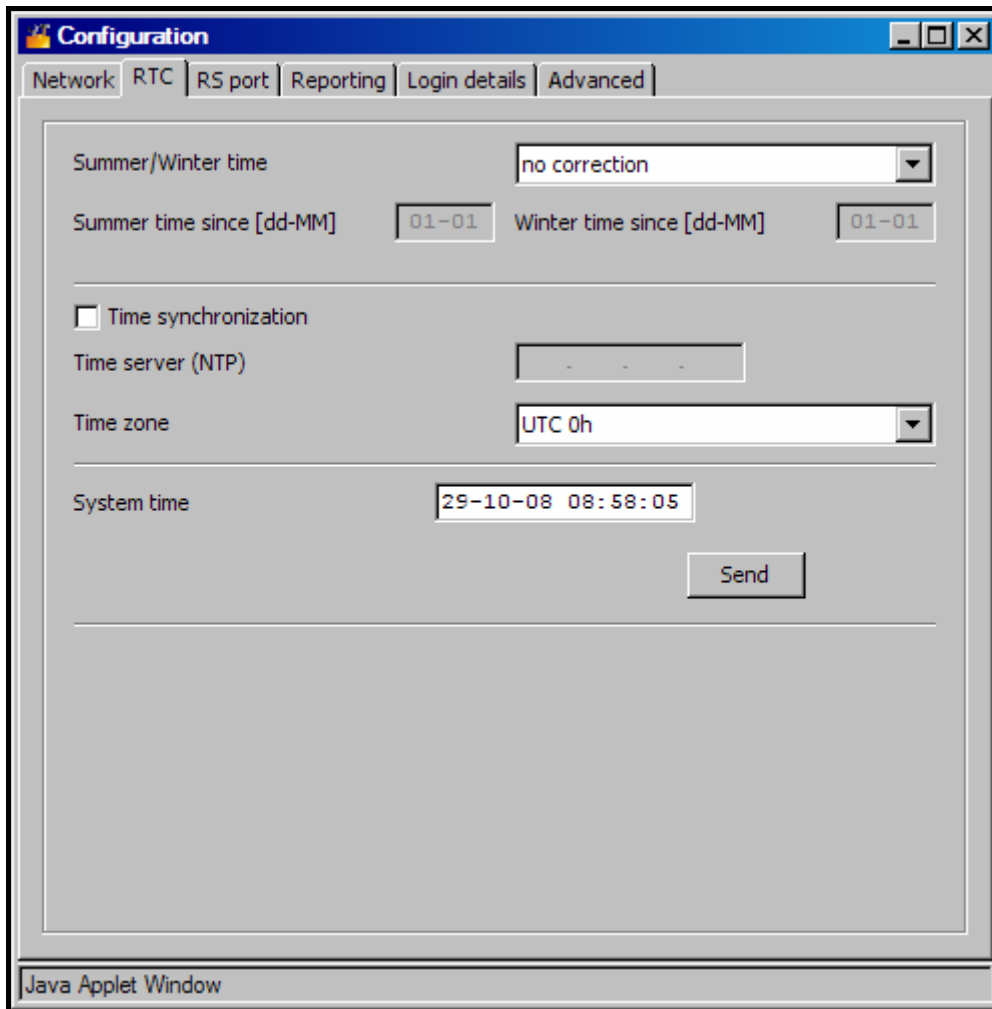


Fig. 6. The "RTC" tab, "Configuration" window in the web browser (the window available in the SMET-256 Soft program differs only in graphic details).

Summer/winter time – the converter can automatically correct the real-time clock settings when the time is changed from summer time to winter time or vice versa. You can choose from the following time correction schemes:

- no correction,
- by EU (by the European Union rules),
- by USA (by the United States' rules),
- by date + 1 hour (1-hour correction according to dates),
- by date + 2 hours (2-hour correction according to dates).

Summer time since – the field is available when the clock settings are to be corrected by 1 or 2 hours according to dates. Thus it is possible to enter the date (day, month) when the module clock is to be changed to the summer time (shifted forward).

Winter time since – the field is available when the clock settings are to be corrected by 1 or 2 hours according to dates. Thus it is possible to enter the date (day, month) when the module clock is to be changed to the winter time (shifted back).

Time synchronization – if this field is selected, the converter will automatically synchronize its clock with the server once every hour and after each restart. In case of failure, the converter will repeat the attempt of clock synchronization every 10 minutes.

Time server (NTP) – available, if the “Time synchronization” box is checked. In this field, enter the IP address of the time server which supports the NTP protocol.

Time zone – in this field, enter the time zone, i.e. the difference between the universal time (UTC) and the zone time.

System time – displayed in this field is the time based on the computer clock.

Send – click the button to write the time displayed in the "System time" field to the converter.

"RS port" tab

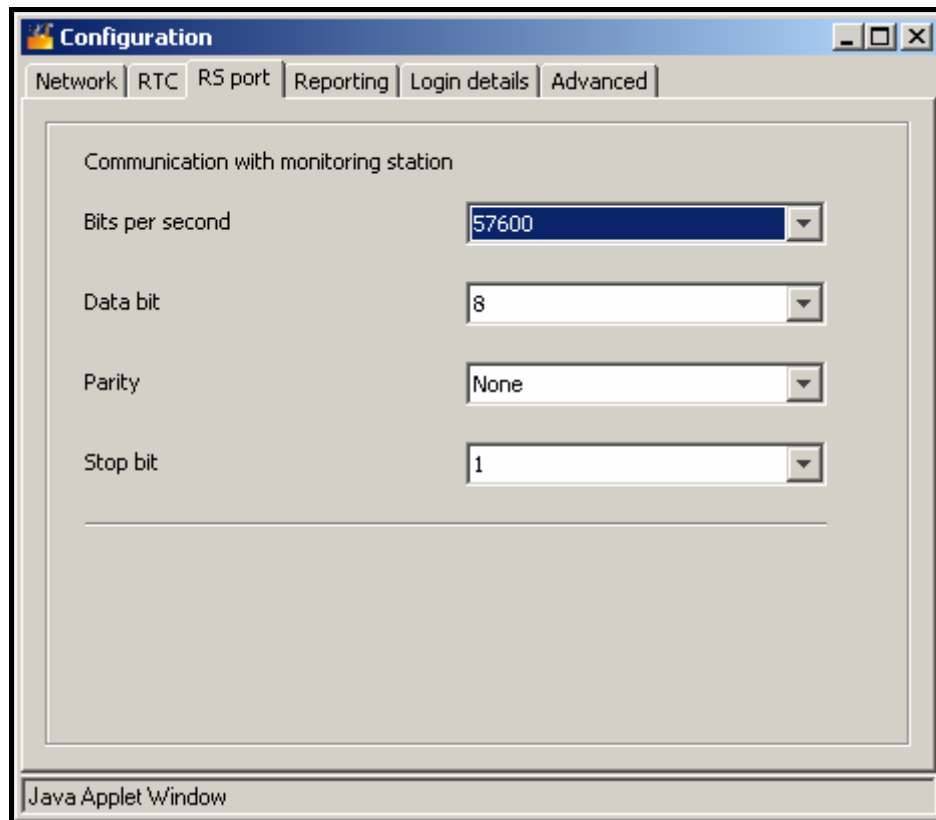


Fig. 7. The "RS port" tab, "Configuration" window in the web browser (the window available in the SMET-256 Soft program differs only in graphic details).

The settings in the tab apply to communication with the monitoring station.

Bits per second – transmission rate. The following values can be selected:

- 57600 [default setting]
- 38400
- 19200
- 9600
- 4800
- 2400
- 1200

Data bit – amount of data sent after the start bit. 6, 7 or 8 bits can be sent. By default: 8.

Parity – parity check, i.e. checking the number of bits of value 1 in data bits. The following settings can be selected:

- None [default setting]
- Even
- Odd

Stop bit – stop bit length. You can choose the value 1 or 2. By default: 1.

"Reporting" tab

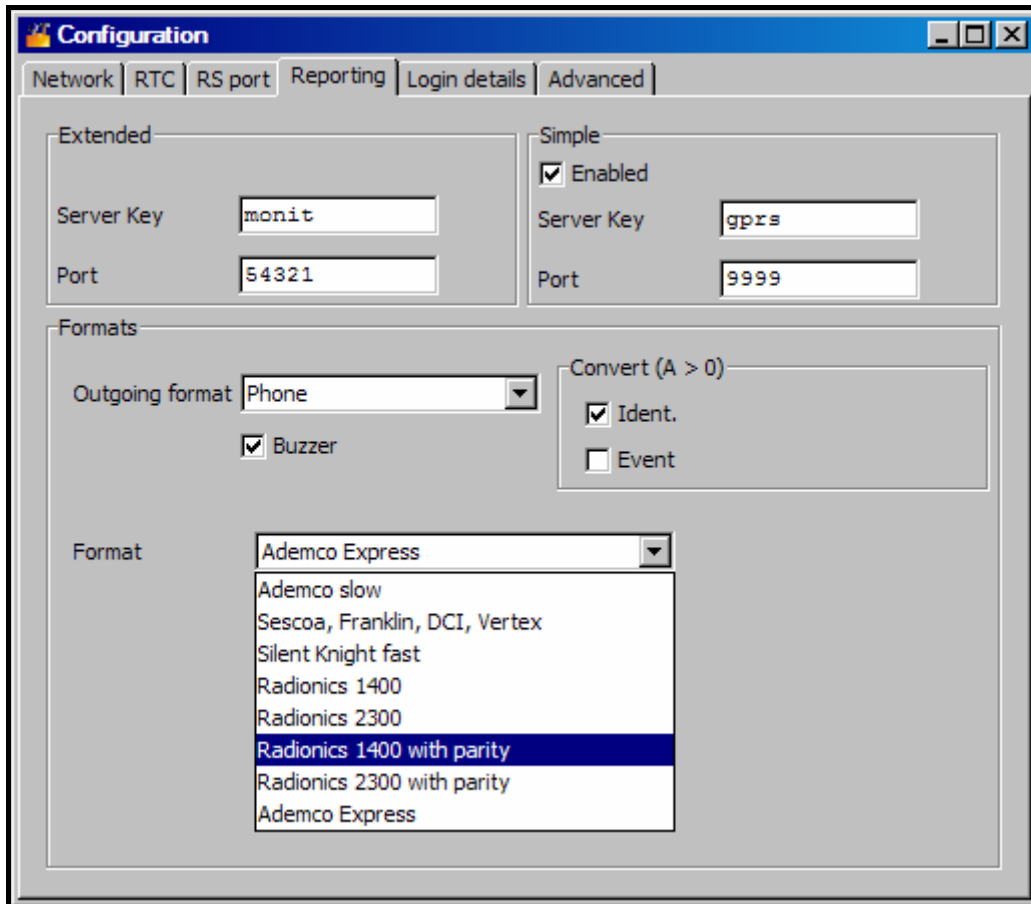


Fig. 8. The "Reporting" tab, "Configuration" window in the web browser (the window available in the SMET-256 Soft program differs only in graphic details).

Extended

Parameters defined in this area apply to subscribers served in the extended mode, i.e. with communication control. Data of such subscribers must be defined in the "Subscribers" tab.

Note: For the subscribers served in the extended mode, you must define appropriately the following parameters: "Test period" (we recommend the maximum value, i.e. 255 seconds) and "Count" (we recommend the maximum value, i.e. 3).

Server key – in this field, enter a sequence from 1 to 12 alphanumeric characters to determine the key for data coding during communication. The identical server key must be entered in the settings for monitoring the subscriber's device. By default: abcde.

Port – in this field, enter the number of network port to be used for communication. Values from 1 to 65535 can be entered. The value must be different from that entered for the other ports. The identical port number must be entered in the settings for monitoring the subscriber's device. By default: 12345.

Simple

Parameters defined in this area apply to subscribers served in the simple mode, i.e. without communication control.

Enabled – when this box is selected, the converter will be able to handle subscribers in the simple mode.

Server key – the field is available, if the "Enabled" box is checked. Enter in this field a sequence from 1 to 12 alphanumeric characters to determine the key for data coding

during communication. The identical server key must be entered in the settings for monitoring the subscriber's device. By default: edcba.

Port – the field is available, if the “Enabled” box is checked. Enter in this field the number of network port to be used for communication. Values from 1 to 65535 can be entered. The value must be different from that entered for the other ports. The identical port number must be entered in the settings for monitoring the subscriber's device. By default: 54321.

Note: *In the case of the simple mode, the SMET-256 converter version 1.07 or higher, after receiving every event, will check whether the subscriber from which the event has been received, is on the list of subscribers assigned to the extended mode. If the subscriber is present on the list, the converter will extend the time of communication with the given subscriber.*

Formats

Parameters defined in this area apply to the method of transmitting data to the monitoring station.

Outgoing format – in this field, define the output format of data to be sent to the monitoring station. One of the following formats can be selected:

- Phone [default setting]
- VISONIC (RC4000)
- SurGuard (MLR2/MLR2E)
- RSM-02

Buzzer – check this box if receiving a transmission by the converter is to be audibly signaled.

Conversion (A>0)

Parameters defined in this area apply to all events sent to the monitoring stations, except for the SIA format.

Ident. – select this field, if the letter A in the identifier of event sent to the monitoring station is to be changed to the digit 0, so that the station can decode it properly.

Event – select this field, if the letter A in the code of event sent to the monitoring station is to be changed to the digit 0, so that the station can decode it properly.

Format – this field is available, if "Phone" has been selected in the "Outgoing format" field. It allows you to select one of the telephone monitoring formats in which events will be sent to the monitoring station. The following formats are available:

- Ademco slow
- Sescoa, Franklin, DCI, Vertex
- Silent Knight fast
- Radionics 1400
- Radionics 2300
- Radionics 1400 with parity
- Radionics 2300 with parity
- Ademco Express

Note: *Events received in the Contact ID format or SIA are sent to the reporting station in the same format.*

Receiver No. [1-99] – the field is available, if the VISONIC (RC4000) or RSM-02 format has been selected. Enter in it the number of receiver the data transfer from which is simulated by the converter. Values from 1 to 99 can be entered. By default: 1.

Receiver No. [1-9] – the field is available, if the SurGuard (MLR2/MLR2E) format has been selected. Enter in it the number of receiver the data transfer from which is simulated by the converter. Values from 1 to 9 can be entered. By default: 1.

Line No. [1-9] – the field is available, if the VISONIC (RC4000) format has been selected. Enter in it the number of line the data transfer from which is simulated by the converter. By default: 1.

Line No. [1-99] – the field is available, if the SurGuard format has been selected. If the number is between 1-9, then the SurGuard MLR2 format is chosen, if the number is between 10-99, then the SurGuard MLR2E format is chosen. Enter in it the number of line the data transfer from which is simulated by the converter. By default: 1.

Test period [0-255] – the field is available, if the SurGuard (MLR2/MLR2E) format has been selected. This parameter is used for the control of communication with monitoring station. The time is to be defined in seconds. Values from 0 to 25 can be entered. By default: 10.

Code list – the list is displayed, if the SurGuard (MLR2/MLR2E) format has been selected. It enables the event type to be defined, depending on the first character of event code.

Test transmissions – the field is available, if the RSM-02 has been selected. Select this field to activate the function of testing connection between the converter and the monitoring station. By default: selected.

"Login details" tab

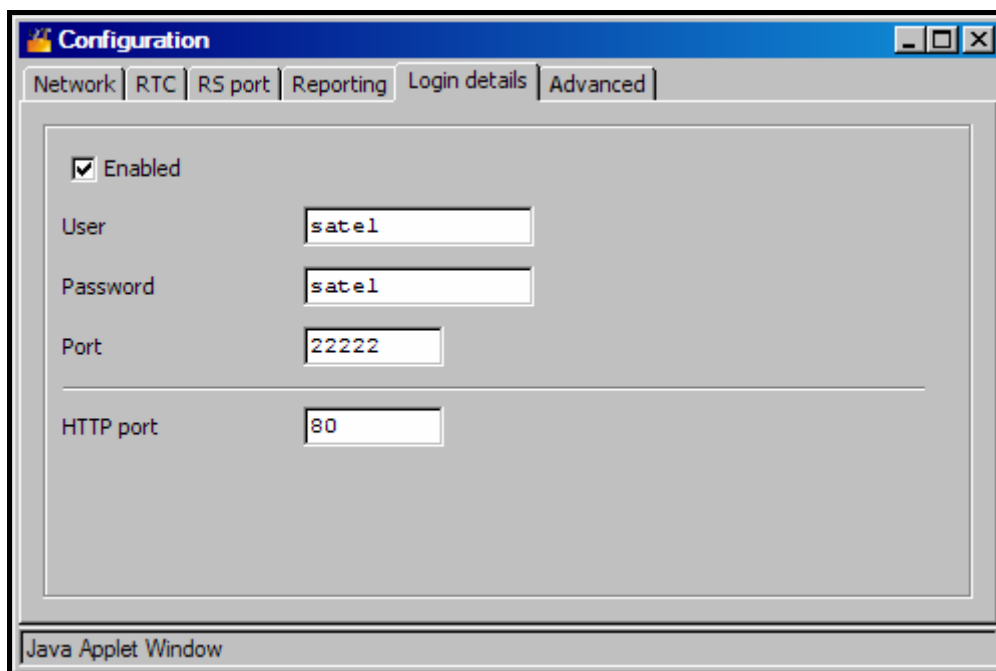


Fig. 9. The "Login details" tab, "Configuration" window in the web browser (the window available in the SMET-256 Soft program differs only in graphic details).

Enabled – select this box to enable the device to be configured in the web browser. At the same time it will activate all the fields relating to login via the web browser.

User – user name. It is required to log in to the device configuration in the web browser. By default: satel.

Password – user code. It is required to log in to the device configuration in the web browser. By default: satel.

Port – in this field, enter the number of network port to be used for communication with the computer. Values from 1 to 65535 can be entered. The value must be different from that entered for the other ports. By default: 22222.

HTTP port – in this field, enter the number of network port to be used for opening the web browser. Values from 1 to 65535 can be entered. The value must be different from that entered for the other port. By default: 80.

Note: *By default, the port 80 in the computer is intended for the web browser. If a different port is set in the converter, enter a colon and the port number after the converter IP address entered in the web browser.*

"Advanced" tab

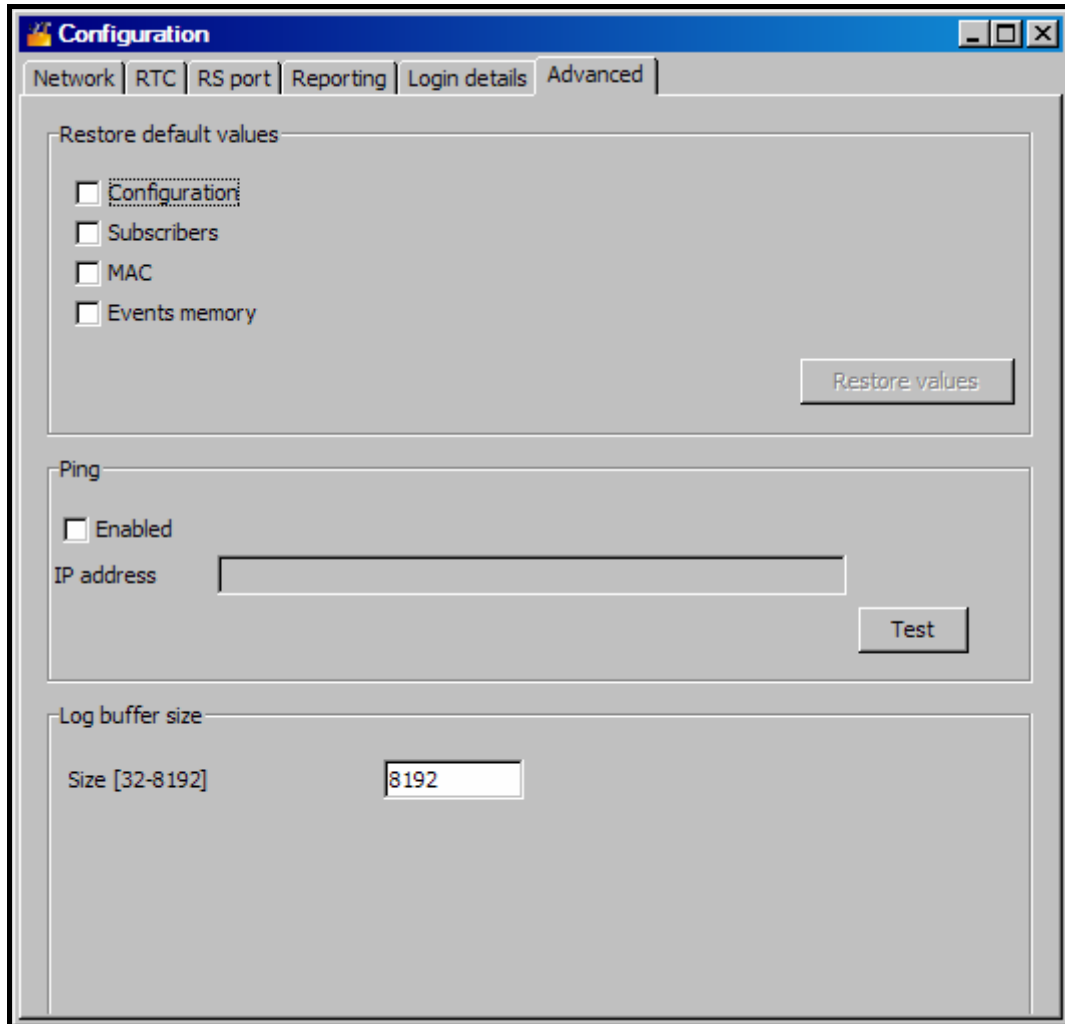


Fig. 10. The "Advanced" tab, "Configuration" window in the web browser (the window available in the SMET-256 Soft program differs only in graphic details).

Restoring factory default settings

The parameters defined in this area will restore the converter factory settings.

Configuration – when you select this box and click on the "Restore values" button, all parameters and settings in the "Configuration" window will be restored to their default values, except for the MAC address list defined in the "Network" tab.

Subscribers – when you select this box and click on the "Restore values" button, all data in the "Subscribers" tab will be erased.

MAC – when you select this box and click on the "Restore values" button, the list of MAC addresses defined in the "Network" tab will be erased.

Events memory – when you select this box and click on the "Restore values" button, you will clear the events memory, i.e. all the events the receipt of which has been acknowledged by the converter, but which have not yet been sent to the monitoring station. Also, the device restart will take place.

Ping

The parameters defined in this area will activate the function of ping command sending.

Enabled – select the box to activate the ping command sending function. The converter will be sending the ping command every 1 minute to the defined TCP/IP address and then waiting for an answer. It can thus monitor correctness of the TCP/IP connection. If no answer comes within 5 seconds, the converter will repeat the command. After five unsuccessful attempts, restart of the device will follow. After five restarts, the "No answer to ping" trouble will be reported by the converter. If the buzzer activation option is selected (see: the "Reporting" tab), the trouble will be audibly signaled. The converter restart will not follow if there is an active connection with the SMET-256 Soft program, used for configuration of the device.

IP address – the field is available if the ping command sending option is enabled. Enter in this field the IP address or domain name to which the ping command will be sent by the converter.

Test – button enabling the connection test to be manually initialized by using the ping command. When the button is pressed, the converter will send the ping command to the defined IP address. If a positive answer is received, the "Ping OK" message will be displayed. If no answer is received, the "No ping answer" message will be displayed.

Buffer event size

Parameters defined in this area are used for configuring the memory of events. It is possible to determine the number of bytes of received events, after reaching of which the device will report the "Events memory full" trouble and will stop receiving new events. Selecting this option will prevent the occurrence of situation in which an excessive number of events would be confirmed by the device, but would not be forwarded further.

Size [32-8192] – set in this field the number of bytes of events, after reaching of which the device will report the "Events memory full" trouble. Values from 32 to 8192 can be entered. By default: 8192. It is recommended that the maximum value be set.

Note: *It is recommended to clean the buffer memory:*

- *after each change of the buffer size,*
- *after each update of the firmware.*

"Program settings" tab

The tab is only available in the SMET-256 Soft program.

Connection

Parameters defined in this area determine the way of communication between the converter and the computer.

RS port – if this option is selected, communication will be effected by means of the RS-232 port. By default, the option is selected.

TCP/IP – if this option is selected, communication will be effected by means of the TCP/IP network.

Address – IP address of the converter with which communication is to be established.

Port – number of the port through which communication with the converter is to be effected.

Notes:

- *After the way of communication has been changed, the program must be restarted.*

- The IP address and port defined in the "Program settings" tab may be different from the IP address of the converter programmed in the "Network" tab and the port programmed in the "Login details". This will depend on whether the communication will be established within the same local network, or within a public network.

Appearance and style

Parameters defined in this area are used for programming the appearance of windows displayed in the SMET-256 Soft program. There are two graphic styles available in the program, i.e. "BusinessBlackSteel" and "Windows". For the changes to take effect, select the appropriate field, click on the "Apply" button and restart the program.

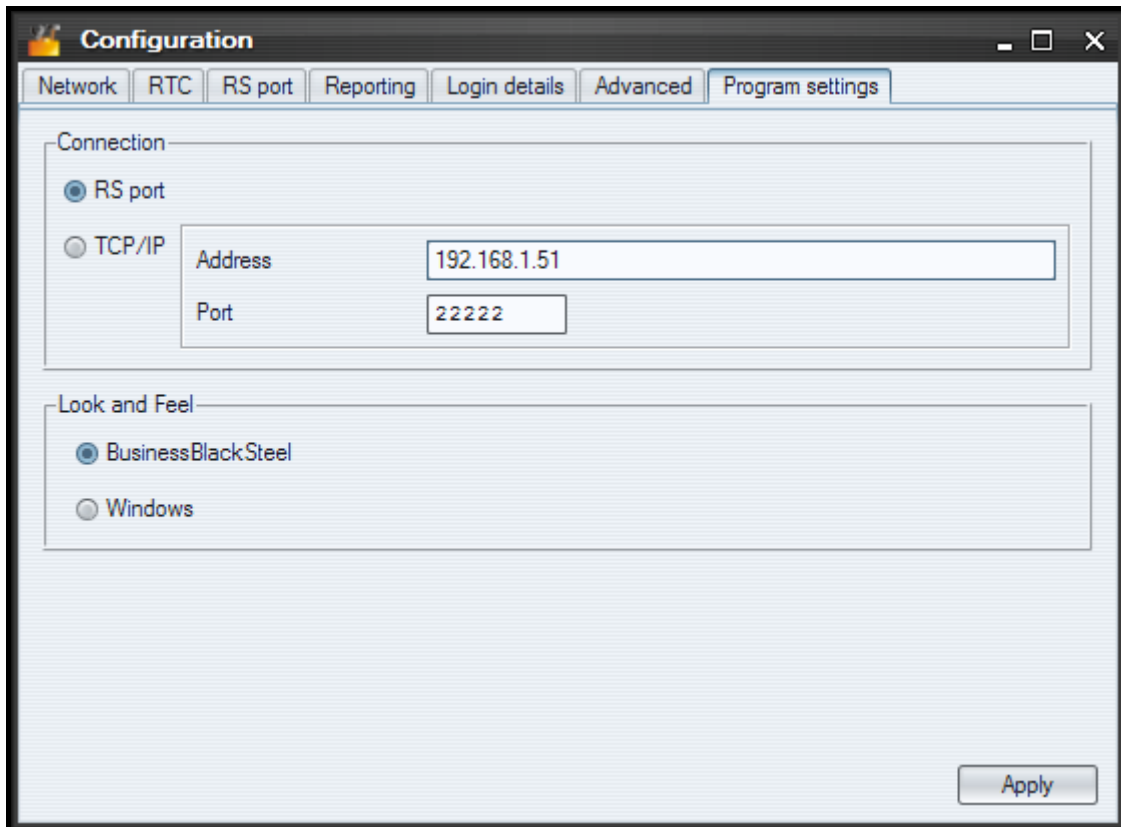


Fig. 11. "Program settings" tab, "Configuration" window in the SMET-256 Soft program (the window is not available in the web browser).

5. SPECIFICATIONS

Power supply	12 V DC / 750 mA
Working temperature range (Class I):	+5...+40 °C
Enclosure dimensions.....	125x114.5x31 mm
Weight incl. accessories	300 g

The latest EC declaration of conformity and certificates are available for downloading on our website www.satel.pl



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