ETHERNET-TELEPHONE CONVERTER FOR MONITORING STATION

SMET-256

USER MANUAL

CE

smet256_e 02/07

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The Ethernet-telephone converter has been designed to enable reporting via Ethernet network to the telephone monitoring stations. The device is a TCP/IP server, the purpose of which is to receive transmissions sent by alarm control panels fitted with the Ethernet module of SATEL's manufacture. The received events are then converted into one of the telephone transmission formats and sent through telephone cable to the monitoring station.

1. CONVERTER FEATURES

- Support of static / dynamic IP address.
- Emulation of analog telephone line.
- Handling up to 256 subscribers.
- Events sent from the control panel in Contact ID format are transmitted in the same format to the monitoring station.
- Events sent from the control panel in formats other than Contact ID are converted into the selected transmission format and sent over to the monitoring station. The monitoring station operators can choose one of the following formats:
  - Silent Knight, Ademco slow
  - Sescoa, Franklin, DCI, Vertex
  - Silent Knight fast
  - Radionics 1400 Hz
  - Radionics 2300 Hz
  - Radionics with parity 1400 Hz
  - Radionics with parity 2300 Hz
  - Ademco Express
- Configuring converter and defining subscribers by means of the SMET-256 Soft program, added to the device free of charge.
- Detection of missing Ethernet network cable. If there is no cable, the converter emulates a telephone line failure.
- Checking communication with Ethernet module. If there is no communication, the converter will generate an event.
- Checking communication between Ethernet module and the alarm control panel. If there is no communication, the converter will generate an event.
- 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

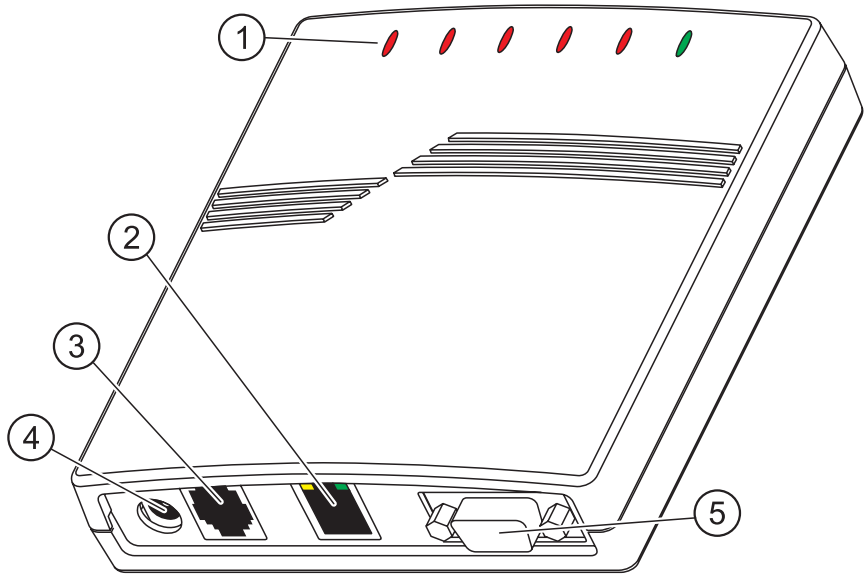

Figure 1. Ethernet-telephone converter for monitoring station.

Explanations for Fig. 1:

1 – **LED indicators:**

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

ST – **status indicator:**

- ON – converter running properly
- blinking fast – replacement of converter firmware
- momentarily dimming – wrong converter configuration data (also on the first-time run, before configuration)

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

OH – **monitoring station connection indicator:**

- ON – connection to the monitoring station
- blinking – timeout of monitoring 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 LED indicators. The green one indicates network connection and data transmission, and the yellow one - network transmission rate (10Mb/100Mb).

3 – **RJ-11 socket** for connection of the telephone cable, connecting the converter to the monitoring station.

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

5 – **RS-232 socket** for connection of the converter with the computer.

3. CONVERTER INSTALLATION

In order to install the converter, do the following:

1. Connect the Ethernet network cable to the RJ-45 socket.
2. Using telephone cable, connect the RJ-11 converter socket with the monitoring station.
3. Connect the RS-232 converter port with the computer serial COM port (the connection is required as long as the device is being programmed).
4. Connect power supply.
5. Start the SMET-256 Soft program in the computer and use it to configure the converter settings and define the subscribers, from whom event transmissions are to be received.
6. After converter settings are configured and subscribers defined, the device is ready for operation.

4. INSTALLATION OF SMET-256 SOFT PROGRAM

Insert the CD with installation program into the CD-ROM drive. After a while, a splash screen should appear. Click on the command of SMET-256 Soft program installation, select the program language version and follow the instructions.

If the splash screen fails to appear after the disk is inserted into the CD-ROM drive, the autostart function of your CD-ROM must have been disabled. If this is the case, click twice on the „My computer” icon and, after the resource window opens, on the CD-ROM icon. There is the **smetinst.exe** file on the installation disk. Open it, e.g. by clicking on it twice, to bring up the splash screen.

5. SMET-256 SOFT PROGRAM

The program, designed to work in Windows environment, makes it possible to configure converter settings and define subscribers which are to be handled.

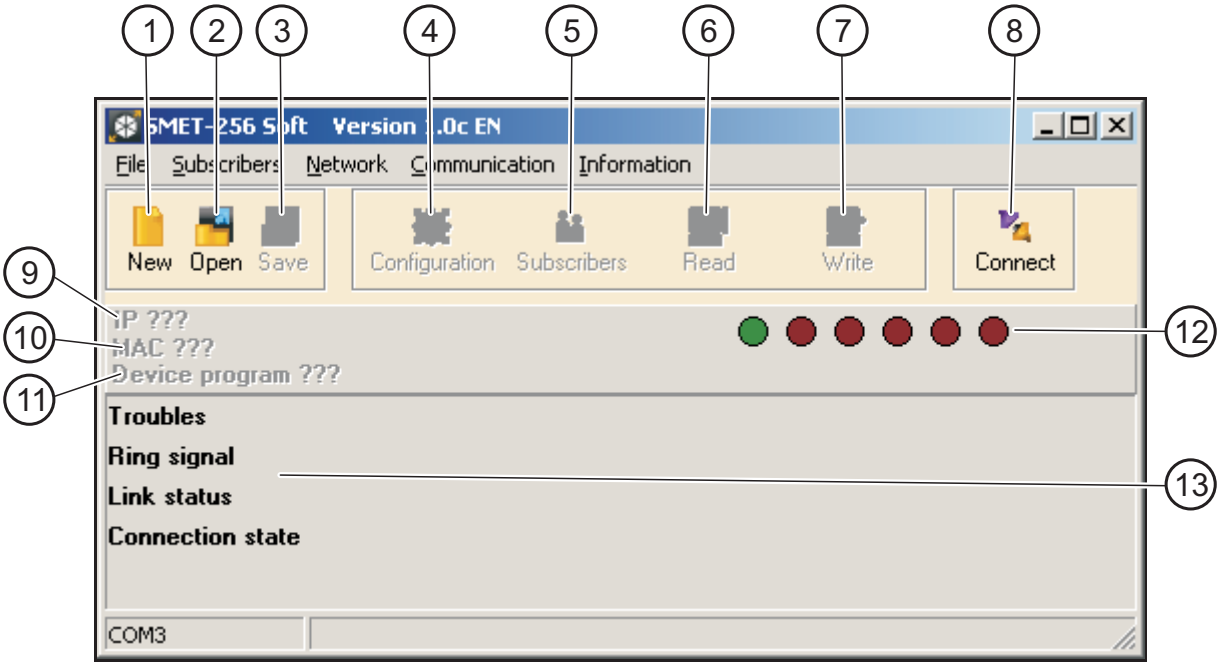

Figure 2. Main window of SMET-256 Soft on starting the program.

Explanations for Fig. 2:

1 – **New** – creating a new data file.

2 – **Open** – opening an existing data file.

3 – **Save** – saving the data file to disk. The button is available after downloading data from the converter or modifying the file data.

4 – **Configuration** – opening the „Network parameters configuration" window. The button is available after downloading data from the converter, or creating a new data file, or opening an existing one.

5 – **Subscribers** – opening the „Defining subscribers" window. The button is available after downloading data from the converter, or creating a new data file, or opening an existing one.

6 – **Download** – downloading data from the converter. The button is available after establishing connection with the converter.

7 – **Write** – writing data to the converter. The button is available after establishing connection with the converter.

8 – **Connect** – establishing connection with the converter. Before connection is established, it is necessary to indicate the computer COM port through which communication is to be effected. After connection is established, the button name will change to „Disconnect". Press the button to terminate communication with the converter (see Fig. 3).

9 – **IP** – IP address of the converter. Displayed after network parameters of the device are configured (see Fig. 3).

10 – **MAC** – MAC number of the converter. Displayed after connection with the converter is established (see Fig. 3).

11 – **Device program** – converter firmware version and compilation data. Information displayed after connection with the converter is established (see Fig. 3).

12 – Graphical visualization of the converter LED indicators. The LED status is shown after establishing connection.

13 – Additional information on status and performance of the device. Displayed after connection is established.

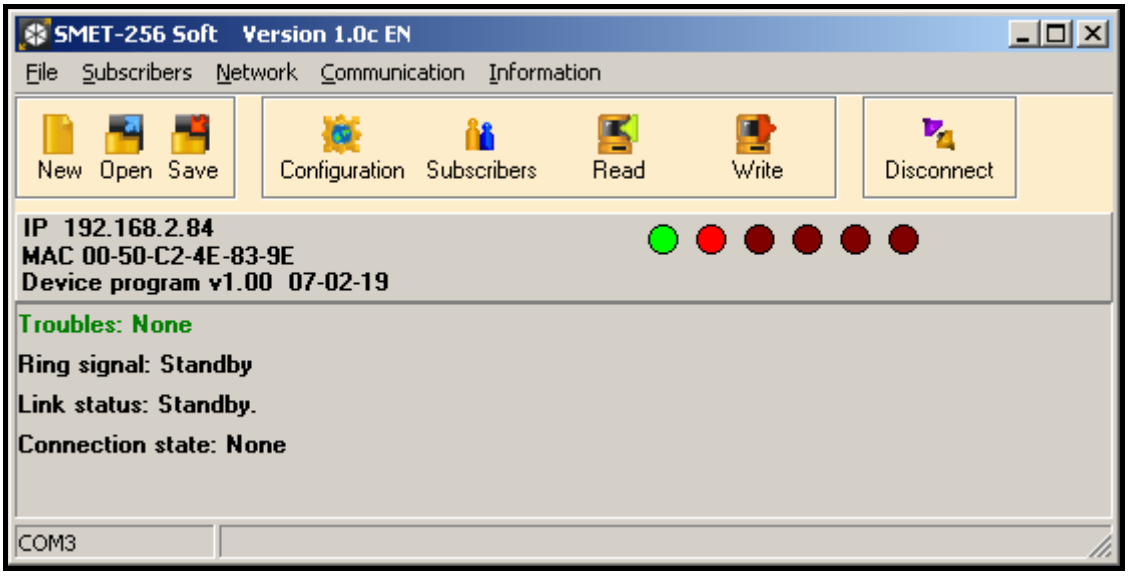

Figure 3. Main window of SMET-256 Soft program after connection is established with converter.

5.1 CONFIGURATION OF NETWORK PARAMETERS

Define in this window the converter network settings, data receiving parameters (data encoding method and number of network port through which communication is to be effected), as well as transmission format in which received events will be sent to the monitoring station.

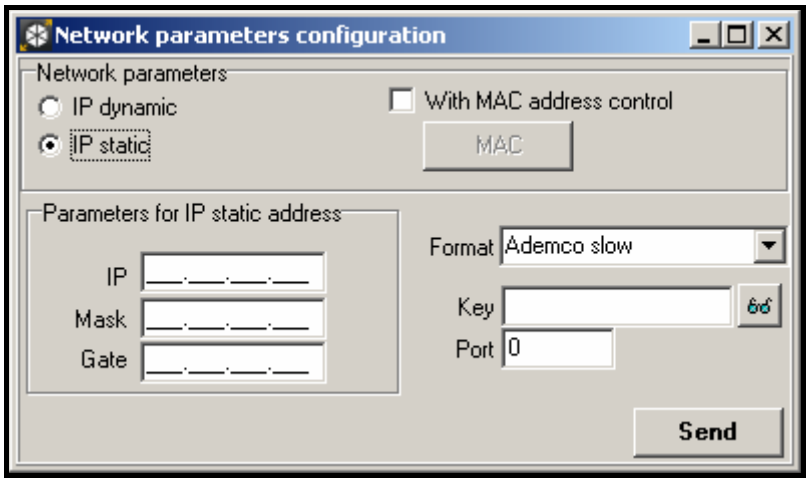

Figure 4. „Network parameters configuration" window before entering data.

IP dynamic – select this field, if the IP address is assigned dynamically and the converter is to automatically download data regarding IP address, subnet mask and gateway from the DHCP server.

IP static – select this field, if the data regarding IP address, subnet mask and gateway will be entered by the station operating personnel.

With MAC address 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 device against hacking attempts. To define the MAC numbers, press the „MAC" button.

MAC – press the button to open a window in which you can define MAC numbers for the devices from which the converter is to receive transmissions. 260 MAC numbers can be defined. The button is available when the „With MAC address control" option is enabled.

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

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

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 „IP static" field has been enabled.

Format – the field permits selection of the transmission format in which events will be sent to the monitoring station, unless they have been received in the Contact ID format. The following formats are available:

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

Note: *Events received in the Contact ID format are sent to the monitoring station in the Contact ID format.*

Key – enter in this field a sequence of 1 to 12 alphanumeric characters to define the key to be used for coding data during communication. The sequence must be identical to that entered in the monitoring settings for INTEGRA control panels as the „Server key". To see the value entered, click on the  button, situated next to the field.

Port – enter in this field the number of the network port through which communication is to be effected. Values from 1 to 65535 can be entered. The number must be identical to that entered in the monitoring settings for INTEGRA control panels.

Send – the button enables the defined parameters to be written to the converter.

5.2 DEFINING SUBSCRIBERS

Enter in this field the data referring to subscribers from whom the converter will receive transmissions.

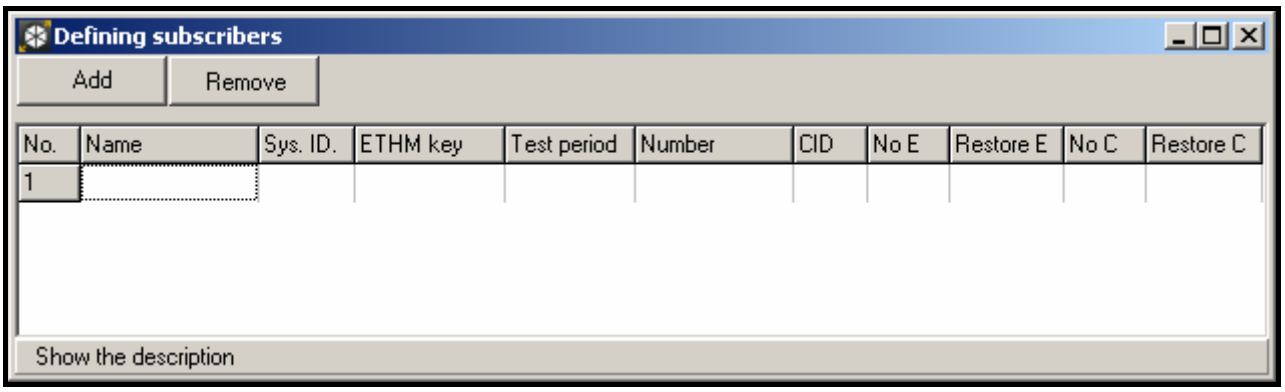

Figure 5. „Defining subscribers" window before entering data.

Add – the key allows another subscriber to be added to the list.

Delete – the key removes the selected subscriber from the list.

No. – consecutive number.

Name – name assigned to the subscriber. The name is not saved in the converter, but only in the converter data file on the computer disk.

ID Sys. – enter in this field the system identifier defined in the subscriber's control panel.

ETHM key – enter in this field a sequence of 1 to 5 alphanumeric characters, identifying the Ethernet module. It must be consistent with the ETHM key defined in the subscriber's control panel.

Test period – 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.

Number – 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 Ethernet module. Values from 1 to 15 can be entered.

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.*

CID – Contact ID – select the field if the converter generated events (loss / restore of communication with the Ethernet module, loss / restore of communication between the Ethernet module and the control panel) are to be sent in Contact ID format. If the field is not selected, they will be sent in the format indicated in the „Network parameters configuration" window. The codes of these events should then be entered in the next fields („No E", „Restore E", „No C", „Restore C").

No E – Code denoting loss of communication with the ETHM module – if the „CID" field is not selected, enter in this field 2 characters which will be sent to the monitoring station if communication with the Ethernet module is lost.

Restore E – Code denoting restoration of communication with the ETHM module – if the „CID" field is not selected, enter in this field 2 characters which will be sent to the monitoring station if communication with the Ethernet module is restored.

No C – Code denoting loss of communication between the ETHM module and the control panel – if the „CID" field is not selected, enter in this field 2 characters which will be sent to the monitoring station if communication between the ETHM module and the control panel is lost.

Restore C – Code denoting restoration of communication between the ETHM module and the control panel – if the „CID" field is not selected, enter in this field 2 characters which will be sent to the monitoring station if communication between the ETHM module and the control panel 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.*

6. TRANSMISSIONS FROM UNREGISTERED SUBSCRIBERS

If the program is connected to the converter and the „With MAC address control" option is not enabled, it is possible to display a special window with information on subscribers which are not defined, but transmissions from which:

- were received from the moment of establishing connection with the converter,
- were sent to the port defined in the „Network parameters configuration" window,
- were coded with the key defined in the „Network parameters configuration" window.

Receiving such transmissions may indicate that control panels of these subscribers have already been configured to interact with the converter, but have not been added to the subscribers' list yet.

In order to open the „Transmissions from unregistered subscribers" window, click on „Subscribers" on the toolbar, and, when the menu opens, select „Unregistered subscribers" (see Fig. 6).

Figure 6. Opening „Unregistered subscribers" window.

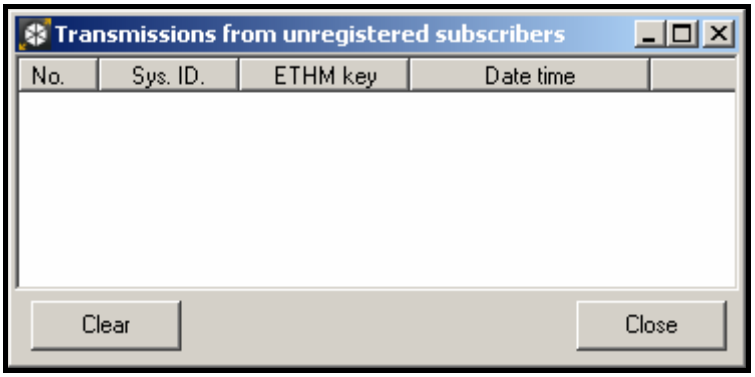

Figure 7. „Transmissions from unregistered subscribers" window.

The „Transmissions from unregistered subscribers" window displays the following information:

No. – consecutive number.

ID Sys. – system identifier defined in the subscriber's control panel.

ETHM key – the ETHM key defined in the subscriber's control panel and used to identify the Ethernet module.

Date, time – date and time when transmission is received.

You can reset the window content by pressing the „Clear” button. The content will be reset automatically when the connection with the converter is completed.

7. TECHNICAL DATA

Recommended power supply ..... 12V DC / 750mA

Working temperature range (Class I): .....+5° do +40°C

Housing dimensions 125x114.5x31mm

Weight incl. accessories 300g

The latest EC declaration of conformity and product approval certificates can be downloaded from our web site **www.satel.pl**	CE

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