

USER'S MANUAL

485COM Monitor

for 485COM FW 2.x (MODBUS)

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1. Installation

1.1 Operating systems support

- Microsoft Windows XP (SP3)
- Microsoft Windows Vista (SP2)
- Microsoft Windows 7

1.2 USB modems support

- Huawei K3765
- Huawei E173

1.3 USB modem installation

1. Insert the USB modem into a USB port – an external disc with the drivers will be mapped.
2. Run the file **DriverSetup.exe** from this disc, the file will install all necessary USB modem drivers.

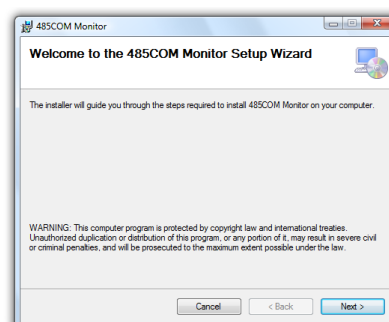
If you install a USB modem with a dashboard of some mobile operator or some automatic installation will start to run then finish this installation and do not install any other software except of the USB modem driver.

Use the file **DriverUninstall.exe** to uninstall the USB modem.

1.4 Installation of the application

We recommend that you install the USB modem before the installation of the 485COM Monitor application.

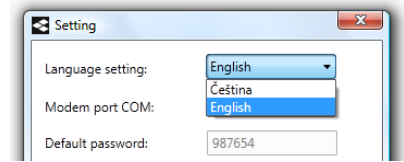
1. Run **setup.exe** file from the installation directory.
2. Follow the on screen instructions that will guide you through the installation.



2. Setting

2.1 Language setting

1. Click the **Setting** icon on the main screen – the **Setting** dialog box will appear.
2. Choose the required language in the **Language setting** field.
3. Click the **OK** button to confirm the chosen language.



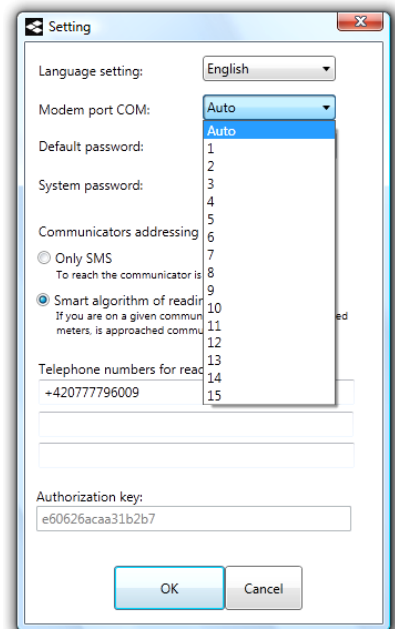
We recommend to restart the computer after changing the language.

2.2 COM port modem setting

This option allows you to choose the COM port of an installed modem. If the modem is installed correctly, it will automatically detect itself when selecting **Auto**. The COM port status is indicated in the bottom left corner of the main screen (the modem is detected if the port number and OK is displayed).

In case there occur any problems during the modem installation you can select the COM port manually. You must restart the application after changing the port.

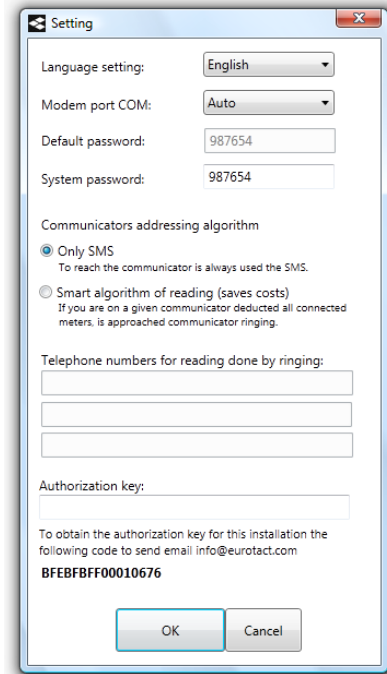
1. Click the **Setting** icon on the main screen – the **Setting** dialog box will appear.
2. Choose the required value in the **Modem port COM** field.
3. Click the **OK** button for confirmation.



2.3 System password setting

This option allows you to set a system password that will be used for safety communication with the communicators and will replace the default password.

1. Click the **Setting** icon on the main screen – the **Setting** dialog box will appear.
2. Type the system password in the **System password** field.
3. Click the **OK** button for confirmation.



2.4 Algorithm for addressing the communicators

The option of algorithm for addressing the communicators is one of the most important setting, which decides how the whole system will communicate.

- **Only SMS:** in case of choosing this algorithm the communicator addressing (reading request) will be done only via SMS. In this case the communicator does not need to know the authorized telephone number for reading via ringing nor the addresses and electrometer registers, because these data are contained in the SMS reading request. In this case it is sufficient to change only the system password for communicator configuration.

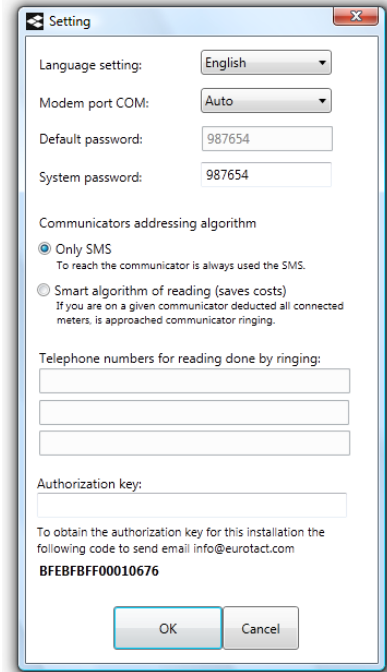
Example: if there are connected 2 electrometers to one communicator and you request a reading of both electrometers, 1 SMS with 2 addresses will be sent to the communicator and the communicator will answer with 2 SMS's with reading - **altogether 3 SMS's.**

- **Smart algorithm (saves cost):** in case of choosing a smart algorithm the system will decide by itself when it is necessary to send SMS with a reading request and when it is more convenient to reach the communicator via ringing and save the cost this way. The addressing via ringing is used whenever there are on a given communicator read all connected electrometers and it is not necessary to address a concrete electrometer from more connected. An SMS will be sent if it is necessary to point the request to a concrete electrometer from more connected. This solution is more demanding on the system configuration, but it saves cost during the operation.

Example: if there are connected 2 electrometers to one communicator and you request a reading of both electrometers the communicator will be reached by ringing and the communicator will answer with 2 SMS's with reading – **altogether 2 SMS's.**

Addressing algorithm setting

1. Click the **Setting** icon on the main screen – the **Setting** dialog box will appear.
2. Select the required algorithm under the **Communicators addressing algorithms**.
3. If you choose **Smart algorithm** you must fill a telephone number in international format of the connected GSM modem in the **Telephone numbers for reading done by ringing** field.
4. Click the **OK** button for confirmation.

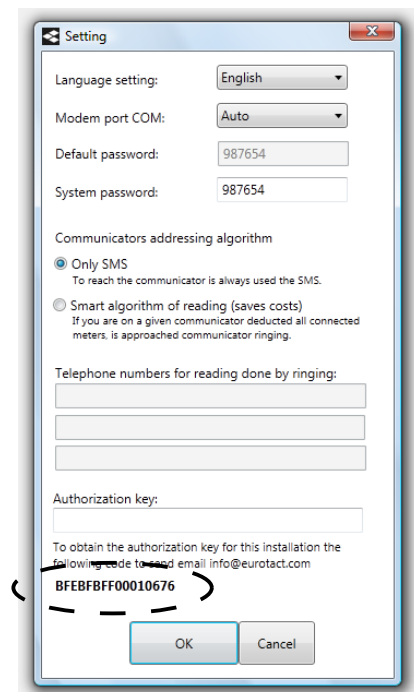


2.5 Authorization of the application

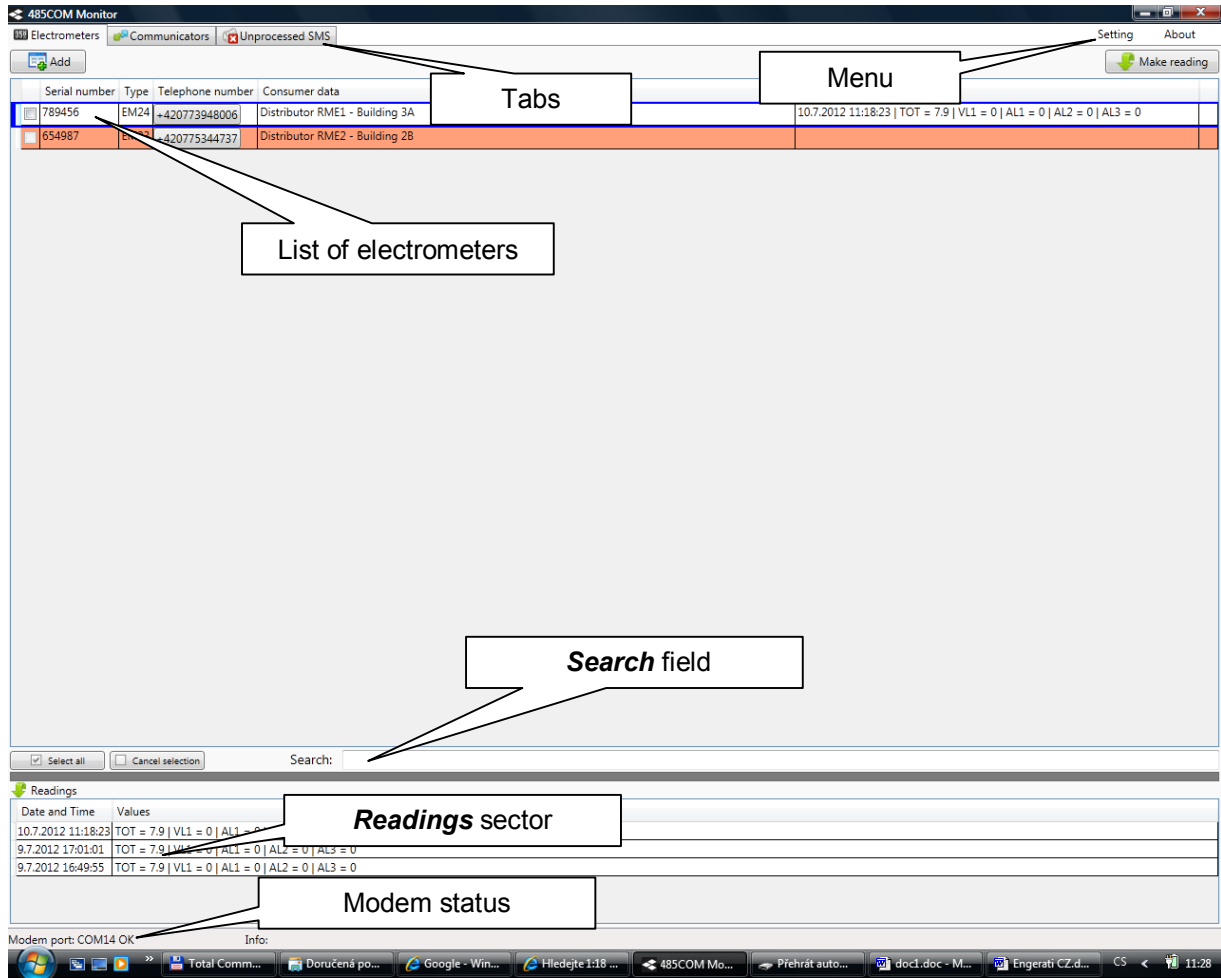
The 485COM Monitor application works after the installation only with one 485COM Communicator without any limitations (suitable for testing purposes). The application authorization is required for operation with more communicators. To unlock the full version of the application contact the manufacturer or a software distributor to purchase the authorization key. The authorization applies to one installation and is not transferable.

Authorization procedure

1. Click the **Setting** icon on the main screen – the **Setting** dialog box will appear.
2. See the generated code which is used to obtain an authorization key at the bottom left of the **Setting** dialog box. Please send this code to e-mail info@eurotact.com with a written request for authorization of the 485COM Monitor application.
3. Type the received key in the **Authorization key** field and confirm by the **OK** button.
4. Once the application authorization is successful, a confirmation dialog box will appear.



3. Main screen description




Electrometers – in this tab is a list of all entered electrometers. The electrometers can be active or inactive. The inactive ones are displayed in the list in grey colour and it is not possible to communicate with them (they are to be used for example for entering yet unconnected electrometers). It is also not possible to communicate with the physically connected electrometers which are red coloured in the list, because the 485COM Communicators are not properly configured yet.

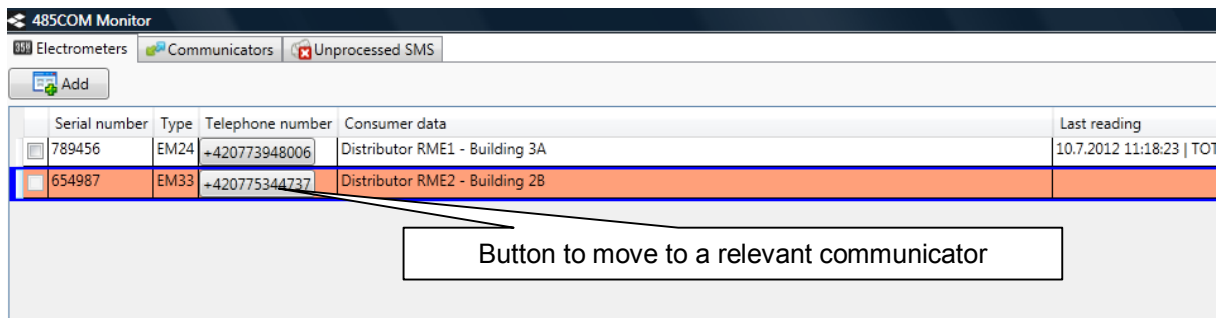
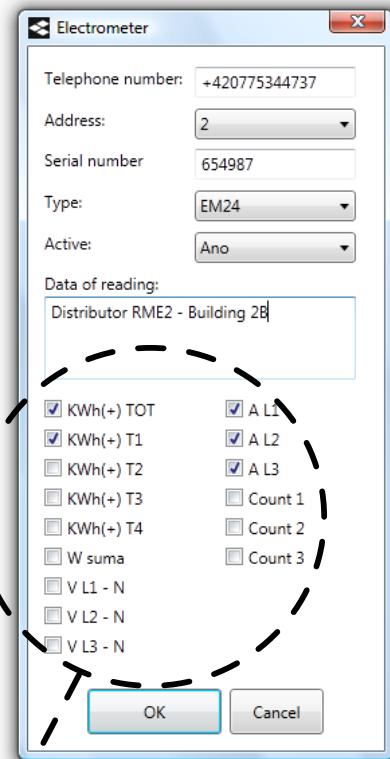
Communicators – in this tab is a list of all 485COM Communicators entered in the system. The inactive communicators are displayed in grey colour and the unconfigured communicators are red.

Unprocessed SMS – in this tab is a list of all received SMS's that could not be processed by the system (because of incompatibility etc.).

Readings sector – in this tab is displayed a history of all readings related to a chosen electrometer from the **Electrometers** tab.

4. Adding a new electrometer into the list of electrometers

1. Click the **Add**  button in the **Electrometers** tab – the **Electrometer** dialog box will appear.
2. Fill in the following fields:
 - **Telephone number** – enter the telephone number in international format of the SIM card inserted in the 485COM Communicator to which is a given electrometer connected physically
 - **Address** – choose a communication address of the electrometer (this address must be set in the connected electrometer)
 - **Serial number** – type in a serial number of the electrometer or other unique electrometer identifier (avoid a duplicate entries)
 - **Type** – choose a type of connected electrometer
 - **Active** – choose whether an entered electrometer will be displayed in the list of electrometers as active or inactive (not possible to communicate with this electrometer temporarily – grey colour)
 - **Data of reading** – in this field you can enter for example data about a supply point or information about the installation
 - **Tic boxes** – tic the electrometer registers which you require for reading
3. Confirm the filled **Electrometer** dialog box by the **OK** button.
4. The electrometer will be added to the list of registered electrometers in the **Electrometers** tab. The line of this electrometer is red (i.e. it is not possible to communicate with this electrometer) until the configuration of the relevant 485COM Communicator to which is the electrometer connected physically will be processed in the **Communicators** tab.



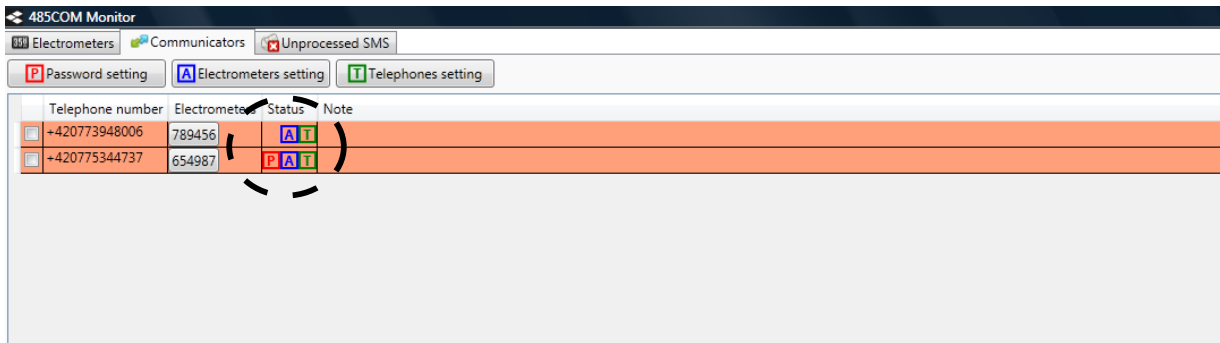
To move to a relevant 485COM Communicator click the button with the telephone number of the communicator or you can find the communicator in the **Communicators** tab.

To make additional changes of already added electrometer use double click on the particular line and make required changes in the opened **Electrometer** dialog box.




5. Communicator configuration

Whenever a communicator is newly entered into the system (via electrometer) or if any of its parameters have been changed, it is necessary to always send the configuration SMS.

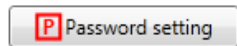
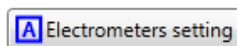

The number of configured parameters depends on the choice of algorithm for addressing the communicator, which you find in the **Setting**. If is chosen **Only SMS** algorithm, only the system password must be set. When **Smart algorithm** is chosen it is necessary to configure also the setting of addresses of the read registers and authorized telephone numbers.



1. Tic the communicators which you require to configurate in the **Communicators** tab. The unconfigured communicators are coloured red and in the **Status** field is one or more icons informing about the parameters which have not been configurated yet.


-  password setting
-  address and read registers setting
-  authorized telephone number (modem number) setting

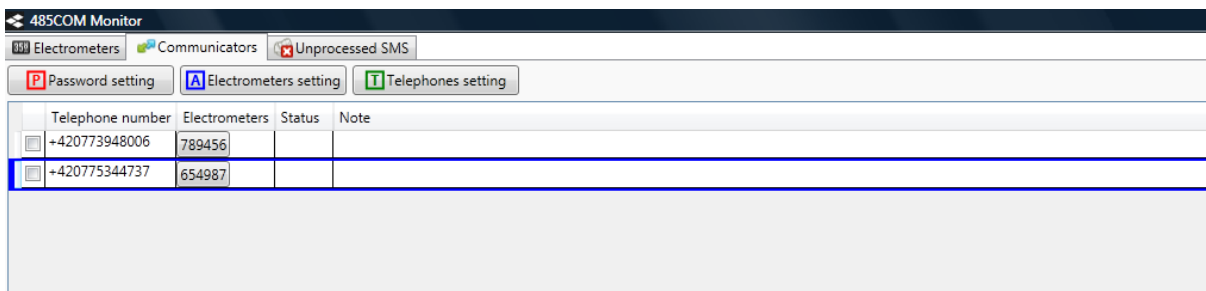
2. Send the configuration SMS using the buttons in the top left corner of the **Communicators** tab.

-  password setting
-  address and read registers setting
-  authorized telephone number (modem number) setting

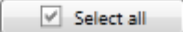
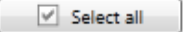
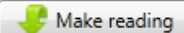
3. Click **OK** in the confirmation dialog box to save the configuration.

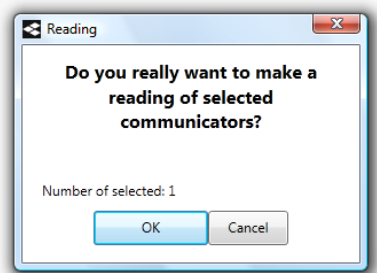


The configuration SMS is always confirmed by the system. After receiving this confirmation the system will remove a relevant icon of discrepancy and considers the communicator as configured. If all needed parameters are set, the red background of the communicator will disappear as well as the red background of its electrometer. The system is now ready to make readings from these communicators. In case the successful change of the communicator parameters is not confirmed in 15 minutes, the system will set the communicator into error. After removing the problem with the communicator it is necessary to send the configuration SMS again. If you have any doubt about the correctness of the communicator configuration it is possible to verify the configuration by the **Verifying configuration**  button at the top right on the screen of the **Communicators** tab. The communicator will receive a request for sending the configuration. The received configuration is compared with a system setting and according to that the displaying of a current communicator status in the system is modified.




6. Reading the state of electrometer registers


1. Select the electrometers which you require to be read in the **Electrometers** tab. For a quick selection of all you can use the **Select all**  button or you can filter required electrometers by any parameter using a full text search placed at the bottom of the screen. If you use searching then **Select all**  button will mark only the searched electrometers.
2. Click the **Make reading**  button to read a chosen electrometers – the **Reading** dialog box will appear.
3. Click the **OK** button for confirmation.




The addressing of selected electrometers will be done according to a preset algorithm (via ringing or sending SMS, see chapter 2.4).

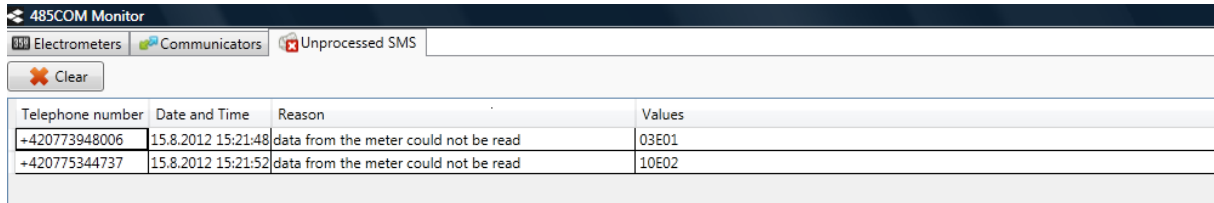
The green icon  indicates the running reading of the concrete electrometer. The icon will disappear after receiving the data.

The last reading will be filed as in the part of all electrometer readings at the bottom of the screen so in the **Last reading** field in the **Electrometers** tab.

In case the reading will not be proceeded for some reason in 15 minutes this icon  will appear.

7. Unprocessed SMS's

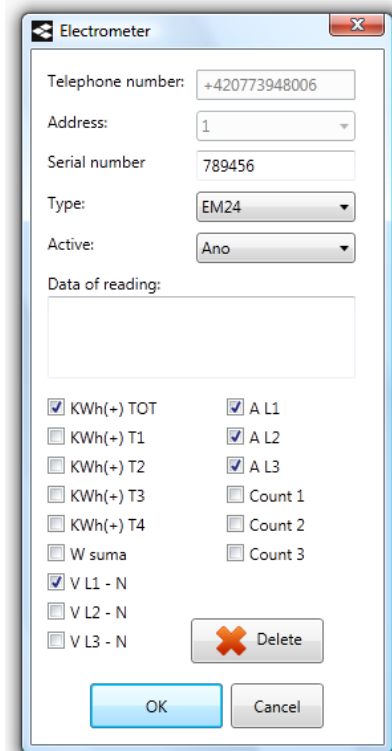
All received SMS's which could not be proceeded by the system are filed in the list in the **Unprocessed SMS's**. You can determine the cause of failed SMS in the **Reason** field. Use the **Clear**  button to empty the list of unprocessed SMS's.



Telephone number	Date and Time	Reason	Values
+420773948006	15.8.2012 15:21:48	data from the meter could not be read	03E01
+420775344737	15.8.2012 15:21:52	data from the meter could not be read	10E02

8. Deleting the electrometer from the list of electrometers

1. Use double click to open a required electrometer in the **Electrometers** tab – the **Electrometer** dialog box will appear.
2. Click the **Delete**  button in the box.



9. Deleting the communicator from the list of communicators

1. Use double click to open a required communicator in the **Communicators** tab – the **Communicator** dialog box will appear.
2. Click the **Delete**  button in the box.

The communicator can be removed only if it is not connected to any electrometer.

