TELENET WEB

MONITORING – SUPERVISION SYSTEM

Use and maintenance manual

Rel. 01-25 ENG
Telenet release 2023.12.01
DB release 2023.12.01

ELECTRICAL BOARDS FOR REFRIGERATING INSTALLATIONS

Pego

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1 - INTRODUCTION

1.1 TELENET OVERVIEW

TeleNET is a software for monitoring and supervising refrigeration and air conditioning systems controlled by Pego electronic instruments. The network of instruments sends data to a personal computer from which it is possible to view and print reports, manage alarms, modify operating parameters, monitor the entire system.

Applications:

- Monitoring and supervision of refrigeration and conditioning systems.
- Automatic management of work cycles.
- Recordings of physical quantities (temperature, humidity, pressure, CO2).
- Industrial cooling, storage, seasoning systems.
- Storage and consultation of data saved on the Secure Digital card for the PLUS EXPERT series panels or on a USB stick for the PLUSR EXPERT and NECTOR series panels.

The software is available in two versions:

TeleNET (code 200TELENET):

- Real-time monitoring version. Package includes:
  - n°1 2TWRS485 Interface*****
  - n°1 USB connection cable

TeleNET Datalogger:

- Specific version for collecting recordings downloaded from panels with Datalogger function (series: PLUS EXPERT, PLUSR EXPERT and NECTOR). Refer to chapters 4, 5, 13, 16).

*** Note:** For 2TWRS interfaces purchased from 01/09/2015 onwards, the software protection USB key is replaced by a chip inside the interface.

1.2 CLIENT/SERVER STRUCTURE

TeleNET is a client/server type application that facilitates configuration on local LAN and Internet ambient.
There are:

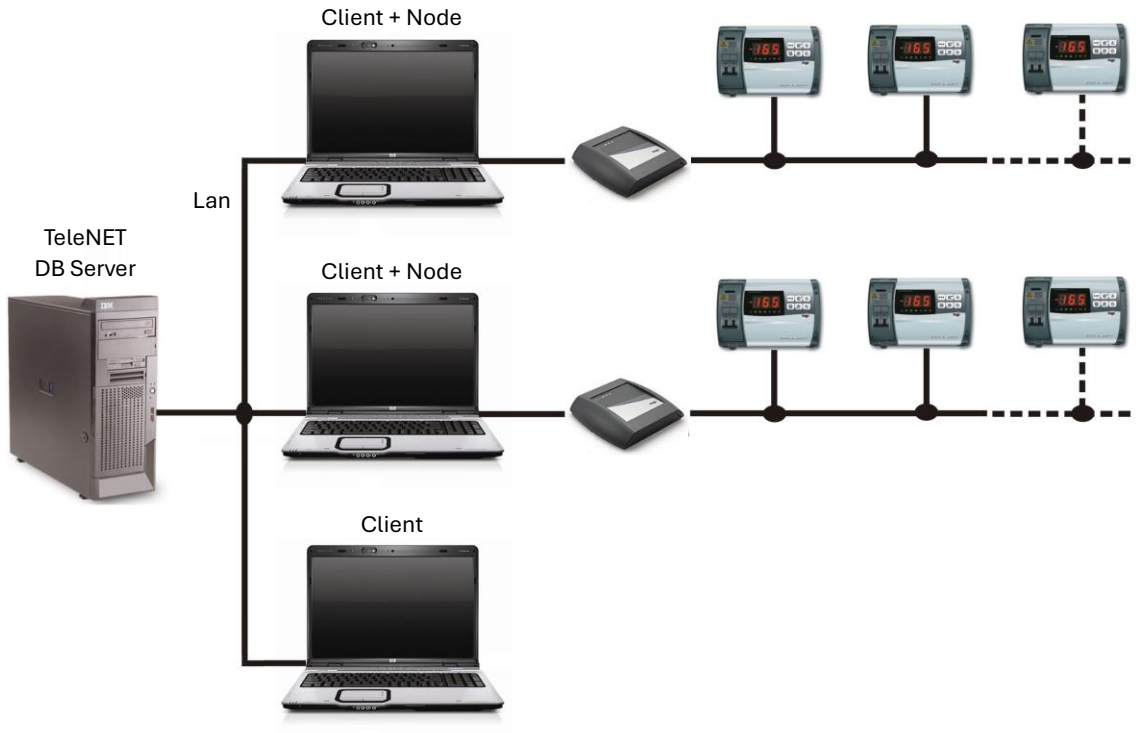
Server: PC where the database (DB) resides. All device information and history are stored in a single SQL database.

Client Node: PC to which the 2TWRS485 interface for the instrument line and the USB hardware protection key are connected (until 01/09/2015). With a TeleNET license it's possible to manage only one node client.

Typical examples of installations are the following:

1) Complete installation on a single PC (Server + Client Node)

2) Local LAN installation with server on a dedicated PC and one or more Client connected.
In this case, the database is stored in a server, while the instrument network is connected to one or more PCs with client Telenet in local network with the server.
Clients on PC with connected instruments require a hardware key to enable their monitoring and control. A client on PC can be connected to the DB on the server, even only for consulting data (protection key not required).



1.3 SYSTEM REQUIREMENTS

The minimum requirements to use the TeleNET system are:

Operating system	○ Windows® 10 ○ Windows® 11
Memory	RAM 4GB
Hard disk	10GB of available space
Display	Resolution 1024x768 24 bit minimum. Recommended 1920x1080 32 bit
Mouse	Microsoft Mouse or compatible peripherals
Others	The installation of .NET Framework 2.0 (included in version 3.5) is required. Install any available critical Windows updates.

Attention: The necessary system resources increase with the increasing number of monitored instruments.

1.4 SOFTWARE RELEASE AND UPDATES

After the installation it's possible to verify software release both for Client and Database always on the upper part of the window. Here you can also verify the presence of the licence:

- **Full Mode**: monitoring with active license: 2TWRS485 interface connected and correctly installed.
- **Client Mode**: monitoring without active license: 2TWRS485 interface not present.

Note: Interfaces purchased from 01/09/2015 onwards have an integrated license; previous ones have the license on an external USB stick.

Check the software release for communications during the support phase or to check the availability of updates on the website www.pego.it. See chapter 5 for how to update the program.

2 - SOFTWARE INSTALLATION

2.1 INSTALLATION

There are three different types of software installation possible, which can be downloaded from the download page of the website www.pego.it :

1) **Complete Installation** (TeleNET database and client + node on the same PC).
2) **Client Installation** (TeleNET database on server and client + node on other PC(s)). The client installation is used to create client/server structures with multiple nodes.

Download:

Telenet Software

Supervision and monitoring system

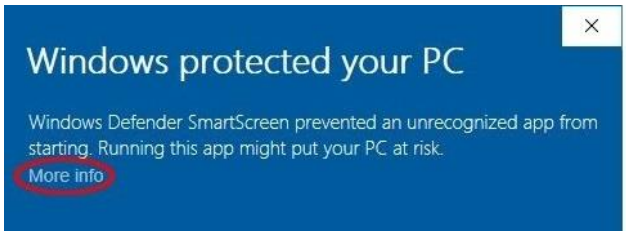
3) "**Datalogger** Only" Installation, specific for importing data recorded by electrical panels with Datalogger function (see chapter 2.4).

Download:

Telenet Datalogger

Version of TeleNET to view the Datalogger recordings

To run the file downloaded from the site (TeleNet_20XX.XX.XX.exe) you may need to give consent to the security window. To run the software, click on “More information” and then on “Run anyway”:



The button allows you to cancel the installation process.

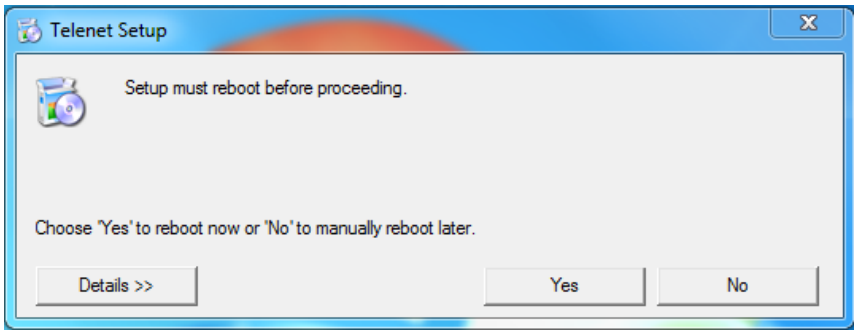
Note: You will be asked to select the installation language: set the same language as the Operating System in use.

2.2 COMPLETE INSTALLATION

To install both the database and the client + node on the same PC, select “Setup All”.

Complete Installation

During the installation process you will be asked to reboot, which we recommend you do by selecting “Yes”:



At the end of this restart, it may be necessary to run the Setup.exe file again to continue the installation. Then select “Setup All” and follow the instructions of the installation procedure.

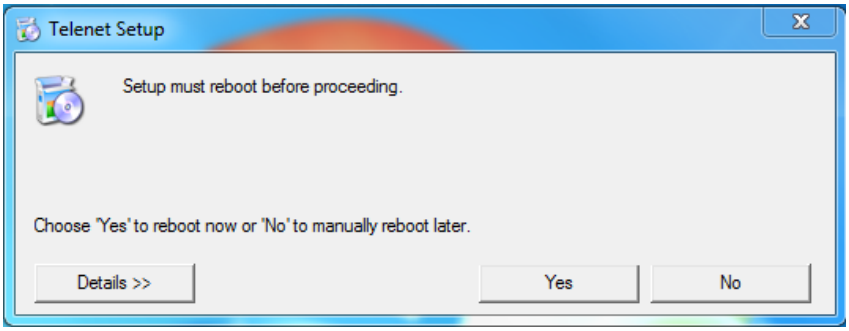
At the end of the installation, the TeleNET icon is created on the Desktop.

2.3 CLIENT INSTALLATION

For the database and the client + node on separate PCs, you will first need to perform the complete installation on a PC that will act as a server to install the database that will contain the configurations and recorded data (see chapter 2.2). Take note of the name or IP address of the server PC.
Then start the installation procedure on the client PC (see 2.1) and choose the “Setup Client” option:

Client Installation

During the installation process you will be asked to reboot, which we recommend you do by selecting "Yes":



At the end of this restart, it may be necessary to run the Setup.exe file again to continue the installation. Then select "Setup All" and follow the instructions of the installation procedure.

At the end of the installation, the TeleNET icon is created on the Desktop.

Once the server is installed, you can perform the Client Installation on each PC that will be used as a client or client + node.

NB: At the first start of the client you will be asked for the name of the server PC or IP address on which the database is installed.

2.4 "DATALOGGER ONLY" INSTALLATION

To install the TeleNET version for Datalogger (see chapter 2.1) simply download the appropriate version from the website www.pego.it and run the "setup.exe" file.

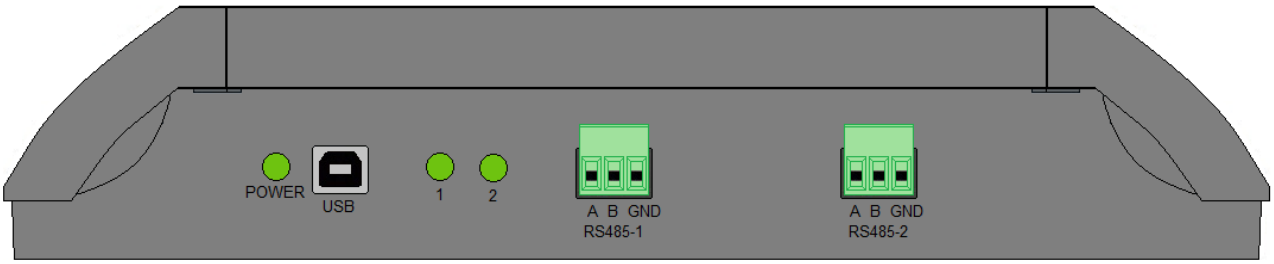
See Chapter 13 for importing and viewing recorded data.

3 –HARDWARE INSTALLATION

3.1 2TWRS485 INTERFACE

The 2TWRS485 interface is the connection device between the Pego instrument line and the computer (for complete installation only). It allows the connection of up to 32 instruments for each RS485 line and each interface has two RS485 inputs. In addition, up to 9 200TWM3IO modules can be connected. Place the interface near the computer and make the electrical connections.
Starting from September 1, 2015, the 2TWRS485 interface is equipped with an integrated chip that replaces the hardware protection key USB.

Connections:



1. **USB:**
   Connect, using cable provided with the package, to an USB socket on computer. When it is connected, wait for the automatic initialisation of the Drivers. If it's not successful, disconnect and reconnect the USB cable, or download the most updated Drivers available from the www.pego.it website.
   In operational system device management, check the numbers of the COM ports used for the interface.

   Path: Control panel -> System and safety -> System -> Device management -> COM and LPT ports.

   COM ports refer to the two ports with removable terminals installed in the interface. Each terminal can be connected to up to 32 instruments. To verify the correspondence between the COM and the ports, it's recommended to select one and check which LED lights up on the interface.
   Note: If the USB cable is disconnected and reconnected to another USB port, the COM port may change and it must therefore be verified again.

2. **RS485 A B:**
   Connect the line from the instruments. Refer to the instrument manual to locate the connection of line A and B.

Nota: it's possible to install additional 2TWRS485 interfaces to increase the number of connectable instruments, each interface will add 32 or 64 instruments.

3 – HARDWARE INSTALLATION

3.2 USB HARDWARE LICENSE KEY

For interfaces purchased before 01/09/2015: the supplied USB hardware protection key must be connected to the PC on which one or more 2TWRS485 interfaces will be connected to the devices network.

For interfaces bought on or after September 2015 the USB key is replaced by a chip inside the 2TWRS485 interface.

The 2TWRS485 interface can be connected to a free USB slot even after the software installation, but it's necessary for the first configurations of the node and of the instruments.
The 2TWRS485 interface drivers are available in the download area of our website www.pego.it .
Note: The key or interface must always remain inserted in the USB port during TeleNET monitoring operation.

3.3 CONNECTING THE DEVICES

The TeleNET supervision system allows you to monitor and control different devices using the most suitable communication protocol according to the different situations. It's possible to create subnets of devices that communicate with TeleNET in the following ways:

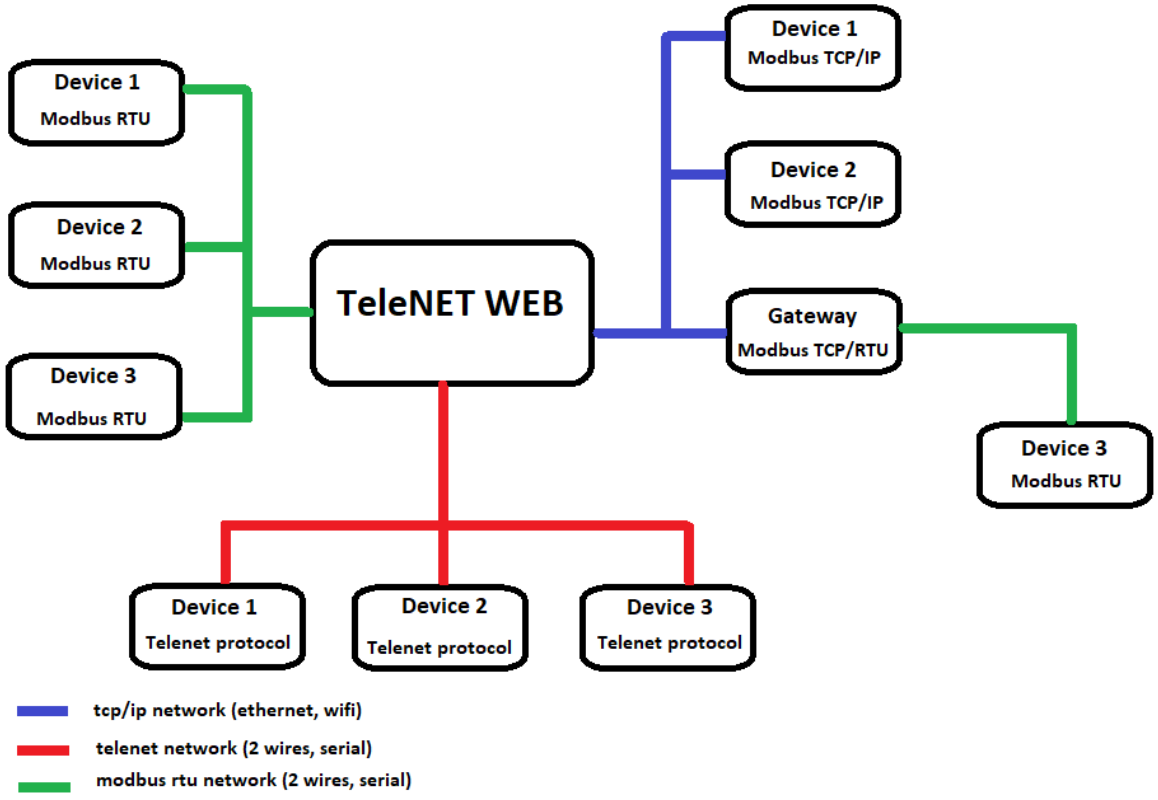
- Pego TeleNET proprietary protocol: suitable for connecting Pego devices; uses a 2-wire RS485 serial connection with a protocol specifically designed for Pego devices. Up to 64 instruments can be connected, 32 per port. It enjoys more features such as self-recognition.

- Modbus-RTU standard protocol: it allows you to connect up to 247 devices in an RS485 serial line with standardized communication mode and format; used to communicate also with third-party devices (not Pego).

- Standard Modbus-TCP protocol: represents the evolution of the Modbus-RTU protocol and allows you to take advantage of any existing company LAN network to connect Modbus devices via the TCP-IP protocol. By exploiting dedicated converters, it's also possible to connect via Modbus-TCP devices equipped with a Modbus-RTU serial interface only. Once the connections are configured, all the devices are represented in a standard way within TeleNET: this effectively makes the communication mode completely transparent to the TeleNET user and allows you to monitor and control all the devices in the same way.

All three protocols can be used at the same time.

Below is a diagram of the possible configurations that can be implemented to connect devices to the TeleNET WEB supervision system.



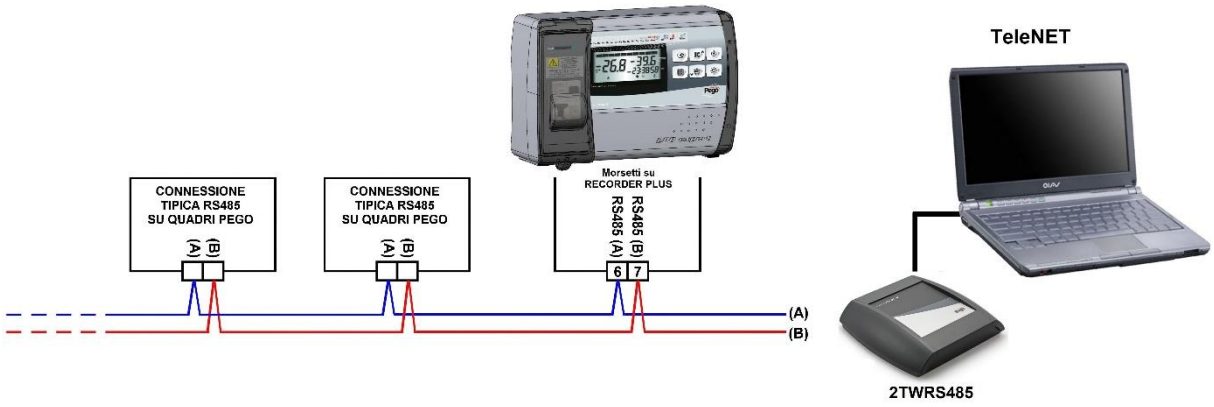
3.4 CONNECTION VIA TELENET OR MODBUS RTU PROTOCOL

Refer to the manual of the single device for the connections of the RS-485 serial line and the configuration of the network addresses.

The RS-485 line must be made with a connection that starts from the interface to the first device, from the first device to the second and so on up to the last device where the line ends.

Note: don't create branch connections or star or ring connections.

Connection example:



The maximum length of the net is about 500m.
Use a twisted pair cable suitable for the transmission of RS485 signals with a minimum section of 0.5mm^2 (example: Belden 8762 cable). Avoid bundling with power cables.

3.5 CONNECTION VIA MODBUS TCP/IP PROTOCOL

Starting from TeleNET version 2022.02.01 it's possible to communicate with the instruments via the TCP/IP protocol using a gateway converter of the Modbus RTU - Modbus TCP/IP protocol.

The electronics must be configured to work with the Modbus RTU protocol; refer to the relevant manual.

For communication, it's necessary to connect the devices to the Modbus RTU - TCP / IP converter via RS485 serial and connect the latter to the same LAN or Wi-Fi network where the PC is connected.

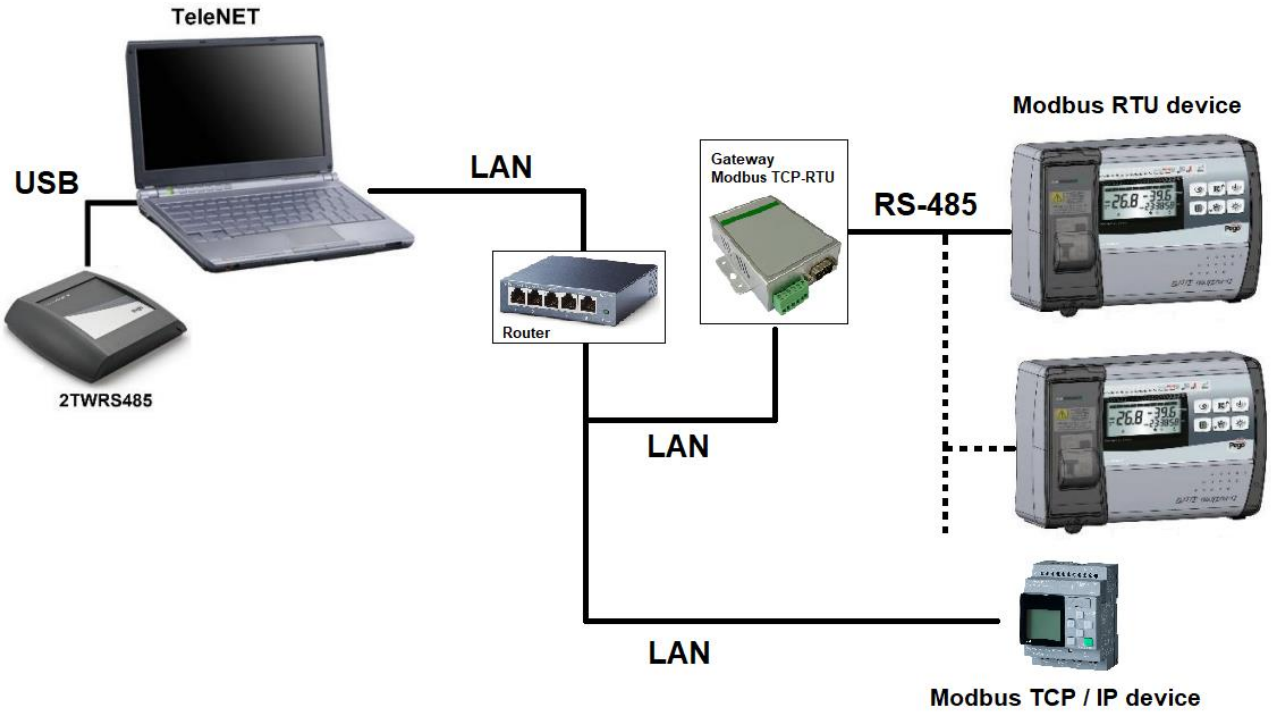
The TeleNET interface must always be connected to the PC via USB cable to read the integrated software license and activate all the program features.

Using a Modbus TCP connection, each device is uniquely identified on the network via an IP address.

In the case of Modbus RTU devices: the IP address identifies the gateway, not the single device; therefore, if it's necessary to have a unique identification of the devices via IP address, a gateway converter must be used for each individual Modbus RTU device connected.

To connect Modbus TCP tools, TeleNET must recognize the type of device: consult the list of compatible devices on the Pego website or contact the Pego Technical Office for further information.

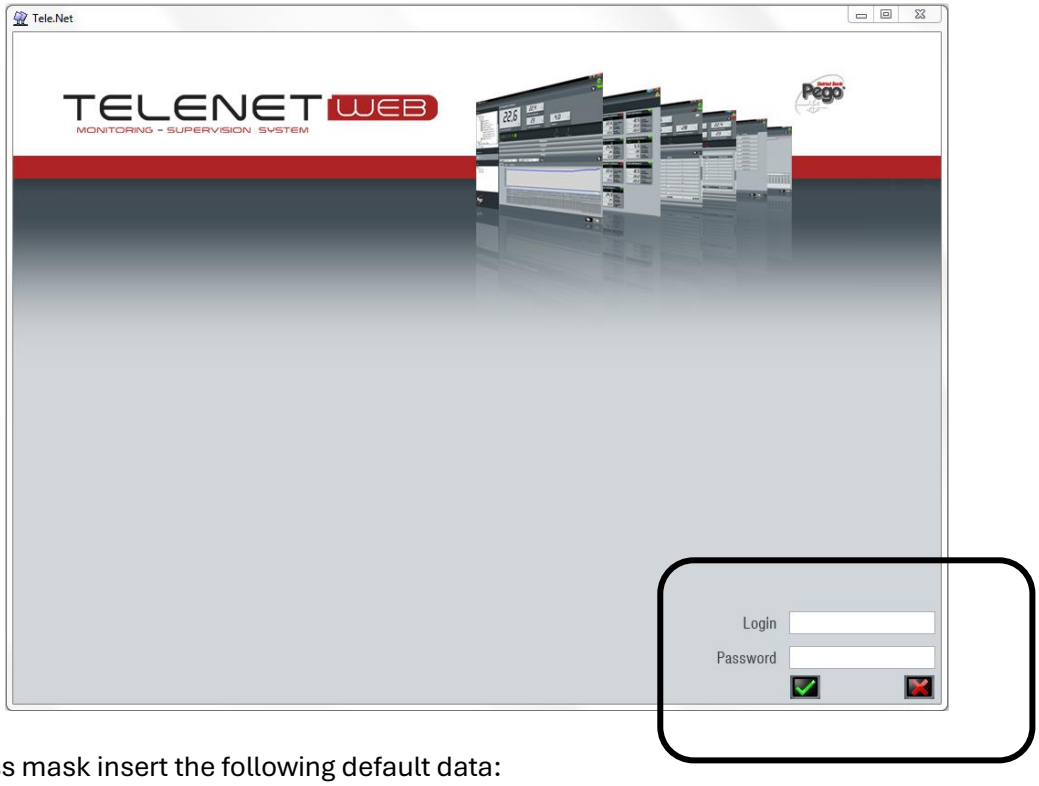
Configuration example:



4 – ACCESS

4.1 ACCESS

To open the program, use the TeleNET icon on the Desktop.



On the access mask insert the following default data:

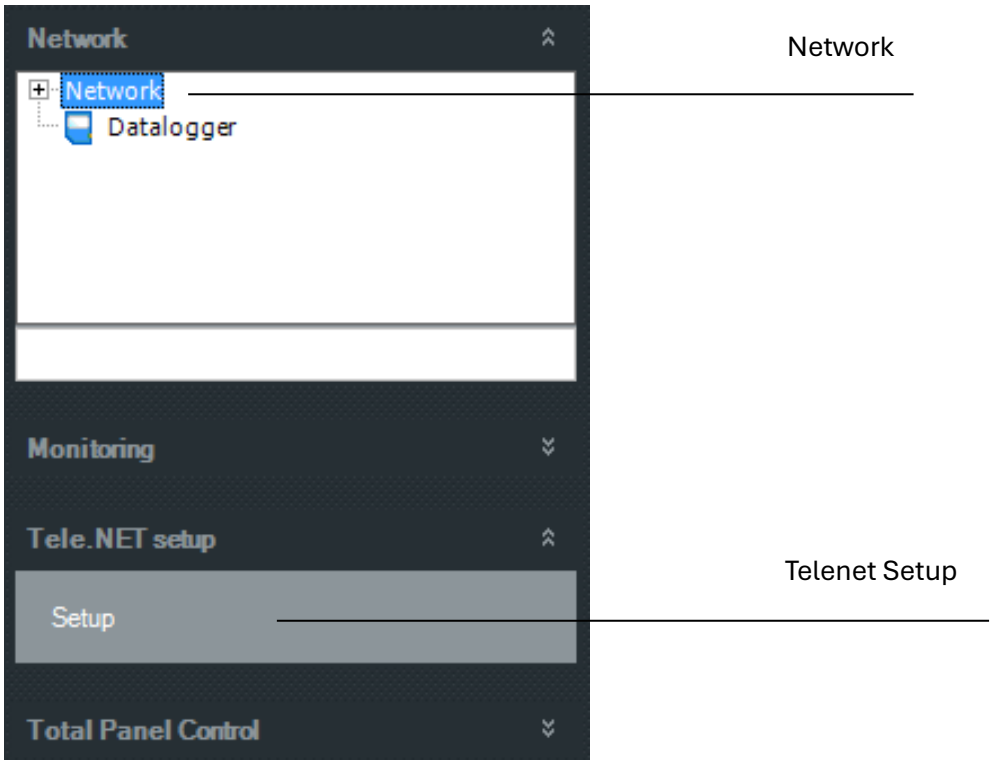
Login: **adminlogin**
Password: ***
***Note:** When logging in for the first time, leave the password field blank and continue by pressing the button.
You can then set a password and create new users.

The default language is English; you can change it by following the instructions in chapter 5.

5 – TELENET CONFIGURATION

5.1 TELENET CONFIGURATION

In “Network” select “Network” and then “Setup” in the “Tele.NET setup” menu to access the general configuration parameters. If the USB hardware key or the TeleNET Datalogger version is not present, only the “Datalogger” item appears in the Instrument Network. For configuration, you must therefore select this item.



The “Setup” menu provides access to the following menu bars:

Note: To insert or edit data within the menus, press the button and then the button to save the settings. To make the changes effective, Telenet will be closed and will need to be restarted.

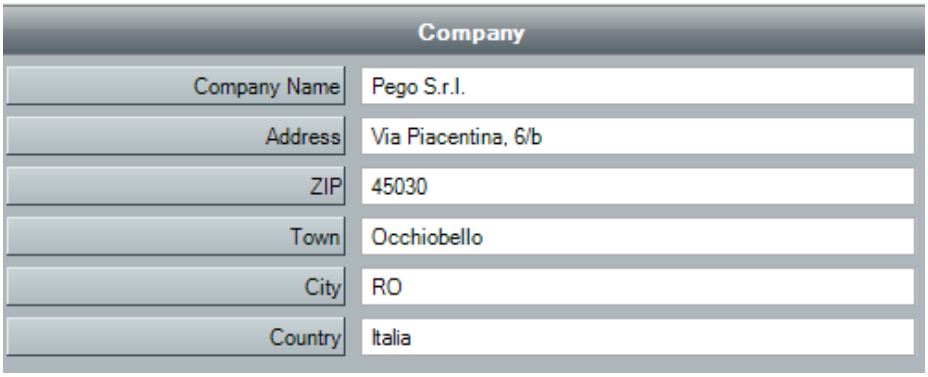
5 – TELENET CONFIGURATION

By selecting you can read the software version of the TeleNET and the database (useful during assistance).

The same information is contained in the main bar of the TeleNET window.

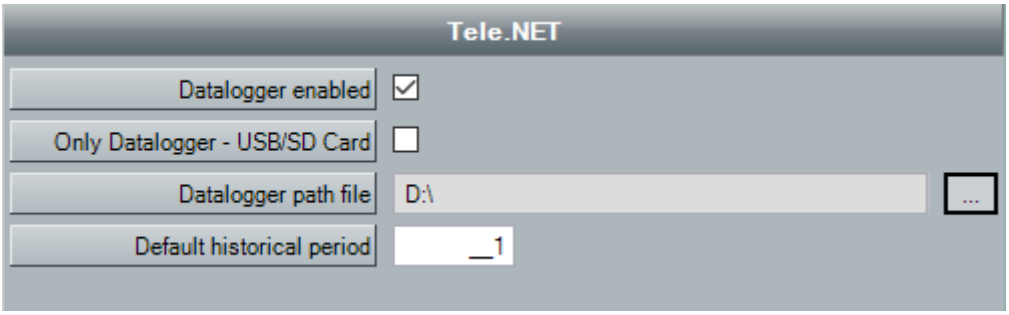
Company Menu:

It allows you to enter company data that will then be used in the header of the printouts and in sending alarm emails.



Tele.NET Menu:

It allows you to configure the Datalogger settings for data import and the default viewing period of the history within the instrument.

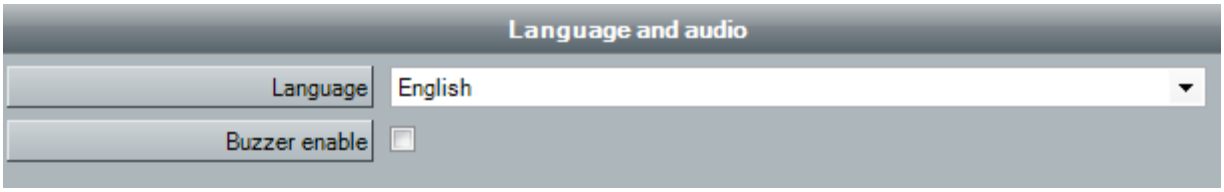


Fields description:

- **Datalogger Enabled**: Enables/disables the displaying of the SD card / USB key in the network.
- **Only Datalogger**: Enables/disables the datalogger only version (see paragraph 13.5).
- **Datalogger Path file**: Default path for searching Data to import files.
- **Default historical period**: Number of days prior today's date for the default display of the date in the historical and in alarm navigator.

Language and audio Menu:

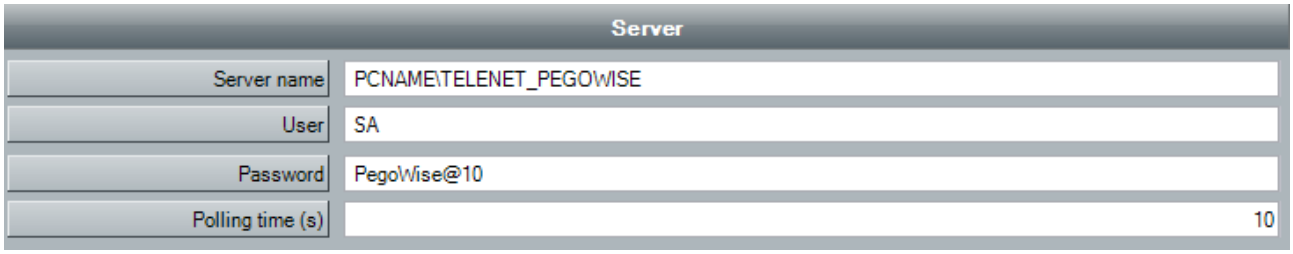
It allows you to select the program language and enable/disable the acoustic alarm:



Server Menu:

Database SQL Server parameters (usually not to be modified)

Note: it could be necessary to modify the password in case SQL server was previously installed with a different password for SA administrator (please contact the system administrator to use the correct password):



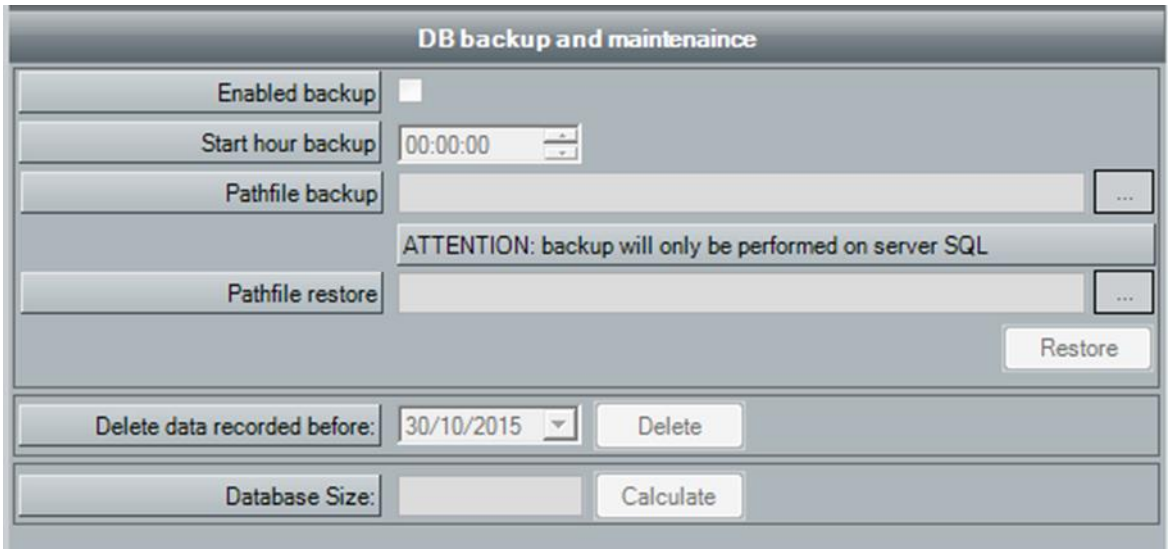
DB Backup and maintenance Menu:

It allows you to schedule a daily backup of the Telenet DB to a specific path or to restore a previously made backup (chapter 18.7 for restoring the backup).

You can perform the backup on an external USB drive permanently connected to the PC to reduce the risk of data loss.

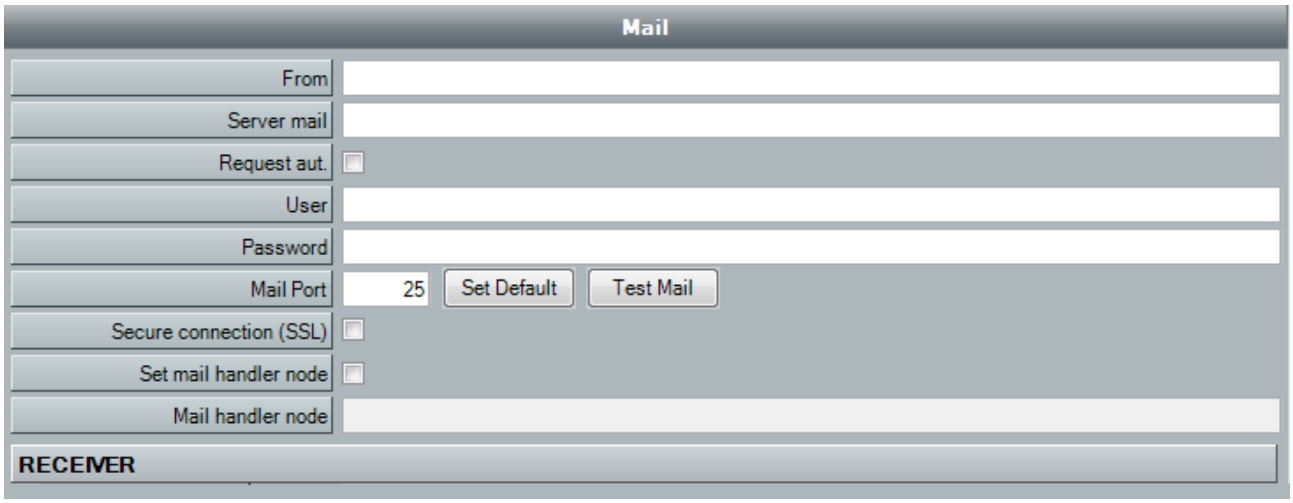
Note: Restoring a Backup must be done on a Telenet with the same release as the recovered DB. No path (backup or restore pathfile) must contain spaces.

The last part of this menu allows you to permanently delete all data prior to the set date:



Mail Menu:

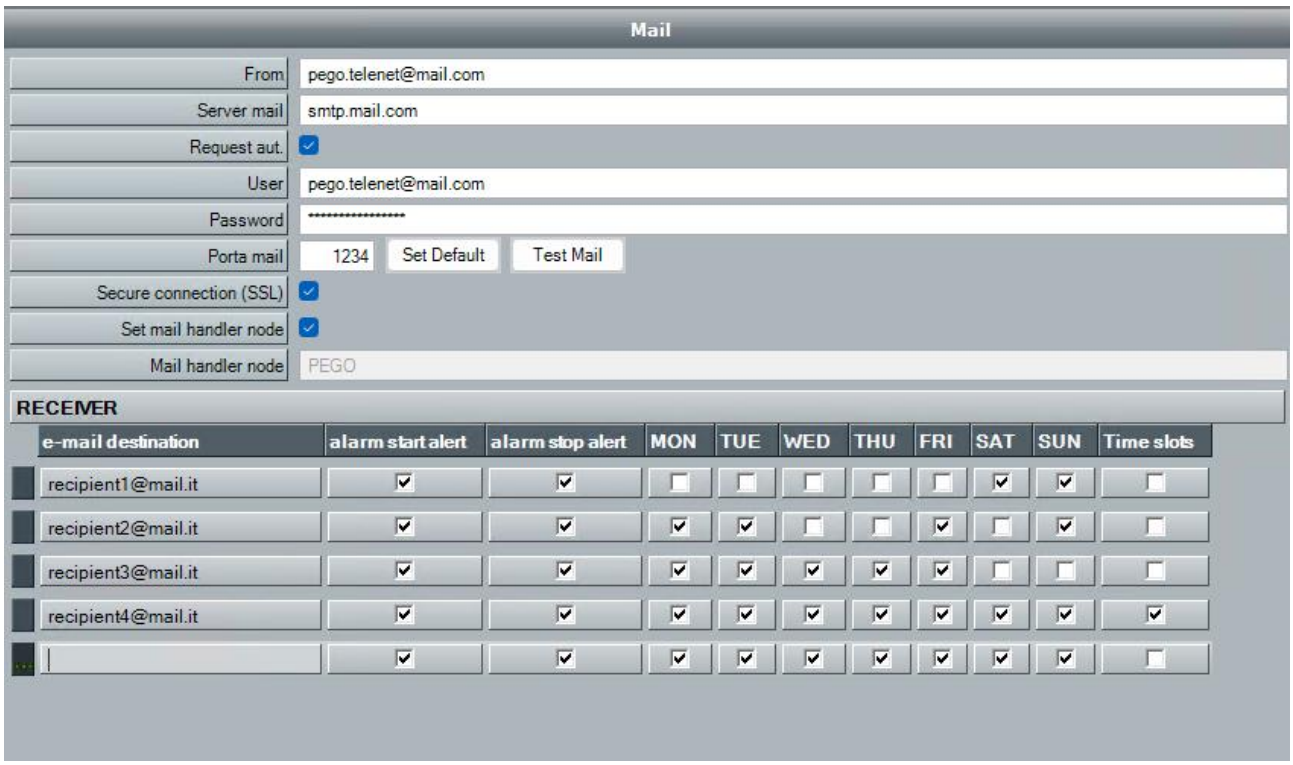
It allows the configuration of the alarm email sending service.
Using a computer or mobile phone enabled for receiving emails, you can receive alarm alerts.
Before filling in the fields, create an email account or use an existing one and obtain the configuration information from your email provider.



Fields description:

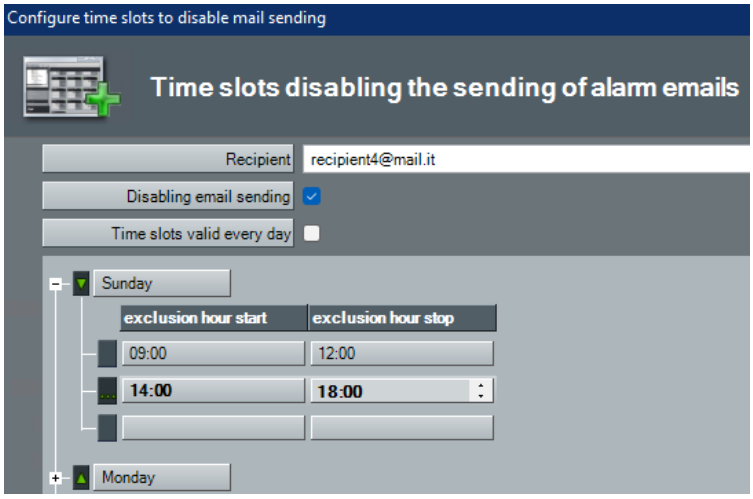
- **From:** fill in with mail account (i.e. example@pego.it) of the sender.
- **Server mail:** write server name for outgoing email (SMTP).
- **Request aut.:** specify if it's necessary or not to make the service provider access procedure to SMTP server.
- **User:** fill with user mail account example@pego.it (the same used in the "From" field).
- **Password:** password assigned by service provider.
- **Mail port:** port to be used for the mail service (default 25).
- **Secure connection (SSL):** ensures the activation of the cryptographic security protocol.
- **Set mail handler node:** it allows to select the node which will manage the email. In case of more than one node only one will manage the e-mails. The computer associated to the manager node must have a permanent Internet connection.
  It's necessary to create first the node (par. 6.1) before proceeding with the configuration (in case there is chance to save the settings made and modify them later).
- **Mail handler node:** shows the chosen node to manage the e-mail service.

Once the fields are completed, save the information and restart TeleNET to make it effective.
In the next step you will be able to enter the recipients:



Fields description:

- **E-mail destination:** insert e-mail address of the receiver of alarm warnings (several receivers can be added). To delete a recipient, select it and press the Delete key.
- **Alarm start alert:** flag the square to send the alarm warning.
- **Alarm stop alert:** flag the square to send the alarm stop warning
- **MON…SUN:** shows the days when the alarm sending is enabled.
- **Time slots:** opens a window that allows you to set the time bands to disable the alarms. Multiple time slots can be managed within a day and on different days:



To always receive the alarm emails in any case, you must activate the checkboxes for all days and leave the “Time slots” fields blank.

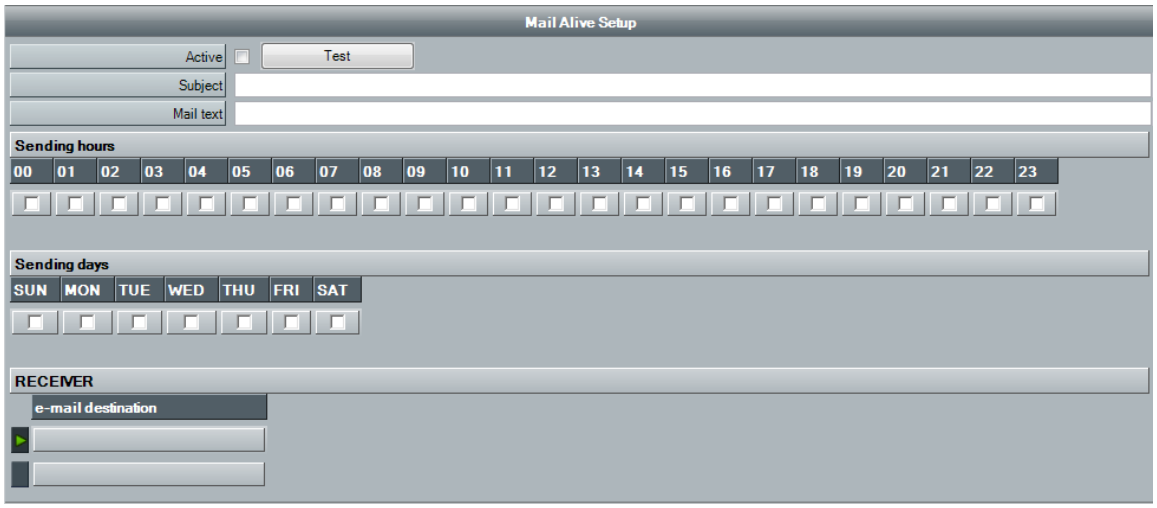
Note: It’s recommended, once the service has been configured, to carry out tests sending emails using the "Test Mail" button.

Mail Alive Setup Menu:

It allows you to configure the sending of automatic emails on selectable days and times, to verify the correct functioning of the monitoring system.

Fields description:

- **Active:** the function is activated by ticking the box.
- **Subject:** write the subject of the automatic emails (e.g.: cell monitoring active).
- **Mail text:** write the text of the automatic emails (e.g.: automatic email - system active).
- **Sending hours:** tick the boxes relating to the times at which the automatic email is to be sent.
- **Sending days:** tick the boxes relating to the days in which the automatic email is to be sent.
- **Receiver:** enter the email address or addresses to which the automatic emails are to be sent.

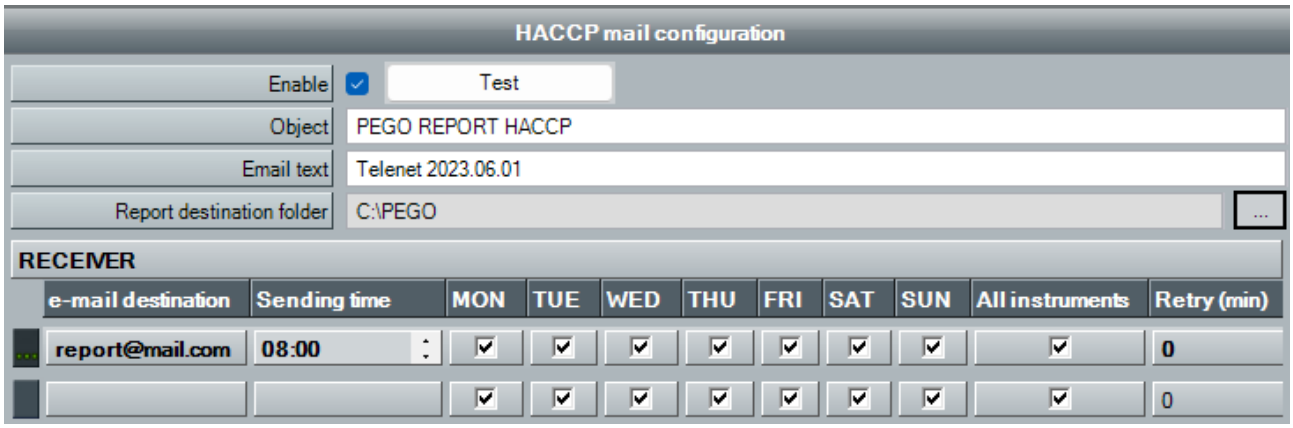


Note: It's recommended, once the service has been configured, to carry out tests sending emails using the "Test Mail" button.

HACCP mail configuration Menu:

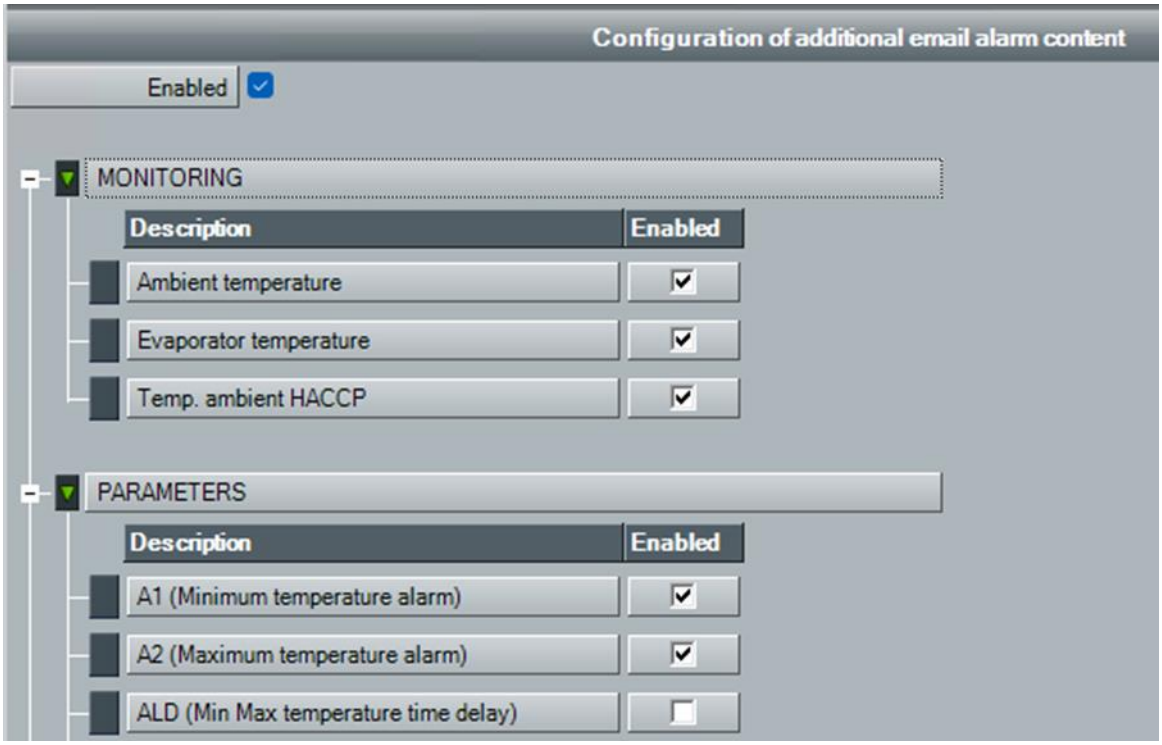
It allows you to save locally and send a daily HACCP report in PDF format via email.

It's also possible to choose certain instruments for each recipient via a window that opens automatically when you deselect the "All instruments" option.



Configuration of additional email alarm content Menu:

Within the "Modify device" menu it's possible to enable the integration of the alarm email with additional data for each individual instrument. Therefore, in the event of an alarm, it's possible to receive the values of any variable in the email, if it has been previously selected, such as the room temperature at the time of the alarm and the related limit values:

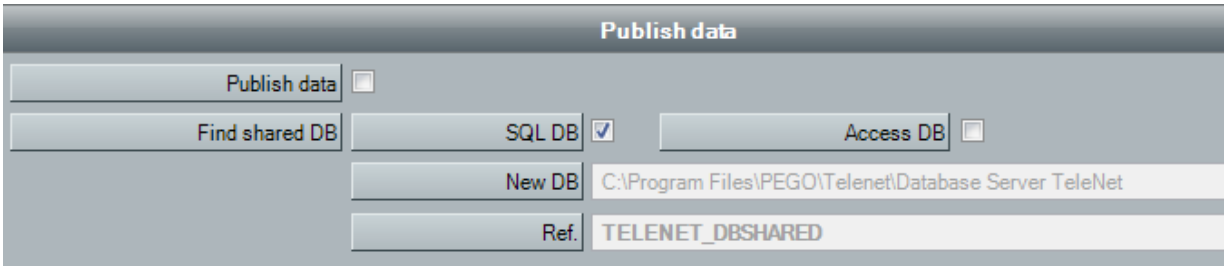


Update Tele.NET Menu:

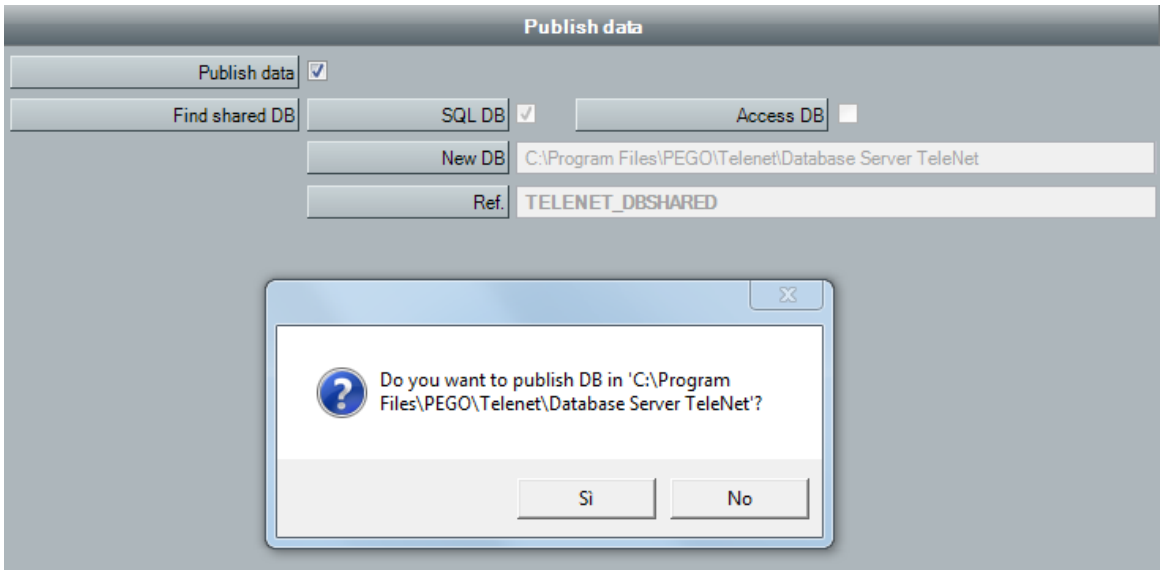
It allows you to check the presence of any Telenet program updates on the PEGO site and install them. An internet connection is requested for this function.

Publish data Menu**:**

It's possible to publish information about the monitored instruments on an external database (SQL or ACCESS) on which it's possible to make queries and extract data that can be used by other software. The information is updated in real time and depends on the speed of querying the instruments. The new data replaces and deletes the previous data.



To publish a new database, select the type (DB SQL or DB Access) and subsequently tick the “Publish data” box (the operation must be performed with monitoring at a stop).



The position and the name of the database are predefined by the TeleNET system; however, it’s possible to assign a different position by clicking on "no" when the above window appears.
In case the selected path (pathfile) requests particular authorisations, the user will be warned to choose a different path.

In case the “Publish data” box is deselected, you will be asked if wanting to eliminate the previously created DB data exchange.

The selection of the sizes and parameters to publish for each instrument happens with monitoring at a stand still by entering the “Modify device” menu of each instrument and selecting the "Published data” bar (see paragraph 8.1 and 8.2).

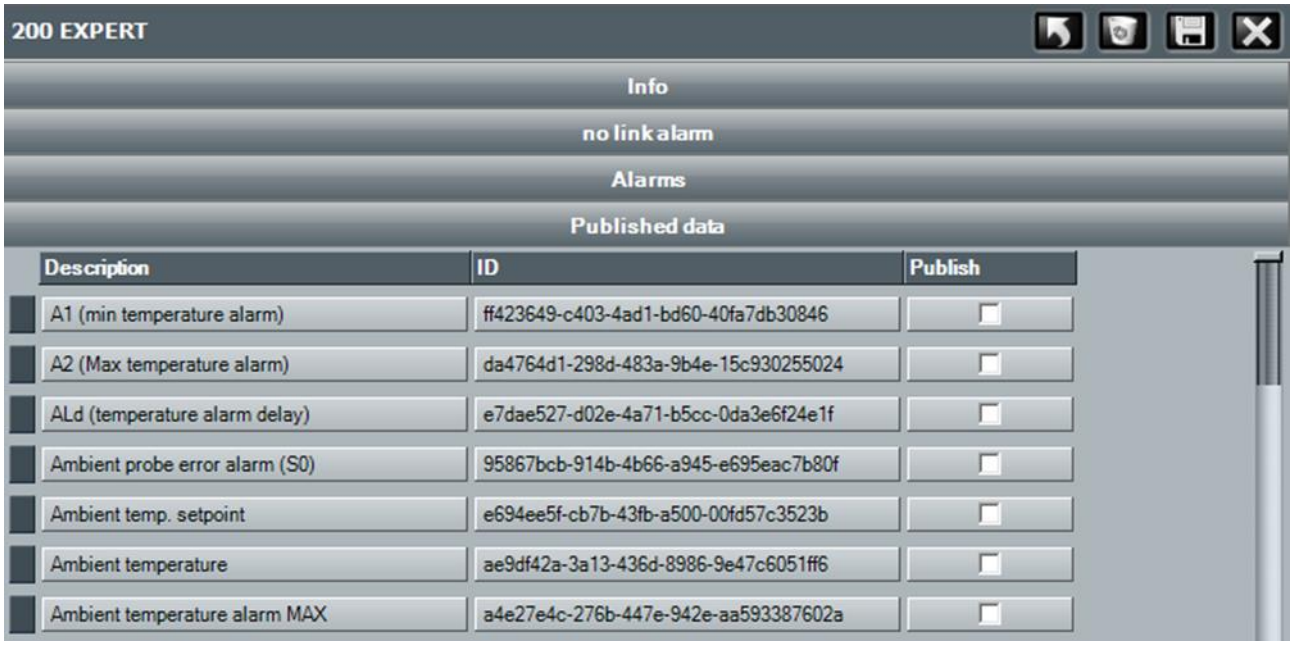


Table description in "Published data":

- **Description:** Description of the variable.

- **ID:** Unique identifier of the variable related to a device. The ID is created when you create a new device on the TeleNET. If you were to delete the instrument and recreate it again the ID would change. The ID can be read, verified and copied on the TeleNET page when editing the device.
- **Publish:** Selection box to enable the publication of the variable.

Once monitoring is started, the previously created TELENET_DBSHARED database is filled with the data of the selected variables and constantly updated.
If a device is disabled, the database rows relating to its published variables are deleted; they will reappear when it's re-enabled.
If a device stops communicating (no link), its published variables take the value "null" (Val column) until it's reconnected.

TELENET_DBSHARED database structure:

Field name	Description	Data type	Field size
ID	Unique identifier of a quantity related to a device.	Numeric	
NodeName	Node name (chapter 6.1)	Text	255
COM	Serial port associated with the 2TWRS485 interface (chapter 8.1)	Text	10
Address	Address assigned to the instrument (chapter 8.1)	Numeric	Whole long
InstrumentType	Type of device (chapter 8.1)	Text	100
InstrumentDescri	Device description (chapter 8.1)	Text	255
ParName	Parameter name	Text	100
UoM	Unit of measurement	Text	10
Val	Value	Numeric	Double precision

Example:

ID	NodeName	COM	Address	InstrumentType	InstrumentDescri	ParName	UoM	Val
{CFFCA714-E	PEGO	COM1:	4	Strumento SC 600	SC600-4	Alta pressione (bar)	Bar	13
E-300F02D7A77D}	PEGO	COM1:	4	Strumento SC 600	SC600-4	Protezione compressore 3		0
F-A1995DEDC632}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200EXPERT	d0 (intervallo sbrinamento)	ore	3
1-3103B0A9EAF4}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	d3 (max durata sbrinamento)	min	25
-E6E9FEC1032A}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	Temperatura ambiente		0
}-A9B72F7D66AB}	PEGO	COM1:	4	Strumento SC 600	SC600-4	Setpoint ventilatori (Alta press	Bar	3
-CA04DDC6D655}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	F5 (pausa ventilatori)	min	0
A-6636A4894CFE}	PEGO	COM1:	4	Strumento SC 600	SC600-4	Pressione Bassa	Bar	2,7
5-39B6AD8D0595}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	T Ambiente	°C	27,7
}-C884FB9351BD}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	T Evaporatore	°C	27
)-CB43E6A4FB63}	PEGO	COM1:	4	Strumento SC 600	SC600-4	Setpoint compressori (Bassa	Bar	2

Web Server Menu:
This is used to indicate the address of the web server that manages the web service and to select the language used in the web interface.

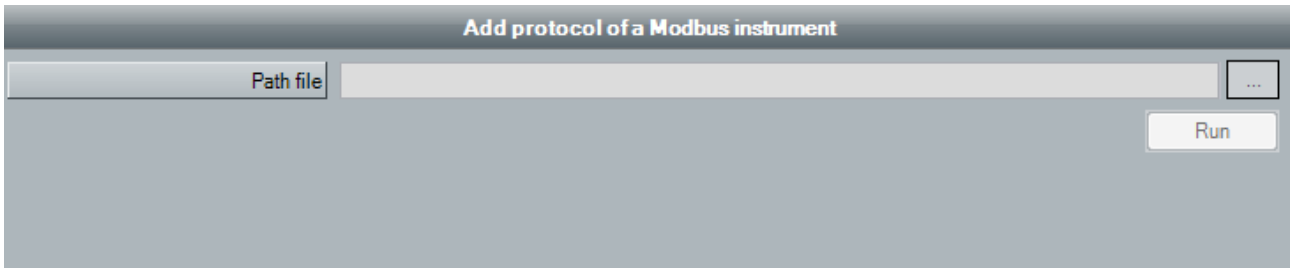
5 – TELENET CONFIGURATION

Server configuration example:

http://localhost:81/TelenetDataService.asmx
http://192.168.0.197:81/TelenetDataService.asmx

For further details please refer to the web interface manual.

Add protocol of a Modbus instrument Menu**:**
It allows you to import new protocols to communicate with instruments via Modbus.



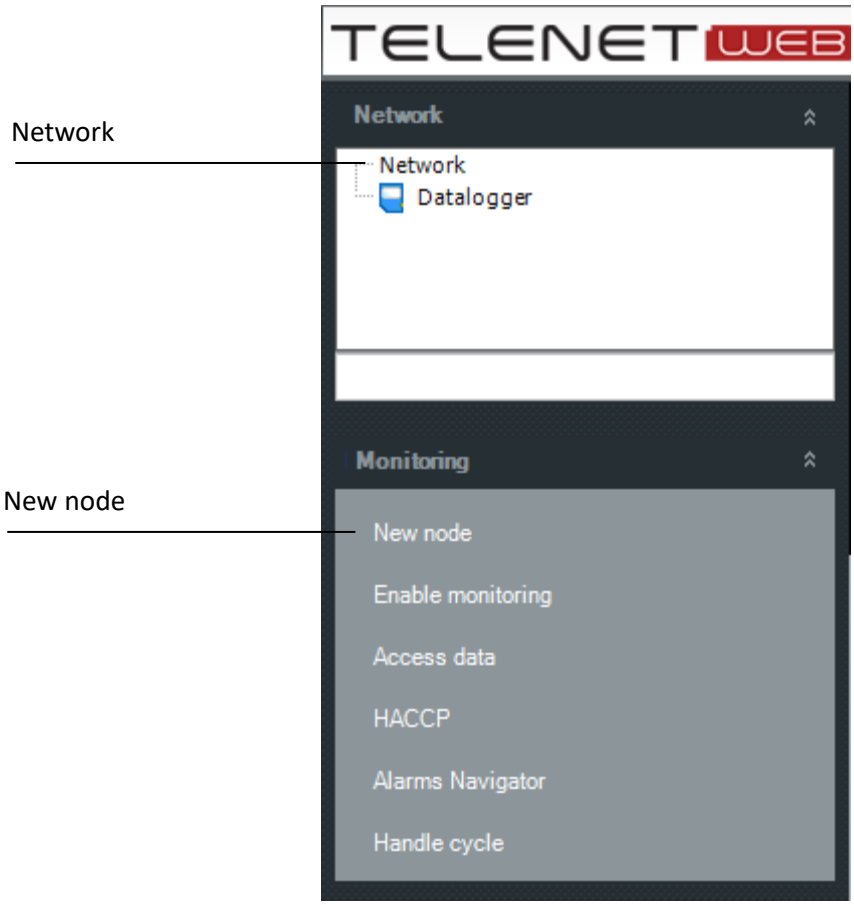
Example: Path file: ..\MB_VISION_TOUCH_THR.mb

6 – NET CONFIGURATION

6.1 NODE CONFIGURATION

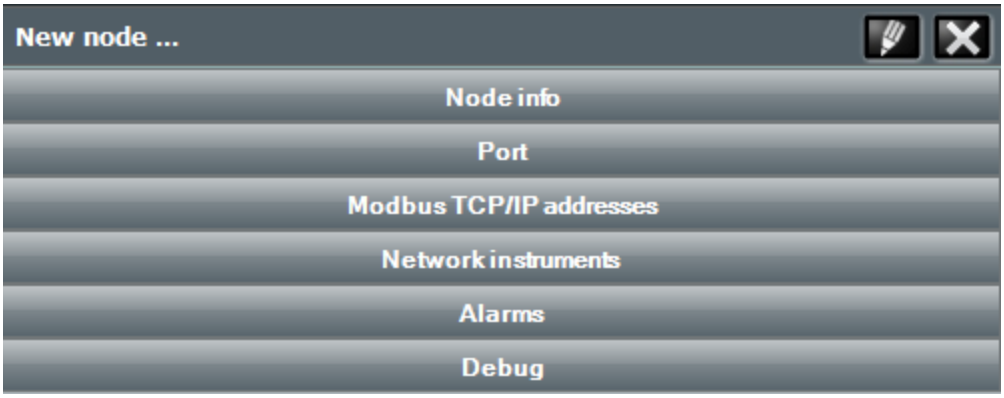
The first step in creating the device network is creating the node.
The node identifies computer where one or more 2TWRS485 interfaces will be connected.

Select “Network” and then “New node”:



The node configuration is intended to indicate the timing with which the node queries the devices, saves data to the database, and manages alarms. It’s also possible to configure the parameters of any Modbus communication ports.

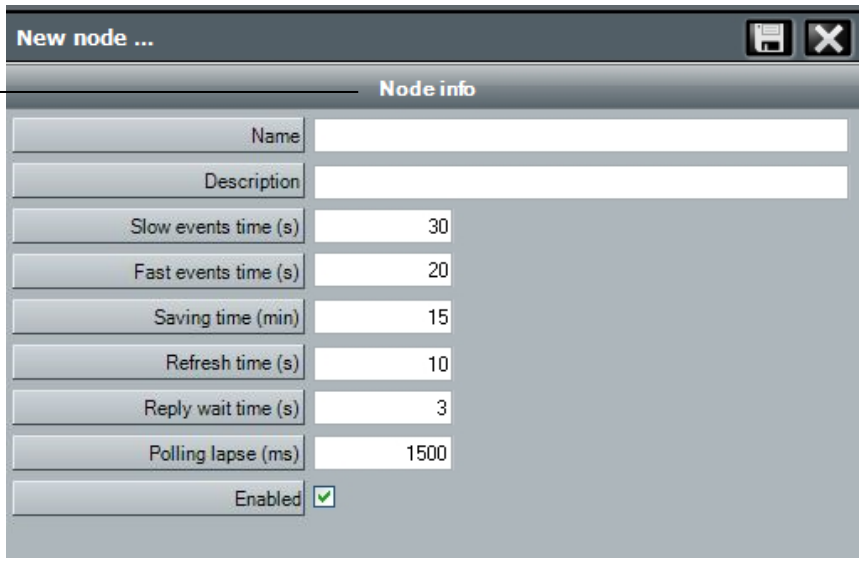
The node configuration is divided into four sections selectable from the bar menu: Node Info, Port, Modbus TCP/IP Addresses, Alarms and Debug.



Node info Menu:

It allows you to enter and configure the general data of the node:

Node info



Field description:

- **Name**: node name (it will be shown on the network tree).
- **Description**: node internal description.
- **Slow events time**: update interval for non-monitoring processes.
- **Fast events time**: interval in seconds between one monitoring cycle and the next.
- **Saving time**: minutes elapsed between two successive saves of the monitoring of the devices physically connected to the node.
- **Refresh time**: seconds elapsed between two refreshes of the monitoring data of the devices physically connected to the node that are contained in the database.
- **Reply wait time**: seconds expected for a response to a request sent to a device physically connected to the node.
- **Polling lapse (ms)**: interval between two successive queries to the devices.
- **Enabled**: set the flag to enable the node.

Port Menu:

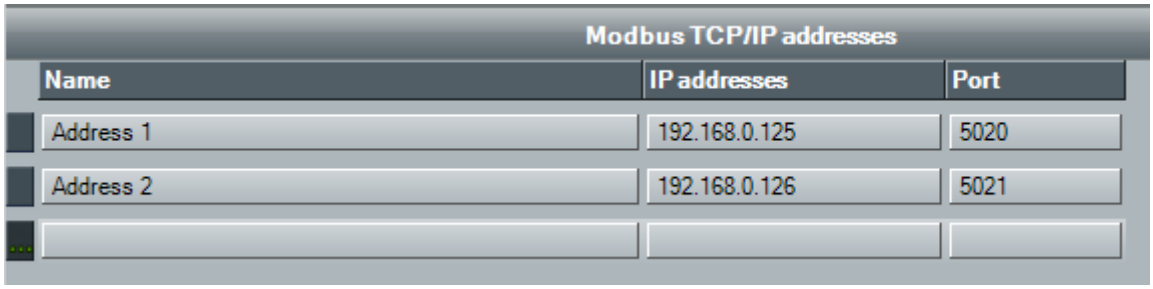
It allows you to define and configure one or more COM ports as Modbus ports:

Field description:

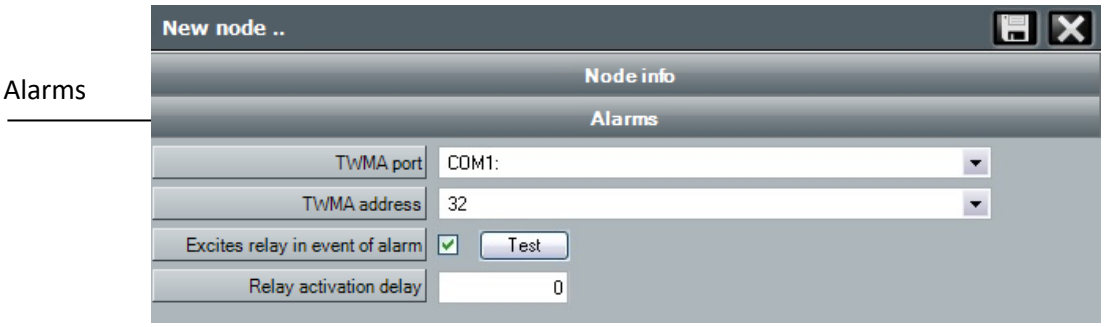
- **Port**: name of the port (for example: COM3).
- **ModBus**: definition of the port type (if not enabled it's Telenet / if enabled it's Modbus).
- **Baudrate**: Modbus communication baudrate (from 1200 to 38400).
- **Databit:** length of the data (from 5 to 8 bit).
- **Parità:** data packet parity bit.
- **BitStop:** number of stop bits of the data packet.

Configuration example – Standard Modbus of Pego instruments
Port: COM x / Modbus: enable / Baudrate: 9600 / Parity: None / Bit Stop: 1

Modbus TCP/IP addresses menu:
It allows you to enter descriptive names for each Modbus TCP/IP address, the IP addresses themselves and the ports used.



Alarms Menu:
In this section the TWM3IO module (if present) is configured to activate the alarm relay.



Field description:

- **TWMA Port**: serial port to which the 2TWRS485 interface, to which the TWM3IO is connected, is connected.
- **TWMA address**: refer to the manual of the TWM3IO module.
- **Excites relay in event of alarm**: set the flag to enable the relay activation on the TWM3IO. With the "Test" button it's possible to simulate an alarm and verify the relay operation.
- **Relay activation delay**: delay in minutes between the alarm signaling on the TeleNET and the activation of the TWM3IO relay.

Debug Menu:
It allows you to disable the "Break" message warning that appears when the RS485 serial ports are not configured correctly in some instruments such as the ECP200 Expert or the ECP200 Base. In case the problem is not due to the instruments but a disturbance on the RS485 line, it is possible to disable the warning.

At the end of the procedure you will need to save the new settings , you will then be asked to restart the program to load the new configuration.

To modify the node later, you need to select it and then click on "Modify node".

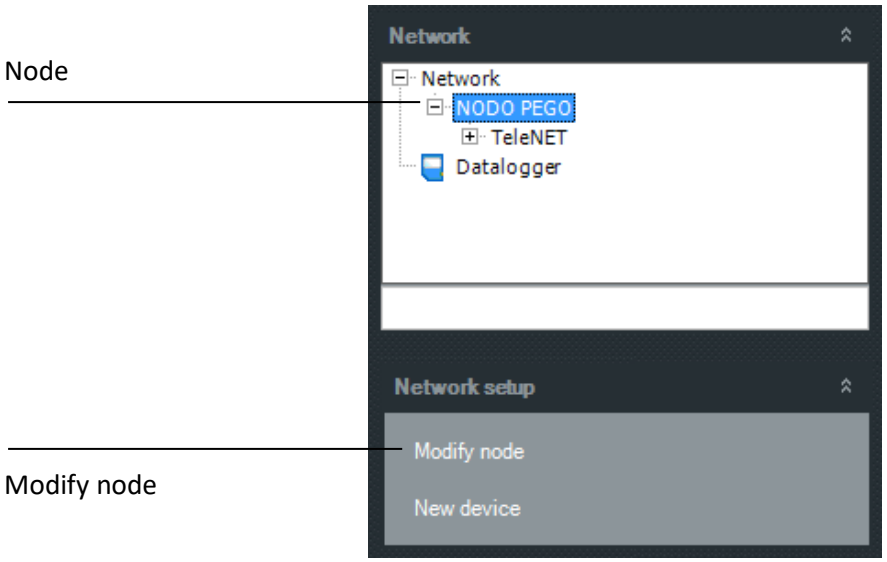
7 – SELF-RECOGNITION OF DEVICES

7.1 ENABLE SELF-RECOGNITION

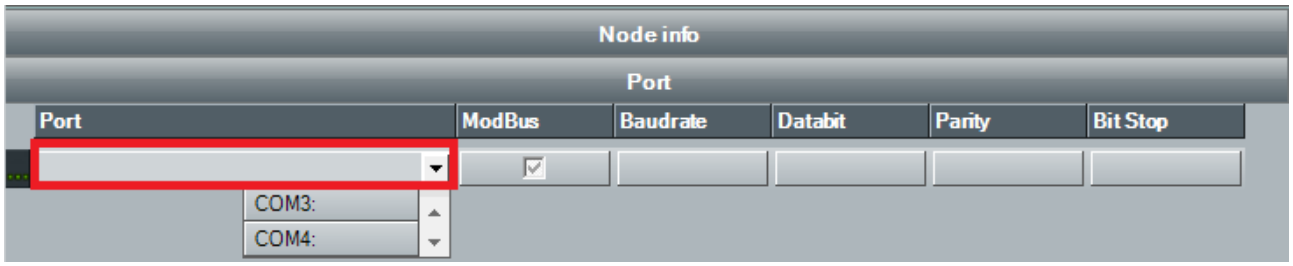
Most Pego electronics can be auto-recognized by TeleNET and inserted into the monitoring system.

To use this function you must first have created and configured the node.

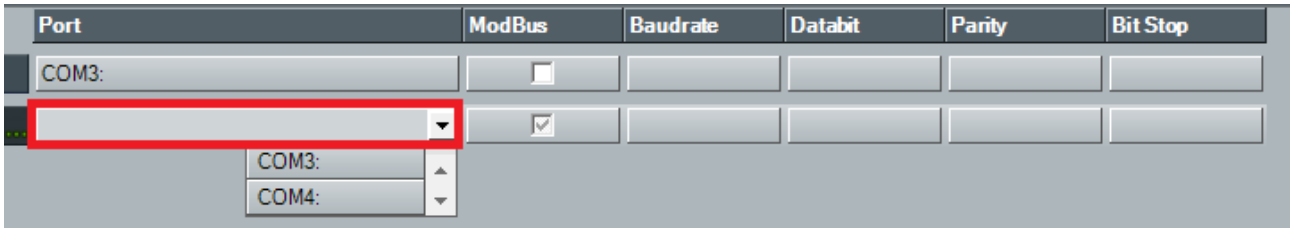
If you have not added a device yet (new installation) you need to configure the COM ports. To do this, you need to select the node and then "Modify node":



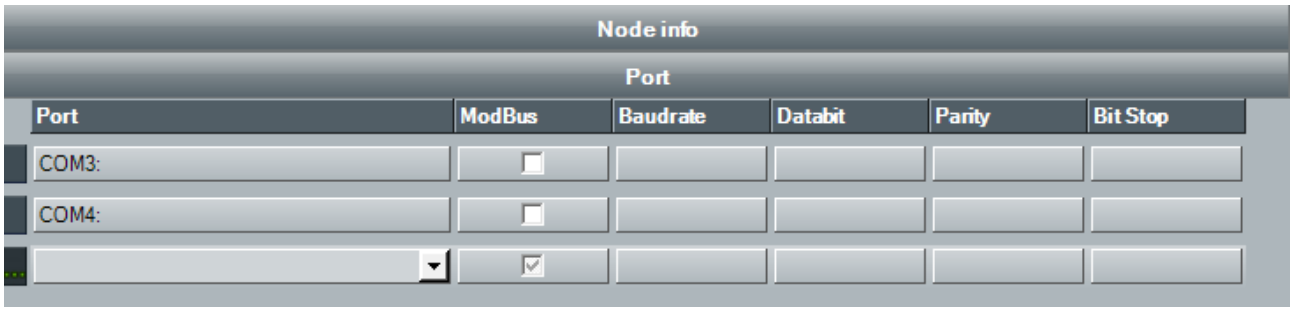
Select the “Port” menu, enable the changes with the button , click inside the port box and select a COM port:



It’s convenient to select both COM ports used by the 2TWRS485 interface, so that you can analyze both of them and not have to track down the port actually used. Once you have added the first port, simply select the box below and select the second COM port:



Result of two COM ports configured for the TeleNET protocol:



When finished, save and restart the program.

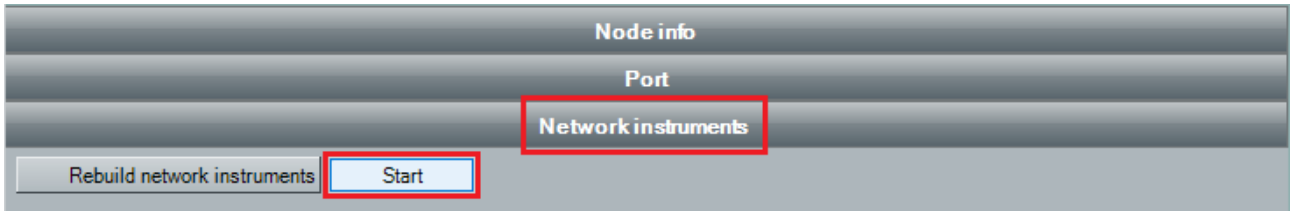
- **Note 1**: A small group of models does not have self-recognition, such as the TWM3 modules and Vision Touch, so it's necessary to configure the instruments manually (see chapter 8.1 to manually add a device).
- **Note 2**: The COM number may vary, usually it's COM3 and COM4. Check the COM ports used in Windows Device Manager.
- **Note 3**: The Modbus protocol is not supported by self-recognition.

7.2 SELF RECOGNIZE THE DEVICES

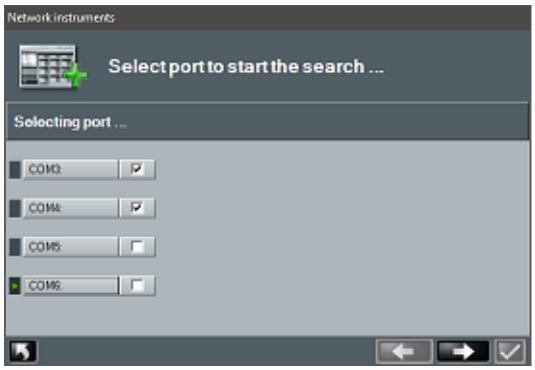
After configuring the node and COM ports (see 7.1), you can start auto-recognition.
Make sure that the electronics of the electrical panels have been configured to use the TeleNET protocol and that each of them has a unique address configured correctly.

Note: The address is described by the "Ad" variable and is a number ranging from 0 to 31, used to identify the electrical board in the TeleNET network. It's advisable to consult the user manual of the board for its configuration.

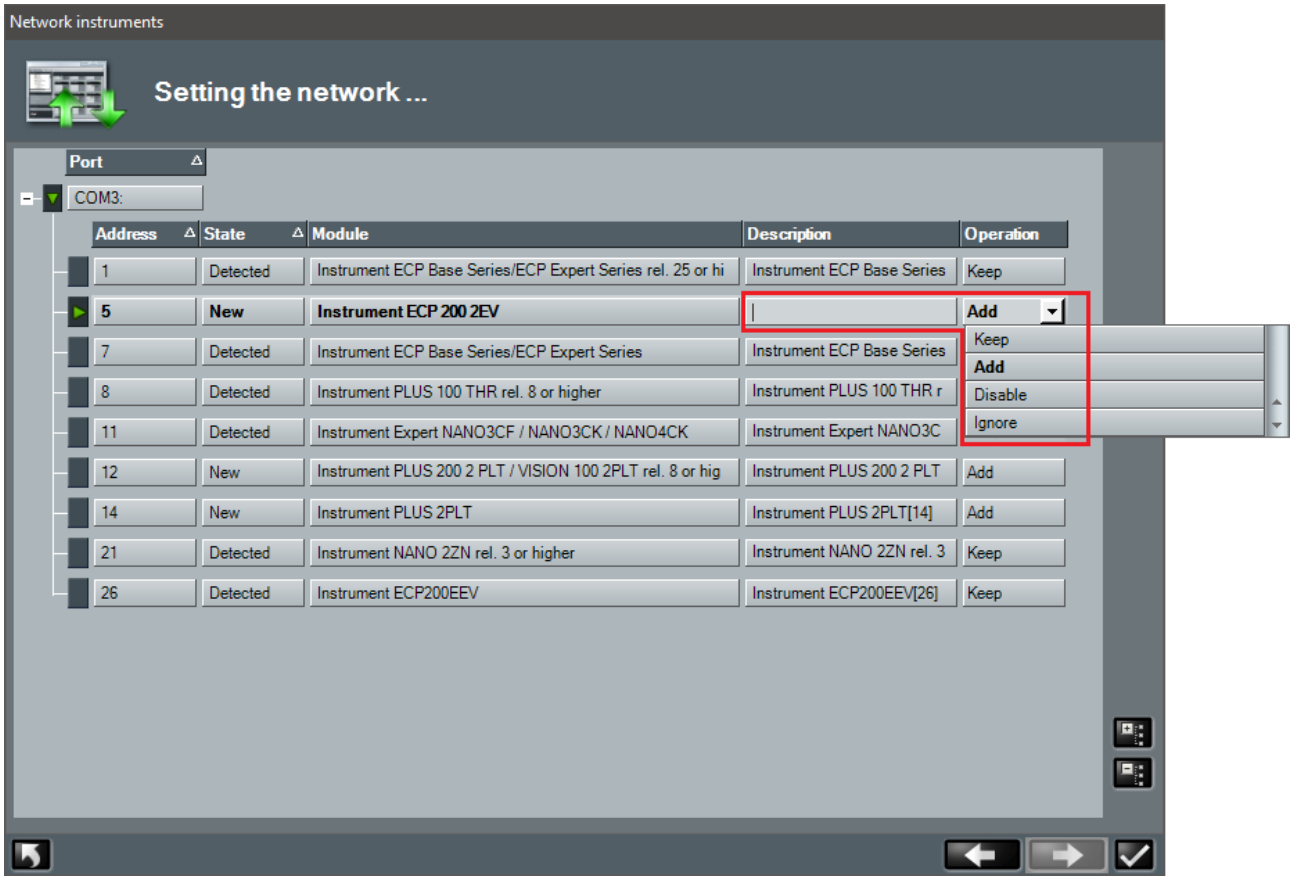
Select the node, then "Modify node", then "Network instruments", enable the modification with the button and start the instrument network rebuild process by clicking on "Start":



Select the ports to analyse and continue :



Once the operation is complete, you can individually select the tools to keep, add, disable or ignore. It's also possible to insert or modify the description of each individual instrument by selecting the relevant "name" box:



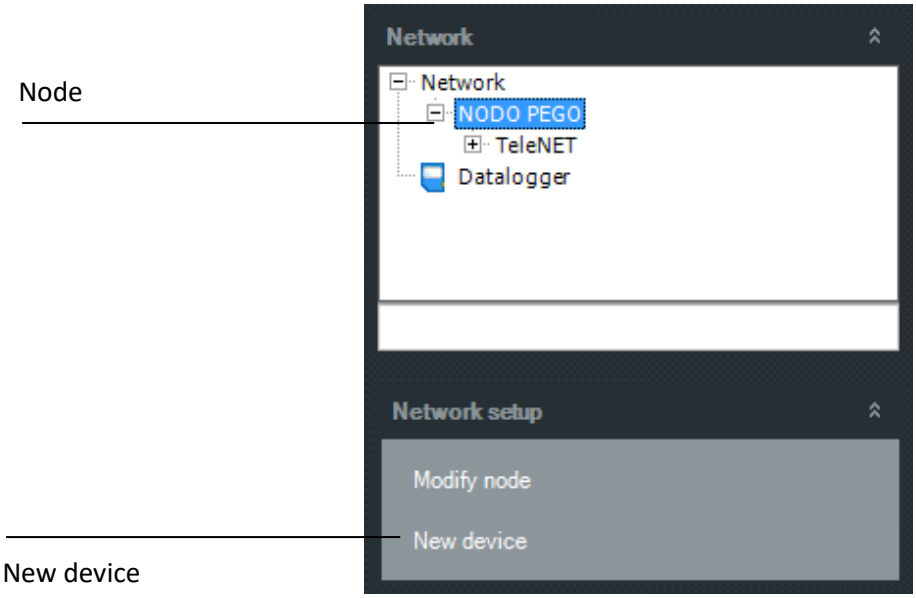
- **Keep**: it keeps the previously added device.
- **Add**: it adds the newly detected device to the network.
- **Disable**: it disables the existing device without deleting it.
- **Ignore**: it does not add the detected device.

To confirm and save, simply press the confirmation check mark at the bottom right.

8 – DEVICE CONFIGURATION

8.1 NEW DEVICE

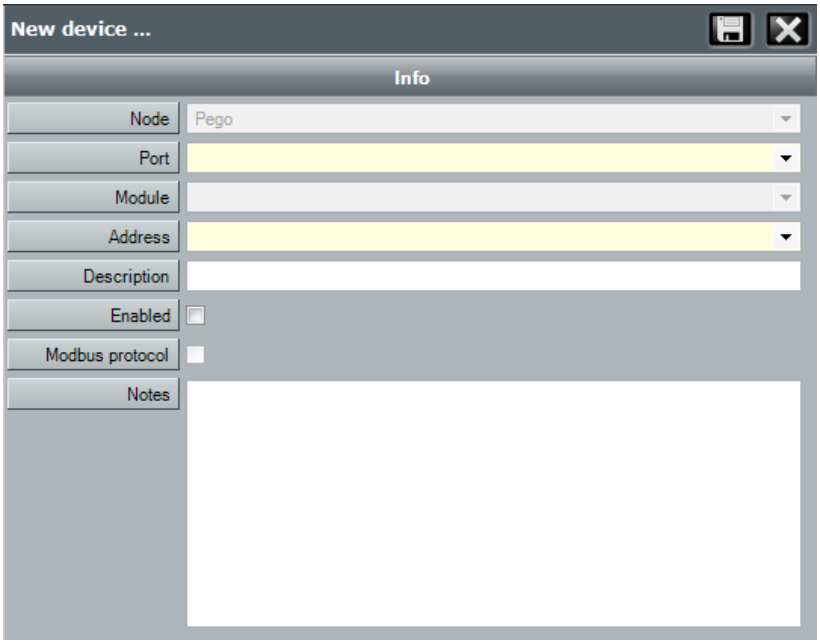
To insert a new device on monitoring system, select the node (on the example “NODO PEGO”) and afterwards select “New device”:



In the work area of the main interface, the tab containing the information about the new device will be displayed. This tab is initially divided into two bar menus:

Info Menu:

It allows you to configure the connected device.



Field description:

- **Node:** indication of the node to which the instrument is physically connected (by default it coincides with the node selected in the instrument tree and cannot be modified).
- **Port:** COM port of the 2TWRS485 interface to which the instrument is connected. If it’s necessary to modify the data, the program must be restarted.
- **Module**: select the type of instrument by indicating the product identification code, shown in the

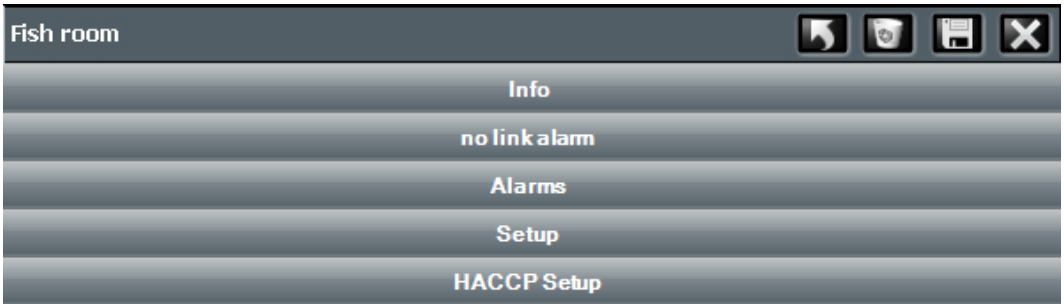
instrument's user manual.

- **Address:**
  - If TeleNET COM port: address of the device which can assume a value between 0 and 31. If the device is a TWM3IO, the address can assume a value between 32 and 40.
  - If Modbus COM port: address of the device which can assume a value between 1 and 254.

  The address can be verified on the panel by consulting the parameter "**Ad**" in the second level.
- **Description:** description of the device displayed in the network tree (e.g. cold room).
- **Enabled:** set the flag to enable device monitoring. If you decide not to use the device, you can disable it. By disabling it you can exclude it from monitoring and keep the configurations ready for future re-enablement.
- **Modbus protocol** (read only): if the selected COM port is of the Modbus type (configured in the node settings, see chap. 6.1) the flag is enabled automatically.

Save with the button. You will be asked if you want to add the tool to the Total Panel Control: click "YES" to make the tool visible in the work area.

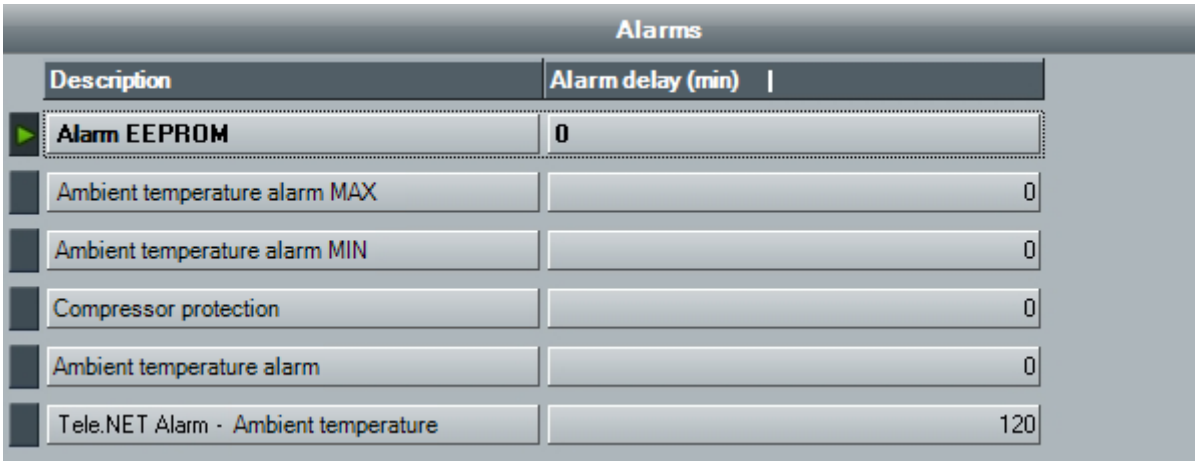
After entering the new instrument data in the Info menu and saving it, additional bar menus will appear depending on the instrument type and the Telenet configurations.



no link alarm Menu:

It contains information regarding the timing of the alarm relay excitation following the recognition of a no link situation regarding the device.

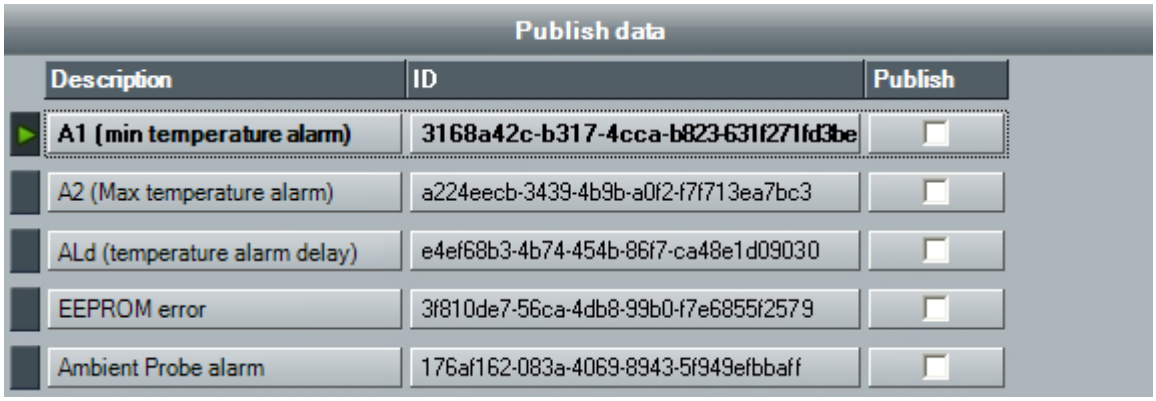
Alarms Menu:



It contains the timing relating to the activation of software alarms following the permanence of a determined alarm situation. The “Alarms” menu differs from the type of device and contains the specific alarms for that particular device.

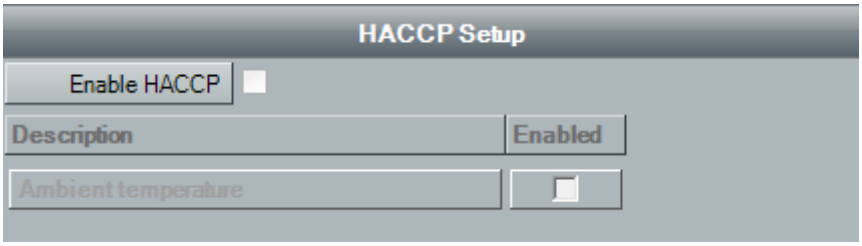
Publish data Menu:

It allows the selection of the quantities and parameters to be published for each device. Changes to the items in this menu can only be made when monitoring is stopped.
For the use and correct configuration of this menu see chapter 6.1 under the heading “Publish data menu”.



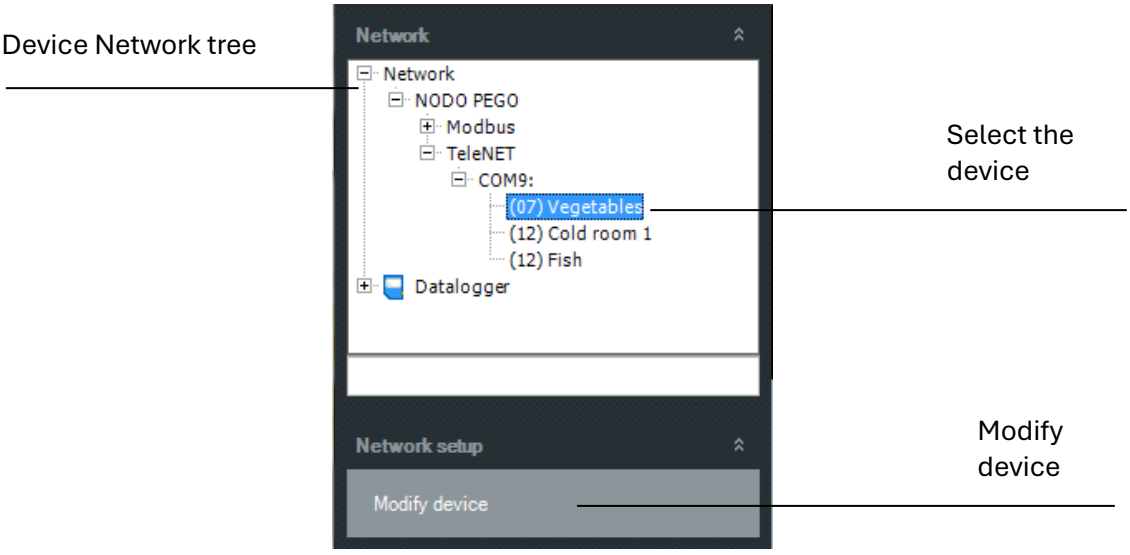
HACCP Setup Menu:

For the selected device, it allows you to enable/disable the HACCP function and select which quantities to monitor.



8.2 MODIFY DEVICE

To edit a device, select it in the Device Network tree with a mouse click; then select the “Modify device” menu:

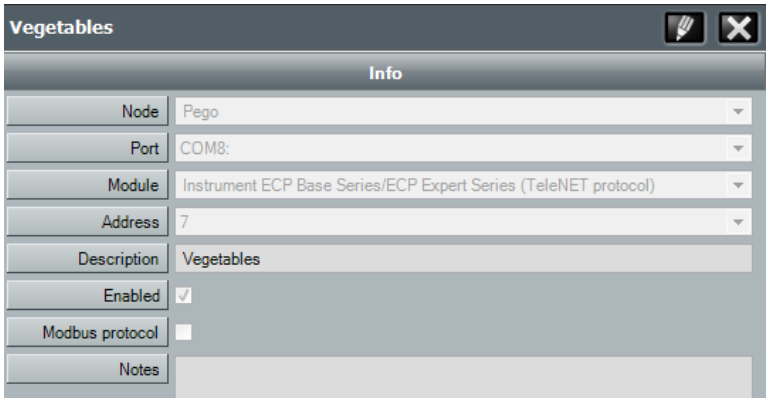


8 – DEVICE CONFIGURATION

The tab containing the information about the device will be displayed in the work area of the main interface.

By pressing the edit button the editable fields become active (in the “Info” menu the “Module” and “Node” fields are disabled, as they cannot be edited).

Once you have made the changes, press the save button to save the changes.



For **datalogger** devices, the **Setup** menu is also available, which allows you to customize the descriptions of the recorded data:

Editable fields become active by pressing the edit button .

Once you have made the changes, press the save button to save the changes.

<u>Deleting the device</u>:
To delete a device, you need to disable it (remove the flag from the “Enabled” field and save the information).

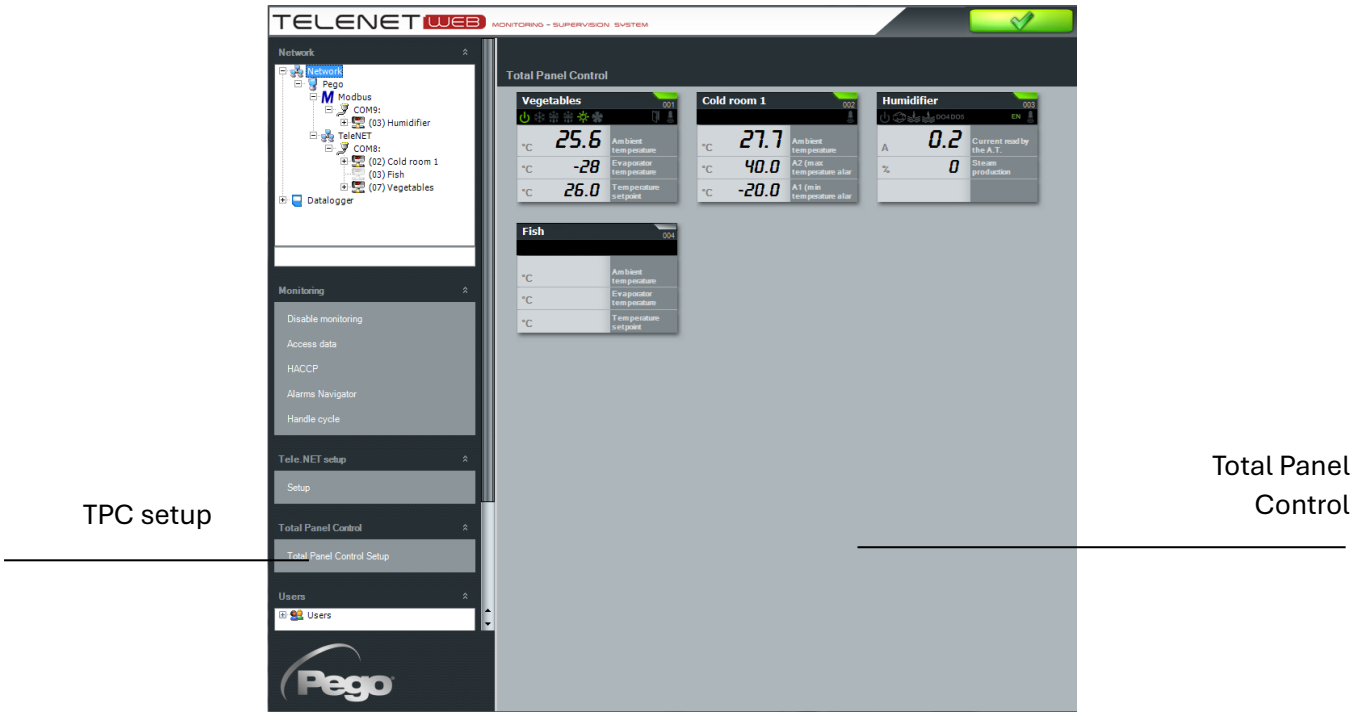
Afterwards, you can delete it by clicking on the trash icon .

Attention: deleting a device will delete all its recordings from the database. A second security message will ask you to confirm that you want to delete the device.

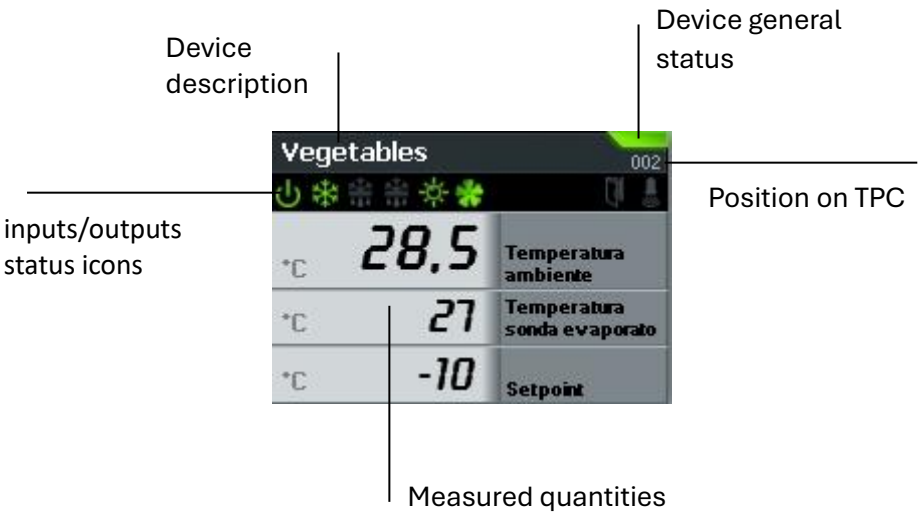
9 –TPC CONFIGURATION

9.1 TOTAL PANEL CONTROL CONFIGURATION

The Total Panel Control (**TPC**) is the work area where the devices are displayed with the main information relating to the available physical quantities, the status of the main outputs and inputs, the disabled, normal, cycle in progress or alarm status:



Representation of the device on the Total Panel Control:

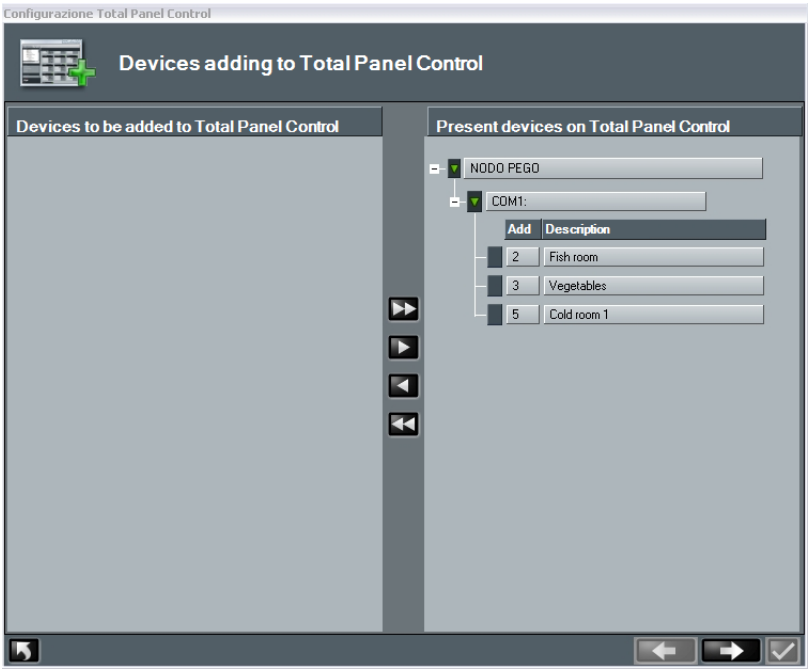


General status icons of the device	
no icon	Monitoring is disabled
grey	The device is disabled
green	Monitoring is enabled and the device is active
yellow	Pre-alarm
red	Alarm
light blue	Automatic cycle in progress

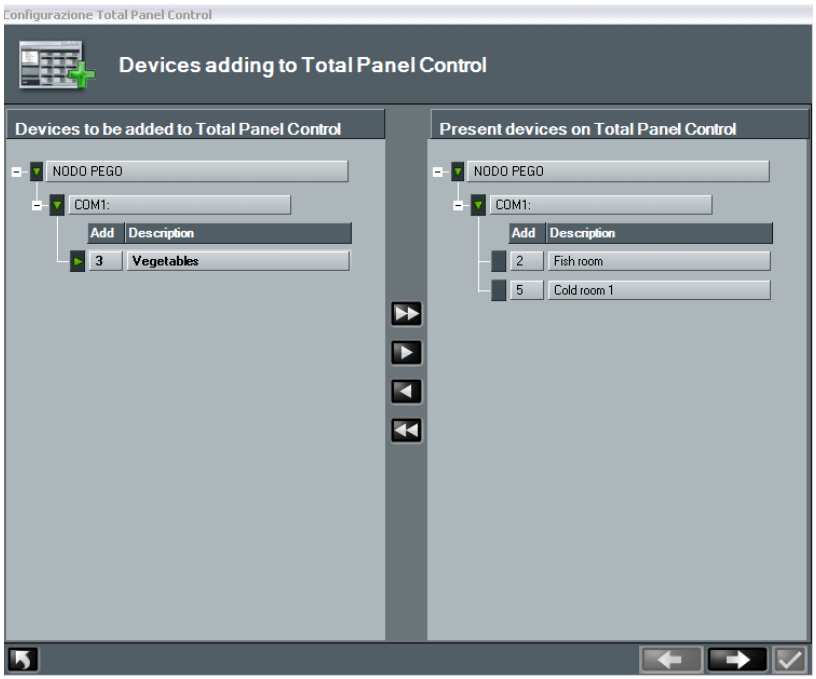
9 – TPC CONFIGURATION

From the main menu you can configure Total Panel Control. Configuring Total Panel Control allows you to organize devices by deciding the order in which they appear, whether to display them, and what available data to show.

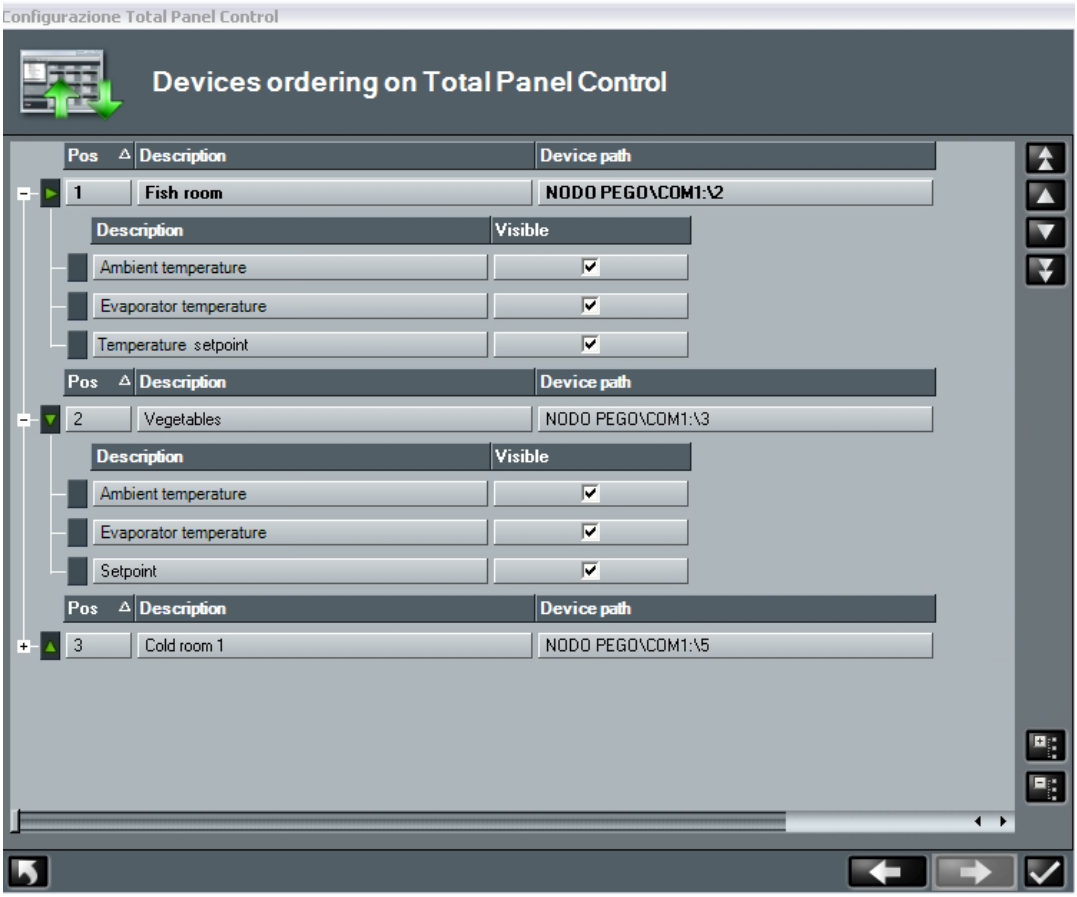
The first step is to add or remove devices from the TPC.
To do this, select the device of interest and use the navigation buttons in the center of the two sections:



In this example a device was removed from the TPC:



In the next section you can decide which data to display for each device and move the order of their appearance by selecting the device and using the movement arrows at the top left:

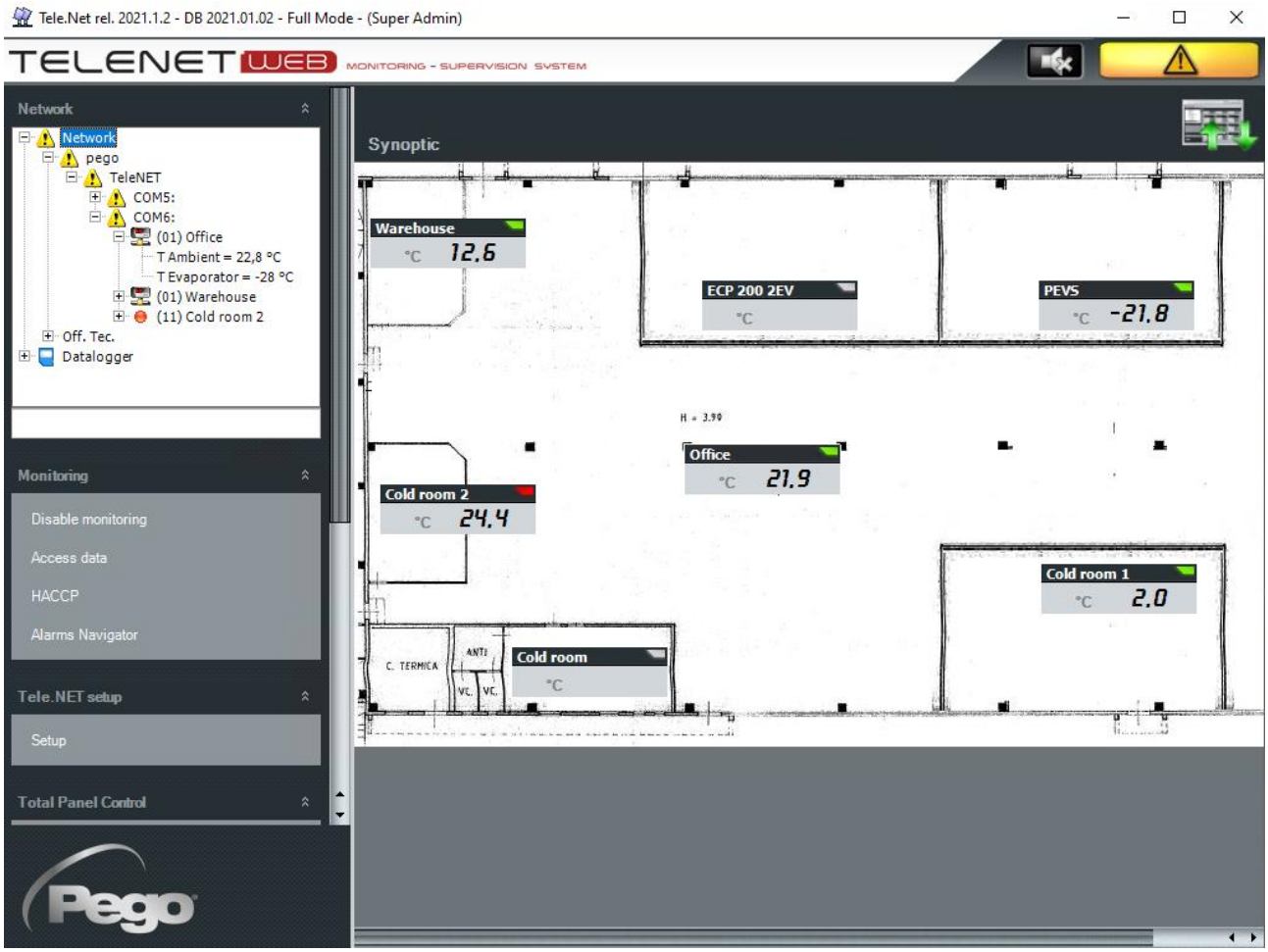


At the end of the configuration, confirm with the checkmark .

10 – SYNOPTIC

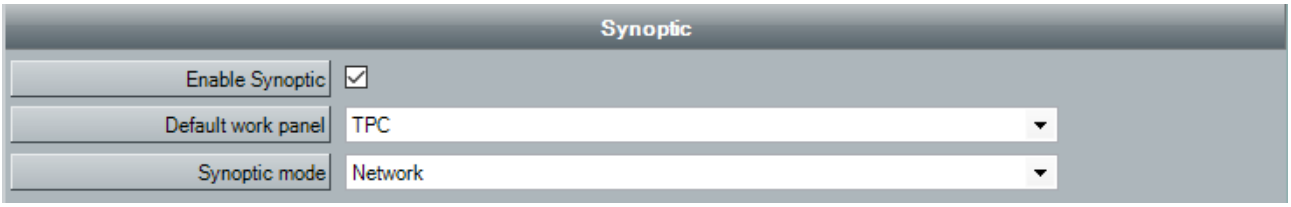
10.1 SYNOPTIC ACTIVATION

The synoptic is an area where the devices are displayed in a minimal style with their status and a single physical quantity each.
You can double-click on a device to view its complete monitoring.
It's possible to upload the plant map or a neutral background to have a quick overview of the situation:



To activate this function, select "Network" in Network menu, then "Setup" in the Tele.NET setup menu and finally select the "Synoptic" tab.

Once you have entered the synoptic configuration, you need to enable the check mark on "Enable synoptic", then choose the "default work panel" when TeleNET starts (TPC or synoptic) and select the synoptic mode (local or network):

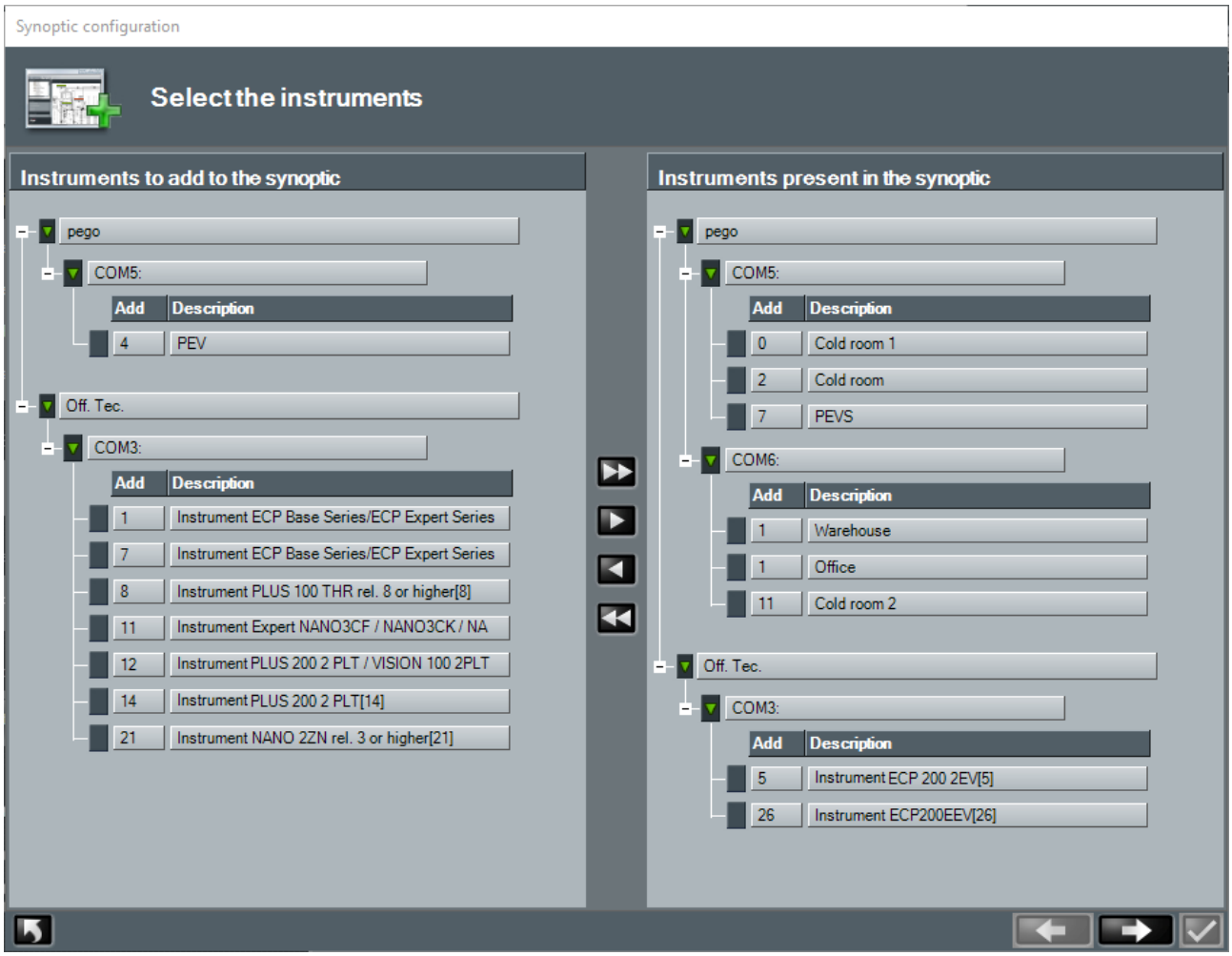


If you work in a network with multiple nodes, you can use a "local" synoptic for each TeleNET station, displaying only the respective local devices; but you can also use a single synoptic shared with all the nodes of the "network", thus being able to also display the devices of other nodes.

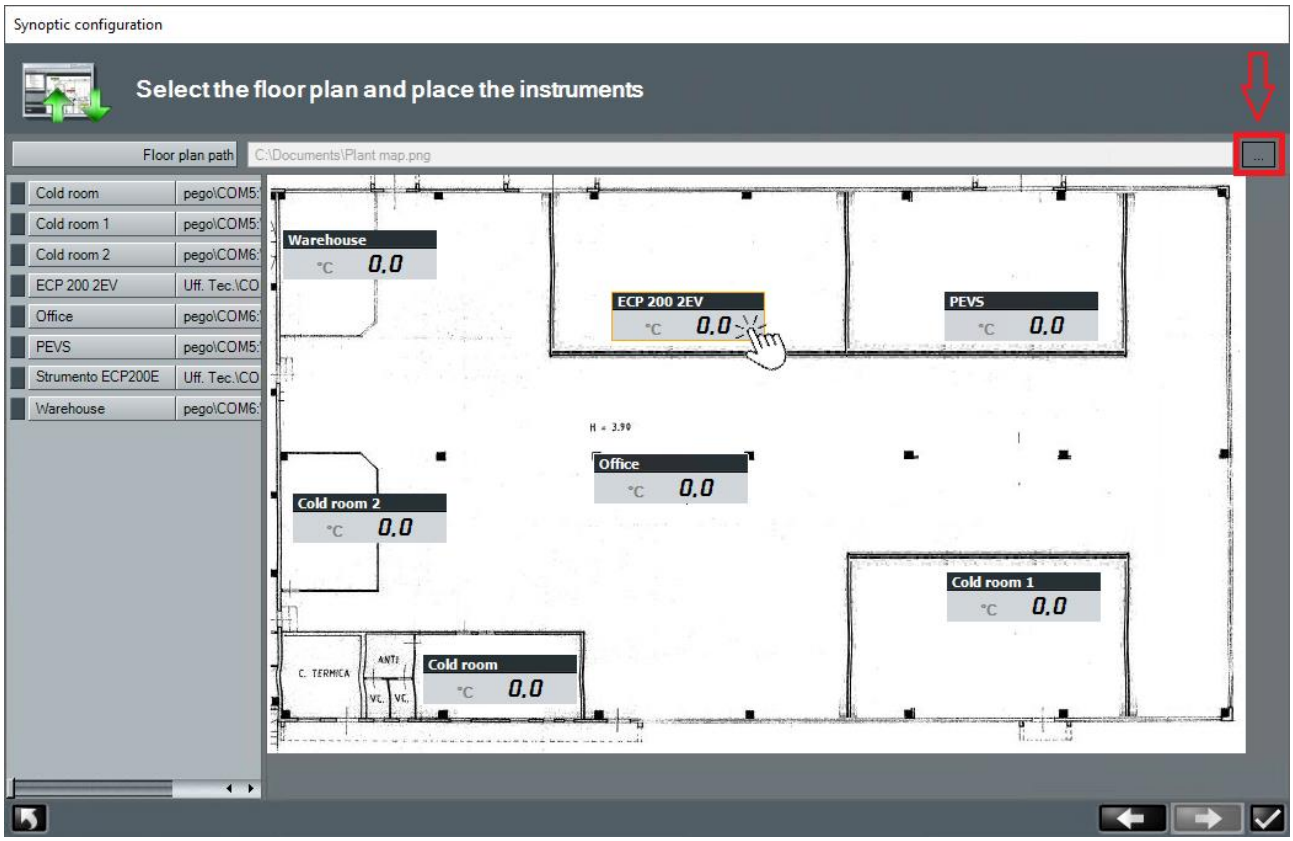
10.2 SYNOPTIC CONFIGURATION

To configure the synoptic: select Network and then Synoptic Configuration in the Synoptic menu.

At this point the device selection panel appears; here you can select the device (Instrument) to be visible or not in the synoptic. As in the example, in the case of network mode, any additional network nodes will also appear:



Once the configuration is confirmed, you will advance to the last configuration page, where you will be able to upload the plan and drag each individual device to the appropriate position on the plan:



10.3 SWITCH FROM TPC TO SYNOPTIC AND VICEVERSA

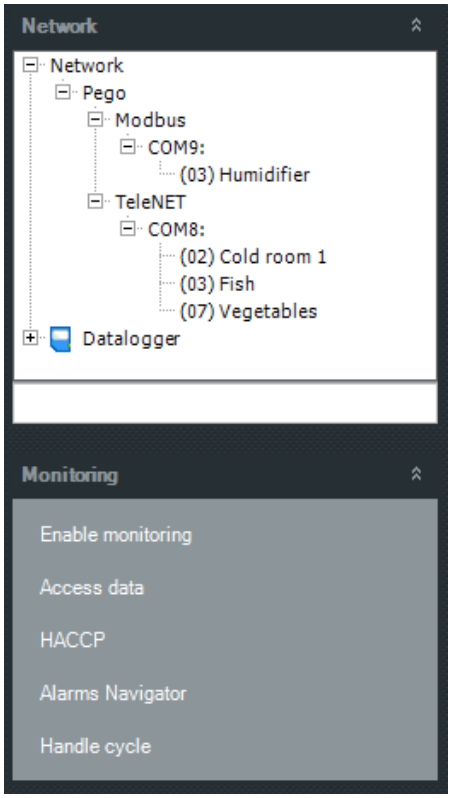
The button at the top right, under the general status icon, is used to switch between the TPC and the synoptic:

11 – MONITORING

11.1 MONITORING ENABLE

Selecting Network activates the menu:

1. Enable monitoring.
2. Access data.
3. HACCP.
4. Alarms Navigator.
5. Handle cycle.



The "Enable monitoring" command in the menu above enables TeleNET to monitor the devices physically connected to the node via the serial interface. After enabling monitoring, the "Enable monitoring" command in the menu above becomes "Disable monitoring".

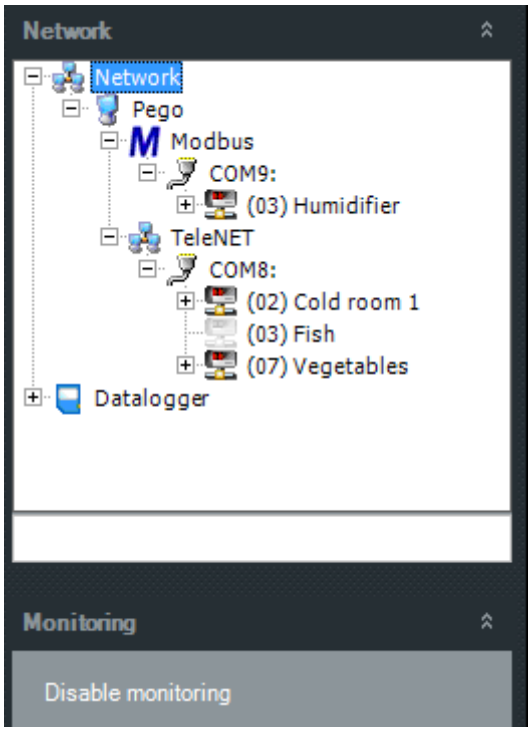
TeleNET monitoring activity is concluded by selecting the “Disable monitoring” command.
The generic status icons in TeleNET are located at the top right.

	Monitoring enabled and no alarms
	Monitoring enabled and alarm present
	Monitoring disabled

ATTENTION: to record the data the computer must remain turned on with the program active and monitoring enabled.

11.2 MONITORING READING

During monitoring, it's possible to view all connected devices on the network tree, as well as a summary of the devices status and the values of the detected physical quantities.

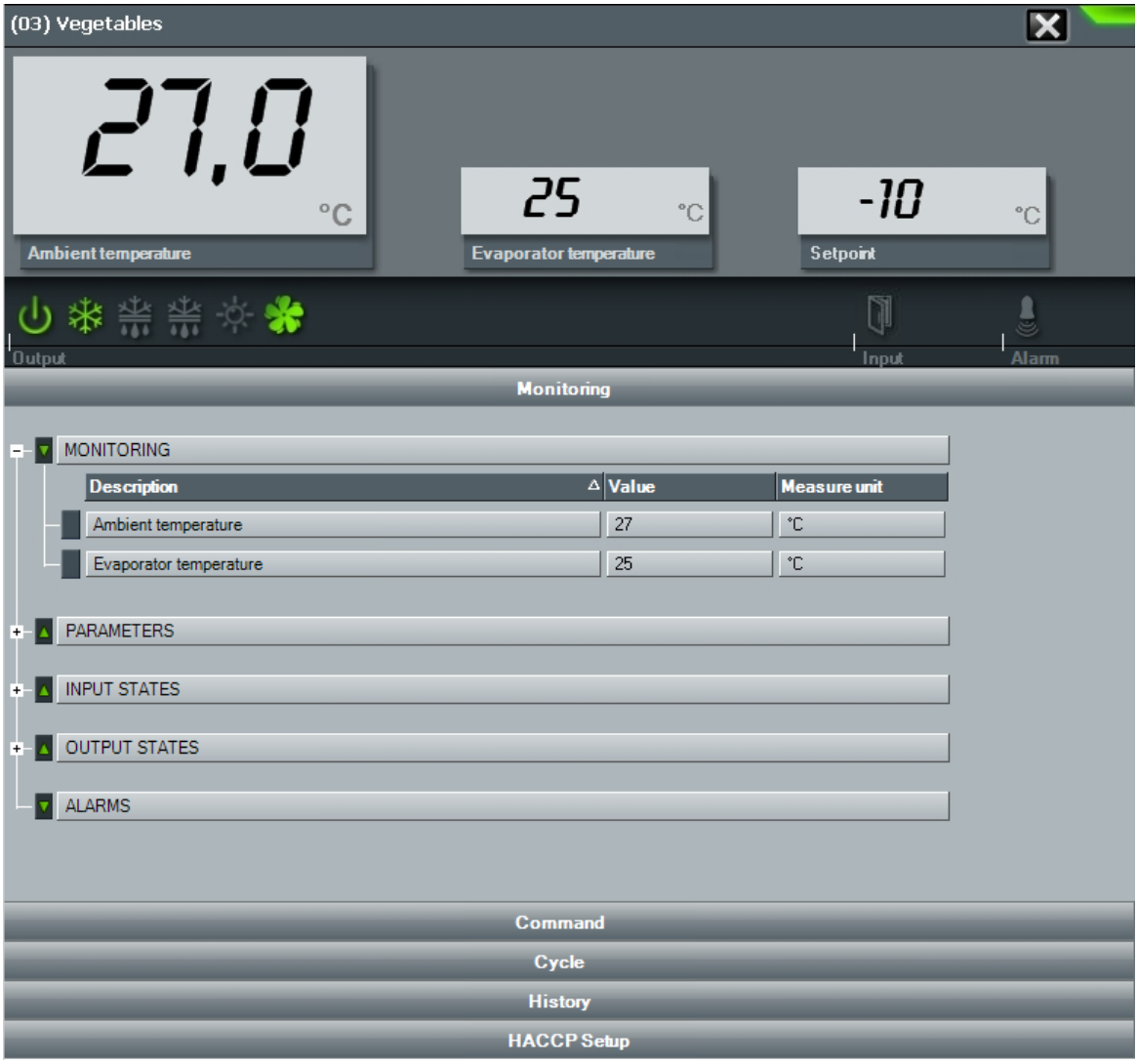


Summary of network tree icons:

	Device monitoring and correctly functioning
	Device not correctly connected
	Device disabled
	TeleNET Network of devices
	Modbus Network of devices
	Node
	Serial port (COM)
	Shows presence of alarm on one or more devices
	Shows presence of an alarm of max. temp. on the device (red)
	Shows presence of an alarm of min. temp. on the device (blue)

11.3 DEVICE PROPERTIES

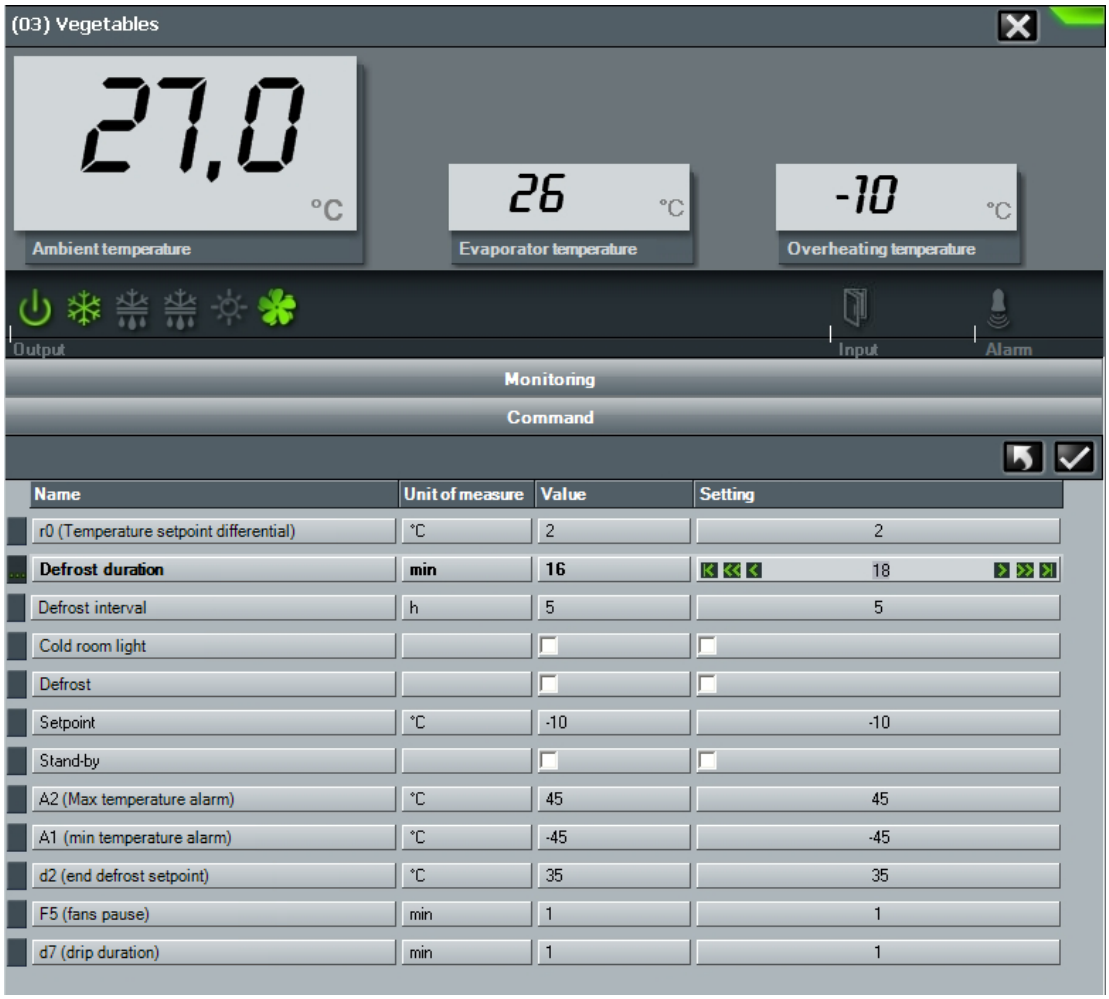
If the user needs to have the details of all the information coming from the device, by selecting the device in the tree, the device tab is displayed.



The device tab allows the user to sort the information for each of the columns in the tab; to do this, simply click on the title of the column for which you want to sort.

11.4 DEVICE PROGRAMMING

TeleNET allows the user to send a command to the device to change its configuration (for example: minimum and/or maximum temperature alarms, stand-by, defrost activation, etc.).
To send a command to the device, access the Command area of the device tab, which displays information about the configurations that can be modified. In detail, the penultimate column contains the current value and the last column the value you want to set for the device.
Once you have finished setting the desired values, sending them to the device occurs by clicking on the "Confirm" button . The "Back" button instead has the task of resetting the settings to the current values of the device.



Name	Unit of measure	Value	Setting
r0 (Temperature setpoint differential)	°C	2	2
Defrost duration	**min**	**16**	18
Defrost interval	h	5	5
Cold room light			
Defrost			
Setpoint	°C	-10	-10
Stand-by			
A2 (Max temperature alarm)	°C	45	45
A1 (min temperature alarm)	°C	-45	-45
d2 (end defrost setpoint)	°C	35	35
F5 (fans pause)	min	1	1
d7 (drip duration)	min	1	1

11.5 DEVICE DATA HISTORY AND GRAPHS

By setting the dates in the "From" and "To" boxes and confirming the entry with the button, it's possible to view the data for any time period (if the data is present). The tabbed menu allows you to select the following display types:

Graph: It displays the graph of the measurements recorded in the selected time period.
Events: It displays, in tabular format, the alarms in the selected time period.
Monitoring: It displays, in tabular format, the measurements recorded in the selected time period.

For each of these modes it's possible to print and for those in tabular format it's also possible to export the data in Excel format . The back button allows you to access the page for selecting the measures to display and the colors to use for the graph.
Note: the first time you create the graph you need to make these settings.

11.6 HACCP

By setting the date in the "Date" box and confirming the entry with the button , it's possible to view, print and save in Excel format the maximum and minimum daily temperature values and the hourly averages (see chap. 14.3).

11.7 TELENET CONTROLS FROM CONTROL LINE

Telenet allows the execution of instructions from the command line.

COMMAND INPUT STRING:
Telenet.exe [-U< nameuser >] [-P< pswuser >] [-A]

CONTROL OPTIONS:

-U[nameuser]	user to log in
-P[pswuser]	user password
-A	automatic monitoring start

Examples:
C:\Programmi\PEGO\Telenet\TeleNet.exe -Uadminlogin -P -A
C:\Programmi\PEGO\Telenet\TeleNet.exe -Umassimo -Pmypassword -A

Thanks to this function, it is possible to automatically carry out at every Windows start-up, the Telenet with a determined user and the monitoring started.

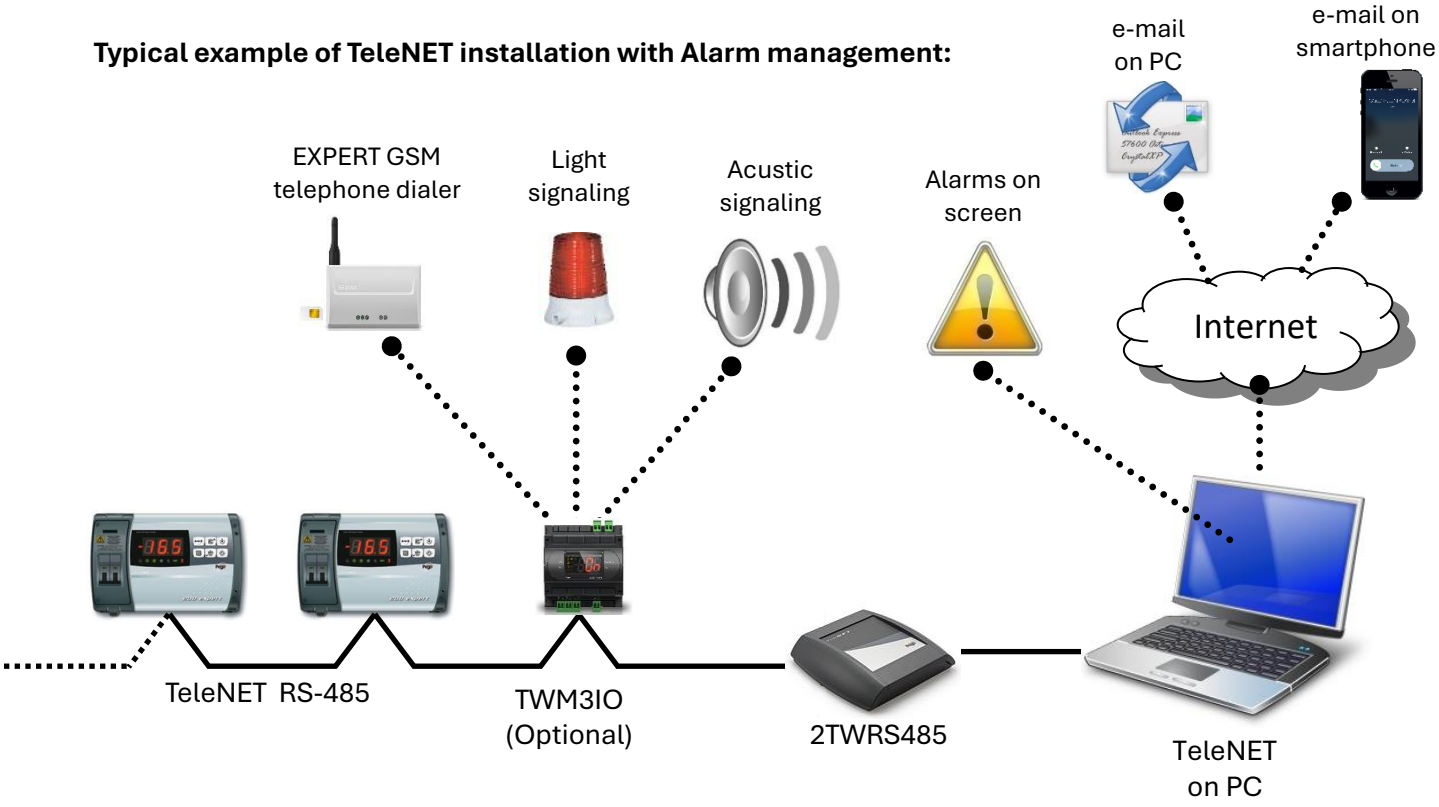
You can then insert a command shortcut (or a script or batch file) into the Windows Startup folder: "C:\Users*user*\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup".

12 – ALARMS

12.1 ALARMS OVERVIEW

TeleNET is a software for monitoring and supervising refrigeration and air conditioning systems controlled by Pego electronic instruments. The network of devices sends data to a personal computer from which it's possible to view and print reports, manage alarms, modify operating parameters, monitor the entire system.
This chapter illustrates how to configure the system for correct alarm management and how they are transmitted to the operator.

Typical example of TeleNET installation with Alarm management:



The TeleNET system offers three alarm reporting options:

- **ALARMS ON SCREEN MANAGEMENT:**
  Reporting via status icons and error messages.
  Real-time alarm display, alarm history consultation.

- **LOCAL ALARMS MANAGEMENT:**
  TWM3IO module (optional) for controlling external devices such as acoustic signal, light signal or EXPERT GSM telephone dialer.

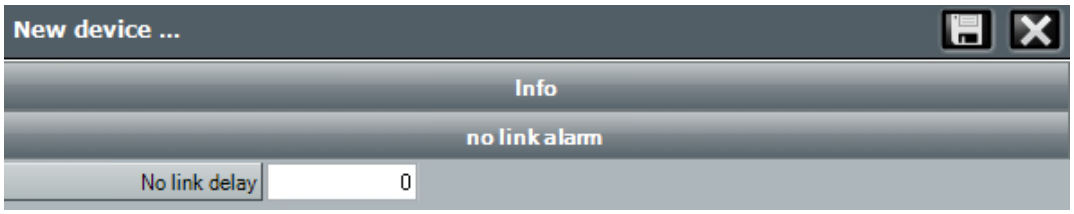
- **REMOTE ALARM MANAGEMENT:**
  Send multiple emails to mobile phones and computers with detailed description of the alarm event. Send emails when the alarm has been cleared. Time slots for excluding alarm sending.

12.2 ALARMS BASIC CONFIGURATION

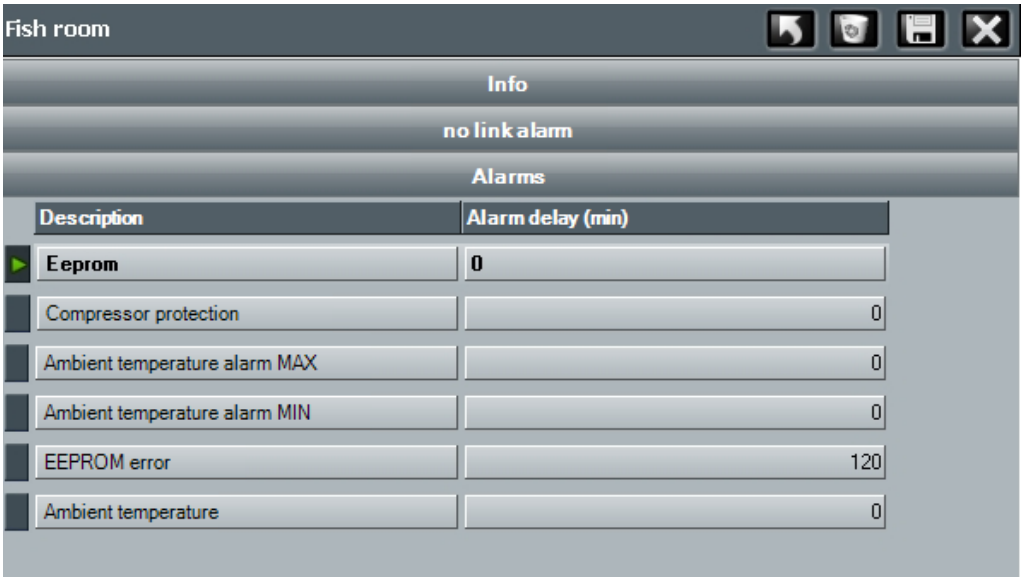
TeleNET provides a default configuration for alarm settings that makes it operational at first start. It's recommended to check that these basic settings are in accordance with your needs.

Each device has one or more alarm delay configuration tabs. It's possible to access it either during the creation of a new device or after its selection in "Network" by pressing the "Modify device" button in the interactive menu.

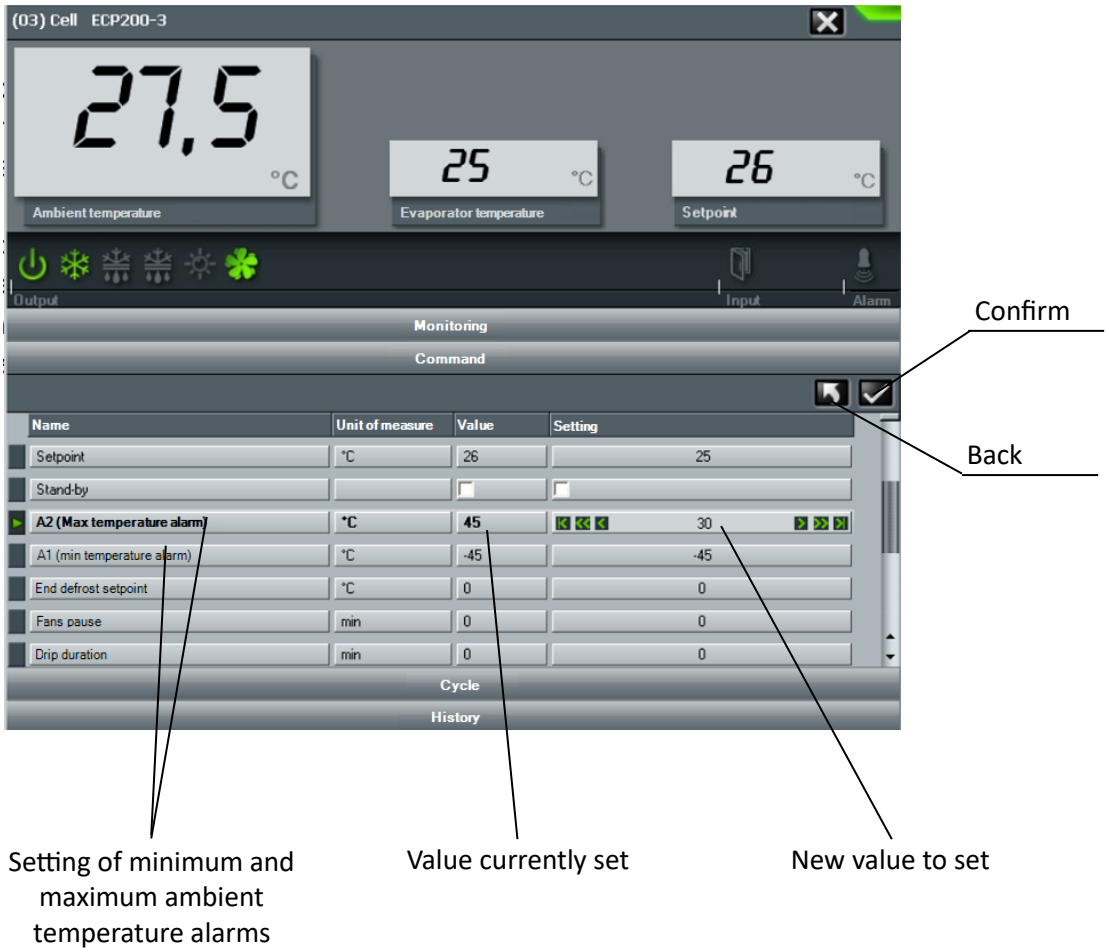
1. **"no link alarm" area:** menu containing information regarding the alarm relay excitation times, following the recognition of a no link situation (disconnection) concerning the device. This menu is always present in each device.



2. **Alarms area**: menu containing the timings relating to the activation of software alarms following the persistence of a certain alarm situation. The alarm area differs by device type and contains the alarms specific to the device.



On the "device tab", in the "Command" area there are the alarm settings for exceeding a detected measurement (temperature, humidity, pressure alarm, etc.) with minimum and maximum threshold settings. With the measurement outside the set range, the alarm status will be signaled, after the delay times.
The penultimate column contains the current value and the last one the value you want to set for the device. Once the desired values have been set, sending them to the device occurs by clicking on the "Confirm" button. The "Back" button instead has the task of resetting the settings to the current values of the device.



12.3 ALARMS ON DISPLAY MANAGEMENT

TeleNET provides a series of on-screen warnings that allow the user to immediately verify the presence of alarms and the origin of the alarm.

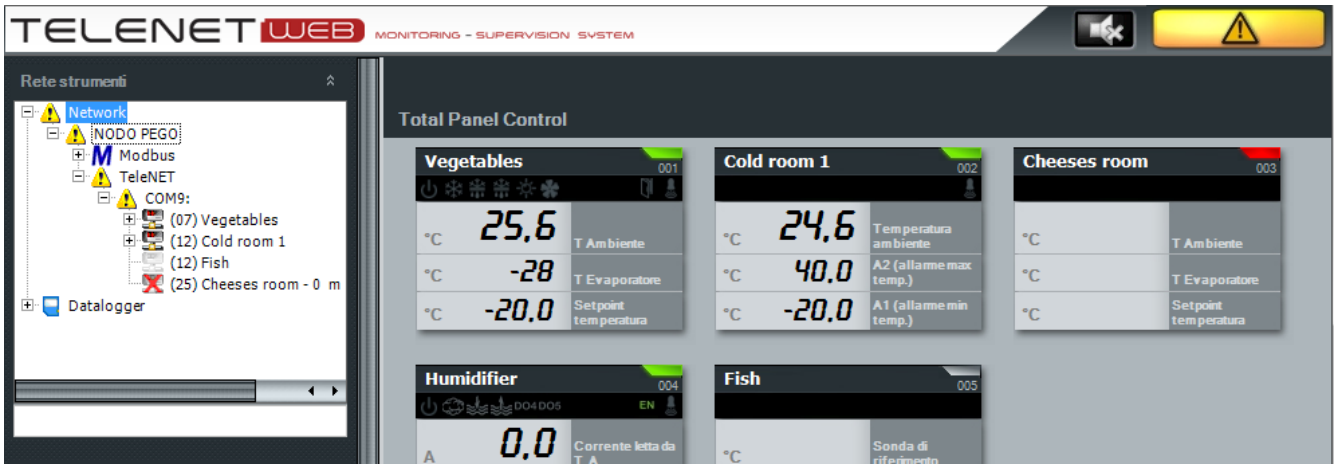
1. **Alarm main icon.** The presence of an alarm is easily detected by the presence of the yellow warning triangle in the top right area of the TeleNET.

Monitoring enabled and no alarm

Monitoring enabled and alarm present

Monitoring disabled

2. **Alarms represented on Network.** On the device tree (Network) the alarm signal is called with the yellow attention triangle. By opening the branches of the Network you search for the device in alarm. The time highlighted next to the device indicates how long the alarm has been active.



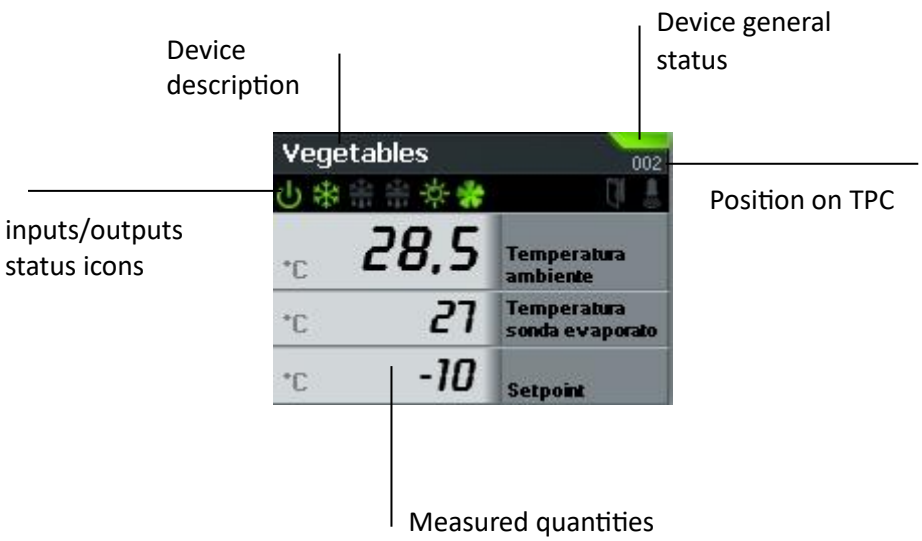
If the sound signal has been enabled in the node configuration

at each alarm, together with the icon, an acoustic alarm is emitted using the computer's sound card.

There is also a button in the upper right corner to silence the acoustic alarm .

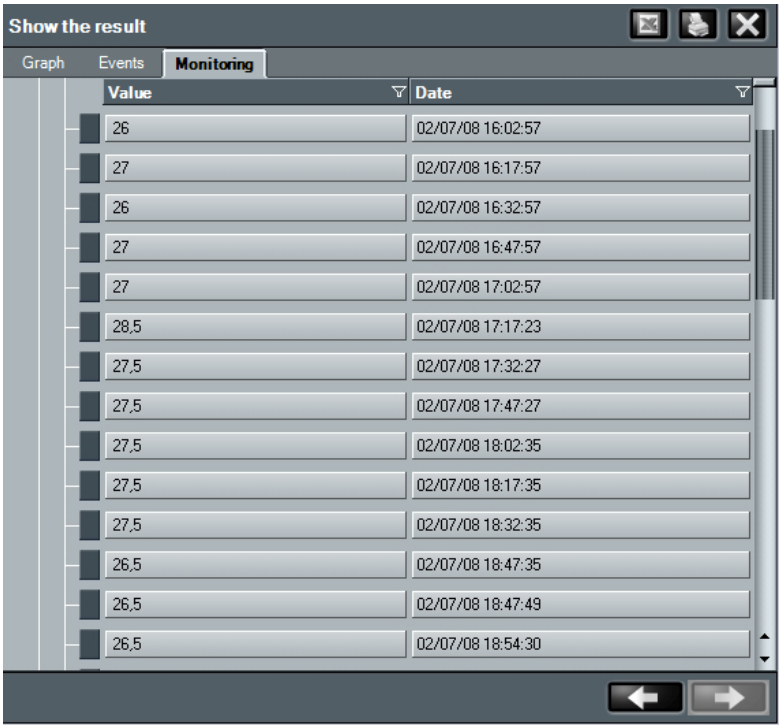
3. **Device alarm icon.** In Total Panel Control each device has a status icon that can highlight the alarm status.

Device representation on the total panel control:



General status icons of the device	
no icon	Monitoring is disabled
grey	The device is disabled
green	Monitoring is enabled and the device is active
yellow	Pre-alarm
red	Alarm
light blue	Automatic cycle in progress

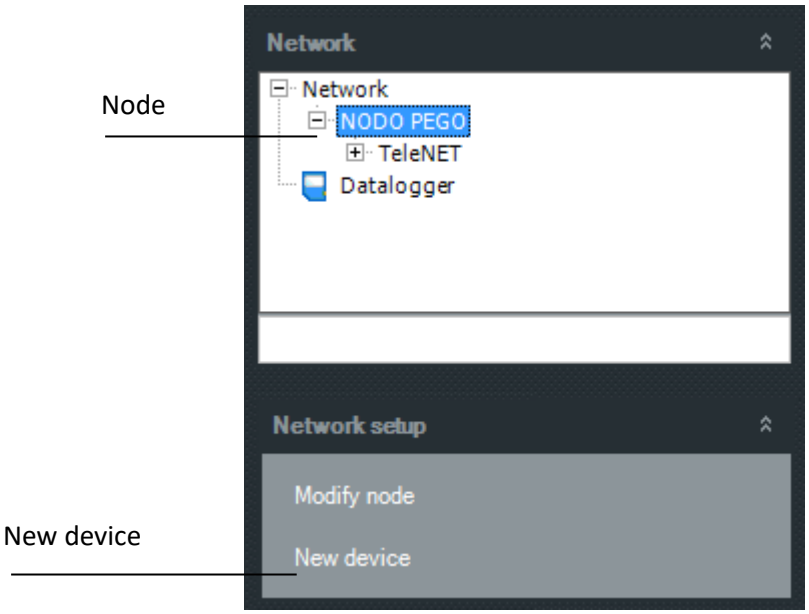
4. **Alarm history.** In the recording history you can search for alarms in the events section.



12.4 LOCAL ALARMS MANAGEMENT

The optional TWM3IO module consists of a 6DIN module, with an on-board relay that, once configured, activates in the presence of an alarm. With it, it is in fact possible to act on an external device such as, for example, light signals, sound signals or EXPERT GSM telephone dialer to warn the operator in the most appropriate way.

The TWM3IO module must be inserted and configured in “Network” like all TWM modules. Select the node (in the example PEGO NODE) and then select “New device”.

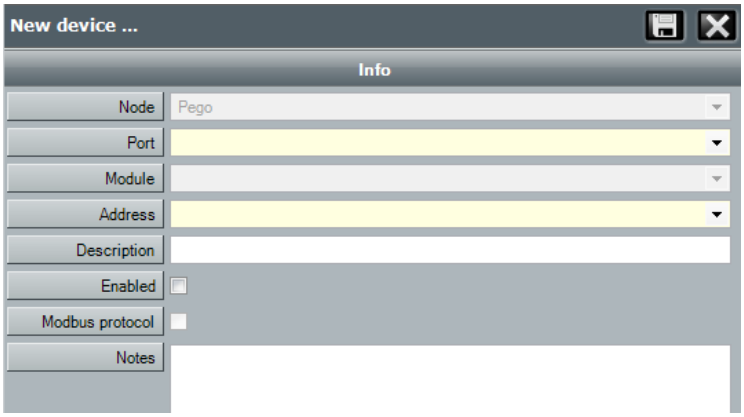


12 – ALARMS

In the work area of the main interface, the tab containing the information about the new device will be displayed. This tab is initially divided into two bar menus:

Info Menu:

It allows you to configure the connected device.



Field description:

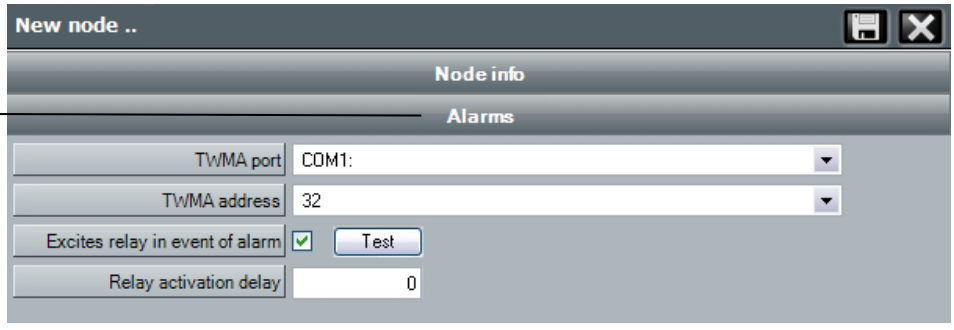
- **Node:** indication of the node to which the instrument is physically connected (by default it coincides with the node selected in the instrument tree and cannot be modified).
- **Port:** COM port of the 2TWRS485 interface to which the instrument is connected. If it's necessary to modify the data, the program must be restarted.
- **Module**: select the type of instrument by indicating the product identification code, shown in the instrument's user manual.
- **Address:** address of the device which can assume a value between 32 and 40. The address can be verified on the TWM3IO by consulting the parameter "**Ad**" in the second level.
- **Description:** description of the device displayed in the network tree (e.g. "Alarm module").
- **Enabled:** set the flag to enable device monitoring. If you decide not to use the device, you can disable it. By disabling it you can exclude it from monitoring and keep the configurations ready for future re-enablement.
- **Modbus protocol** (read only): disabled in the case of TW3MIO device.

no link alarm Menu:

It contains information regarding the timing of the alarm relay excitation following the recognition of a no link situation regarding the device.

Once the TWM3IO module has been configured in "Network", it must be linked to the Node.
Select the node and then press "Modify node"; then select the Alarms bar in the right area.

Alarms



In this section the TWM3IO module (if present) is configured to activate the alarm relay.

Fields description:

- **TWMA Port:** serial port to which the 2TWRS485 interface is connected to which the TWM3IO is connected.
- **TWMA Address:** refer to the TWM3IO module manual.
- **Energizes the relay in case of alarm:** flag the box to enable the relay activation on the TWM3IO. With the “Test” button it’s possible to simulate an alarm and verify the functioning of the relay.
- **Relay activation delay:** delay in minutes between the alarm signaling on the TeleNET and the activation of the TWM3IO relay.

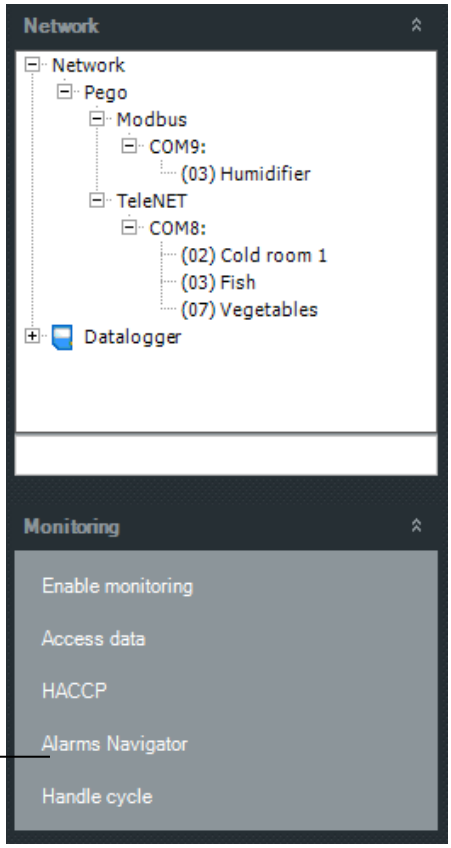
After completing the settings, save the information.
You will be asked to restart the program.

12.5 REMOTE ALARMS MANAGEMENT

TeleNET can send alarm reports via email.
The computer must be connected to the Internet and have an email account to use for sending emails.
For configuration, refer to chapter 5.1 under the "Mail Menu" item.

12.6 ALARMS NAVIGATOR

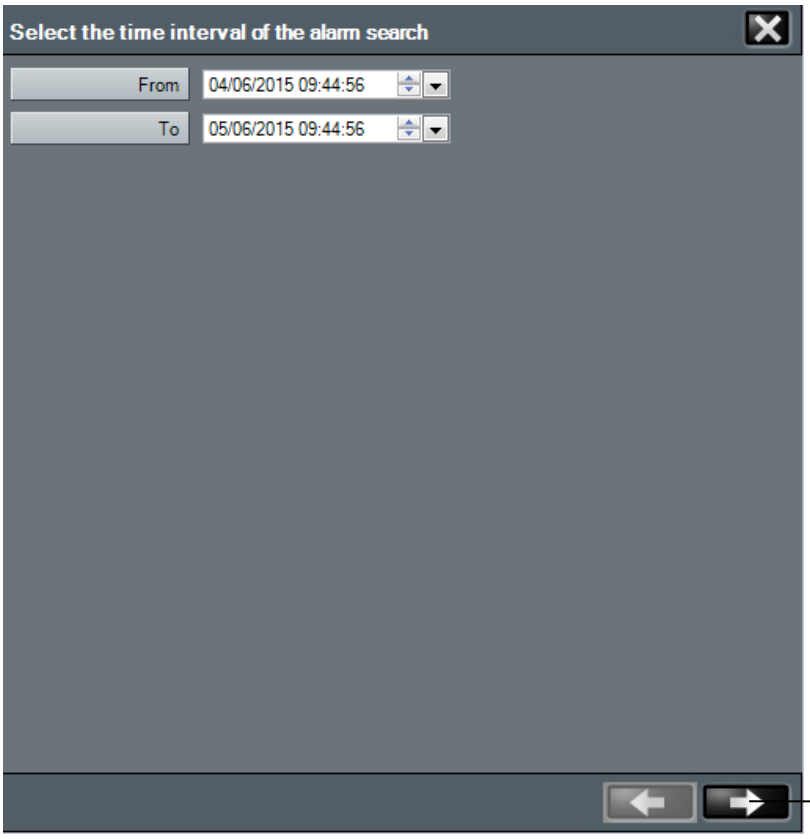
TeleNET allows viewing of alarm sequences related to currently defined devices.
To access the Alarm Navigator from the general menu:



Alarms navigator

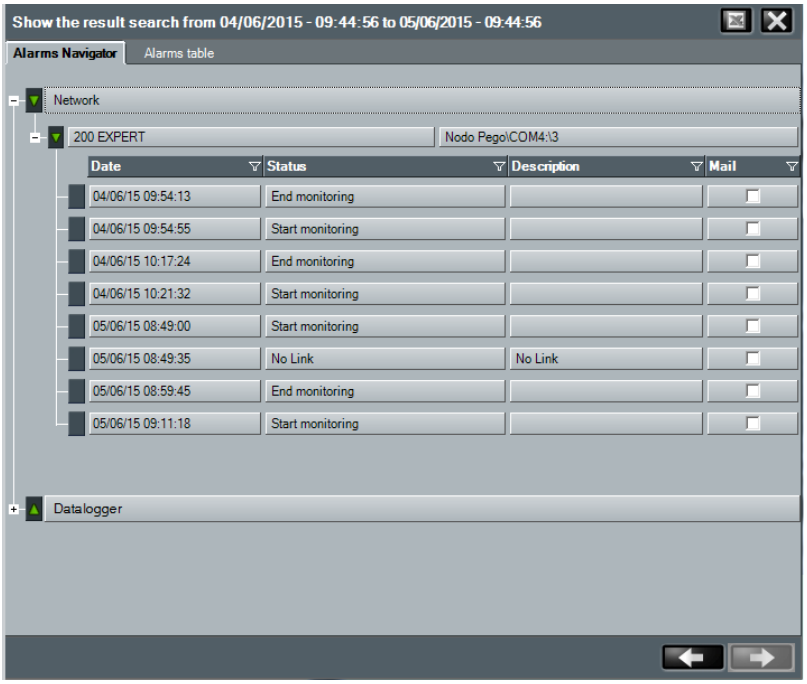
12 – ALARMS

The tabbed menu allows you to select the following display types:
Alarms navigator: it displays the alarms recorded in the selected period, keeping them divided by origin (Network or Datalogger) and by device according to a tree structure.
Alarms table: it displays the alarms in the selected period in a tabular format.



Select the time period for which you want to analyze the history.
If there is no data recorded in the period, the next screen will be empty.

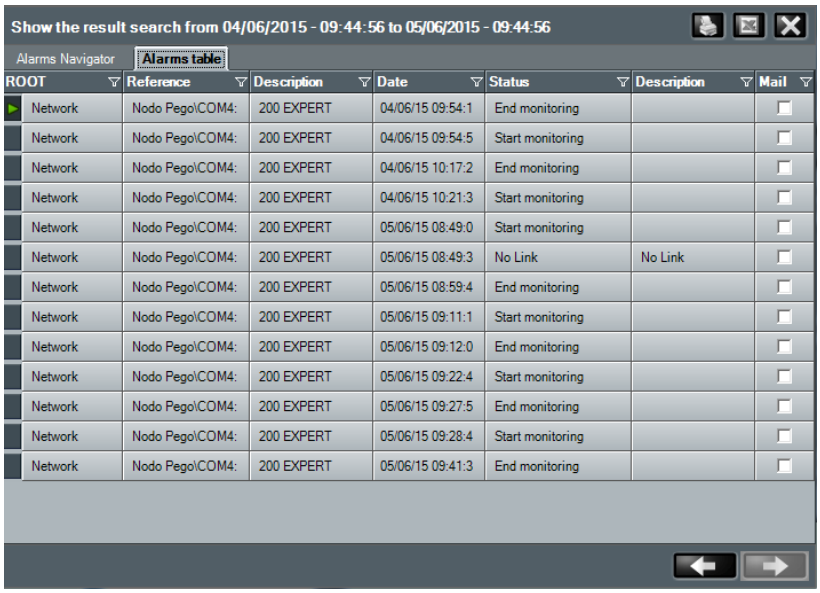
Proceed with the right arrow



Select the devices of interest, among those available. For each of them, the alarms and the start and end moments of monitoring are visible, with the relative time, description and email sending note.
It's possible to export the recorded alarms in Excel format.
By selecting the Excel icon, you will be asked directly for the path in which to save the file.

12 – ALARMS

Print and export



ROOT	Reference	Description	Date	Status	Description	Mail
Network	Nodo Pego\COM4:	200 EXPERT	04/06/15 09:54:1	End monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	04/06/15 09:54:5	Start monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	04/06/15 10:17:2	End monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	04/06/15 10:21:3	Start monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 08:49:0	Start monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 08:49:3	No Link	No Link	
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 08:59:4	End monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 09:11:1	Start monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 09:12:0	End monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 09:22:4	Start monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 09:27:5	End monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 09:28:4	Start monitoring		
Network	Nodo Pego\COM4:	200 EXPERT	05/06/15 09:41:3	End monitoring		

The ‘Alarm Table’ tab has the same information as described in the ‘Alarm Navigator’, but in table format. In addition to exporting to Excel, you can print the recorded alarms.

13 – TELENET DATALOGGER

13.1 SD/USB SYSTEM INTRODUCTION

TeleNET allows the storage and consultation of data recorded on PEGO panels with datalogger function: PLUS EXPERT, PLUSR EXPERT and NECTOR series. This functionality is always available.
Data transfer from the panels to the program is possible by means of a Secure Digital* memory card or a USB stick**.

***Note:** Use SD cards with a capacity of no more than 2GB and with a speed of 80x (Ultra-Speed) or 150x (Extreme-Speed). The card must be formatted as FAT16.
****Note:** Use USB stick formatted as FAT32.

FEATURES:

- TeleNET program, to be downloaded from the Download page of our website www.pego.it (see chapter 2).
- Use of Secure Digital memory cards for data transfer, for the PLUS EXPERT series.
- Use of USB stick for data transfer, for the PLUSR EXPERT and NECTOR series.
- Unique instrument identification, with serial number.
- Intuitive and simple data download.
- Customizable graphs with comparison between different quantities.
- Consultation of records and alarms.

Note: When installing the software, please perform the complete installation for real-time monitoring, with 2TWRS485 interface present; see chapter 2.2.
Note 2: When installing the software, if you don't have the 2TWRS485 interface and if you only need to import data from USB memory/SD Card, install the "Telenet Datalogger" version; see chapter 2.4.

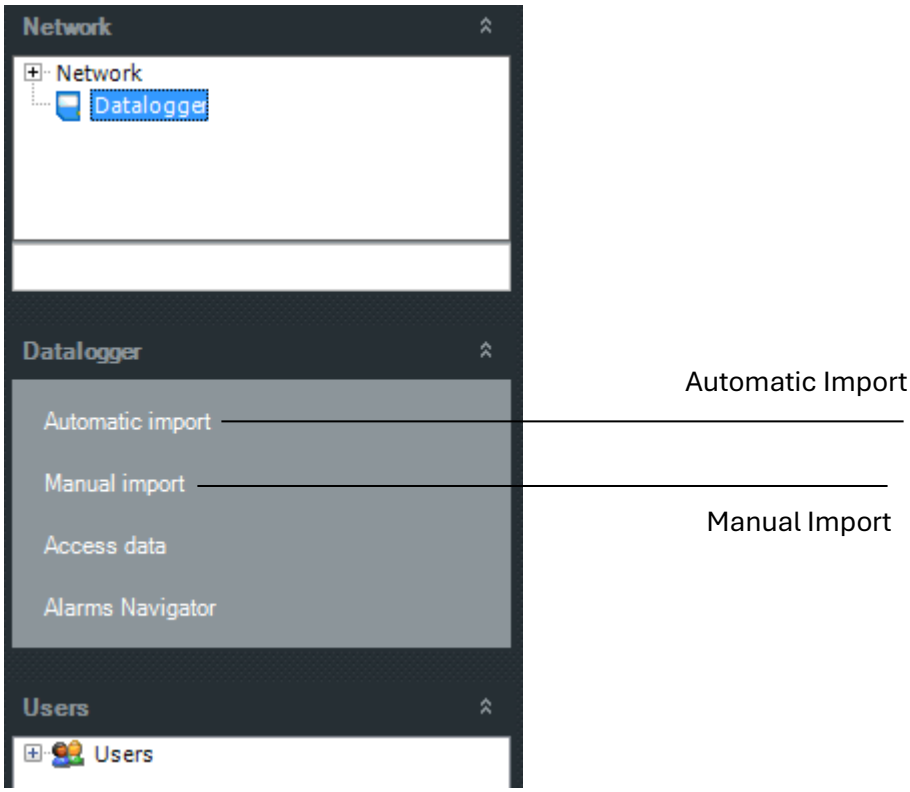
13.2 DATA IMPORT FROM SD/USB

Below are the steps to import the data downloaded to the SD memory card or USB stick from the PLUS EXPERT, PLUSR EXPERT and NECTOR series panels.
There are two possible import modes:

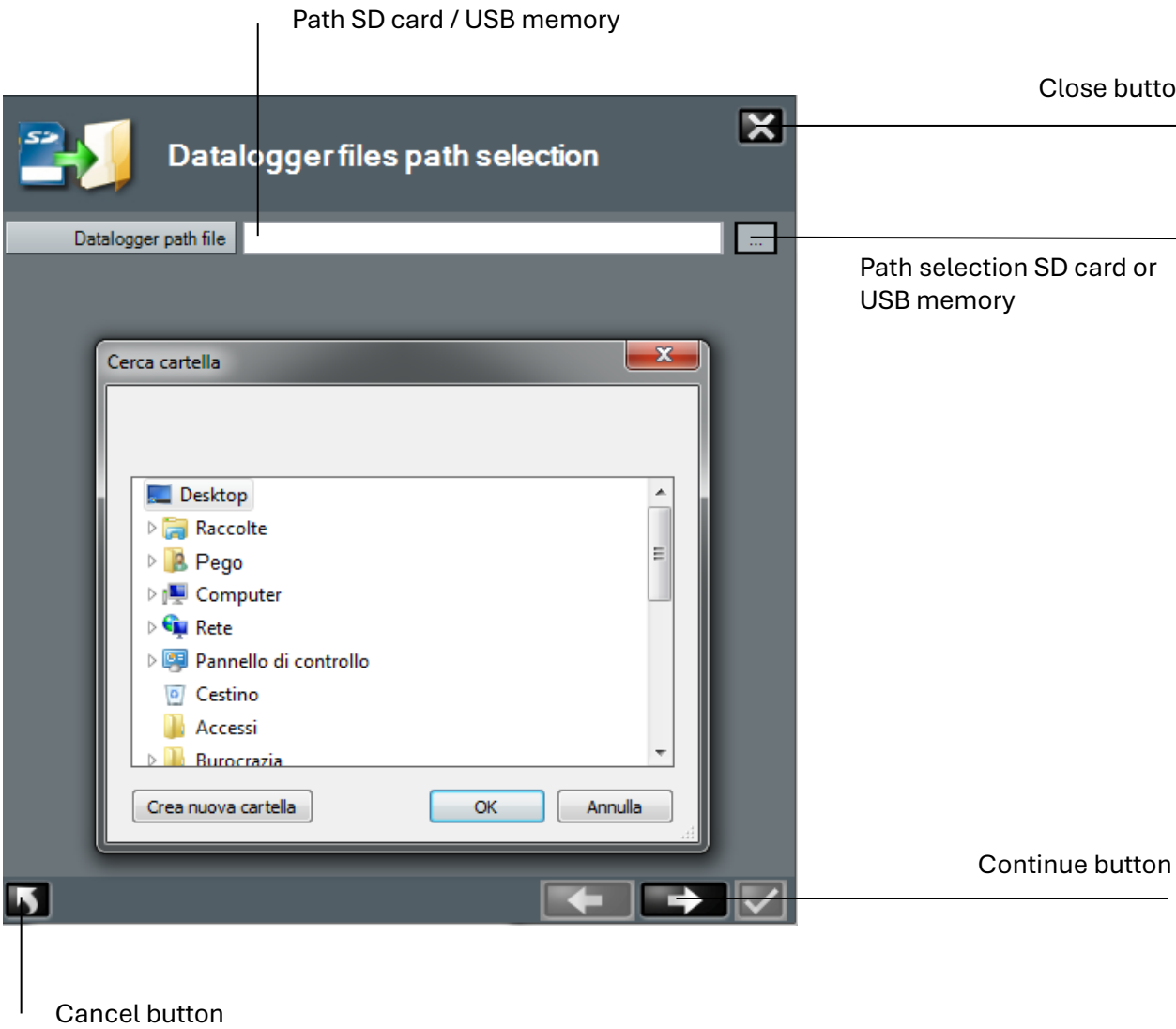
Automatic Import: it allows the selection and import of the last data saving of each single device. The device are in fact recognized uniquely thanks to the internal serial number and only the last progressive saving is pre-selected and proposed for import.
This is the recommended mode, as it's the simplest.

Manual Import: it allows the selection and import of any data backup made for any device regardless of the dates and the progressive. The user must first select the files to import.

When importing new files, any data already present in the database because it was previously imported is ignored.

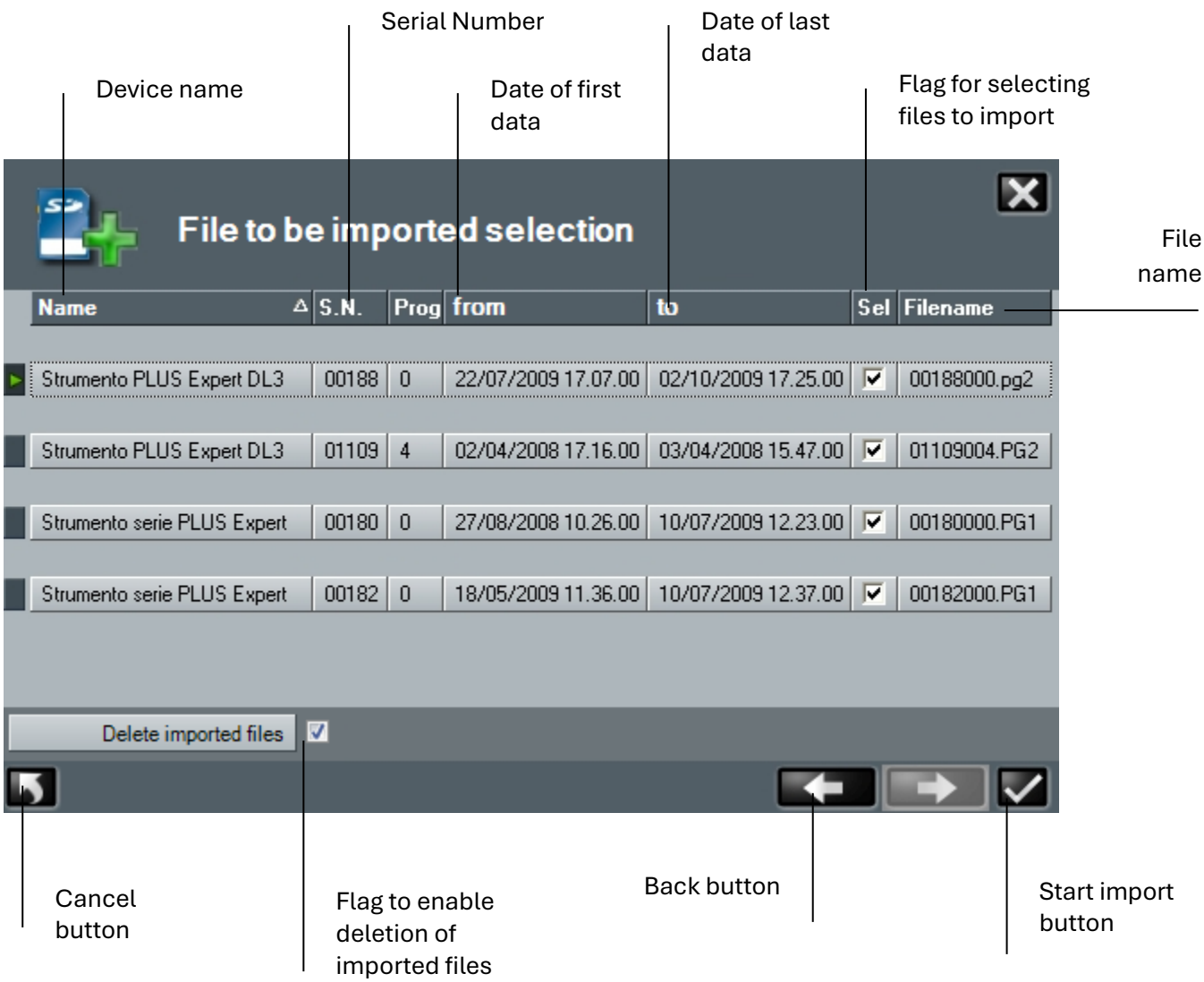


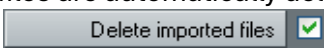
Once the import mode has been selected, you must enter the path of the USB memory by pressing the button and then press the button to continue the import procedure.



Attention: Do not modify or rename the data files in any way or they will no longer be automatically recognized and imported by the Telenet program.

Below is the data import in **Automatic Import** mode which is recommended to use due to its simplicity.

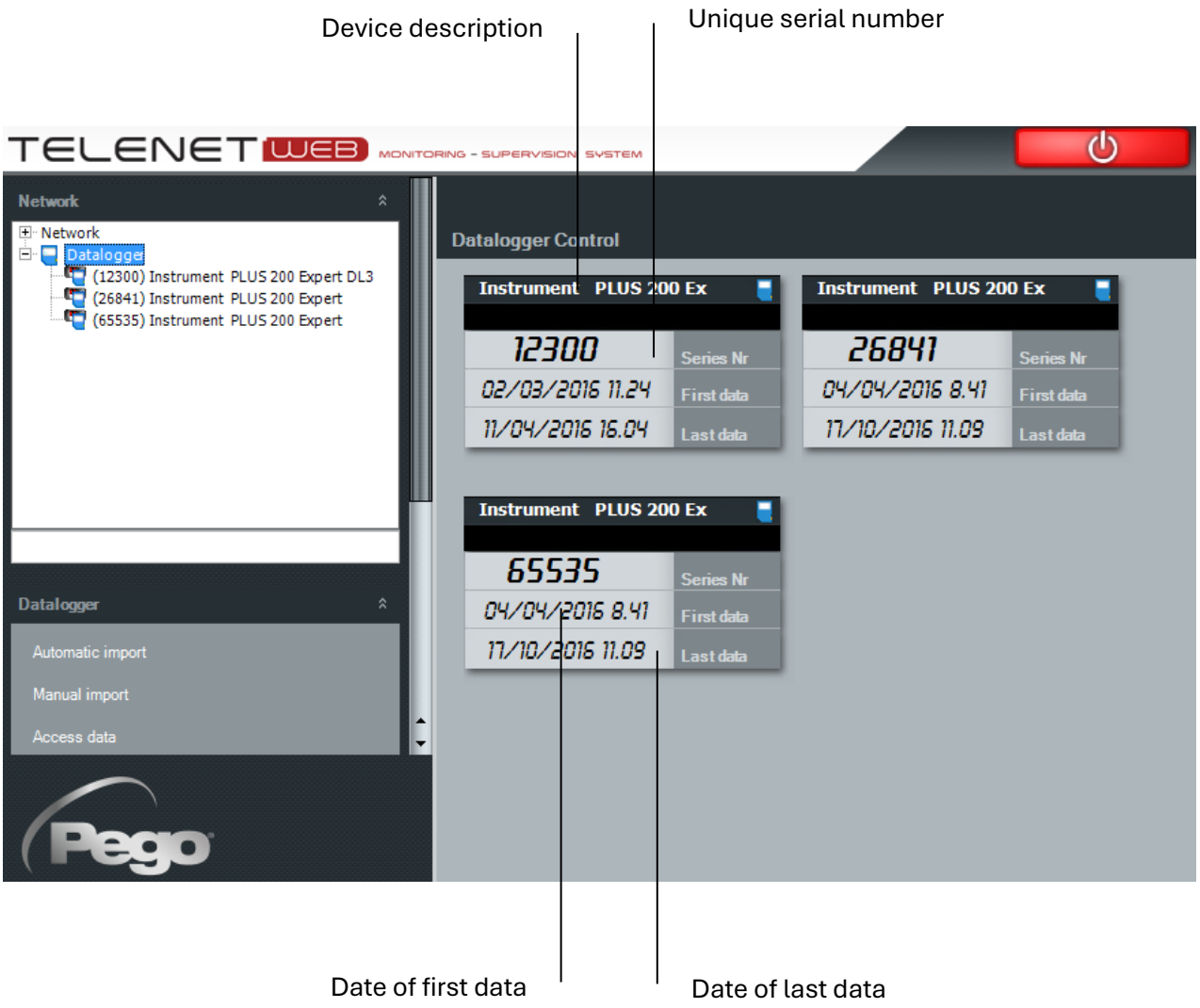


By default, once imported, files are automatically deleted from the SD/USB to prevent it from filling up over time. Uncheck the flag 

if you want to exclude this option.
The progress of the import in progress is displayed with a percentage bar that advances, and at its end a window appears indicating the end of the procedure.

13.3 DATALOGGER CONTROL

Datalogger Control represents the summary where all the PLUS EXPERT, PLUSR EXPERT and NECTOR series panels from which data have been imported are visible. They are identified by their UNIQUE serial number and by the description assigned by the user (see chapter 8.2 to modify the description). The first and last data recorded in the database relating to each device are also present, which is useful for checking its update status.



By selecting the device with a double click from the Datalogger Control window or from the device Network window, you can access the history which will display by default the recordings in the 24 hours preceding the current date. To configure the default settings relating to the SD/USB, see chapter 5.1 under the "Tele.NET Menu" item.

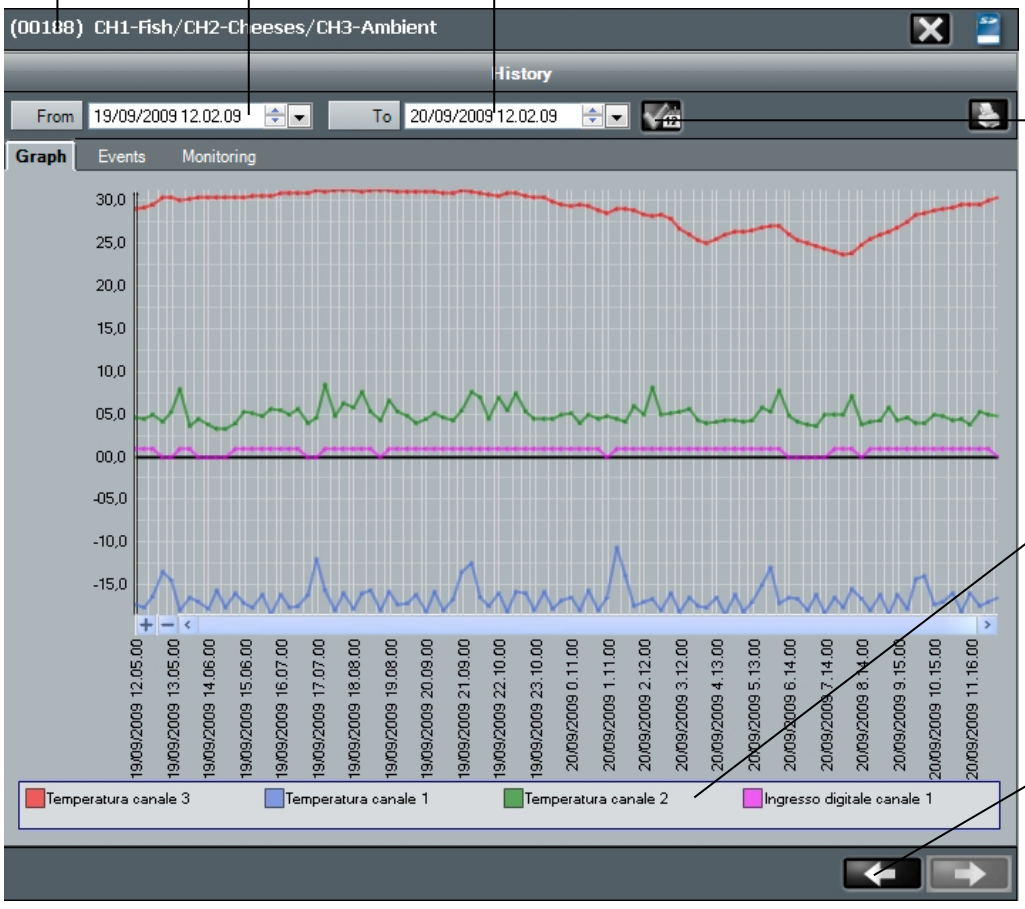
13.4 DEVICE DATA HISTORY AND GRAPHS

By setting the dates in the "From" and "To" boxes and confirming the entry with the button, you can display data for any time period. The tabbed menu allows you to select the following types of display:

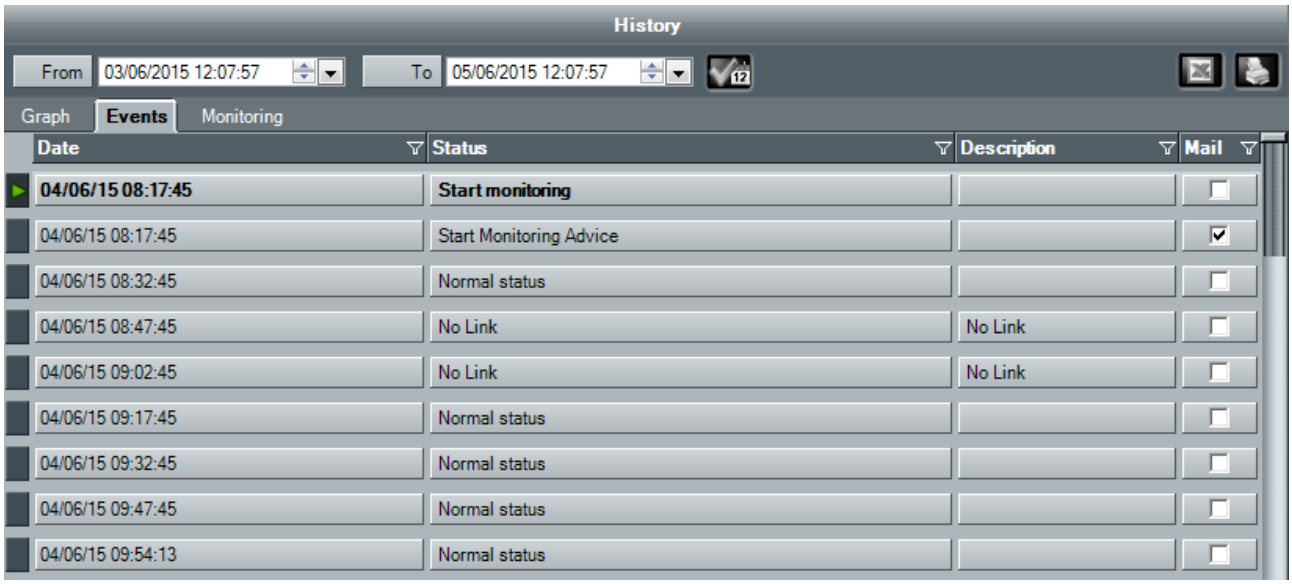
Graph: It displays the graph of the measurements recorded in the selected time period.
Events: It displays, in tabular format, the alarms in the selected time period.
Monitoring: It displays, in tabular format, the measurements recorded in the selected time period.

For each of these modes it's possible to print and for those in tabular format it's also possible to export the data in Excel format. The back button allows you to access the page for selecting the measures to display and the colors to use for the graph.
Note: the first time you create the graph you need to make these settings.

Graph:

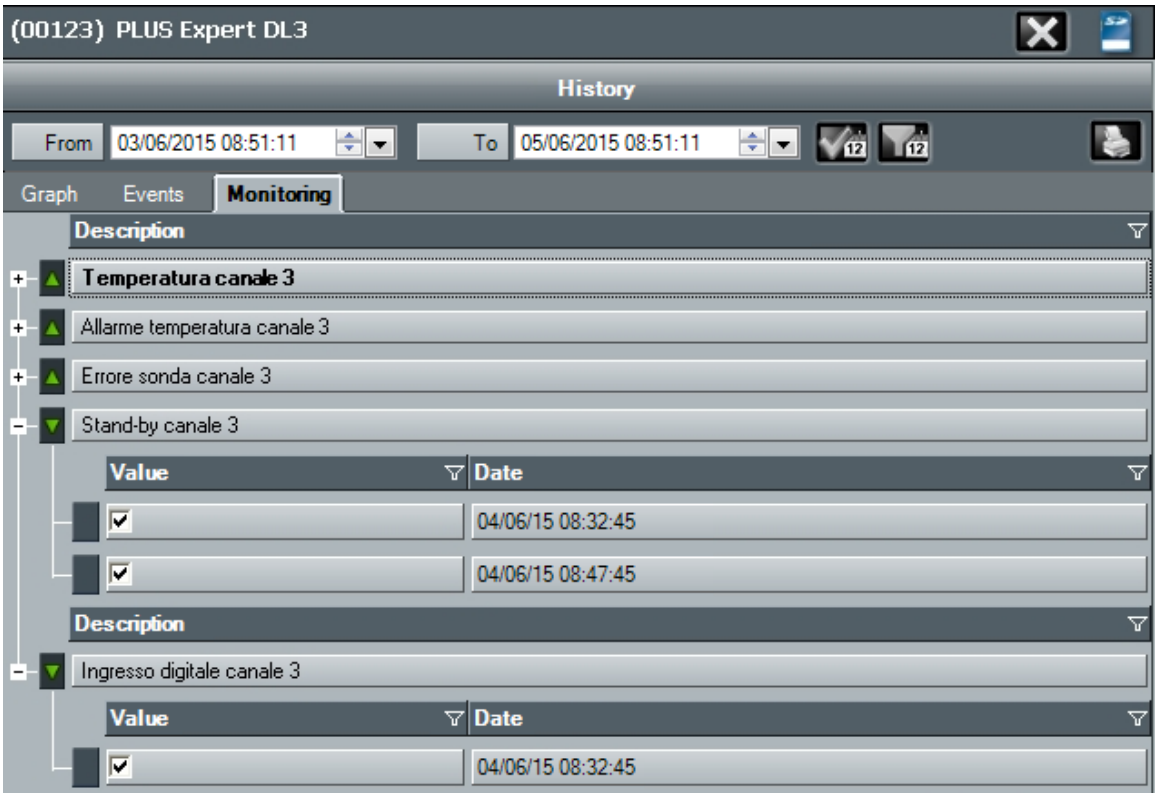


Events:
By selecting this tab you access a list containing the alarms and the start and end moments of monitoring recorded in the selected period, with the relative time, description and email sending note.



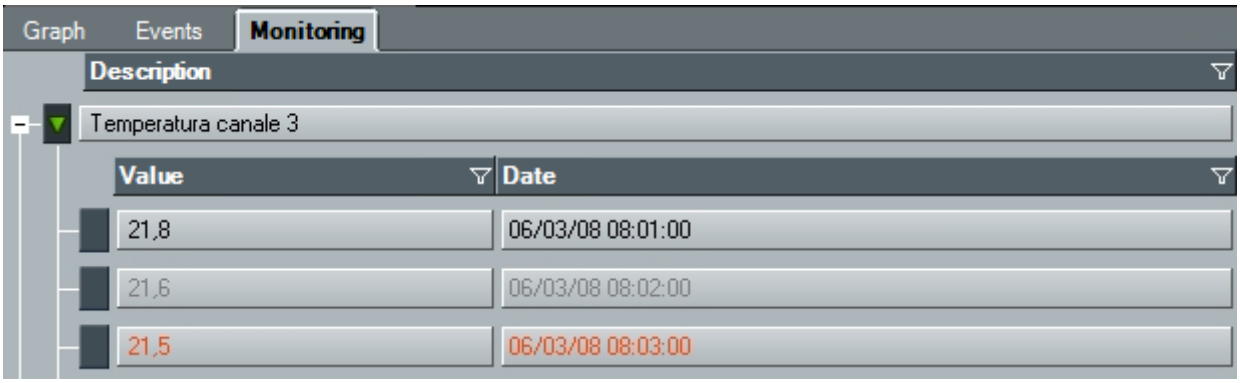
Monitoring:
The PLUS Expert DL3 panel allows the analysis of more data than other devices; in particular, for each of the three available channels, the recording temperature, the channel temperature alarm, the probe error, the stand-by and the digital input can be displayed.
To customize the descriptions of the recorded data, see Chapter 8.2.

You can also filter their display for a specific record using the button.



In the tabular display of recorded temperatures, there is a color code for the rows that allows you to immediately identify states and anomalies:

- **Grey** = channel standby.
- **Orange** = Temperature alarm or channel probe error.
- **Black** = Recording temperature with no problem.

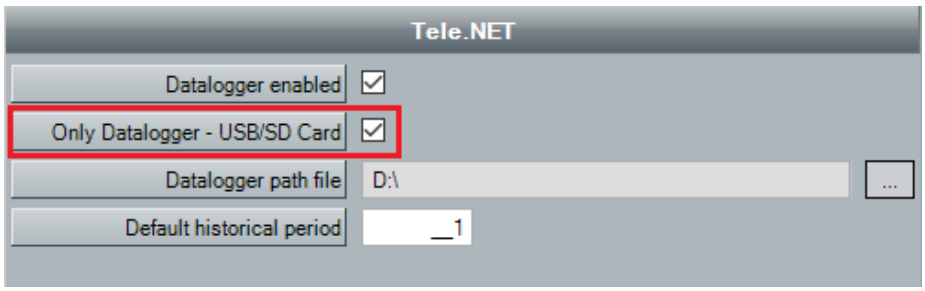


The PLUSR Expert DL3 panel has the same features as the PLUS EXPERT DL3 panel, but storage is on a USB stick.

The PLUSR Expert DL8 panel has 8 channels available to display the recording temperature, the channel temperature alarm, the probe error, the stand-by and the digital input. Data recording takes place on a USB stick for this instrument too.
Note: For the DL8 each channel is displayed as a separate device.

13.5 "DATALOGGER ONLY" VERSION

If you don't have the 2TWRS485 interface and you only need to import data from a USB stick/SD Card, TeleNET would be set up to use an alternative data storage system without using Microsoft SQL. In case of problems with the SQL database, it may be useful to enable this mode. The Datalogger Only version does not allow real-time monitoring.
You can activate the "Only Datalogger – USB/SD Card" configuration by selecting Network, then Configuration and finally opening the Tele.NET menu.
Enable the changes and activate the checkbox "Only Datalogger – USB/SD Card".

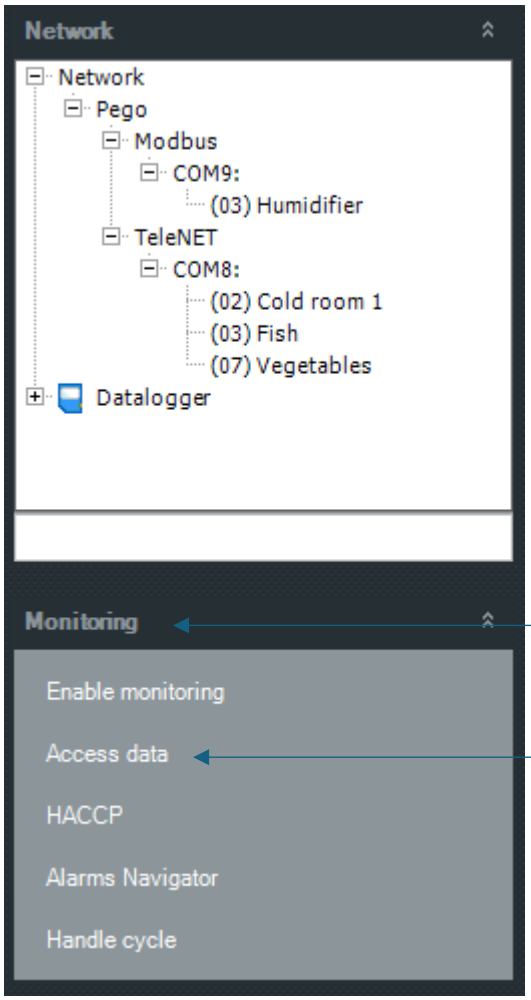


Save and restart the program.

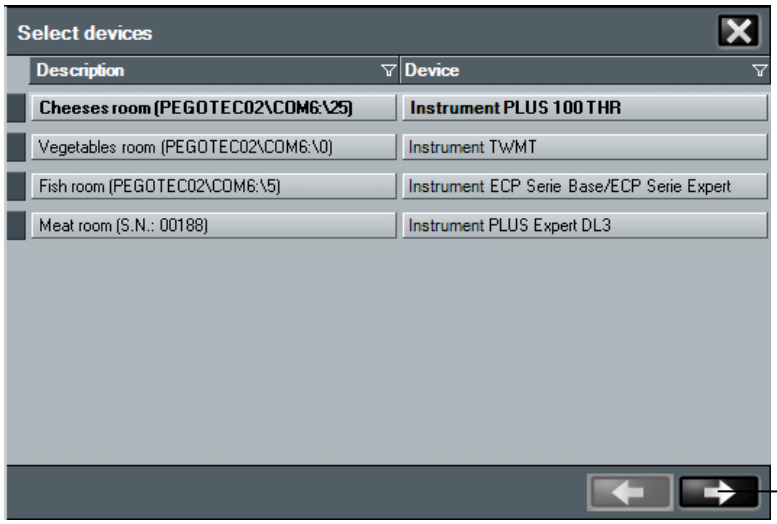
Note: Any data saved on the SQL database will not be deleted and you can return to full mode by performing the same procedure by disabling the "Only Datalogger" checkbox.
Note 2: This version does not support automatic daily backup.

14 – RECORDED DATA HISTORY

14.1 HISTORICAL DATA ANALYSIS



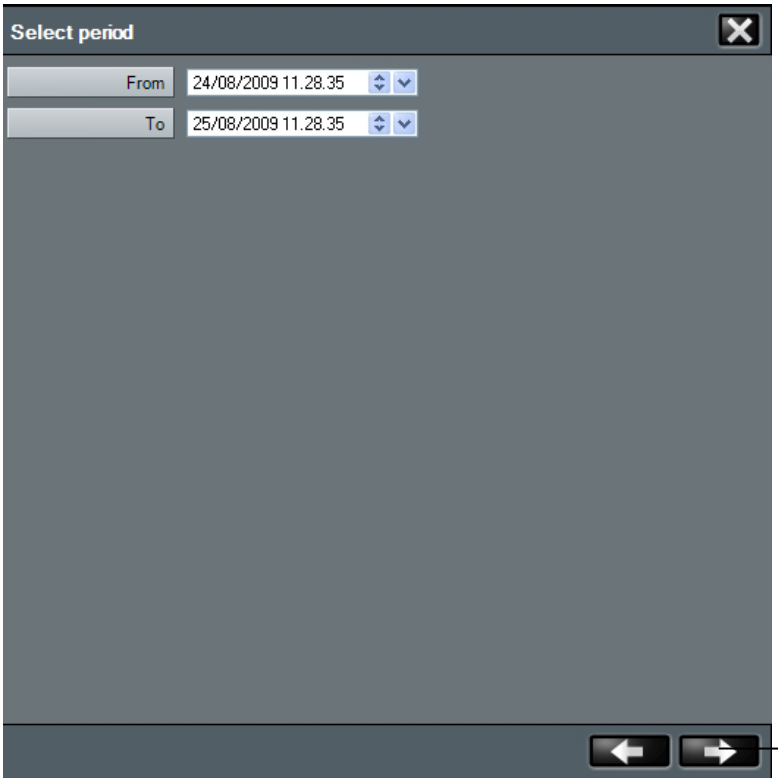
To view the history of recorded data, select "Access data" from the "Monitoring" menu.



Select the device whose history you want to analyze.

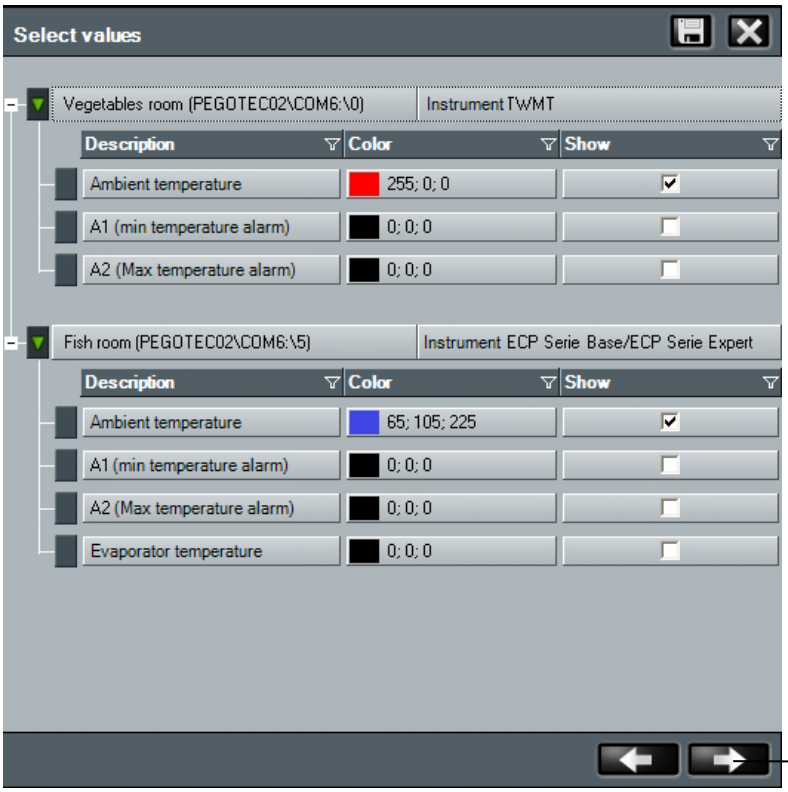
Note: You can select up to 4 devices at the same time, in case you want to make comparisons..

Proceed with the right arrow



Select the time period for which you want to analyze the history.
If there is no data recorded in the period, the next screen will be empty.

Proceed with the right arrow



Select the measures you are interested in from those available.
You can associate a different color to each of them and save the assigned settings.

Proceed with the right arrow

14 – RECORDED DATA HISTORY

Tabs:

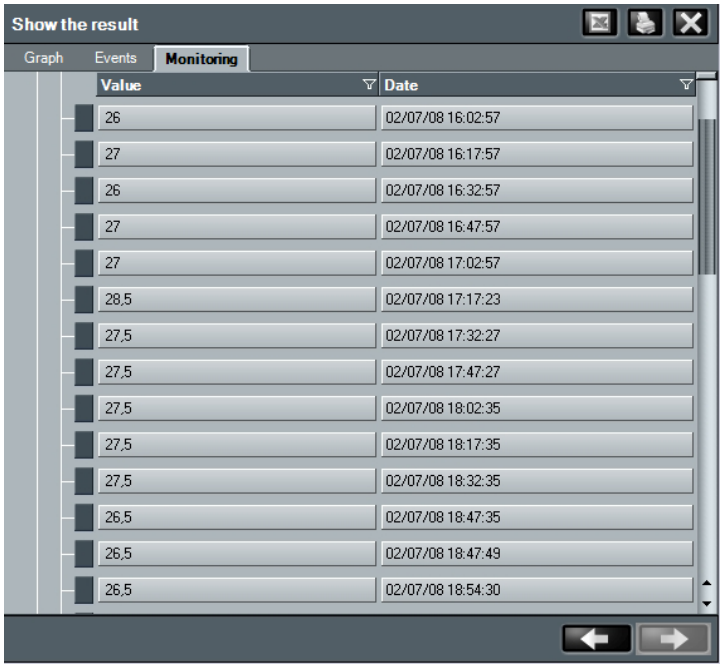
- Graph
- Events
- Monitoring

Legend

14.2 DATA EXPORT

From the “Events” and “Monitoring” tabs you can print the recorded data or export it to Excel format. Selecting the Excel icon will directly ask you for the path where to save the file.

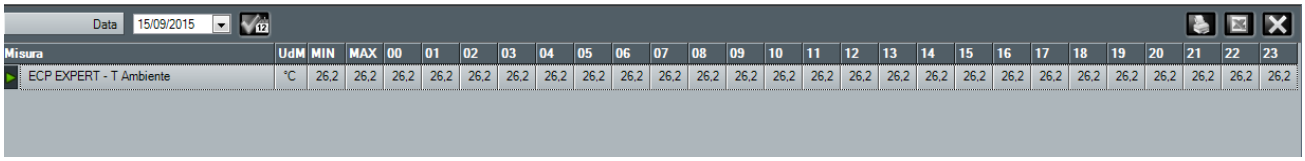
Export and print



14.3 HACCP

HACCP or Hazard Analysis and Critical Control Points is a protocol aimed at preventing food contamination hazards.

Telenet allows you to view, print and save in Excel format the maximum and minimum daily temperature values and also the hourly averages, for the instruments that provide it, on a specific date selectable by the user.



Note: This function is **not** available for the following devices: PEV, SC600, DIN3RK, TWM3IO.

To use the function, from the “TeleNet setup” menu select HACCP and then select the devices for which you want to view data.

Select the date and click on to confirm.

At this point you can print and export the data in Excel format . The back button allows you to access the device selection page to perform a new analysis on other devices.

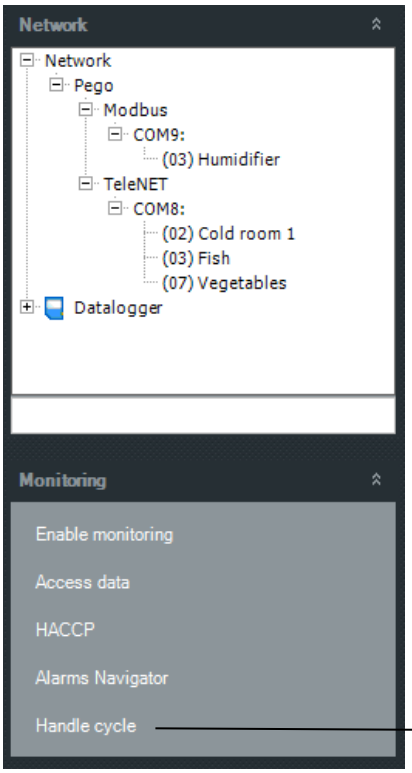
To run a new analysis on the same devices but on a different date, you can change the date at the top left and confirm by clicking .
The data will be updated on the selected date.

Note: to use this function, you need to enable it from the “HACCP Setup” menu in “Modify Device” (Chapters 8.1 and 8.2).

15 –AUTOMATIC CYCLES

15.1 CYCLE MANAGEMENT

A cycle allows the definition of a series of configurations that a device will assume in sequence, each of which will be maintained for a specified period.
TeleNET for each device allows the definition of a library of cycles. Each cycle consists of a sequence of phases with a defined duration, and each of the phases is characterized by a sequence of settings that the instrument will assume.
Cycle management is only available for TeleNET devices (therefore it's not possible to set cycles in devices that communicate via Modbus). To access cycle management from the general menu:



Select the "Handle cycles" menu and then the button to create a new cycle or the button to modify an existing one.

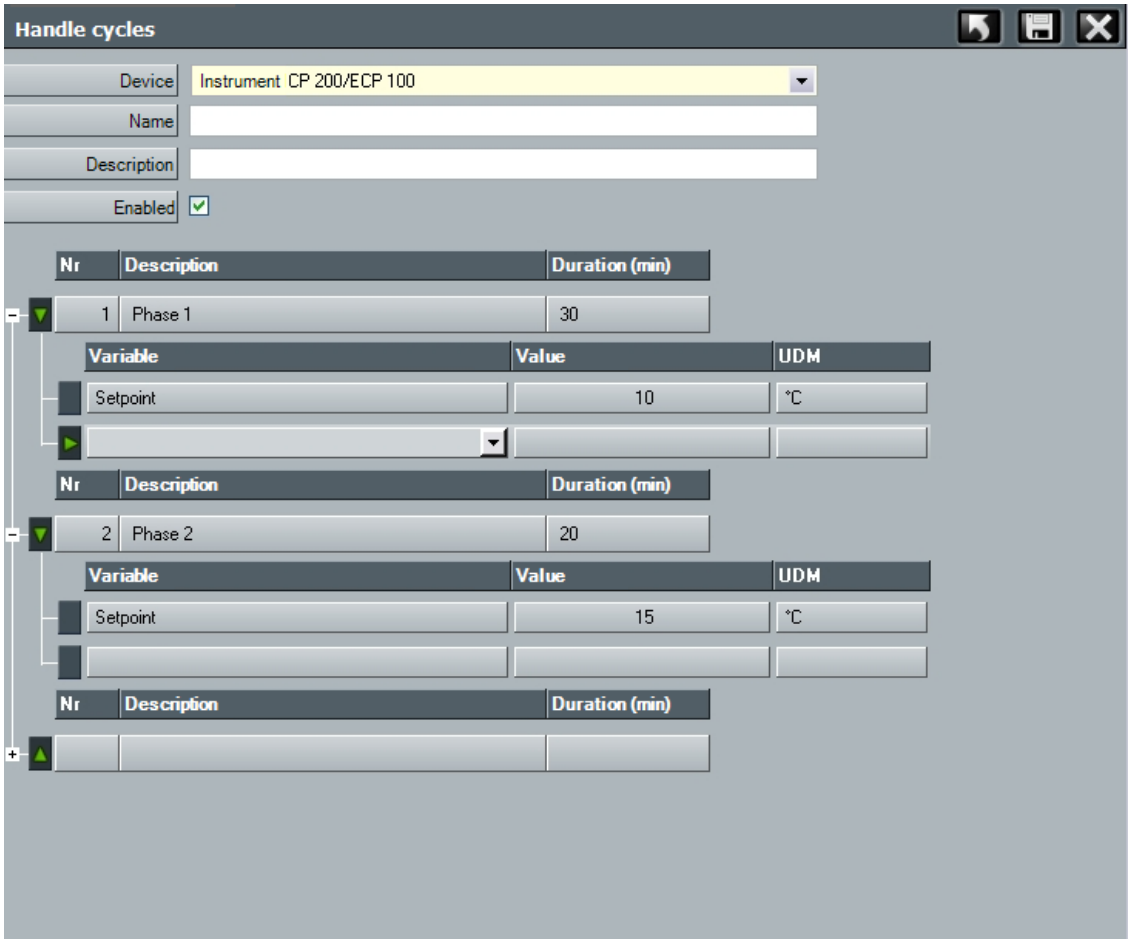
This tab is divided into two defined areas:

1. **Cycle header** containing the Name and Description of the cycle. The "Device" field is important, as it has the function of indicating the device for which the cycle is intended (editable only for a new cycle).

2. **Cycle** detail, divided into two levels:

    a. **Phase**: phase header (Description) with indication of its duration.
    b. **Phase detail**: definition of the individual settings that characterize the phase.

To delete an entire phase or part of the settings it contains, use the Delete key.

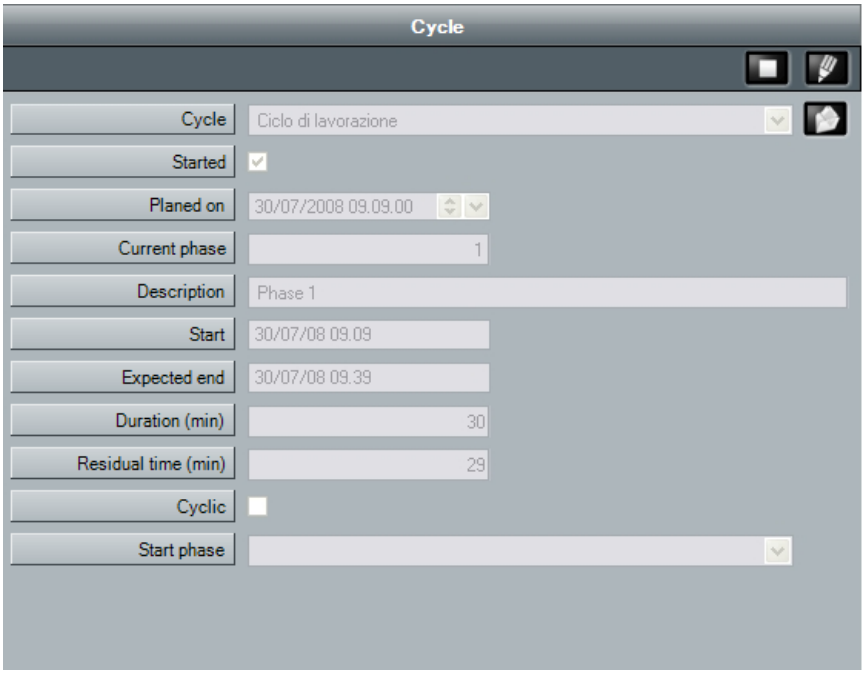


15.2 CYCLE PLANNING

TeleNET allows the user to plan the execution of a cycle for the device and to view its progress.

To plan or view the status of a cycle, access the “Cycle” area of the device tab menu.

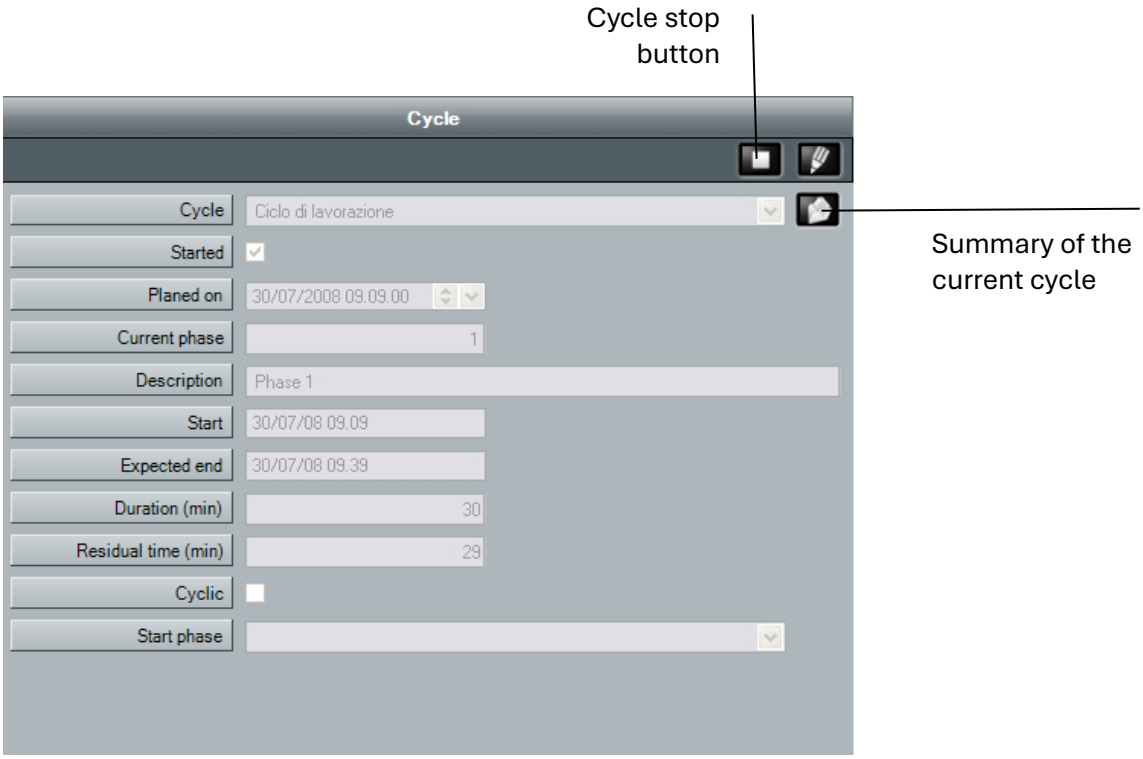
Cycle



Field description:

- **Cycle:** it contains the cycle to be planned (or started) chosen from the cycles in force for the selected device.
- **Started:** it indicates the cycle start status (the flag appears automatically when the cycle starts). The start of the cycle is also highlighted by the “blue” status of the device status icon.
- **Planned on:** date and time for the start of the cycle.
- **Current phase:** phase of the cycle currently in progress (read-only).
- **Description:** description of the phase of the cycle currently in progress (read-only).
- **Start:** phase start date and time (read-only).
- **Expected end:** phase end date and time (read-only).
- **Duration:** duration of the phase, expressed in minutes (read-only).
- **Residual time:** time remaining until the end of the phase, expressed in minutes (read-only).
- **Cyclic:** it indicates whether the cycle is cyclical or whether at the end of the last phase it automatically starts again from phase 1.
- **Start phase:** it allows you to start from a different phase than the first.

Note: to schedule a new cycle, the "Started" field must not be checked to indicate the start of the cycle; it will be automatically checked when the start time foreseen by the schedule occurs.

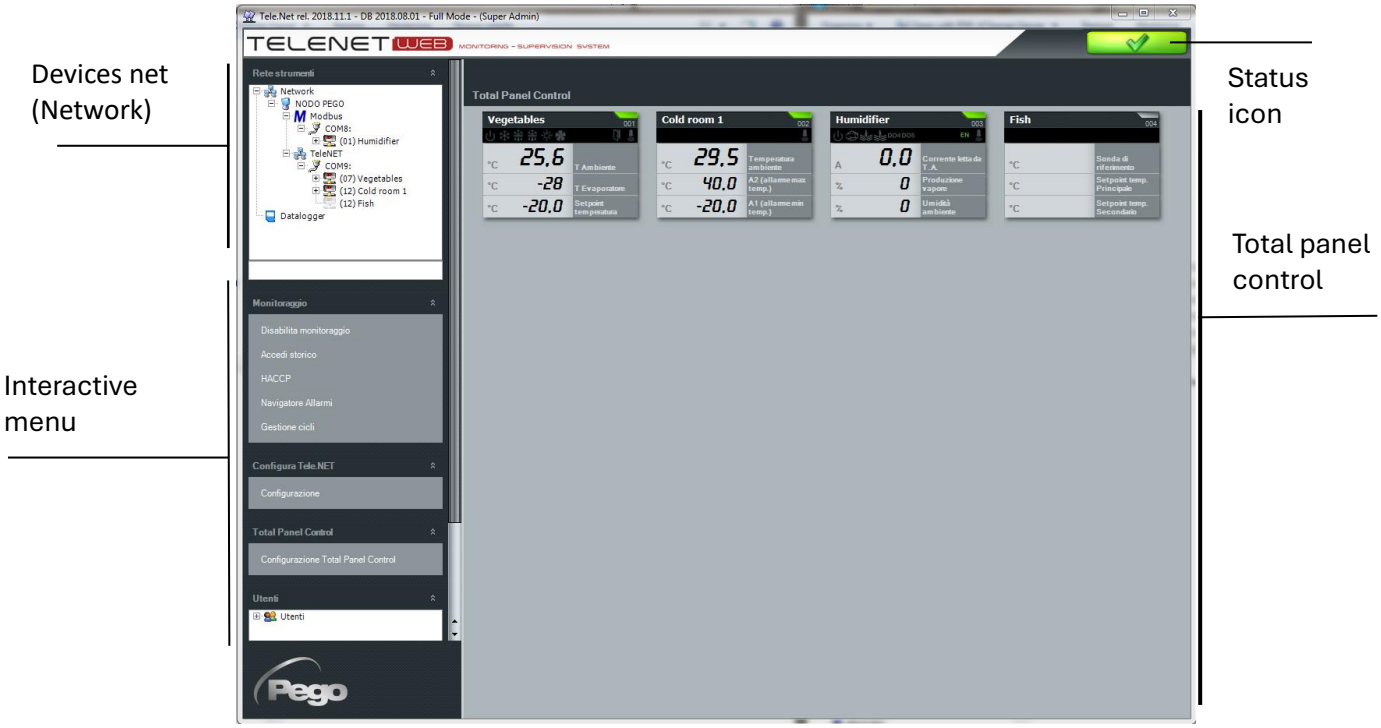


16 – GENERAL INFORMATION

16.1 MAIN INTERFACE

The following image presents the TeleNET operating interface.

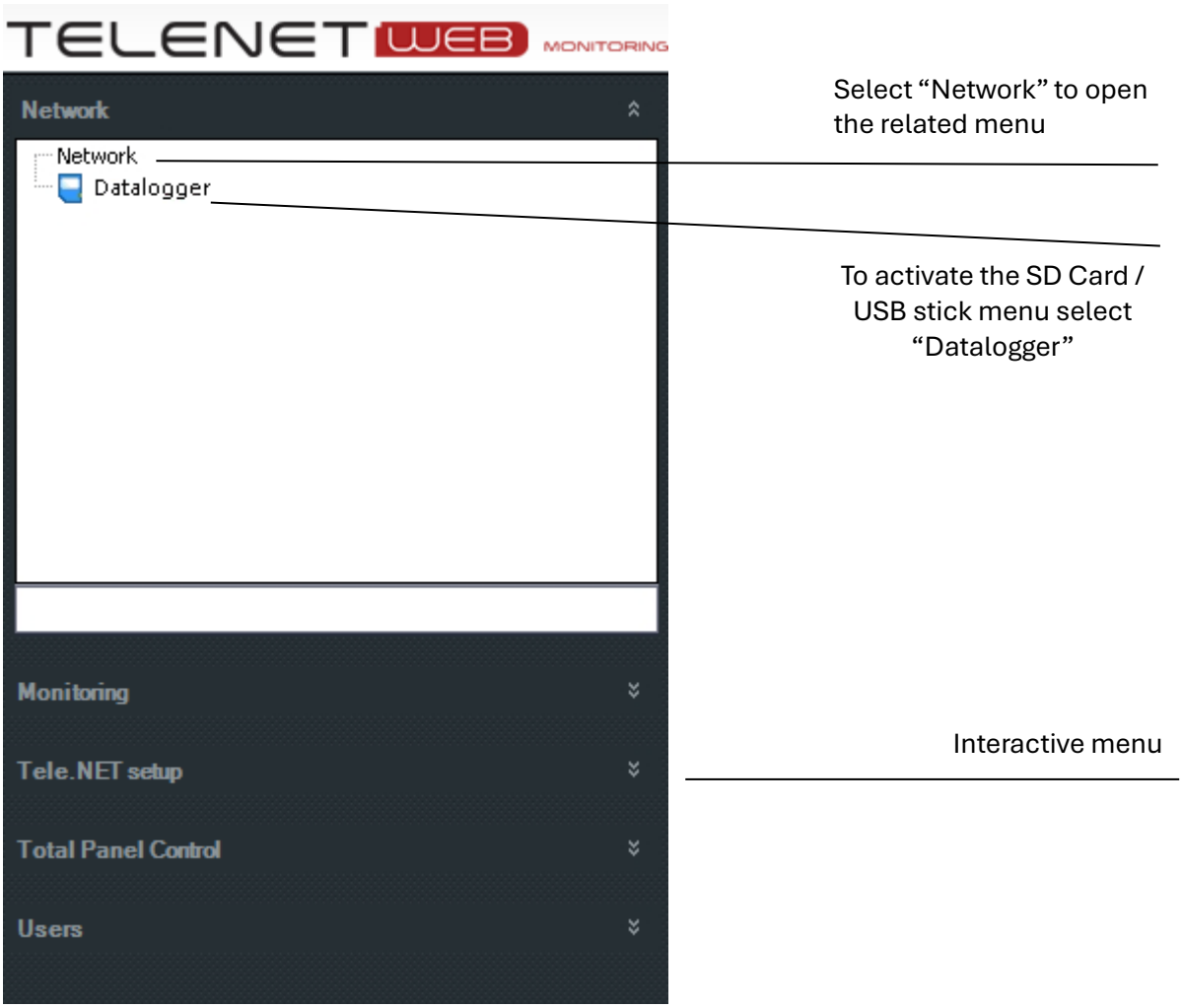
The section on the left is composed of the network devices tree (Network) and the interactive menu for the various configurations.
The section on the right is the operational part of the Total Panel Control and the windows relating to the selected menus:



16.2 MENU

The main menu allows you to configure the device network and users.
The menu is divided into two dedicated menus for the Network or for the SD Card / USB stick section (Datalogger).

To activate the Network menu, select “Network” in the Device Net (Network).



Depending on the item selected in “Network”, the interactive menu displays the possible selectable options.

16.3 ICONS AND KEYS

Operation buttons used in the settings of the various tabs (user, node, device, etc.):

	Enable editing of the contents of the fields		Up
	Save changes made		Scroll up completely
	Delete the item		Down
	Cancel without saving changes		Scroll down completely
	Add item		Add
	Open item		Add all
	Exits the tab		Remove
	Confirm / send command		Remove all
	Confirmation of the date		Activate / deactivate filter
	Copy		Back to previous window
	Export to Excel		Go to next window
	Stop cycle		Close the tree
	TeleNET and DB version		Expand the tree
	Print		Acoustic silencing

General TeleNET operating status icons:

	Monitoring enabled and no alarms
	Monitoring enabled and alarm present
	Monitoring disabled

16 – GENERAL INFORMATION

The following icons are used in the device network tree to provide a first level of information from the devices:

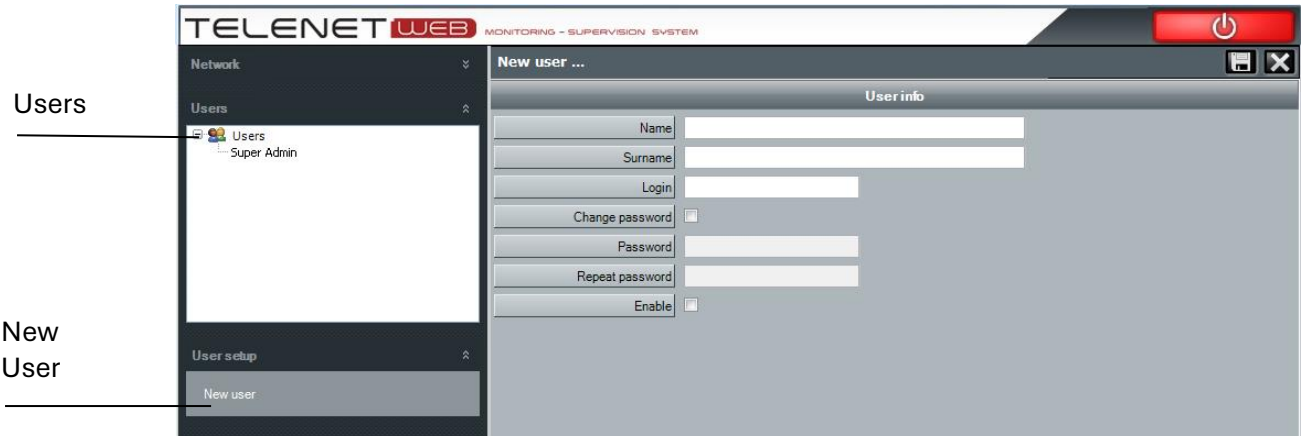
	Monitored device functioning correctly
	Device not connected correctly
	Device disabled
	TeleNET Device Network
	Modbus Device Network
	Node
	Serial Port (COM)
	Indicates the presence of an alarm in one or more devices
	Indicates the presence of a maximum temperature alarm in the device (red)
	Indicates the presence of a minimum temperature alarm in the device (blue)

17 – USERS CONFIGURATION

17.1 USERS CONFIGURATION

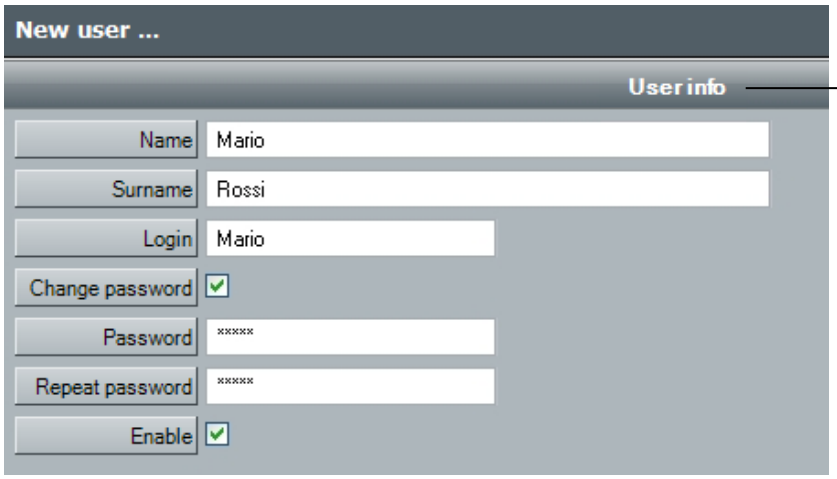
User configuration is only allowed to users with the ADMINISTRATOR permission associated.
Users with this type of permission associated can view the user tree:

To create a new user select "Users" and then "New User":

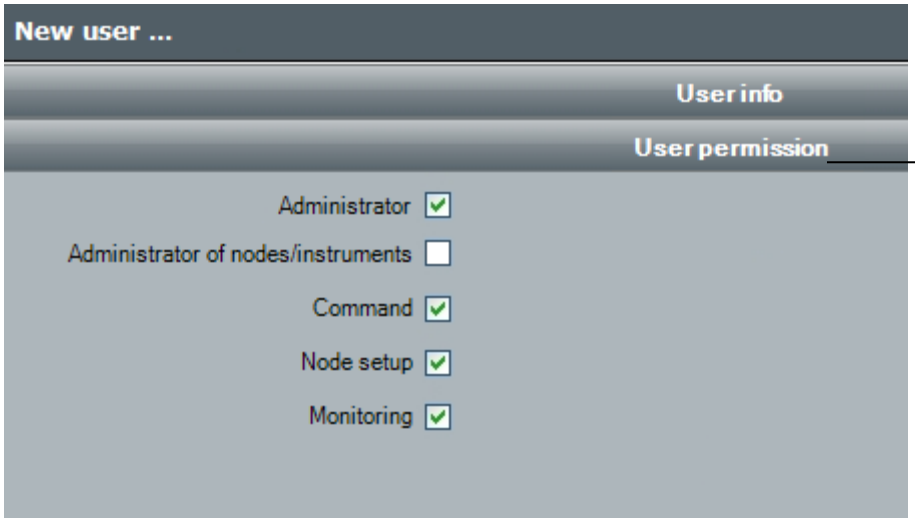


17 – USERS CONFIGURATION

The user card is composed of two areas: “User Info” and “User Permission”.



User info



User Permission

Depending on the assigned authorization level, the user is allowed to perform the following operations:

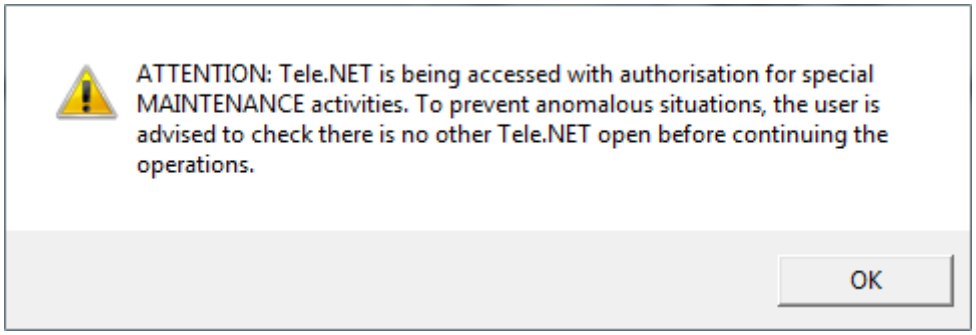
Administrator	It allows user administration
Administrator of nodes/instrument **(to be used only for maintenance)**	It allows: - access to all nodes/devices in the network and their deletion. - assigning an existing node to the PC when installing Telenet on a new PC and restoring a backup (chapter 18.7).
Command	Monitoring and control of devices
Nodes configurator	Allows you to configure the node and devices
Monitoring	Device monitoring only

Once you have entered the information, click on the save icon.

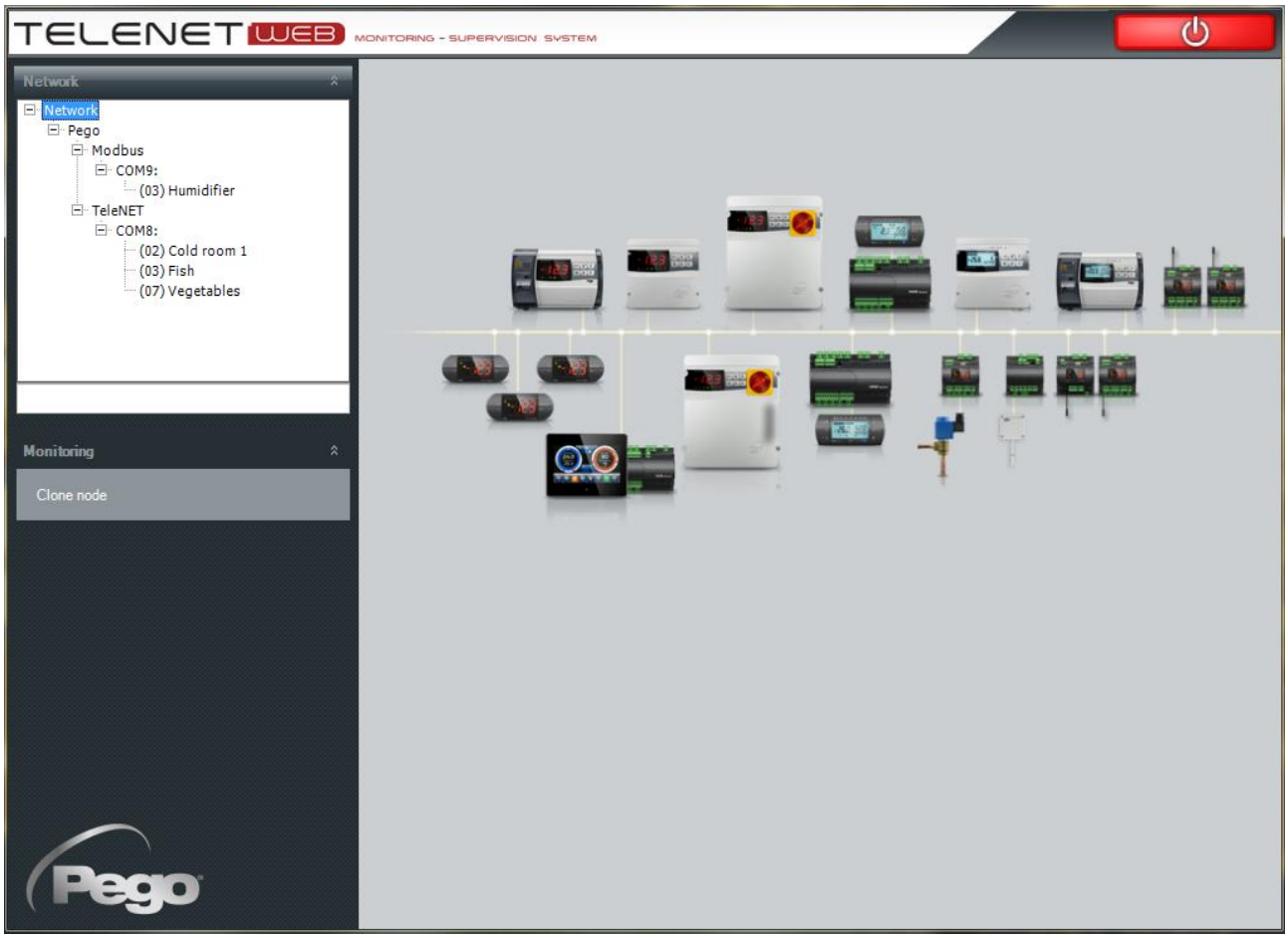
(save or cancel changes)

17.2 AMMINISTRATORE NODI/STRUMENTI

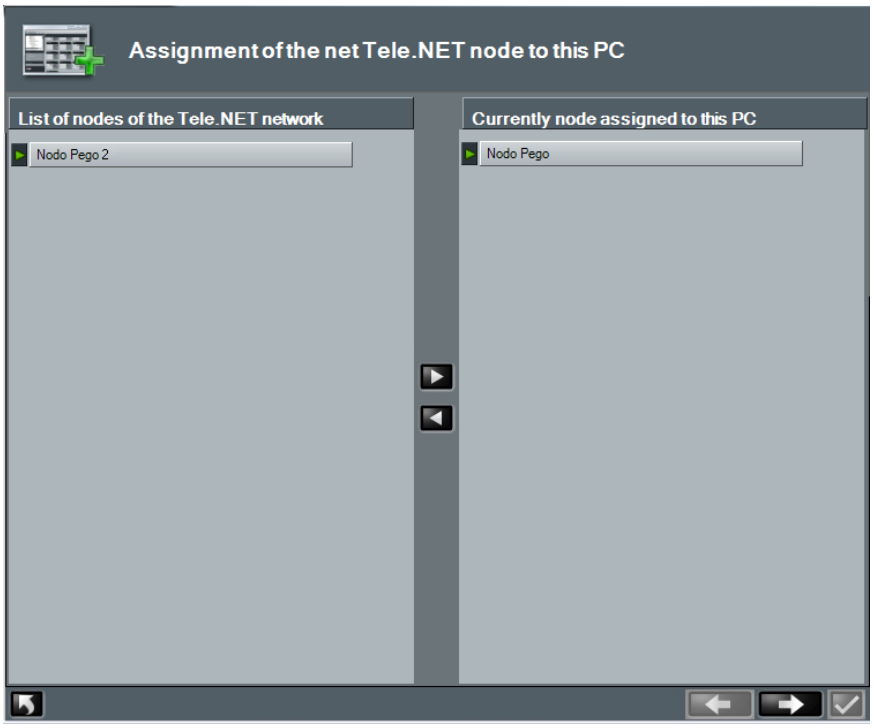
If you want to delete nodes or devices (even remote ones) or associate one of the network nodes to the PC, you need to create a new user with 'Administrator of nodes/instrument' permission (see chapter 17.1); then close and restart TeleNET, logging in with this user's data.
At this point the following warning appears:



After pressing the OK button, you access the following screen:



If you want to delete a node/device, select it and press "Delete node/device"; complete the deletion by clicking on the trash icon . If you want to assign a new node to the PC, select Network and press "Clone node". At this point the following window appears:



Using the and keys, move the desired node to the right side and confirm by pressing .
You can assign only one node to the PC.

18 – PROBLEMS AND SOLUTIONS

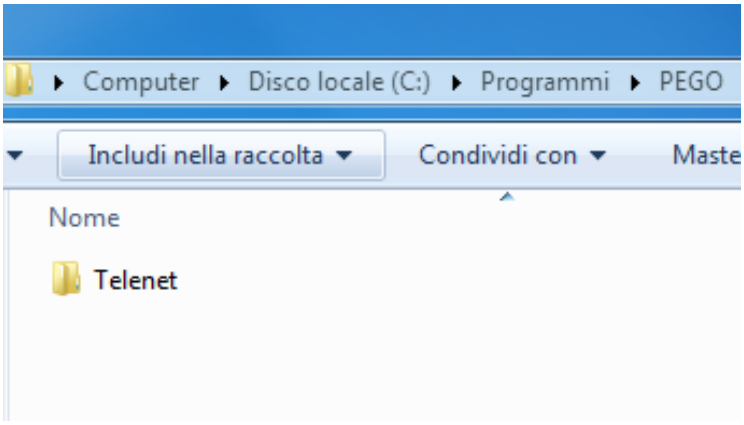
18.1 PROBLEMS AND SOLUTIONS

PROBLEM	POSSIBLE CAUSE	SOLUTION
A "path too long" error appears when manually running the Setup.exe file.	The folder containing the installation file is in a sub-folder with an excessively long path.	Move the folder to the local hard drive C to make the path shorter.
An "Access Denied" error appears when launching installation.	The installed antivirus is blocking installation.	Momentarily disable the antivirus and launch installation again.
A Generic Error 26 window - "Server not found or not accessible" appears when launching TeleNET	PC name changed or SQL instance not installed or launched properly.	Refer to paragraph **18.3**
Incorrect username and password	Password forgotten	Contact Pego assistance
The monitoring process does not start (interface prior to 01/09/2015)	USB protection key not inserted in the PC.	Close TeleNET, insert the USB protection key in the PC and restart TeleNET.

18.2 UNINSTALLING TELENET

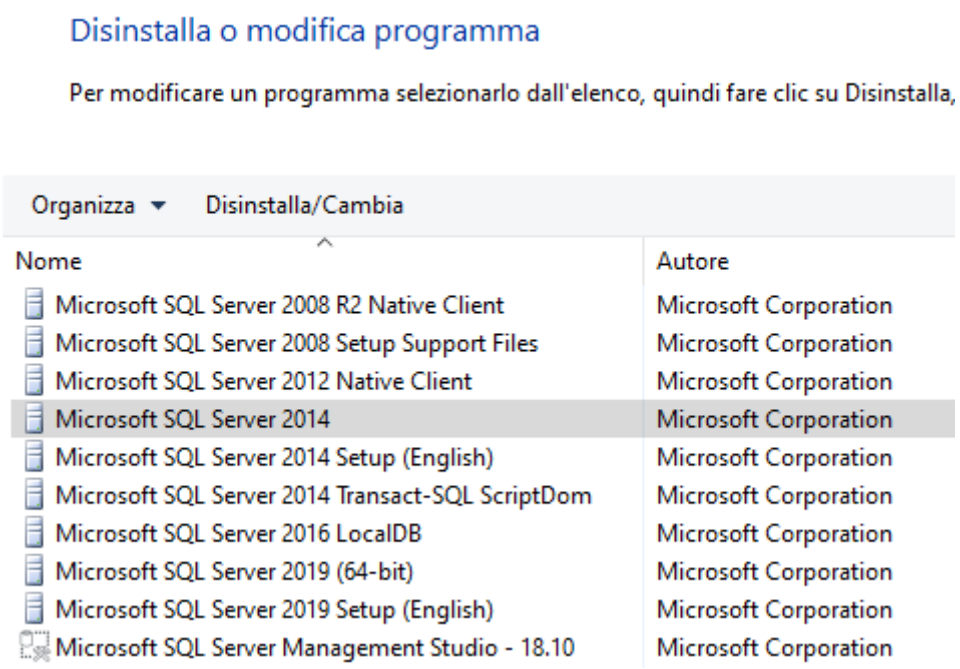
Open "Programs and Features" from the Control Panel and select Telenet. Click on "Uninstall" and confirm the uninstallation procedure.

Once the procedure is complete, you must manually remove the Telenet folder, which can be identified with the following path: Computer -> C -> Programs -> PEGO.

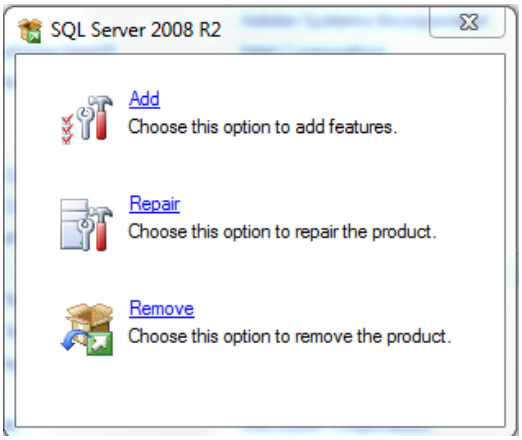


If the SQL instance is installed, you must uninstall it.

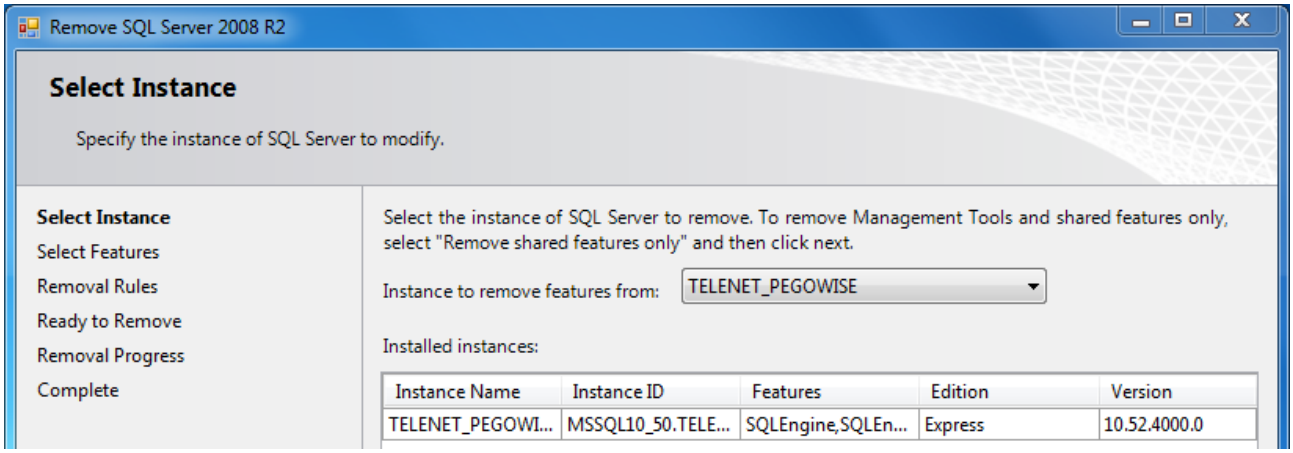
Open "Programs and Features" from the Control Panel. Select "Microsoft SQL Server 2014" and click on the "Uninstall/Change" button":



Select "Remove" in the following window:

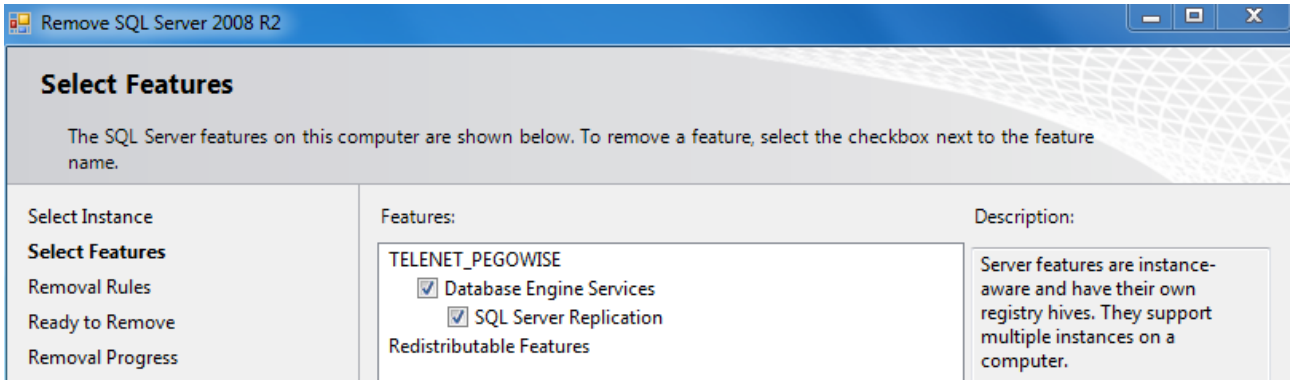


The uninstallation procedure will run a check, at the end of which you must click on OK. At this point, you can select the TELENET_PEGOWISE instance from the dropdown menu and click on Next.

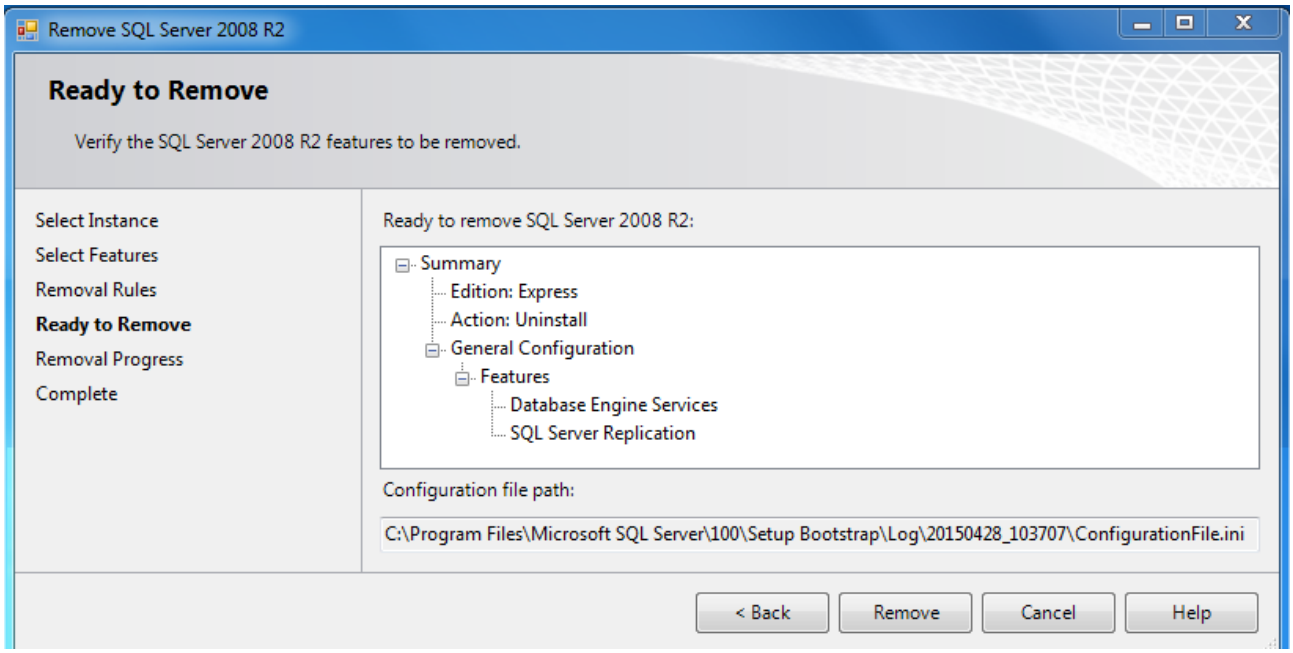


You will be prompted to select the features to be removed: select “Database Engine Services” and the relative feature will also be selected automatically.

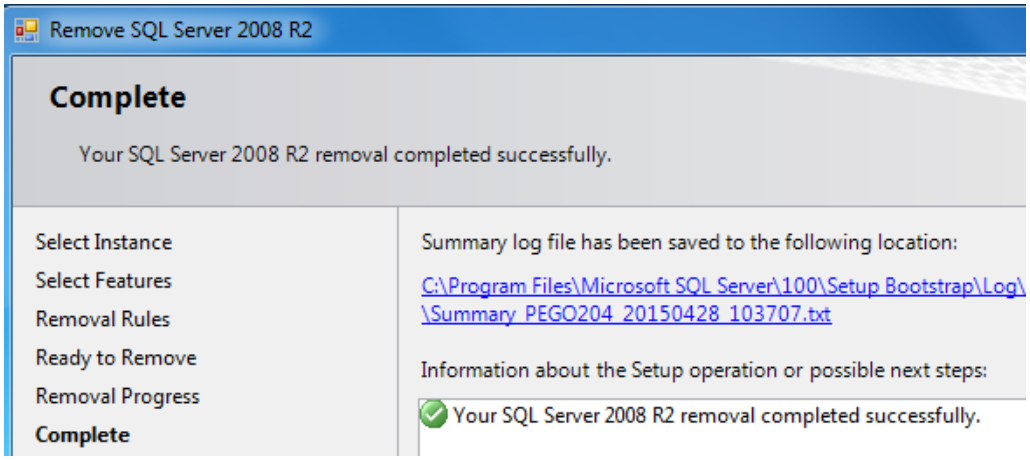
Confirm by clicking on Next.



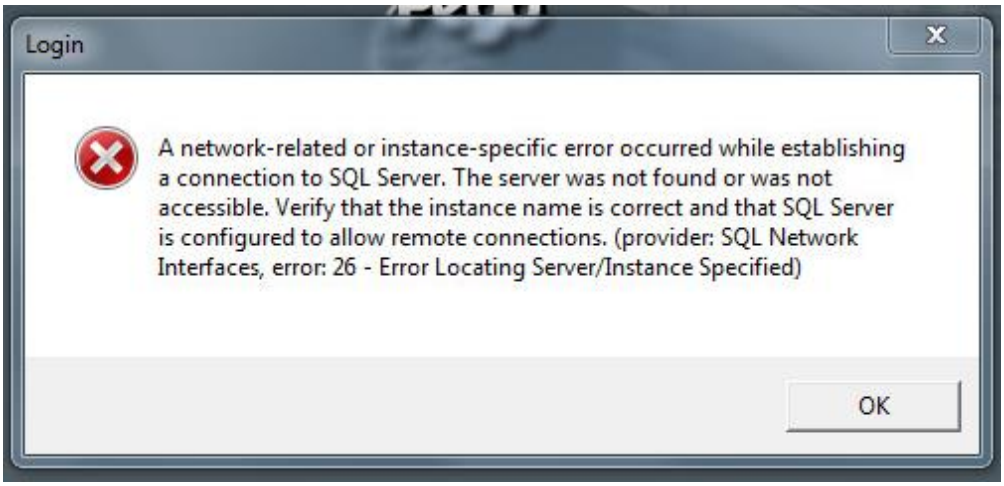
A check will be carried out, at the end of which you must click on Next to proceed.
The procedure is now ready for uninstallation. Click on Remove to proceed.



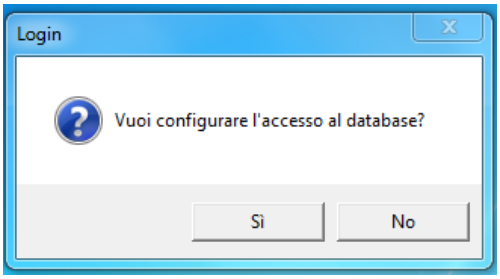
At the end of the procedure, uninstallation is complete.



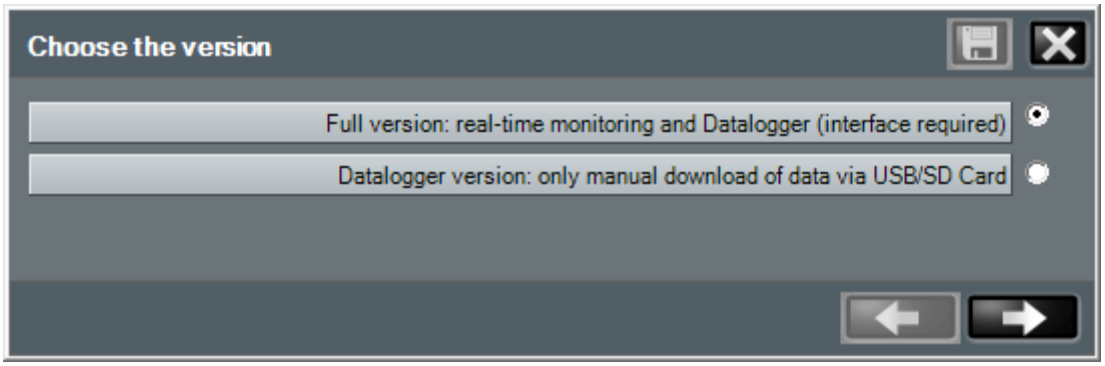
18.3 GENERAL ERRORS



Solution A: the PC name has been changed
If the PC name was changed, you must update this data in the TeleNET database configuration. Launch TeleNET and close the error message by clicking on "OK".
The following window will open:

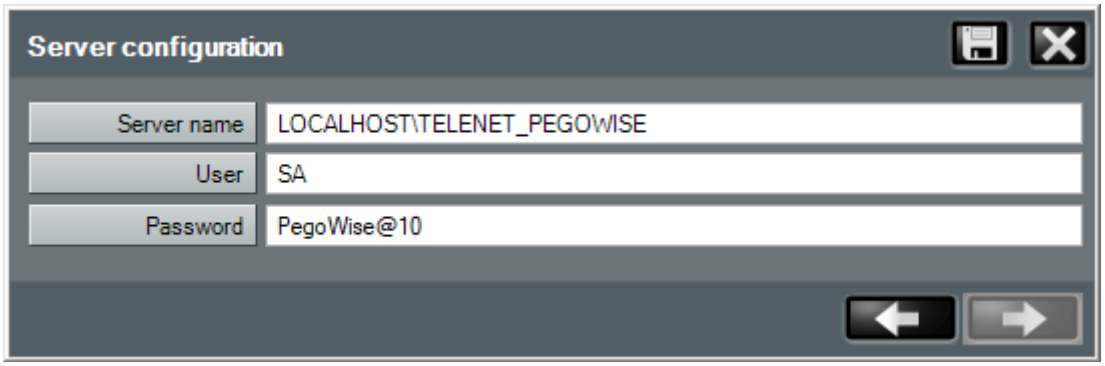


By clicking "Yes" the window to choose the version will appear:



To be able to update the PC name in the Server Name field select the first option “Full version”.
For the “Datalogger Only” version option see chapter 18.4.

Continuing with the first option, the window to connect to the database will appear:



The first part of the Server Name is the name of the PC where the SQL server has been installed and is the data to be updated.
If you do not know the name or IP address of the PC, you can enter the generic "LOCALHOST".

The second part is the name of the SQL instance and is not to be changed.

Click on the icon to save the change and launch TeleNET.

If the problem persists, go to Solution B.

Solution B: SQL instance not installed or not launched properly

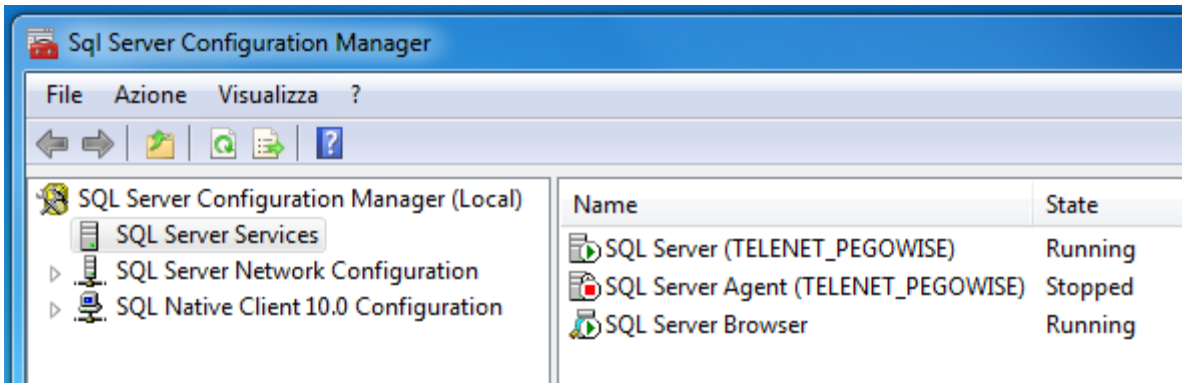
First you need to verify that the SQL instance is installed.

From the **START menu -> All programs** look for the **Microsoft SQL Server 2014 or 2008 R2** folder:

- Folder not present: the SQL instance is not installed and it will therefore be necessary to uninstall the Client (see 18.2) and then proceed with the Complete Installation (see 2.2).

- Folder present: open it and select “SQL Server 2014 Configuration Manager”:

The following window will open, from which you can check the status of the "SQL Server (TELENET_PEGOWISE)” instance:



1. **SQL Server instance (TELENET_PEGOWISE) is missing**

Only the Client installation has been performed and therefore the instance has not been installed. Uninstall the Client (see 18.2) and then proceed with the Complete Installation (see 2.2).

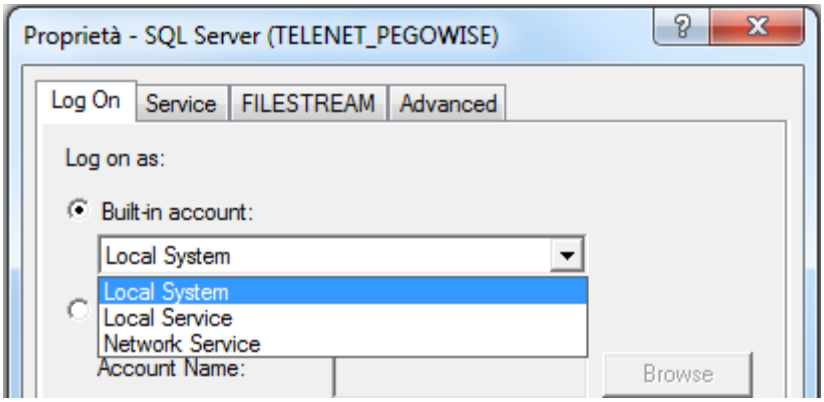
2. **Status = Running**

Client installation failed. Uninstall (see 18.2) and perform Full Installation (see 2.2).

3. **Status = Stopped**

Right-click on the SQL instance and select “Start”. If it does not start or the problem persists, continue to the next solution.

Right-click on the SQL instance and select “Properties”. In the “Log On” tab, the “Built-in account” parameter has three accounts that can be selected from a drop-down menu.



Select one and click “OK”. If the problem persists, select another account. If the problem persists with each account, you need to uninstall the Client and then remove the SQL instance (see 18.2).

Once uninstalled, start the Complete Installation (see 2.2).

18.4 "DATALOGGER ONLY" VERSION

If you are using TeleNET only to manually import data from a Datalogger, it may be convenient to use the intrinsic Access database, bypassing any problems caused by the complexity of the Microsoft SQL database.

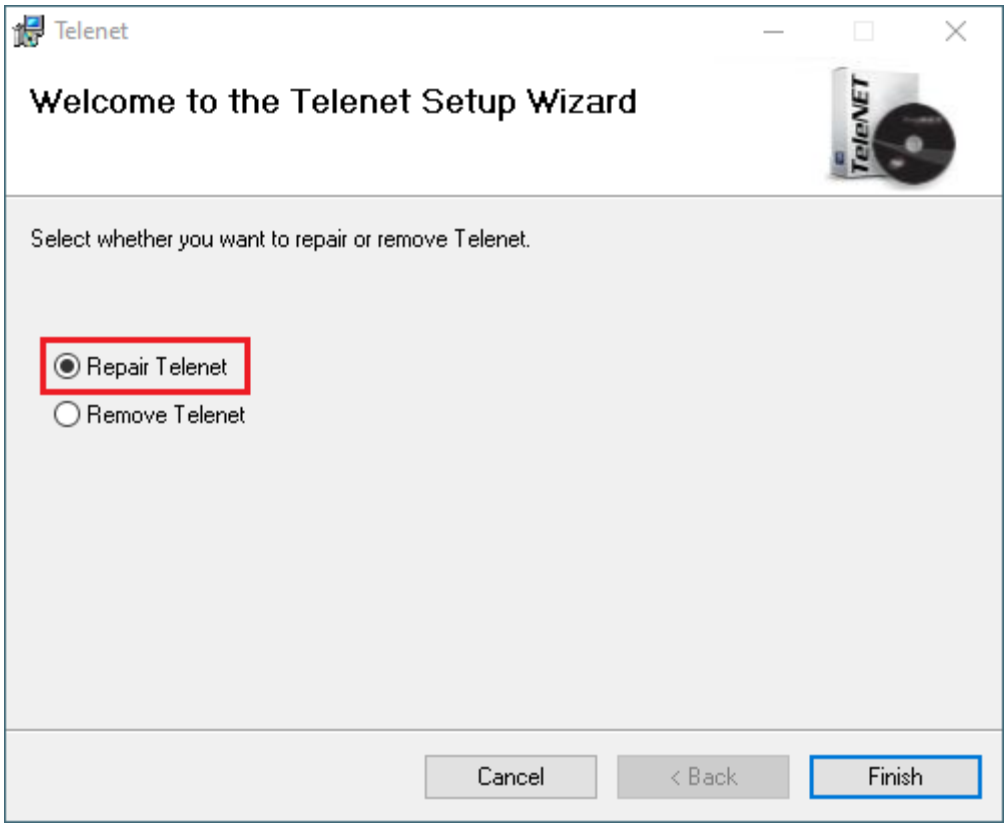
This version of TeleNET is useful in cases where there is no possibility of restoring the proper functioning of the SQL Database.

By activating this mode, the SQL database is not deleted but simply ignored and a new, completely independent, empty Access database is created.

See chapter 13.5 for the "Datalogger Only" version.

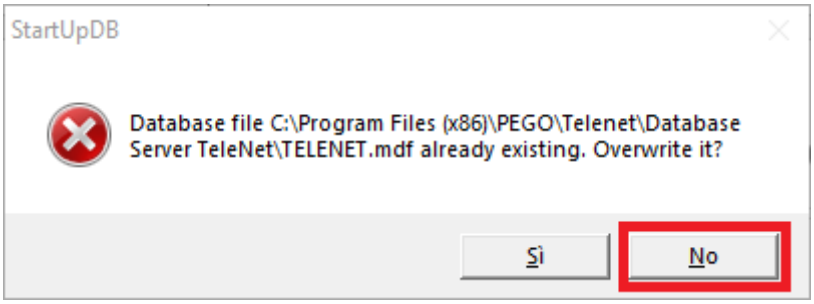
18.5 REPAIR TELENET

In some cases, TeleNET can be repaired automatically by running the complete installation procedure again (chapter 2.2).
Running the complete installation will display the following screen:



Select "Repair Telenet" and click "Finish".

WARNING! During the restore phase you will be asked to replace the database files:



The request has been purposely minimized to an icon in the Windows taskbar to avoid the risk of inadvertently overwriting the database, **irretrievably losing all data and configurations**. Therefore, it's recommended to continue by selecting "**NO**".

Instead, if there is a recent backup of the database, it may be convenient to overwrite the database and then restore it (see chapter 18.7).

18.6 CLONE THE NODE

Sometimes it happens that the node associated with a PC is disassociated for various reasons, even for a backup restore.
The problem occurs when: all the tools are viewable in the TPC, monitoring cannot be started and the "New node" button appears.
It's therefore necessary to disassociate the affected node and reassociate it to the PC following the procedure described in chapter 17.2 by moving the node from the right pane to the left pane, then save and move the node from the left pane to the right pane.
If the node is already in the left pane, it could be due to a backup restore.

18.7 BACKUP RESTORE

To restore a backup, simply go to the configuration menu and then Backup and DB maintenance (see chapter 5.1).
Once you have entered the path of the backup file, you must select "Restore".
After loading the backup, you must re-associate the node following the "Clone node" procedure described in paragraph 18.6.

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Pego makes the latest versions of the manuals available.
Read the license of use during the installation of the TeleNET software.

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