

# TELENET **WEB**

MONITORING - SUPERVISION SYSTEM



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## Use and maintenance manual

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# 1 INTRODUCTION

## 1.1 TELENET OVERVIEW

TeleNET is an application for supervision and monitoring of refrigeration and conditioning systems controlled by Pego electronic instruments. The network of instruments channels the data onto a personal computer where it possible to display and print reports, manage alarms, modify operating parameters and monitor the whole system.

### Applications:

- Monitoring and supervision of refrigeration and conditioning systems.
- Automatic control of work cycles.
- Recording of physical parameters (temperature, humidity, pressure, CO<sub>2</sub>).
- Industrial cooling, storage, seasoning systems.
- Registration and consultation of data saved on Secure Digital card (for Pego electrical panel PLUS Expert series) or on USB key (for Pego electrical panel PLUSR Expert series)

### Package contents:


n° 1 Software and manual installation DVD-ROM

n° 1 2TWRS485 desk interface

n° 1 USB connection cable

### TeleNET Datalogger package contents:

For downloading recordings from the PLUS EXPERT / PLUSR EXPERT panels series, only the installation DVD-ROM of the TeleNET program is provided (please refer to chapters 4, 5, 6, 7).

Note: For interfaces 2TWRS bought on or after September 2015 the USB key  for software protection is replaced by a chip inside the interface.

# 1 INTRODUCTION

## 1.2 CLIENT/SERVER STRUCTURE

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

It identifies:

**Server:** PC where the database belongs. All informations on instruments and history are stored in a unique SQL database.

**Client Node:** PC which is connected the 2TWRS485 interface for instruments chain and USB hardware protection key (until September 1, 2015). With a single TeleNET license is possible to manage only one client node.

Typical examples of installations are the following:

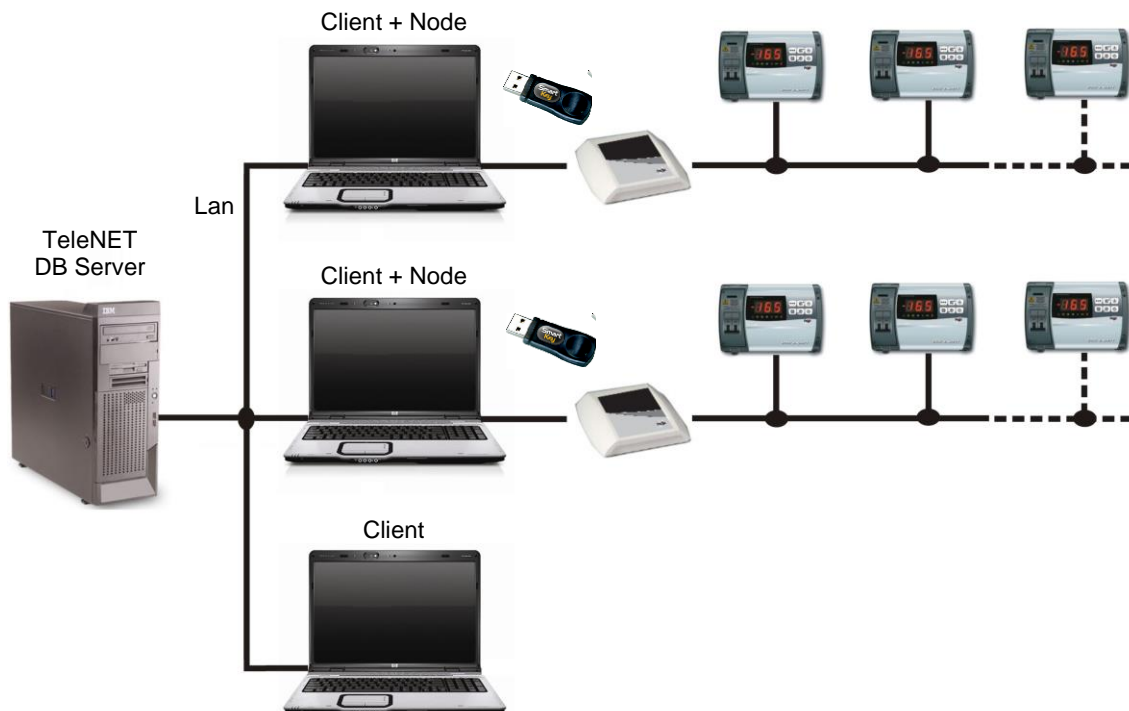
- 1) Complete installation on a single PC (Server + Client Node)



- 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 INTRODUCTION

## 1.3 SYSTEM REQUIREMENTS

The minimum requirements to use the TeleNET system are:

o Server

<b>Operating system</b>	<ul style="list-style-type: none"><li>o Windows® 7 SP1/8</li><li>o Windows® Server 2008 R2</li><li>o Windows® 10/11</li></ul>
<b>Memory</b>	RAM 4 GB
<b>Hard disk</b>	10 GB available space

o Client

<b>Operating system</b>	<ul style="list-style-type: none"><li>o Windows® 7</li><li>o Windows® 8</li><li>o Windows® Server 2008</li><li>o Windows® 10</li></ul>
<b>Memory</b>	RAM 4 GB
<b>Hard disk</b>	10 GB available space
<b>Display</b>	Resolution 1024x 768 24 bit min. Recommended 1920x1080 32 bit
<b>Mouse</b>	Microsoft Mouse or compatible peripherals
<b>Others</b>	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 USB hardware protection key connected. Ensures the connection of interface 2TWRS485.
- Client Mode: monitoring without USB hardware protection key. Does not ensure the connection of interface 2TWRS485.

**NB:** The interfaces bought on or after September 1, 2015 are always active in Full Mode.



Verify software release for communications during assistance or to verify updates availability on [www.pego.it](http://www.pego.it) website.

See chapter 6 on how to update the program.

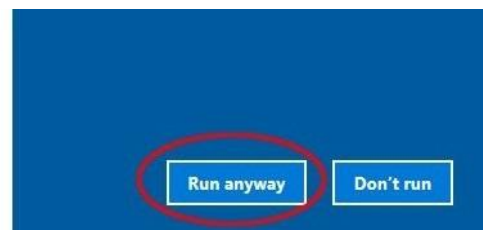
# 2 SOFTWARE INSTALLATION

## 2.1 TYPES OF INSTALLATION

The program can be installed using the DVD-ROM provided, or by downloading it from the download page of the website [www.pego.it](http://www.pego.it) .

If by inserting the CR-ROM the installation procedure does not start autonomously or if you have downloaded the program from the website [www.pego.it](http://www.pego.it), to start the installation manually execute the Setup.exe file contained in the DVD or in C:\TelenetInstaller\TeleNet\_20XX.XX.XX. It is important to perform the installation with an Administrator account.

To execute the file downloaded from the site (TeleNet\_20XX.XX.XX.exe) it may be necessary to give consent to the security window. To run the software, click on "More info" and then on "Run anyway":




There are three different types of software installation available:

- 1) Complete installation (TeleNET Database and client + node on the same PC)
- 2) Client installation (client on other PC/s)
- 3) Only Datalogger installation (see chapter 2.4)

Client installation is in order to create client/server structures with several nodes.



The button  allows you to cancel the installation process.

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

## 2 SOFTWARE INSTALLATION

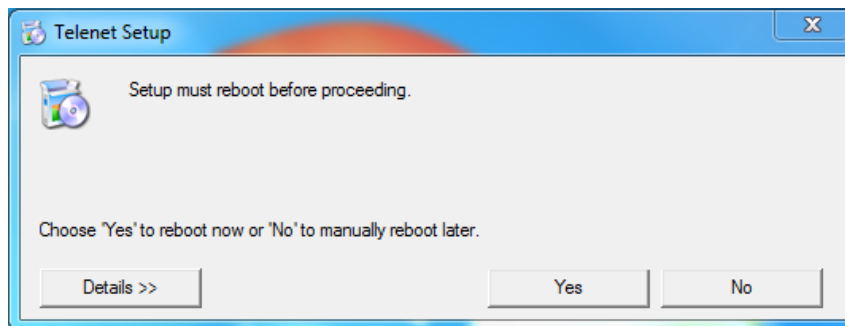
### 2.2 COMPLETE INSTALLATION

If you want to install both the database and the client + node on the same PC select "Setup All":

Complete Installation



A reboot will be required during the installation process, which is recommended to be performed 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 "Complete installation" 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

If you want to install 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). Make a note of the name or IP address of the server PC.



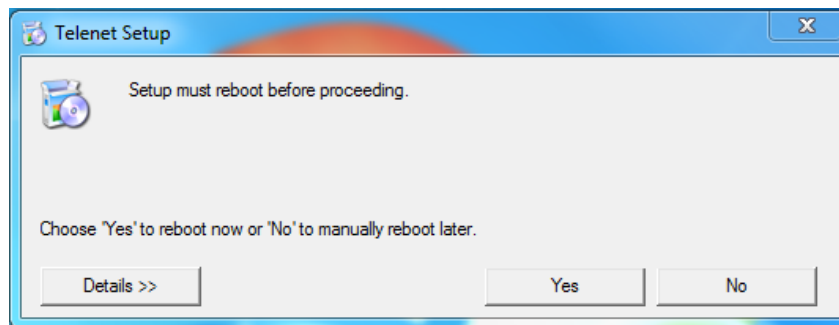
## 2 SOFTWARE INSTALLATION

Then start the installation procedure on the client PC (see 2.1) and choose the option "Setup Client":

Client installation



A reboot will be required during the installation process, which is recommended to be performed 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 "Complete installation" 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, it will be possible to perform the client installation on each PC that will be used as a client or client + node.

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 ONLY DATALOGGER INSTALLATION

If you wish to install the version only for TeleNET Datalogger (see chapter 7.5), simply run the "setup.exe" file located in the "DATALOGGER" folder of the DVD-ROM or download the specific version from the website [www.pego.it](http://www.pego.it).

# 4 ACCESSO

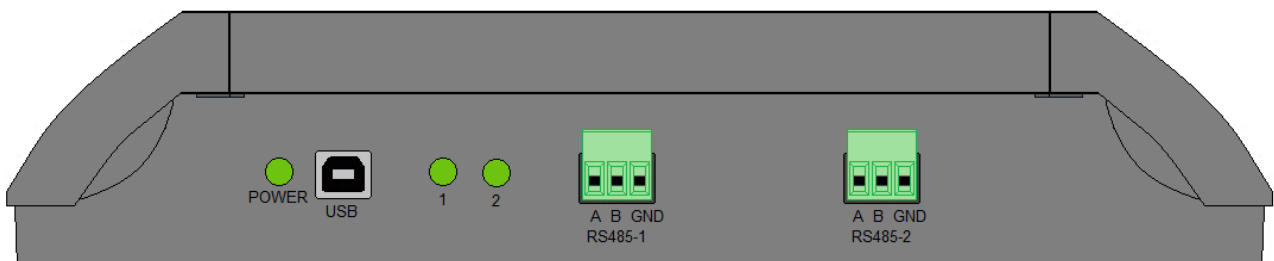
## 3.1 2TWRS485 INTERFACE

2TWRS485 interface is the connecting device between Pego instruments chain and computer. It allows the connection up to 32 instruments for each RS485 line. In addition it's possible to connect up to 9 TWM3IO modules. Position the interface near the computer and make the electrical connections.



Starting from September 1, 2015, the 2TWRS485 interface is equipped with a 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 is not successful, disconnect and reconnect the USB cable, or download the most updated Drivers available from the [www.pego.it](http://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 is recommended to select one and check which LED lights up on the interface. 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 line from the instruments. Please refer to instrument user manual to find the connection of lines A and B.

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

## 3 INSTALLAZIONE HARDWARE

### 3.2 LICENCED USB HARDWARE 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 instrument network.  
The drivers are available on the supplied DVD-ROM.



NB. The key must keep being inserted on USB port during TeleNET functioning.

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

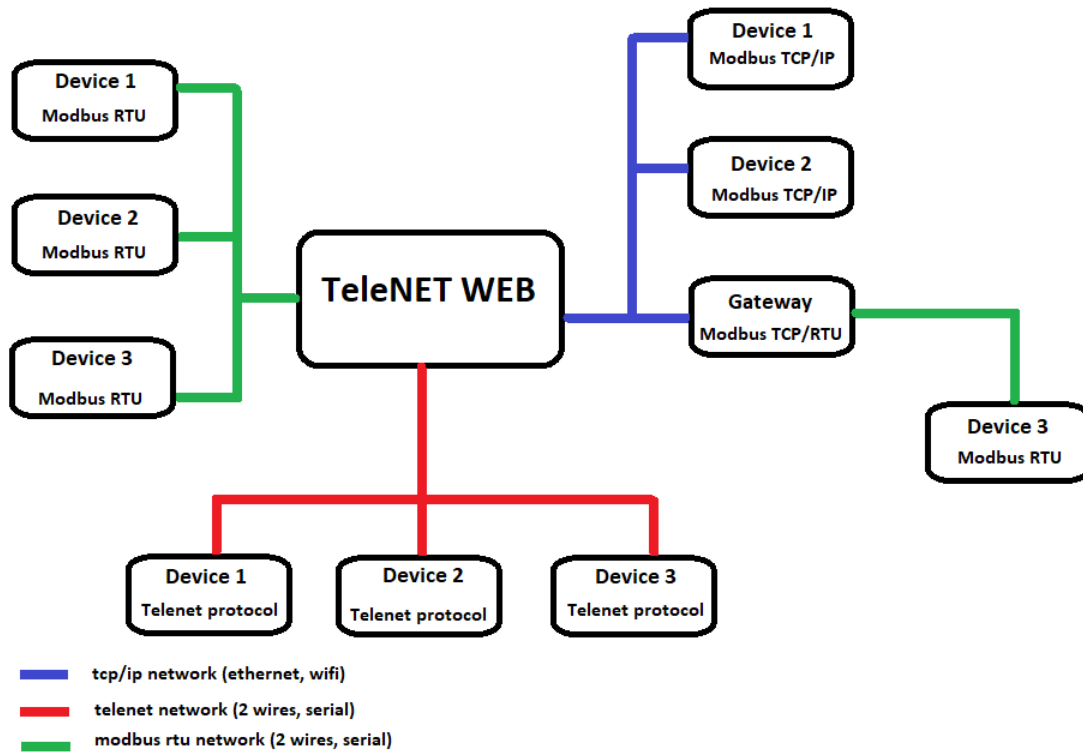
### 3.3 INSTRUMENTS CONNECTIONS

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

- Pego TeleNET proprietary protocol: suitable for connecting Pego instruments; uses a 2-wire RS485 serial connection with a protocol specifically designed for Pego instruments. Up to 64 instruments can be connected, 32 per port. It enjoys more features such as self-recognition.
  - Modbus-RTU standard protocol: allows you to connect up to 247 instruments in an RS485 serial line with standardized communication mode and format; used to communicate also with third-party tools (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 instruments via the TCP-IP protocol. By exploiting dedicated converters, it is also possible to connect via Modbus-TCP instruments equipped with a Modbus-RTU serial interface only. Once the connections are configured, all the instruments 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 instruments 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 instruments to the TeleNET WEB supervision system:

## 4 ACCESSO



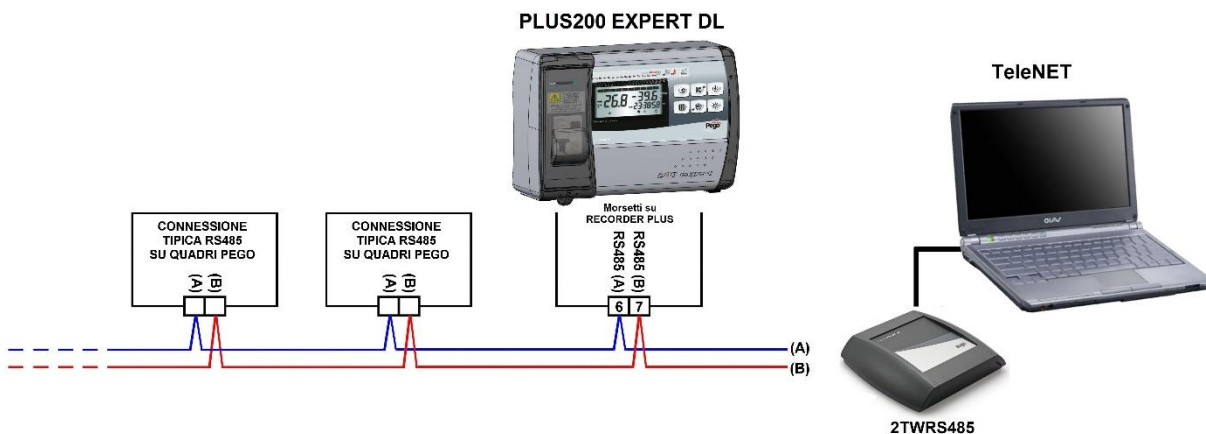
### 3.4 CONNECTION VIA TELENET OR MODBUS RTU PROTOCOL

Refer to the manual of the single instrument 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 instrument, from the first instrument to the second and so on up to the last instrument where the line ends.

Do not 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<sup>2</sup> (eg Belden 8762 cable). Avoid coupling with power cables.

# 3 INSTALLAZIONE HARDWARE

## 3.5 CONNECTION VIA MODBUS TCP / IP PROTOCOL

Starting from TeleNET version 2022.02.01 it is 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 is necessary to connect the instruments to the Modbus RTU - TCP / IP converter via RS485 serial and connect the latter to the same LAN or WiFi network where the PC is connected.

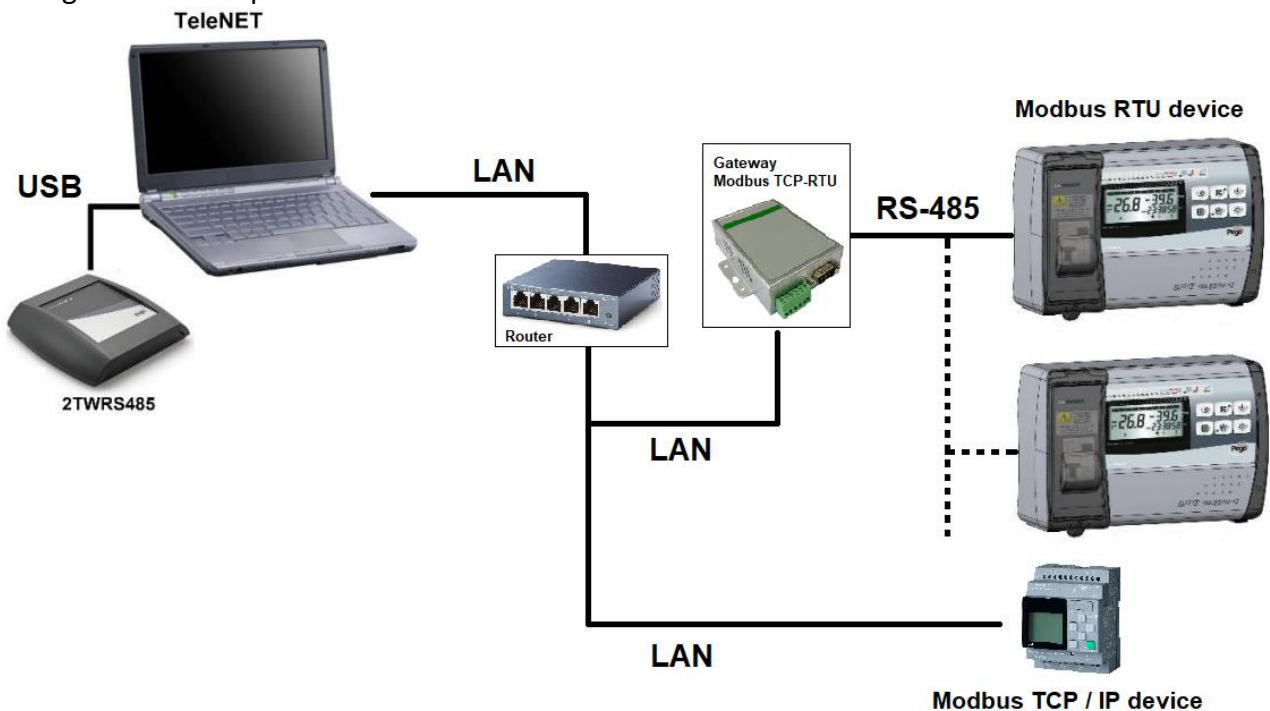
The TeleNET interface must always be connected to the PC via USB cable in order to read the integrated software license and activate all the program features.

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

In the case of Modbus RTU instruments: the IP address identifies the gateway, not the single instrument; therefore, if it is necessary to have a unique identification of the instruments via IP address, a gateway converter must be used for each individual Modbus RTU instrument 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 FIRST ACCESS

To open the program use TeleNET icon  on the Desktop.

On the access mask insert the following default data:



Login: **adminlogin**  
Password:

**NB:** on first access leave the field password blank and proceed pressing the key 

Default language is English.

To change language refer to chapter 6 “TeleNET configuration”.

# 5 GENERAL INFORMATIONS

## 5.1 MAIN INTERFACE

The following image shows TeleNET operating interface.

Section on the left is the one with instruments net tree (Network) and interactive menu for the various configurations.

Section on the right is the operating part of Total Panel Control and windows related to the selected menus.

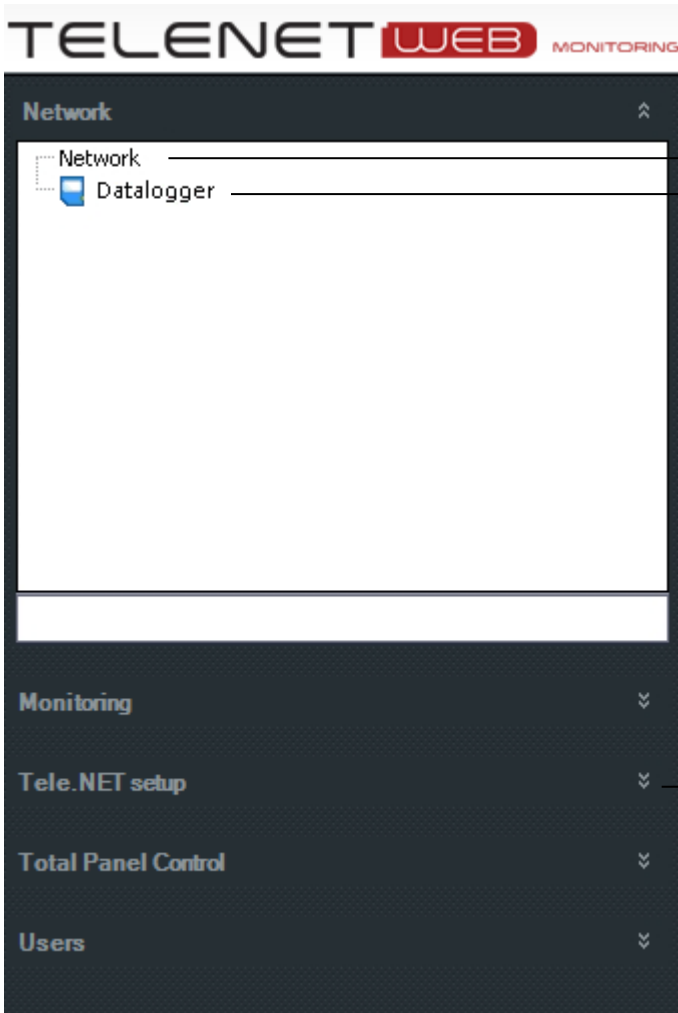


# 5 GENERAL INFORMATIONS

## 5.2 MENU

Main menu allows to configure instruments net (Network) and users.  
The menu is divided in two dedicated menus for the Network or for SD card / USB key section.

To activate Network menu select Network.



The screenshot shows the TELENET WEB MONITORING interface. At the top, the logo 'TELENET WEB MONITORING' is displayed. Below the logo, there is a dark grey header with the word 'Network' and a double arrow icon. The main content area is divided into two sections. The top section is a white box containing a list of items: 'Network' and 'Datalogger'. The bottom section is a dark grey box containing a list of items: 'Monitoring', 'Tele.NET setup', 'Total Panel Control', and 'Users'. Each item in the bottom section has a double arrow icon to its right. Lines connect the text labels to the corresponding elements in the screenshot.

Select Network to open the related menu

To activate SD Card / USB key menu, select Datalogger

Interactive menu

Basing on the selected item on Network, the interactive menu shows the possible selectable options.






# 5 GENERAL INFORMATIONS

## 5.3 KEYS AND ICONS

Operating buttons are used in various settings of the user windows, node, instrument, etc. :











	Enable to modify the field contents		Up
	Save modifications		Scroll up
	Erase element		Down
	Cancel without saving modifications		Scroll down
	Add element		Add
	Open element		Add all
	Exit from the folder		Remove
	Confirmation / command send		Remove all
	Confirm date		Activate / deactivate filter
	Copy		Back to previous window
	Export to Excel		Go to next window
	Cycle stop		Close the tree
	TeleNET e DB release		Expand the tree
	Print		Acoustic inhibitor

TeleNET general operating status icons:

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

## 5 GENERAL INFORMATIONS

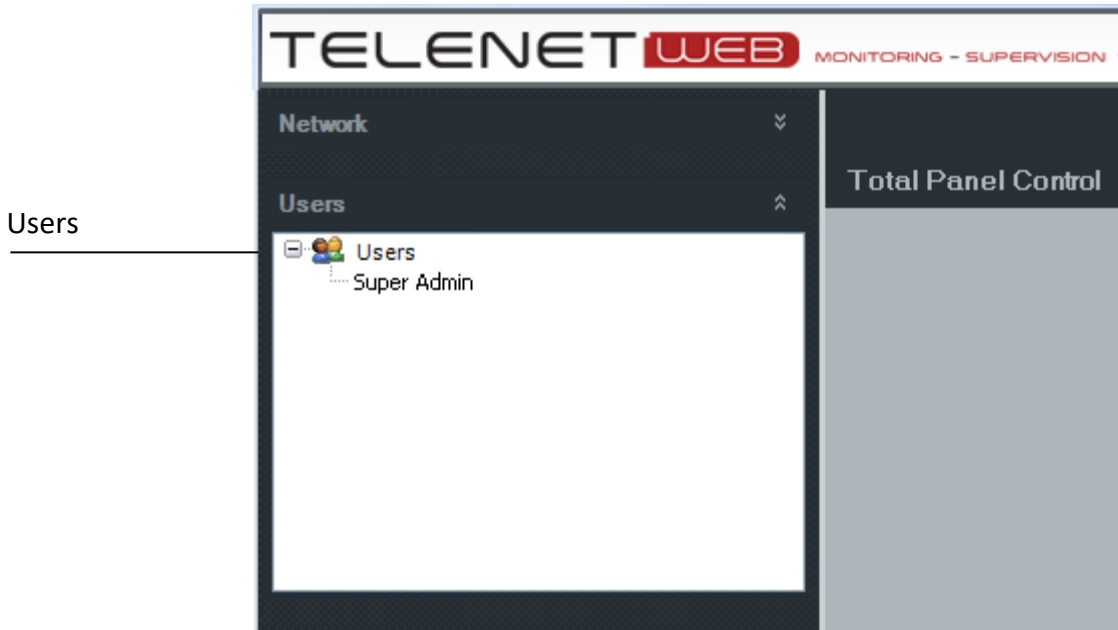
The following icons are used on the instruments net tree to give a first level of informations coming from the devices:

	Monitoring instruments correctly functioning
	Instruments non correctly connected
	Disabled instruments
	TeleNET instruments net
	Modbus instruments net
	Node
	Serial port (COM)
	Shows presence of alarm on one or more instruments
	Shows presence of an alarm of max. temp. on the instrument (red)
	Shows presence of an alarm of min. temp. on the instrument (blue)

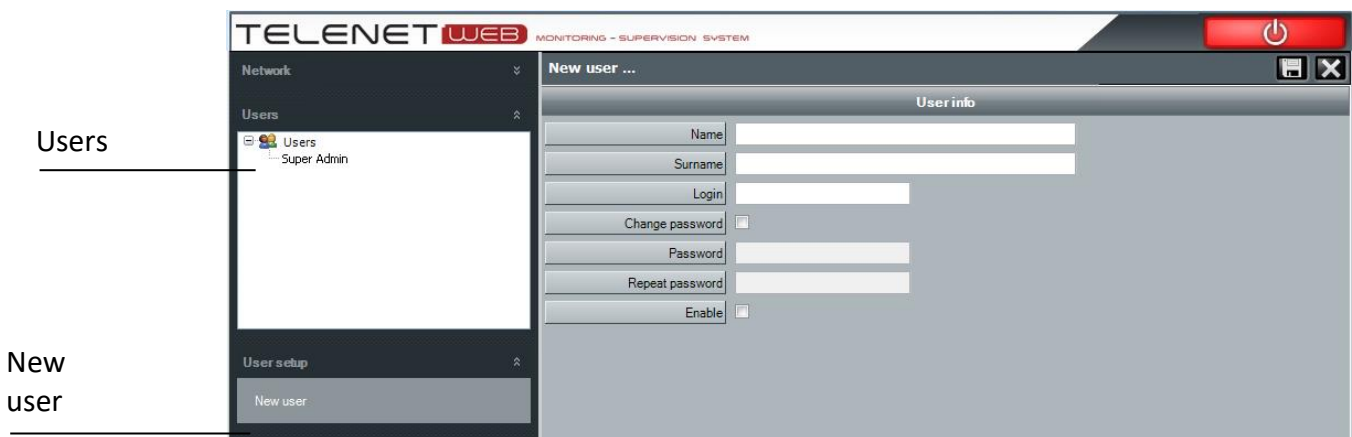
# 5 GENERAL INFORMATIONS

## 5.4 USERS CONFIGURATION

Users configuration is allowed only to users with ADMINISTRATOR authorization associated. The users with this level of authorization can display the users tree:



To add a new user select Users and then New user



The user folder is made by two areas: User info and User permission.

## 5 GENERAL INFORMATIONS

**New user ...**

**User info**

---

Name

Surname

Login

Change password

Password

Repeat password

Enable

**New user ...**

**User info**

---

**User permission**

---

Administrator

Administrator of nodes/instruments

Command

Node setup

Monitoring

Depending on the assigned authorization level the following operations are allowed to the specified user:

<b>Administrator</b>	Allows users administration
<b>Node/Instrument Administrator</b> <b>(to be used only for maintenance)</b>	Allows: - accessing all nodes/instruments of the network and their removal; - assigning an existing node to the PC, in case Telenet is installed on a new machine and restoring of a backup (chapter 18.7).
<b>Command</b>	Monitoring and control of the instruments
<b>Nodes configurator</b>	Allows to configure the node and the instruments
<b>Monitoring</b>	Only instruments monitoring

Once the informations are in please click on the icon to save data.

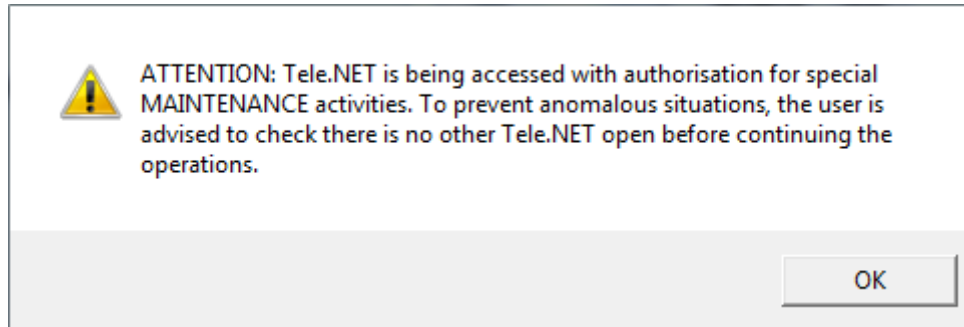


(save or cancel the modifications)

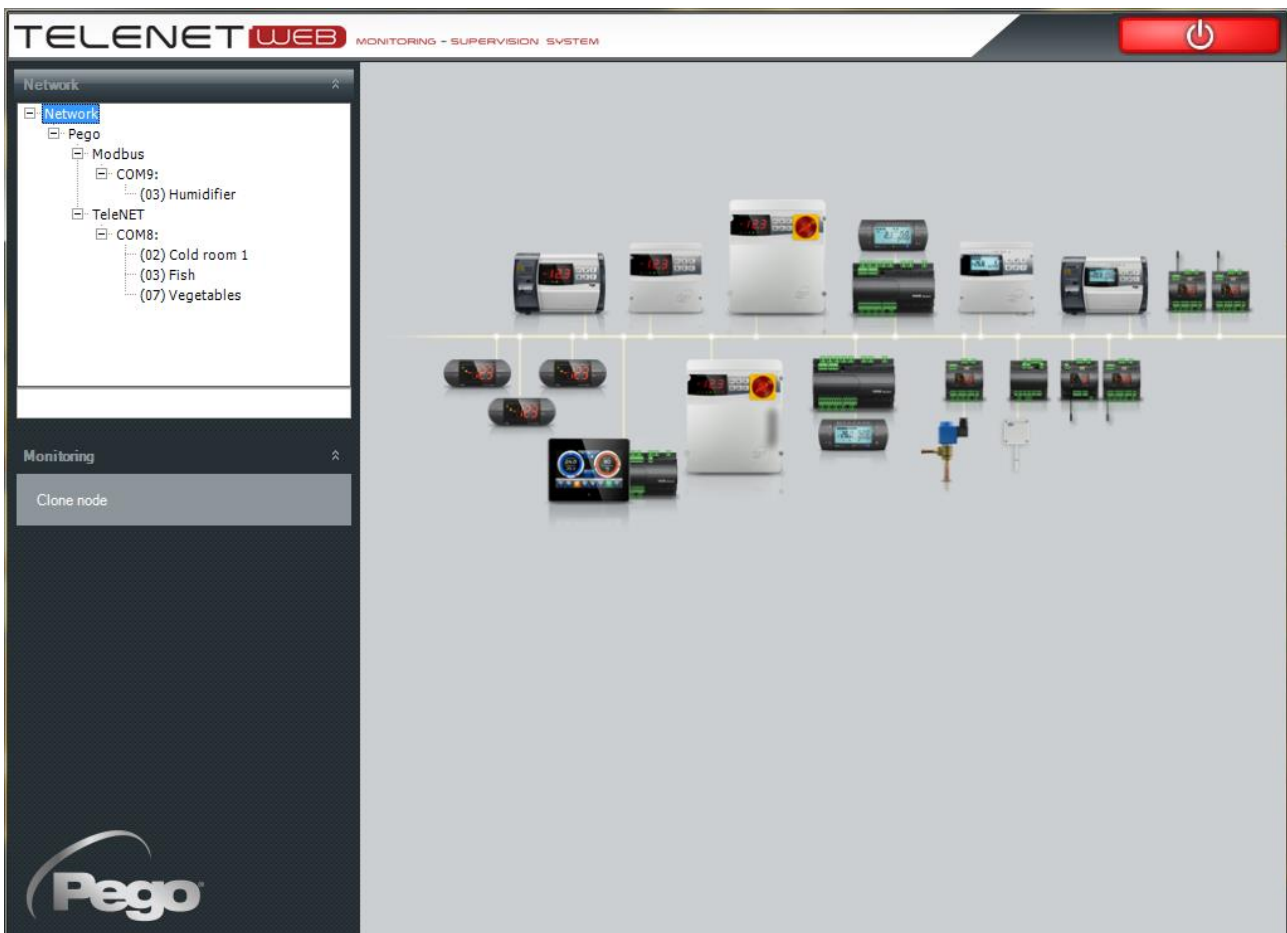
# 5 GENERAL INFORMATIONS

## 5.5 NODE/INSTRUMENT ADMINISTRATOR

In case nodes and instruments (even remote) should be removed or one of the nodes of the network be associated to the PC, a new username must be created having 'Node/Instrument Administrator' authorisation (chapter 5.4); subsequently close and restart Tele.NET, logging in with the data of this user. At this point the following warning will be displayed:



Press on OK to access the following display:

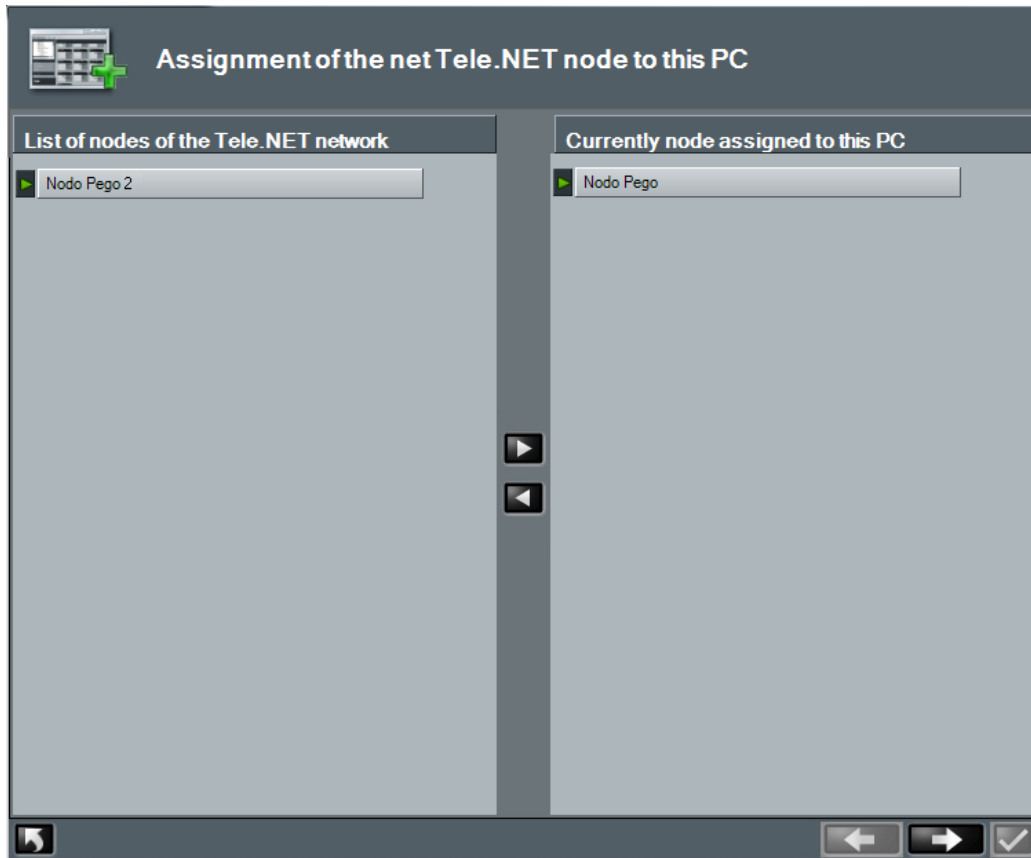





If a node/instrument should be removed, select it and press "Delete node".

Complete the operation by clicking on the basket icon .

## 5 GENERAL INFORMATIONS

If a new node should be assigned to the PC, select Network and press “Clone node”. At this point the following window will be displayed:

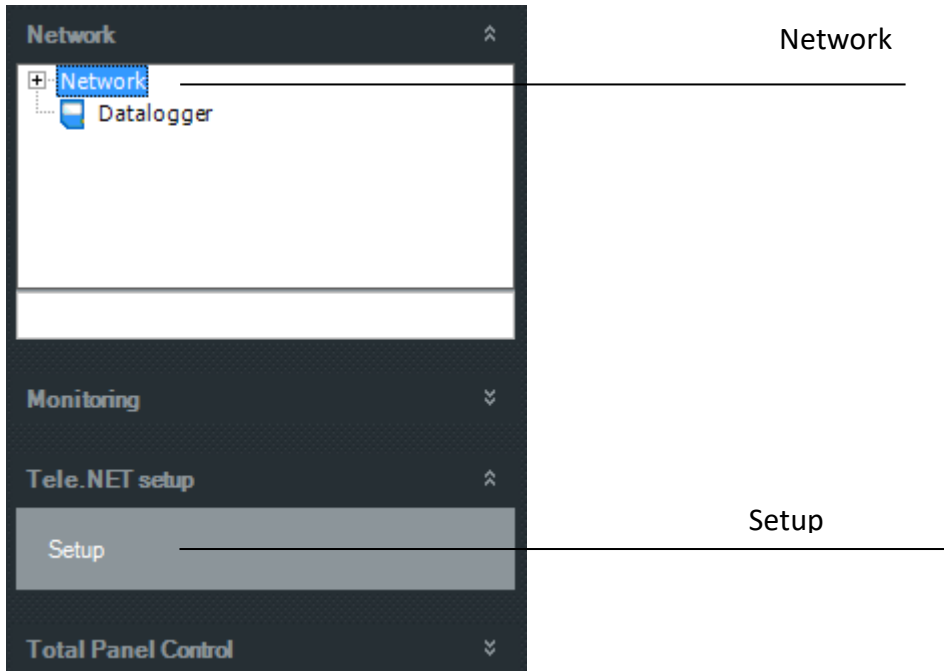


With keys  and , bring the desired node to the right and confirm pressing . Only one node can be assigned to the PC.

# 6 TELENET CONFIGURATION



## 6.1 GENERAL PARAMETERS

Select Network and then Setup on the TeleNET setup menu to access the general configuration parameters. In case the USB protection hardware key is not present, in Instrument Net (Network), Network does not appear and Datalogger must be selected for configuration.




It's possible to configure the following parameters:



**NOTE:** To be able to insert or edit the data inside the menu, act on button  and subsequently on button  to save settings. To make the amendments effective, Telenet will be closed and must be subsequently re-started.

# 6 TELENET CONFIGURATION

Selecting  it's possible to read TeleNET software and database release (to use during assistance call).



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



## Company Menu:

Allows inserting the company data, used subsequently in the printouts headed paper and in the sending of alarm e-mails

Company	
Company Name	Pego S.r.l.
Address	Via Piacentina, 6/b
ZIP	45030
Town	Occhiobello
City	RO
Country	Italia

## Tele.NET Menu:

Allows to configure the Datalogger settings for data import and default of the historical displaying period inside the instrument.

Tele.NET	
Datalogger enabled	<input checked="" type="checkbox"/>
Only Datalogger - USB/SD Card	<input type="checkbox"/>
Datalogger path file	D:\ <input type="button" value="..."/>
Default historical period	<input type="text" value="_1"/>

Fields description:

- **Datalogger Enables:** Enables/disables the displaying of the SD card / USB key in the network.
- **Only Datalogger:** Enables/disables the datalogger only version (see paragraph 7.5).



# 6 TELENET CONFIGURATION

- **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:

Is used to select the program language and to enable/disable the buzzer.

Language and audio	
Language	English
Buzzer enable	<input type="checkbox"/>

### 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):

Server	
Server name	PCNAME\TELENET_PEGOWISE
User	SA
Password	PegoWise@10
Polling time (s)	10

### DB Backup and maintenance Menu:

Allows programming a daily backup of the DB Telenet in a specific path or restore a previously performed backup (chapter 18.7 for restoring a backup).

You can back up to an external USB drive permanently connected to your PC to reduce the risk of data loss.

**Note:** The restoring of a Backup must be carried out on a Telenet with the same release of the recovered DB. No path (backup or restore pathfile) must contain spaces.

The last part of this menu allows to permanently eliminate all data prior to set date.

DB backup and maintenance	
Enabled backup	<input type="checkbox"/>
Start hour backup	00:00:00
Pathfile backup	...
ATTENTION: backup will only be performed on server SQL	
Pathfile restore	...
Restore	
Delete data recorded before:	30/10/2015 Delete
Database Size:	Calculate

# 6 TELENET CONFIGURATION

## Mail Menu:

Allows to configure service for sending of alarms via e-mail.

It is possible to receive alarm warnings using a computer or a mobile telephone enabled for receiving e-mails.

Before filling in the fields, create an e-mail account or use an existing one and find the configuration information from your own e-mail provider.

The screenshot shows a configuration window titled "Mail". It contains several input fields and checkboxes:

- From:** Text input field.
- Server mail:** Text input field.
- Request aut.:** Checkbox.
- User:** Text input field.
- Password:** Text input field.
- Mail Port:** Text input field containing "25", with "Set Default" and "Test Mail" buttons to its right.
- Secure connection (SSL):** Checkbox.
- Set mail handler node:** Checkbox.
- Mail handler node:** Text input field.

At the bottom of the window, there is a section labeled "RECEIVER".

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:** 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. 8.1) 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 completely filled in the fields save the informations and restart TeleNET for the modifications to take effect.

# 6 TELENET CONFIGURATION

At next step will be possible to insert the receivers.

e-mail destination	alarm start alert	alarm stop alert	MON	TUE	WED	THU	FRI	SAT	SUN	Time slots
recipient1@mail.it	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
recipient2@mail.it	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
recipient3@mail.it	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
recipient4@mail.it	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 alarm emails in any case, you need to activate the checkboxes for every day and leave the "Time slots" fields blank.

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

# 6 TELENET CONFIGURATION

## Mail Alive Setup Menu:

This is used to configure the transmission of automatic emails, selecting the days and times, to check that the monitoring system is working properly.

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.

We suggest, once configured the service, to make some test of mail sending using the 'Test Mail' key.

## HACCP mail configuration Menu:

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

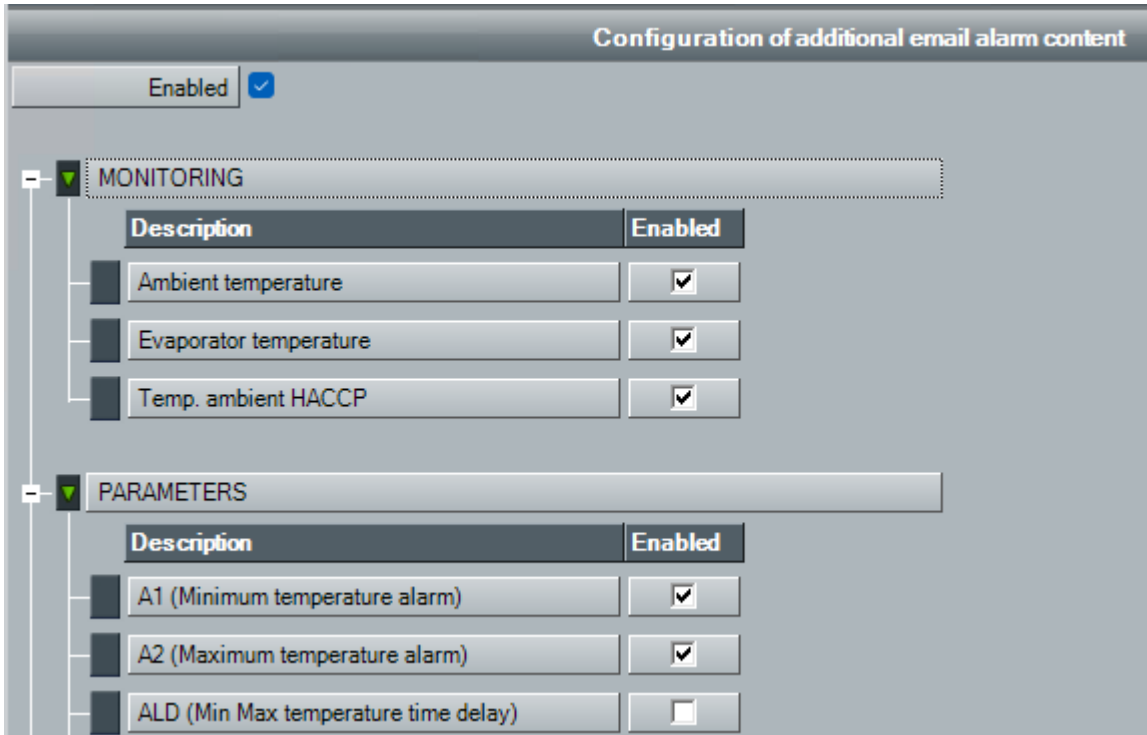
It is also possible to choose certain instruments for each recipient via a window that opens automatically when you deselect the "All instruments" option.

HACCP mail configuration										
Enable	<input checked="" type="checkbox"/>	Test								
Object	PEGO REPORT HACCP									
Email text	Telenet 2023.06.01									
Report destination folder	C:\PEGO									
RECIEMER										
e-mail destination	Sending time	MON	TUE	WED	THU	FRI	SAT	SUN	All instruments	Retry (min)
report@mail.com	08:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0

# 6 TELENET CONFIGURATION

## Configuration of additional email alarm content menu:

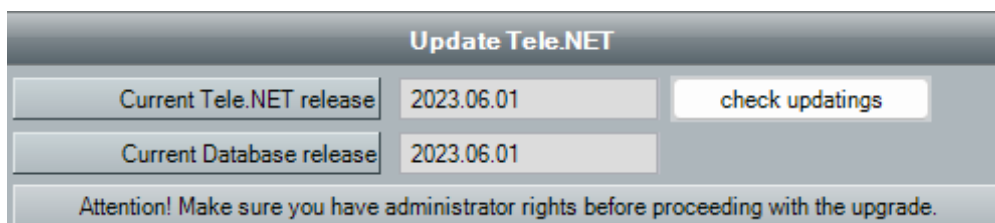
Within the "Modify device" menu it is possible to enable the integration of the alarm email with additional data for each individual instrument. Therefore, in the event of an alarm, it is possible to receive the values of any variable in the email, if it has been previously selected, such as the room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



## Update Tele.NET Menu:

Allows verifying the presence of any updates of the Telenet program on the PEGO site and install them.

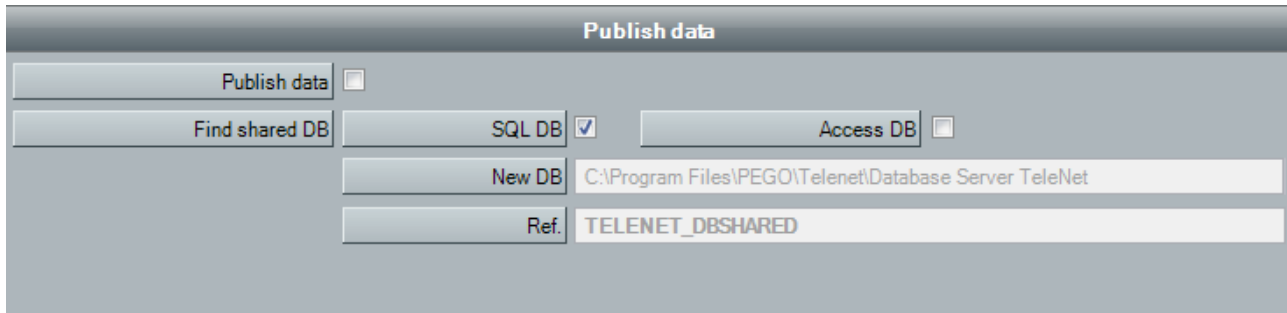
An internet connection is requested for this function.



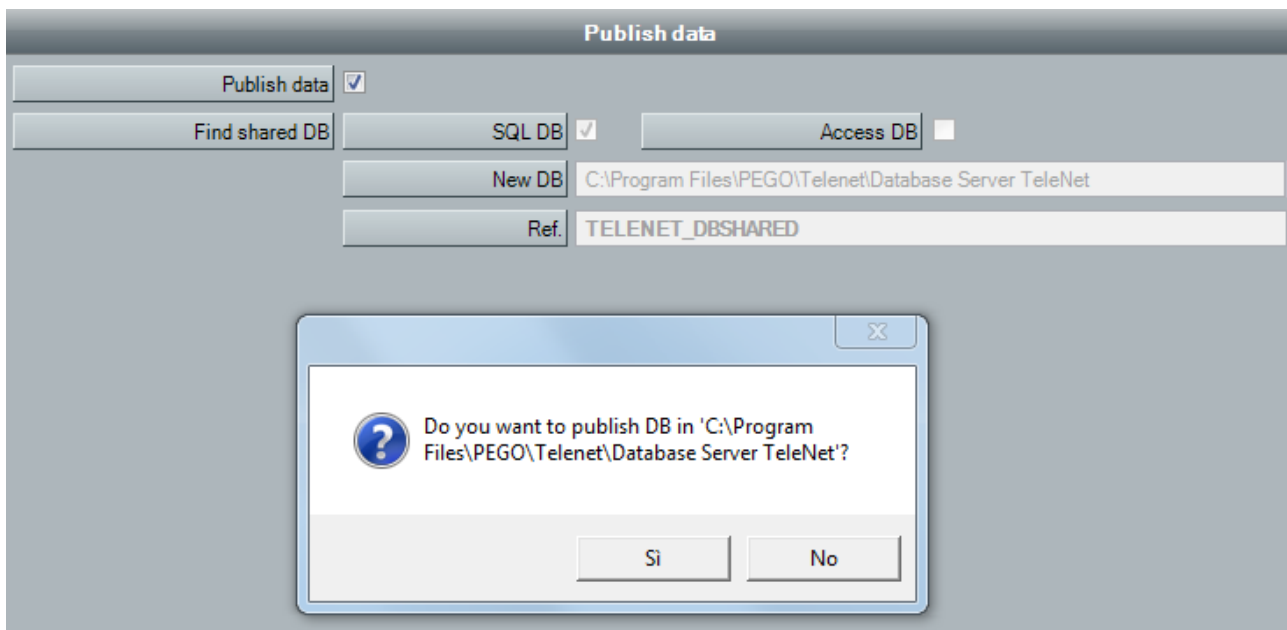
## Publish data Menu:

The possibility to publish information relating to the instruments monitored on an external database is given (SQL or ACCESS) on which it is possible to query and export data that can be used by other software. The information is updated in real time and depends from the query speed of the instruments. The new data replaces and deletes the previous data.

## 6 TELENET CONFIGURATION



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 is 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 9.1 and 9.2).

# 6 TELENET CONFIGURATION

Info		
no link alarm		
Alarms		
Published data		
Description	ID	Publish
A1 (min temperature alarm)	ff423649-c403-4ad1-bd60-40fa7db30846	<input type="checkbox"/>
A2 (Max temperature alarm)	da4764d1-298d-483a-9b4e-15c930255024	<input type="checkbox"/>
ALd (temperature alarm delay)	e7dae527-d02e-4a71-b5cc-0da3e6f24e1f	<input type="checkbox"/>
Ambient probe error alarm (S0)	95867bcb-914b-4b66-a945-e695eac7b80f	<input type="checkbox"/>
Ambient temp. setpoint	e694ee5f-cb7b-43fb-a500-00fd57c3523b	<input type="checkbox"/>
Ambient temperature	ae9df42a-3a13-436d-8986-9e47c6051ff6	<input type="checkbox"/>
Ambient temperature alarm MAX	a4e27e4c-276b-447e-942e-aa593387602a	<input type="checkbox"/>

Description of the table in Published data

- **Description:** Description of the variable.
- **ID:** Only identification of the variable relating to an instrument. The ID is created when creating a new instrument on TeleNET. In case of eliminating an instrument and creating it again, the ID would change. The ID can be read, verified and copied in the TeleNET page during amendment of the instrument.
- **Publish:** Selection box to enable the publication of the variable.

With monitoring started, the previously created TELENET\_DBSHARED database is filled with the data of the selected variables and constantly updated.

In case an instrument is disabled, the database rows relating to its published variables are deleted; they will reappear on its requalification.

In case an instrument stops communicating (no link) its published variables have the “null” value (Val column) until its reconnection.

TELENET\_DBSHARED database structure

Field name	Description	Data type	Field size
<b>ID</b>	Only ID of a size relating to an instrument.	Numerical	
<b>nodeName</b>	Node name (paragraph 8.1)	Text	255
<b>COM</b>	Serial port associated with the 2TWRS485 interface (paragraph 9.1)	Text	10
<b>Address</b>	Address assigned to the instrument (paragraph 9.1)	Numerical	Whole long
<b>InstrumentType</b>	Type of instrument (paragraph 9.1)	Text	100
<b>InstrumentDescri</b>	Instrument description (paragraph 9.1)	Text	255
<b>ParName</b>	Namen of parameter	Text	100

# 6 TELENET CONFIGURATION

<b>UoM</b>	Unit of measure	Text	10
<b>Val</b>	Value	Numerical	Double precision

Example:

ID	NodeName	COM	Address	InstrumentType	InstrumentDescri	ParName	UoM	Val
{CFFCA714-E300F02D7A77D}	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
E-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
4-E6E9FEC1032A}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	Temperatura ambiente		0
4-A9B72F7D66AB}	PEGO	COM1:	4	Strumento SC 600	SC600-4	Setpoint ventilatori (Alta press	Bar	3
4-CA04DDC6D655}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	F5 (pausa ventilatori)	min	0
4-6636A4894CFE}	PEGO	COM1:	4	Strumento SC 600	SC600-4	Pressione Bassa	Bar	2,7
3-39B6AD8D0595}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	T Ambiente	°C	27,7
3-C884FB9351BD}	PEGO	COM1:	1	Strumento ECP Serie Ba:	200 expert 2	T Evaporatore	°C	27
3-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.

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



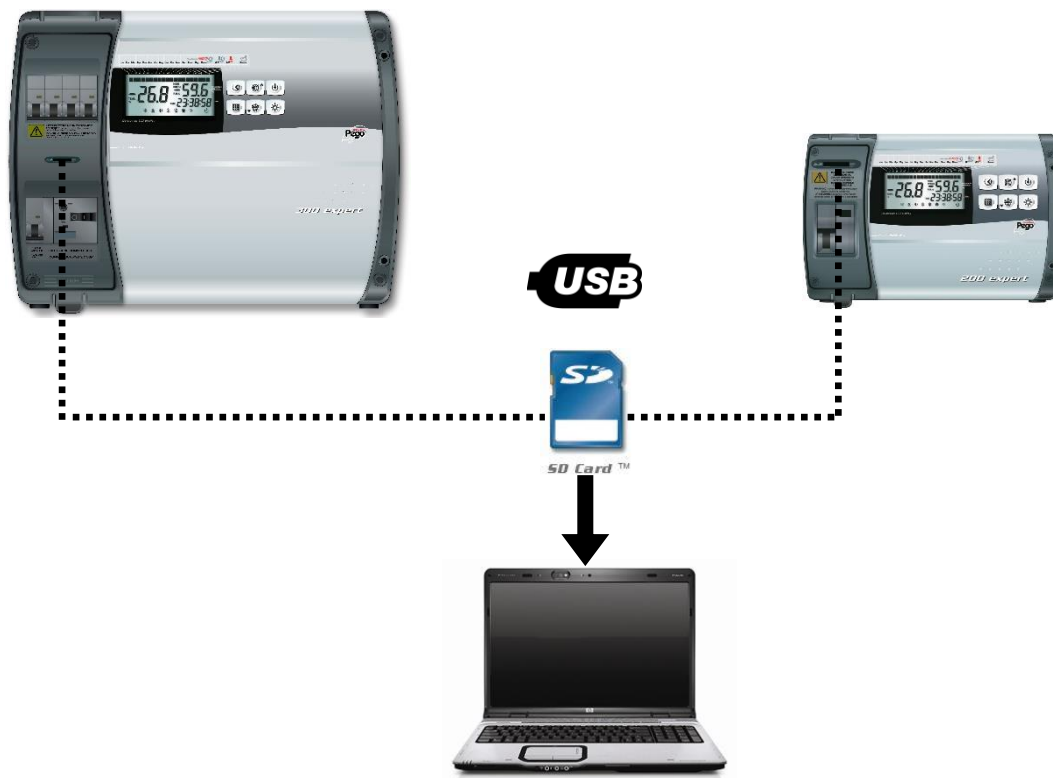
# 7 DATALOGGER CONTROL

## 7.1 SD/USB SYSTEM INTRODUCTION

TeleNET also allows saving and consultation of stored data on PEGO panel PLUS EXPERT and PLUSR EXPERT series. This functionality is available even when hardware protection key is not present or connected.

Data transfer from panels to the software is possible by using of a Secure Digital memory card\* or an USB key.

**\*NB:** Use models with capacity under 2GB and with speed 80x (Ultra-Speed) or 150x (Extreme-Speed). The SD card must be formatted with FAT16.



### CHARACTERISTICS:

- TeleNET software program present, on DVD-ROM, inside each panel package of PLUS EXPERT and PLUSR EXPERT series.
- Use of Secure Digital memory cards for data transfer (with PLUS EXPERT series).
- Use of USB key for data transfer (with PLUSR EXPERT series).
- Unique instrument id by serial number.
- Easy and intuitive data download.
- Customized graphs with comparison of different parameters.
- Registration and alarms consultation.

**Note:** When installing the software, install it completely (see 2.2).

**Note 2:** When installing the software, if you do not have the 2TWR5485 interface and if you only need to import data from a USB / SD Card, it would be possible to install the Only Datalogger version, see chapter 2.4.

# 7 DATALOGGER CONTROL

## 7.2 DATA IMPORT FROM SD/USB KEY

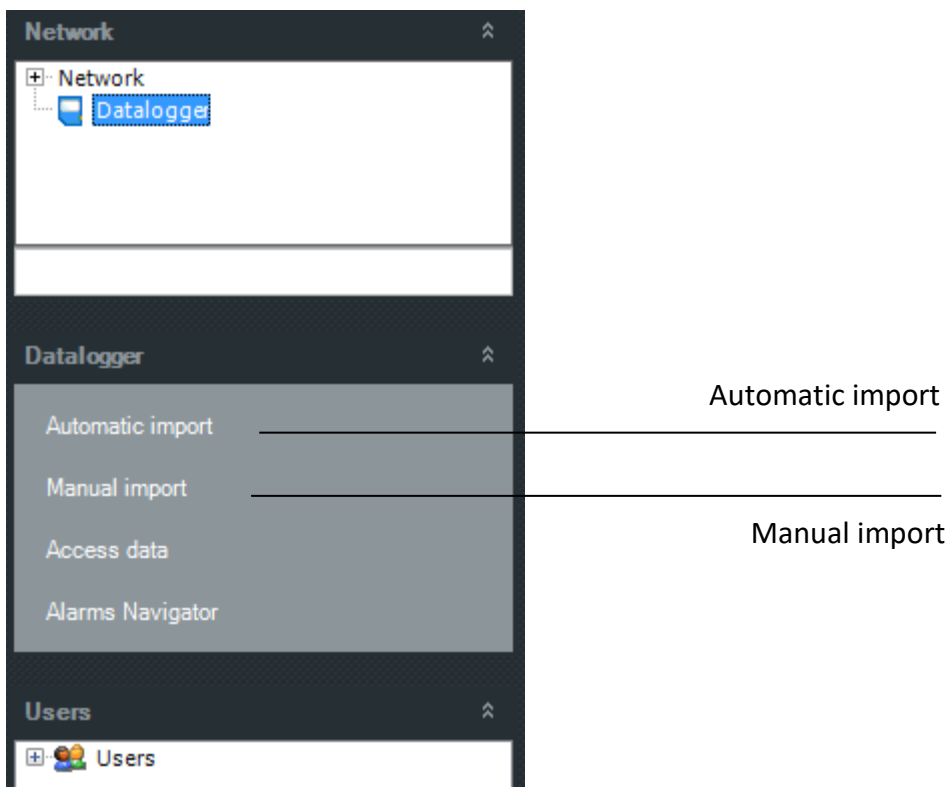
Below are the steps to follow to set the data downloaded on to SD memory card or from USB key from the PLUS EXPERT and PLUSR EXPERT series boards.

There are two possible importing methods:



**Automatic Import:** allows selecting and importing the last saved data of every individual instrument. The instruments are recognised univocally thanks to an internal serial number and only the last progressive saving is pre-selected and proposed for import.

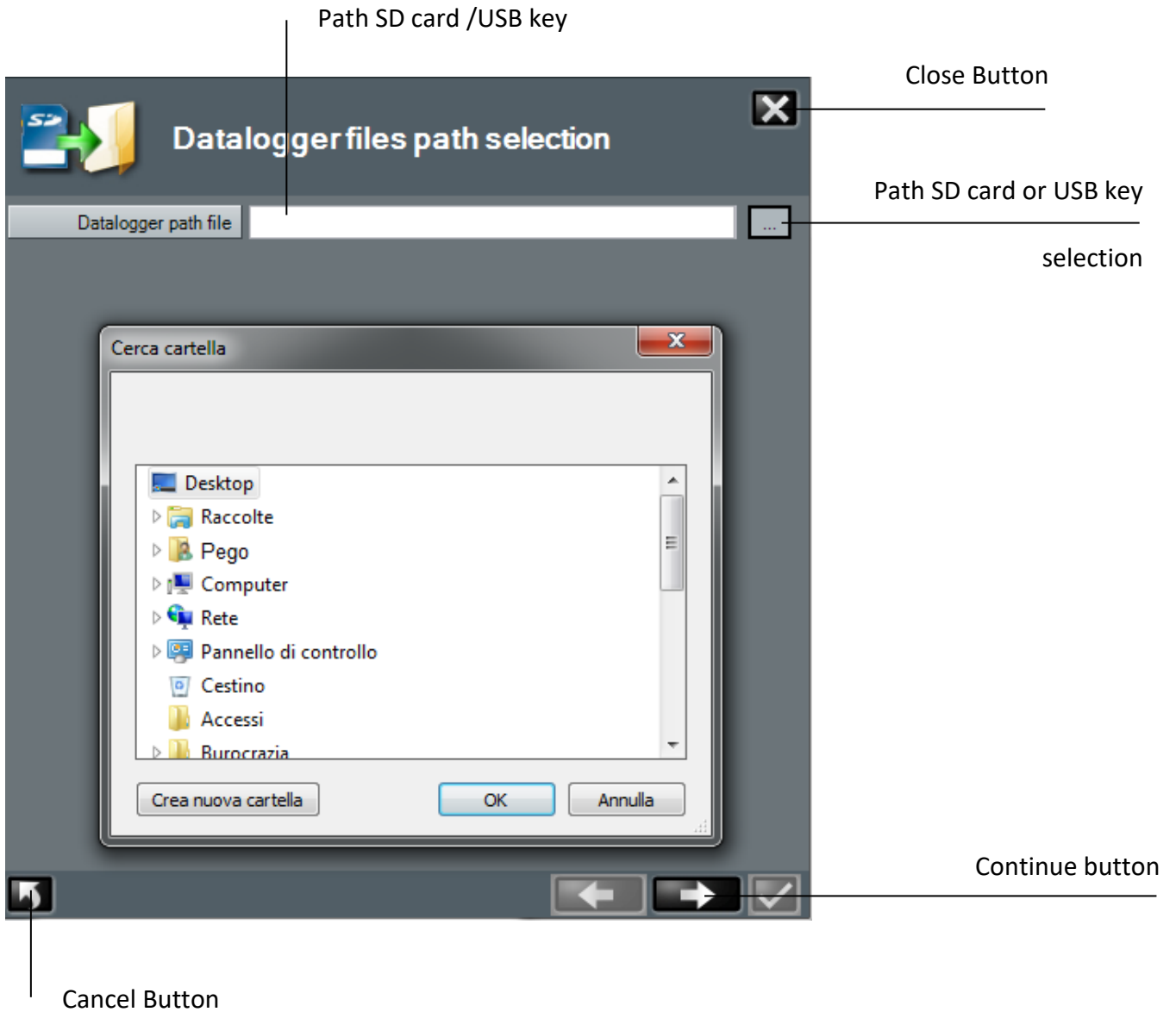
**Manual Import:** allows selecting and importing any data saved for any instrument, indifferently from date and progressive. The user must previously select the files to import.

During import of new files, any data already present in the database is ignored because previous imported.



# 7 DATALOGGER CONTROL

Once the importing method has been selected, the SD Card / USB key Path must be inserted by pressing the  button and subsequently pressing the  button to continue the importing procedure.



**Attention:** Do not amend or rename the data files or the automatic finding and their importing by the Telenet program will no longer be possible.

# 7 DATALOGGER CONTROL

Shown below is the data import in the **Automatic import** method we recommend using for its simplicity.

The screenshot shows a dialog box titled "File to be imported selection" with a close button (X) in the top right corner. Below the title bar is a table with the following columns: Name, S.N., Prog, from, to, Sel, and Filename. The table contains four rows of data. Below the table is a checkbox labeled "Delete imported files" which is checked. At the bottom of the dialog are four buttons: a Cancel button (left arrow), a Back Button (left arrow), a Start import button (right arrow), and a confirmation button (checkmark).

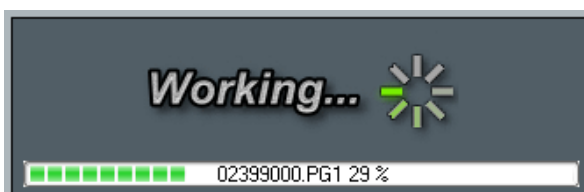
Name	S.N.	Prog	from	to	Sel	Filename
Strumento PLUS Expert DL3	00188	0	22/07/2009 17.07.00	02/10/2009 17.25.00	<input checked="" type="checkbox"/>	00188000.pg2
Strumento PLUS Expert DL3	01109	4	02/04/2008 17.16.00	03/04/2008 15.47.00	<input checked="" type="checkbox"/>	01109004.PG2
Strumento serie PLUS Expert	00180	0	27/08/2008 10.26.00	10/07/2009 12.23.00	<input checked="" type="checkbox"/>	00180000.PG1
Strumento serie PLUS Expert	00182	0	18/05/2009 11.36.00	10/07/2009 12.37.00	<input checked="" type="checkbox"/>	00182000.PG1

Labels in the image:

- Instrument name
- Serial number
- Date first data
- Date last data
- File to import selection flag
- File name
- Cancel Button
- Imported files deletion enabling flag
- Back Button
- Start import button

Once imported, the files are automatically deleted from the SD/USB key by default, to avoid its filling in time. Deselect the flag  Delete imported files  in case of wanting to exclude this option.

The advancing of the import in progress is displayed with a percentage bar that advances, and upon its completion, a window is displayed indicating procedure complete.



# 7 DATALOGGER CONTROL

## 7.3 DATALOGGER CONTROL

Datalogger Control represents the summary where all PLUS EXPERT and PLUSR EXPERT series boards where the data was imported from are displayed. They are identified from their own UNIVOCAL series number and by the description assigned by the user (see chapter 10.2 to amend description). The first registration data and the last registration data are also present in the database relating to every instrument, useful for checking its updating status.

Instrument description

Univocal series number

TELENET WEB MONITORING - SUPERVISION SYSTEM

Network

- Network
  - Datalogger
    - (12300) Instrument PLUS 200 Expert DL3
    - (26841) Instrument PLUS 200 Expert
    - (65535) Instrument PLUS 200 Expert

Datalogger

- Automatic import
- Manual import
- Access data

Pego

Datalogger Control

Instrument PLUS 200 Ex	
12300	Series Nr
02/03/2016 11.24	First data
11/04/2016 16.04	Last data

Instrument PLUS 200 Ex	
26841	Series Nr
04/04/2016 8.41	First data
17/10/2016 11.09	Last data

Instrument PLUS 200 Ex	
65535	Series Nr
04/04/2016 8.41	First data
17/10/2016 11.09	Last data


Date of the first data

Date of the last data




By selecting the instrument with a double click from the SDC Control window or from the Network (Instrument network), access is gained to the historical that will display, by default, the registrations of the 24 hours prior to the current date. To configure the default settings relating to the SD/USB key, see in chapter 6.1 "Tele.NET Menu".

# 7 DATALOGGER CONTROL

## 7.4 HISTORICAL INSTRUMENT AND GRAPHICS

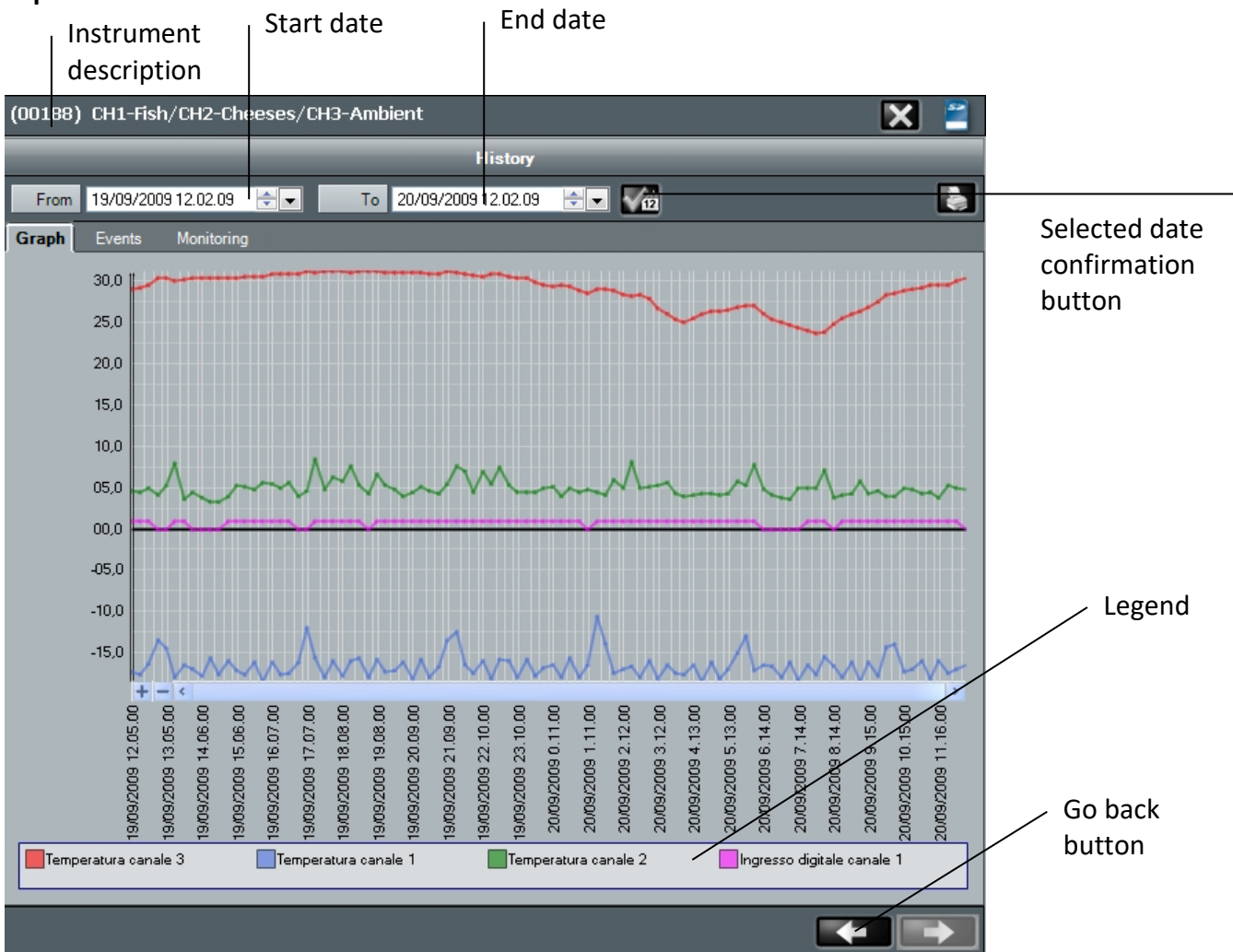
By setting the dates in the "From" and "To" boxes and confirming issuing with the button , it is possible to display the data of any time period. The window menu allows selecting the following types of display:

- Graph:** displays the graph of the measures registered during the selected period.
- Events:** displays in table form the alarms during the selected period.
- Monitoring:** displays in table form the measures registered during the selected period.

For each of these methods it is possible to print  and for those in table format it is also possible to export the data in  Excel format. The  Back button allows access to the measures selection page to be displayed and the colours to be used in the graph.



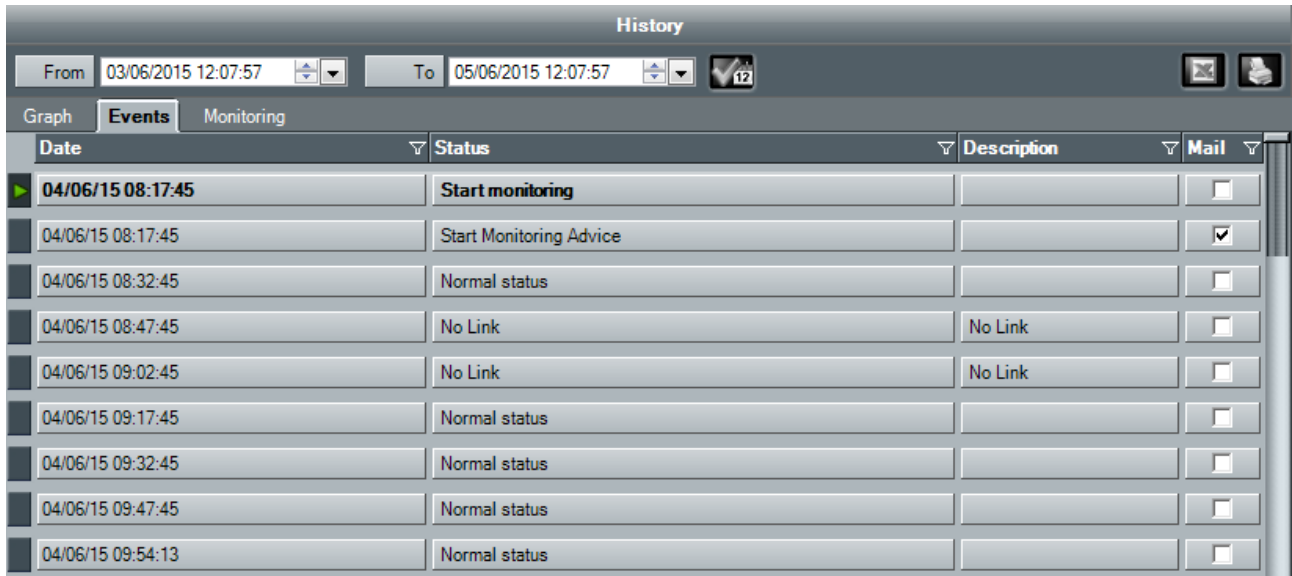
**Graphic:**



# 7 DATALOGGER CONTROL

## Events:

Select this card to access a list of alarms, indicating time of start and end of monitoring registered in the period selected, with relative hour, description and notice of email sent.




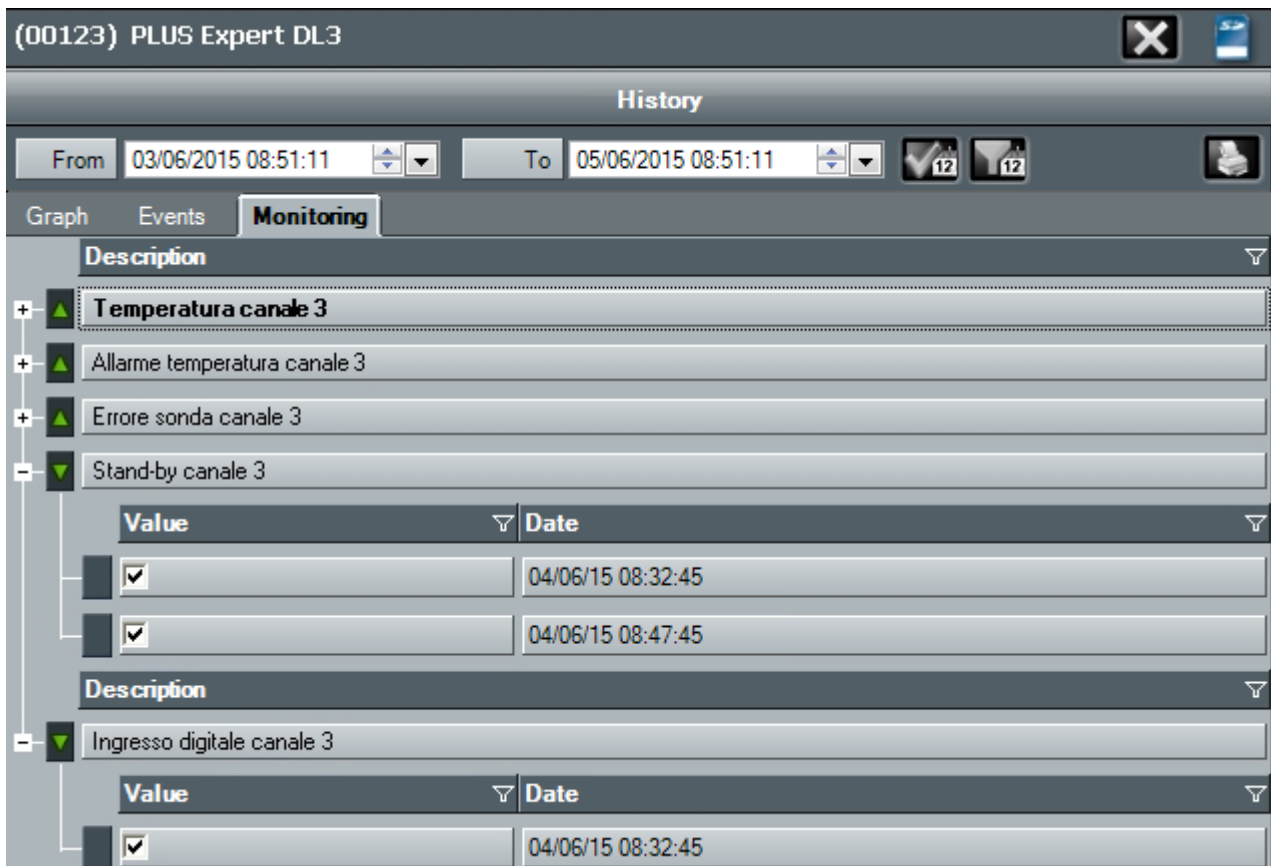
The screenshot shows a 'History' window with a table of events. The table has columns for Date, Status, Description, and Mail. The events are as follows:

Date	Status	Description	Mail
04/06/15 08:17:45	Start monitoring		<input type="checkbox"/>
04/06/15 08:17:45	Start Monitoring Advice		<input checked="" type="checkbox"/>
04/06/15 08:32:45	Normal status		<input type="checkbox"/>
04/06/15 08:47:45	No Link	No Link	<input type="checkbox"/>
04/06/15 09:02:45	No Link	No Link	<input type="checkbox"/>
04/06/15 09:17:45	Normal status		<input type="checkbox"/>
04/06/15 09:32:45	Normal status		<input type="checkbox"/>
04/06/15 09:47:45	Normal status		<input type="checkbox"/>
04/06/15 09:54:13	Normal status		<input type="checkbox"/>

## Monitoring:

The PLUS EXPERT DL3 instrument allows analysing more data compared to other equipment; in particular, for every of the three available channels, the registration temperature, the channel temperature alarm, the probe error, the stand-by and the digital input can be displayed. To personalize descriptions of recorded data, see Chapter 10.2 .

It is also possible to filter their displaying for a determined record, thanks to the button .



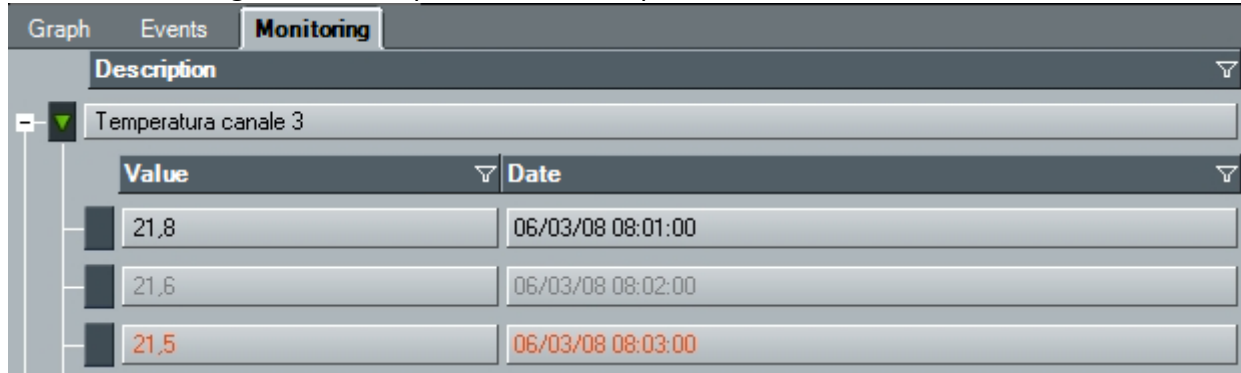
The screenshot shows a 'Monitoring' window for '(00123) PLUS Expert DL3'. It displays a list of monitoring data for channel 3, including temperature, alarms, and digital input. The data is organized into expandable sections:

- Temperatura canale 3**
  - Allarme temperatura canale 3
  - Errore sonda canale 3
  - Stand-by canale 3
    - Value:  Date: 04/06/15 08:32:45
    - Value:  Date: 04/06/15 08:47:45
- Ingresso digitale canale 3**
  - Value:  Date: 04/06/15 08:32:45

# 7 DATALOGGER CONTROL

In the displaying in table format of the registered temperature, a colour code of the rows is present, allowing to immediately identify status and anomalies:

- **Grey** = channel stand-by.
- **Orange** = Temperature alarm or channel probe error.
- **Black** = Registration temperature with no problem.



Description	
Temperatura canale 3	
Value	Date
21,8	06/03/08 08:01:00
21,6	06/03/08 08:02:00
21,5	06/03/08 08:03:00

The PLUSR EXPERT DL3 instrument has the same characteristics of the PLUS EXPERT DL3, but the registration is on an USB key.

The PLUSR EXPERT DL8 instrument has eight available channels to display the registration temperature, the channel temperature alarm, the probe error, the stand-by and the digital input. The registration is on an USB key.

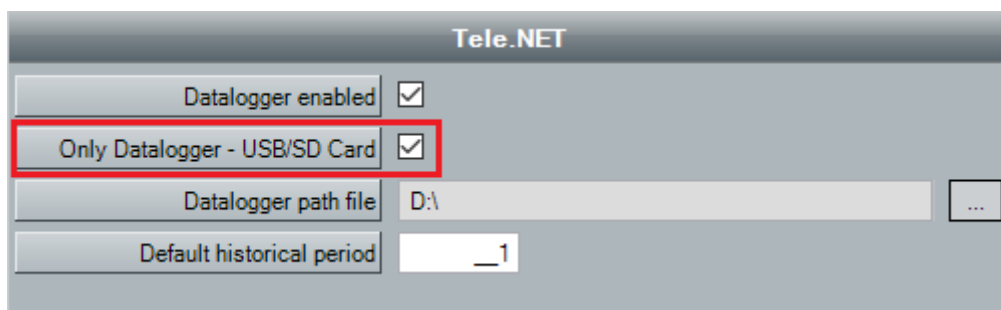
Each channel is displayed as a stand-alone instrument.

## 7.5 ONLY DATALOGGER VERSION

If you do not have the 2TWS485 interface and if you only have to import data from a USB / SD Card, TeleNET would be designed for the use of an alternative data storage system without the use of Microsoft SQL. In case of problems with the SQL database it may be useful to enable this mode. The Datalogger version does not allow monitoring in real time.

It is possible to activate the “Only Datalogger - USB / SD Card” configuration by selecting Network, then Configuration and finally opening the Tele.NET menu.

Enable 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 the complete mode by carrying out the same procedure by disabling the “Datalogger only” tick.

**Note 2:** This version does not support daily automatic backup.



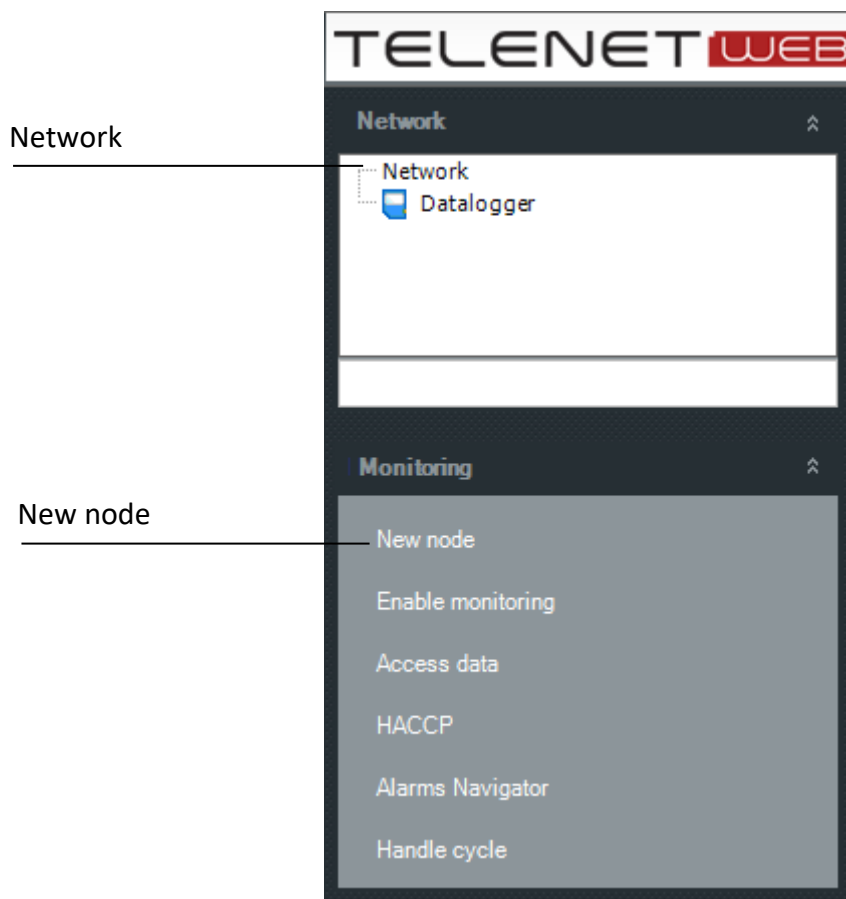
# 8 NET CONFIGURATION

## 8.1 NODE CONFIGURATION

First step is the instrument network and node creation.

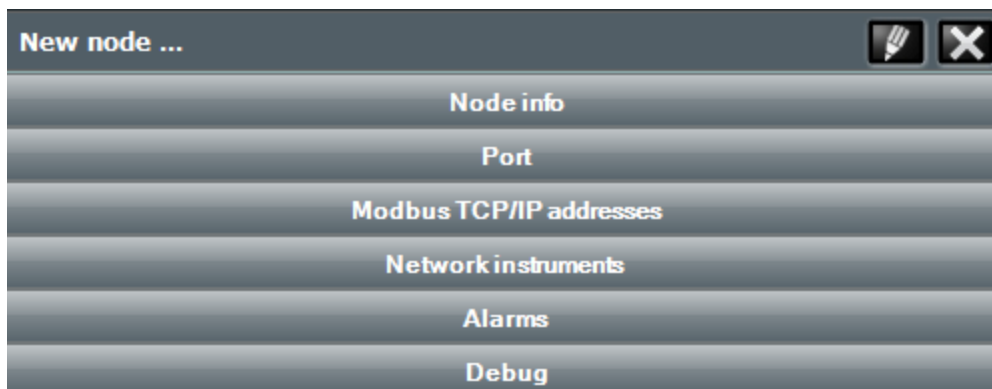
The node identifies computer where one or more 2TWS485 interfaces will be connected.

Select *Network* and then *New node*:



Node configuration indicates the timing whereby node is polling the instruments, saving data on database, managing alarms. It is possible to configure the parameters of any Modbus communication ports.

Configuration of the node is subdivided into four sections that can be selected from the bar menu: Node info, Port, Modbus TCP / IP addresses, Alarms and Debug.

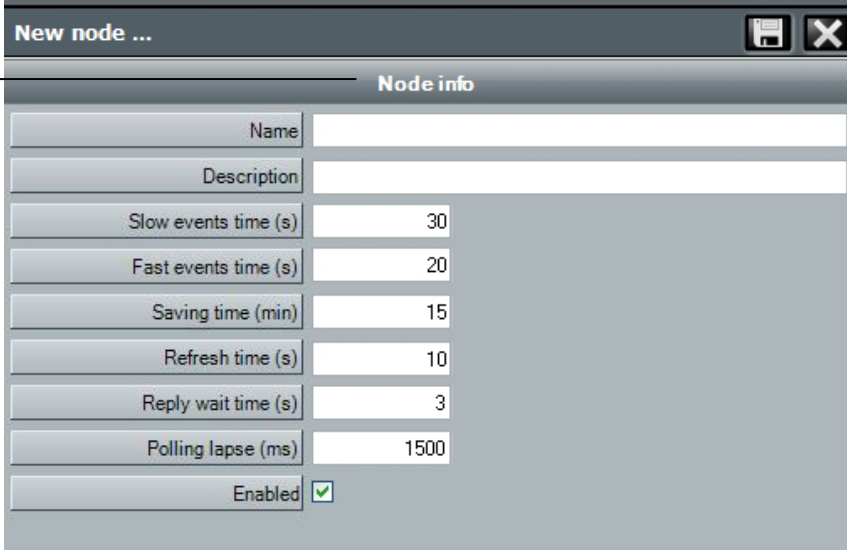


# 8 NET CONFIGURATION

## Node info Menu:

Allows inserting and configuring the main node data:

Node info



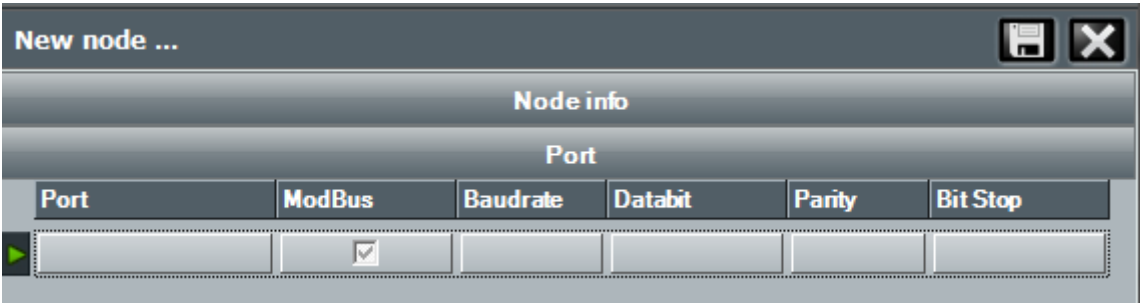
Node info	
Name	
Description	
Slow events time (s)	30
Fast events time (s)	20
Saving time (min)	15
Refresh time (s)	10
Reply wait time (s)	3
Polling lapse (ms)	1500
Enabled	<input checked="" type="checkbox"/>

Field description:

- **Name:** node name (it will be shown on the network tree).
- **Description:** node internal description.
- **Slow events time:** refresh range of processes not directly linked to the monitoring.
- **Fast events time:** interval in seconds between a monitoring cycle and the next one.
- **Saving time:** minutes passed between two monitoring saving of the instruments physically connected to the node.
- **Refresh time:** seconds passed between two monitoring data refresh of the instruments physically connected to the node, included into database.
- **Reply wait time:** seconds waited for the answer to a request sent to an instruments physically connected to the node.
- **Polling lapse (ms):** interval between two consecutive instruments polling.
- **Enabled:** flag it to enable node.

## Port Menu:

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



Port					
Port	ModBus	Baudrate	Databit	Parity	Bit Stop
▶	<input checked="" type="checkbox"/>				

Field description:

- **Port:** name of the port (for example: COM3)
- **ModBus:** door type definition (if not enabled it's Telenet / if enabled it's Modbus)
- **Baudrate:** Modbus communication baudrate (from 1200 to 38400)

# 8 NET CONFIGURATION

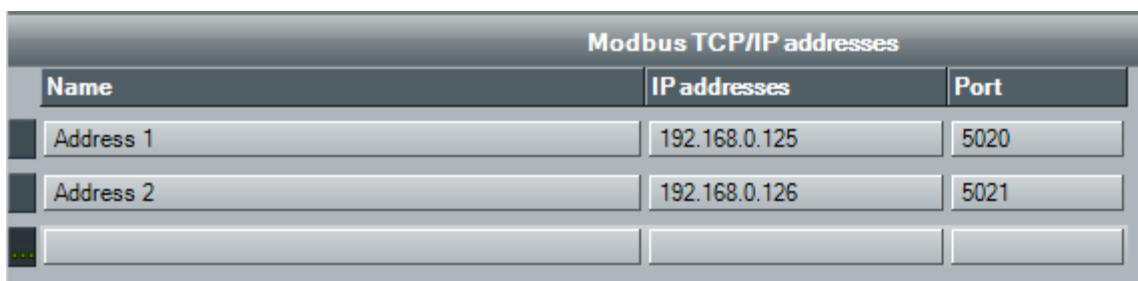
- **Databit:** length of the data (from 5 to 8 bit)
- **Parity:** parity bit of the data packet
- **BitStop:** number of stop bits in the data packet

## Configuration example – Standard Modbus of Pego instruments

Port: COM x / Modbus: enable / Baudrate: 9600 / Parity: None / Bit Stop: 1

### Modbus TCP / IP addresses menu:

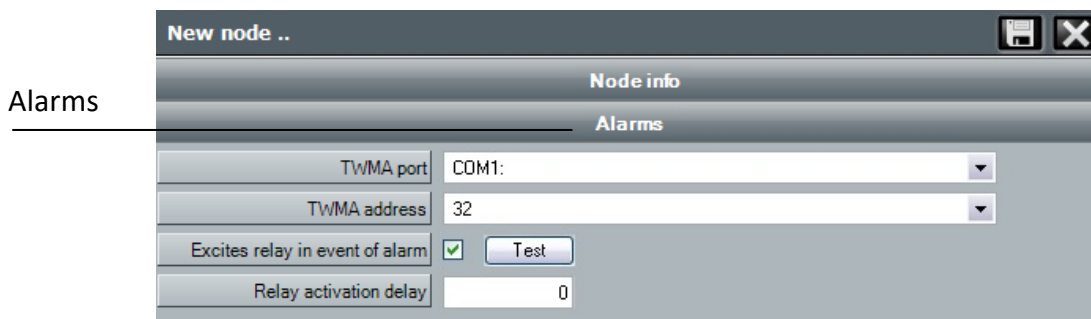
It allows you to enter descriptive names for each Modbus TCP / IP address, the IP addresses themselves and the ports used.



Name	IP addresses	Port
Address 1	192.168.0.125	5020
Address 2	192.168.0.126	5021

### Alarms Menu:

The TWM3 IO module (if present) is configured in this section for the activation of the alarm relay.



Alarms

TWMA port	COM1:
TWMA address	32
Excites relay in event of alarm	<input checked="" type="checkbox"/> Test
Relay activation delay	0

### Field description:

- **TWMA Port:** serial port where is connected the 2TWRS485 interface to which the TWM3 IO is connected.
- **TWMA address:** refer to the manual of the TWM3 IO module.
- **Excites relay in event of alarm:** flag here to enable TWM3 IO relay activation. With the TEST key is possible to simulate an alarm intervention and verify correct relay functioning.
- **Relay activation delay:** delay in minutes between an alarm signalling on TeleNET and the relay activation on TWM3 IO.

### Debug Menu:


Allows disabling the Break message warning that appears when, in certain instruments like the ECP200 Expert or ECP200 Base, the serial RS485 are not correctly configured. In case the problem is not due to the instruments but a disturbance on the RS485 line, it is possible to disable the warning.

## 8 NET CONFIGURATION



At the end of settings please save the informations.  
It will be request to restart the program.

Afterwards it will be possible to modify the node selecting it and clicking on "Modify node".

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

To modify the node at a later time, select it and then click on "Edit node".

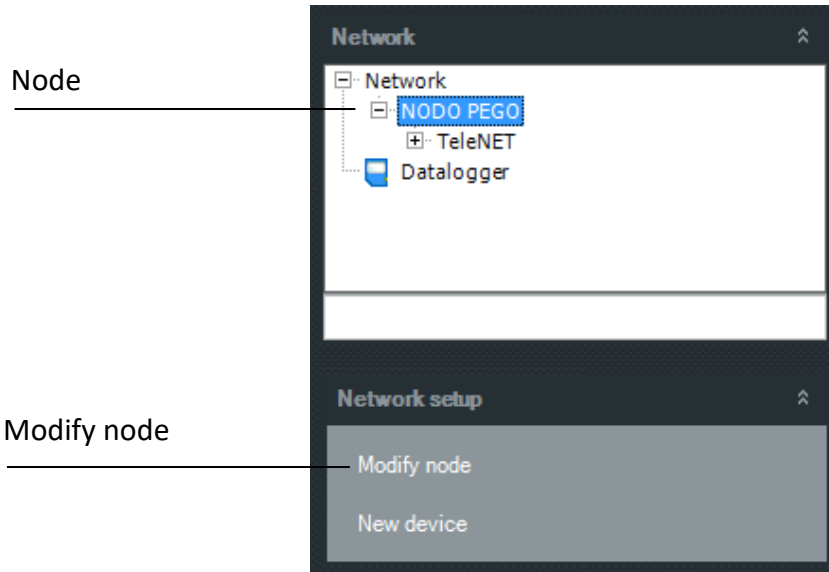
# 9 SELF-RECOGNITION DEVICES


## 9.1 ENABLE SELF-RECOGNITION

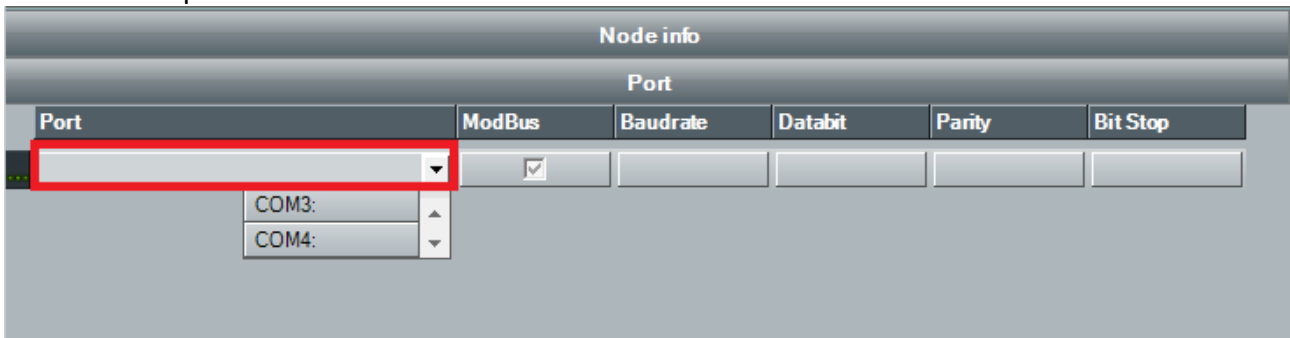
Most Pego electronics can be self-recognized by TeleNET and inserted into the monitoring system.

In order to use this function, you must first have created and configured the node.

If no one device has been added yet (new installation), the COM ports must be configured. To do this, 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:

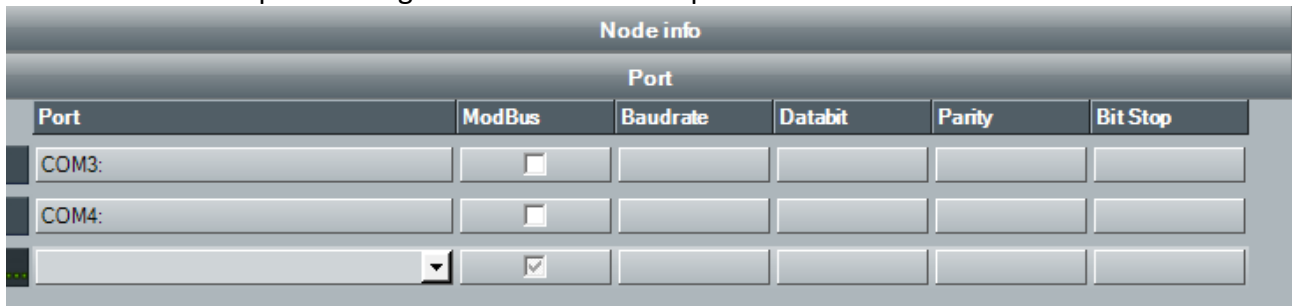


It is advisable to select both COM ports used by the 2TWRS485 interface, to analyse both and not have to trace the port used. Once the first port has been added, simply select the box below and select the second COM port:



# 9 SELF-RECOGNITION DEVICES

Result of two COM ports configured for the TeleNET protocol:



Node info					
Port					
Port	ModBus	Baudrate	Databit	Parity	Bit Stop
COM3:	<input type="checkbox"/>				
COM4:	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>				

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 is necessary to configure the instruments manually (see chapter 10.1 to manually add a device).

**Note 2:** The COM number can vary, usually it is COM3 and COM4. Check the COM ports used in Windows device manager.


**Note 3:** The ModBus protocol is not supported by self-recognition.

## 9.2 SELF RECOGNIZE THE DEVICES

After configuring the node and the COM ports (see 9.1), you can start self-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.

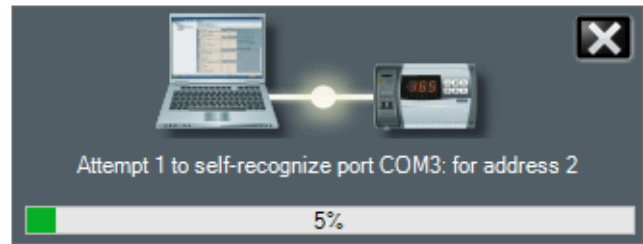
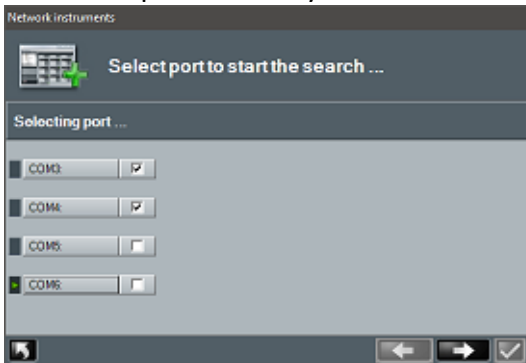
**Note:** The address is described by the "Ad" variable and is a number ranging from 0 to 31, used to identify the electrical board in the TeleNET network. It is advisable to consult the user manual of the board for its configuration.

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":

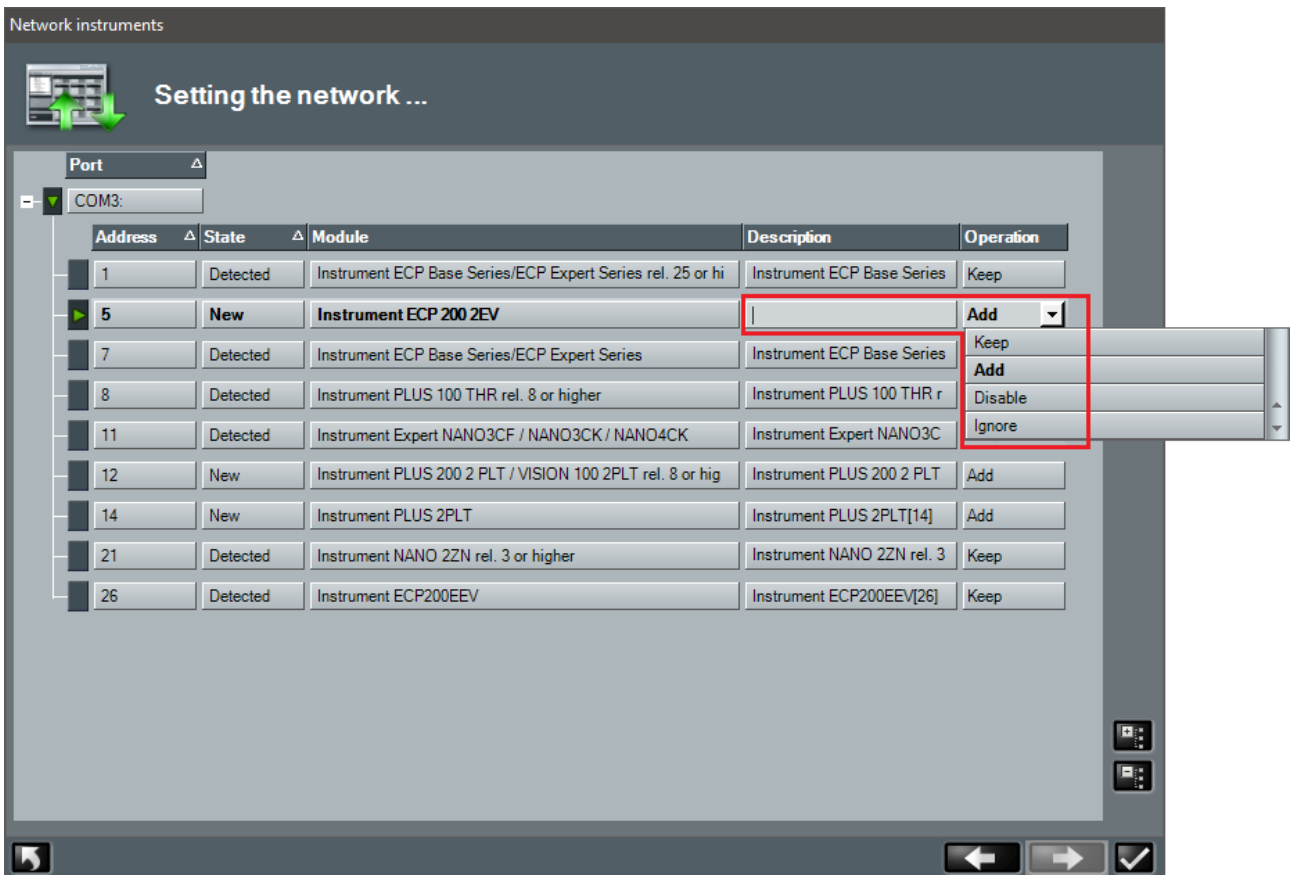


# 9 SELF-RECOGNITION DEVICES


Select the ports to analyse and continue  :



At the end of the operation, you can individually select the tools to keep, add, disable or ignore. It is also possible to enter or modify the description of each individual device by selecting the relative "name" box:



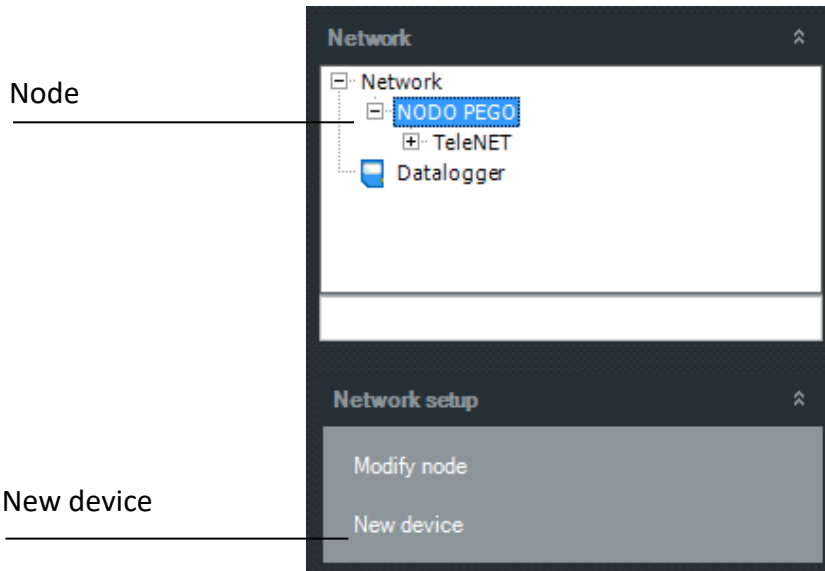
- Keep: to keep the previously added device.
- Add: to add the new device detected to the network.
- Disable: to disable the device already present without deleting it.
- Ignore: to not add the detected device.

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

# 10 DEVICE CONFIGURATION

## 10.1 NEW DEVICE

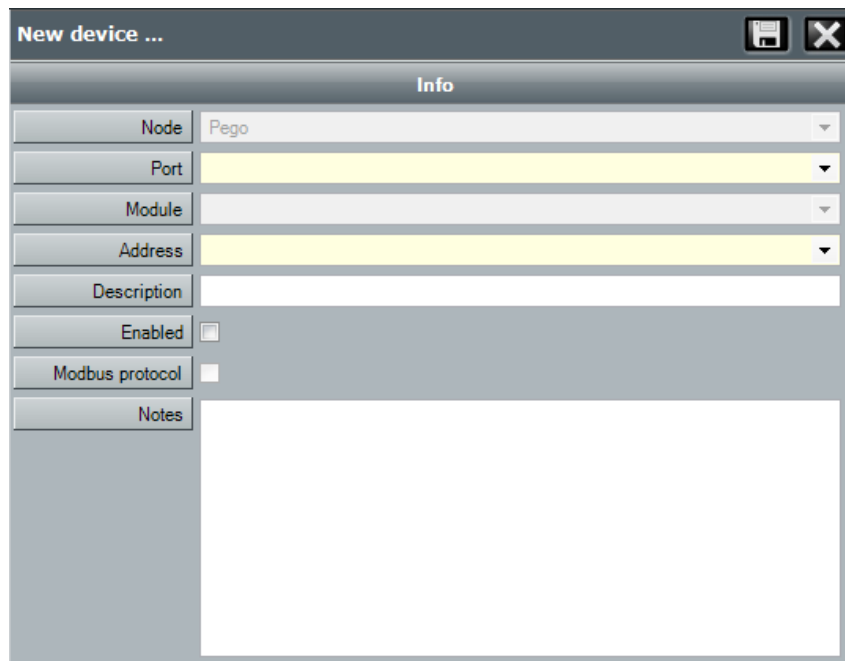
To insert a new device on monitoring system, select the node (on the example NODO PEGO) and afterwards select *New device*



On working area of main interface will be displayed the folder containing informations related to the new device. This window is initially subdivided into two bar menus:

### Info Menu:

Allows configuration of the connected instrument.



Field meaning:

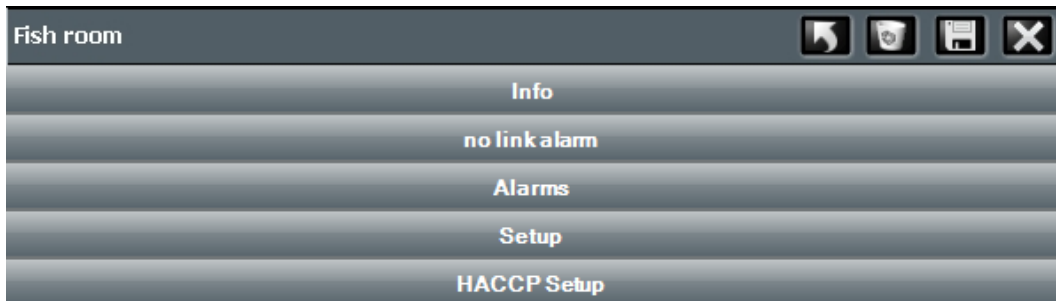
- **Node:** indication of node where device is physically connected (by default it's the selected node on instruments tree and it cannot be modified);
- **Port:** COM port of the 2TWRS485 interface to which the instrument is connected. If it is necessary to change the data, the program must be restarted;



# 10 DEVICE CONFIGURATION

- **Module:** select the type of instrument, specifying the product identification code, shown on the instrument operating manual;
- **Address:** if COM port Telenet: device address that can be a value between 0 and 31. In case the instrument is a TWM3 IO, the address can be a value between 32 and 40. If COM port Modbus: instrument address that can take a value between 1 and 254;
- **Description:** description of device shown on the instruments tree;
- **Enabled:** flag here to enable the device to monitoring. If it's chosen to not use the instrument it could be disabled. Disabling the device it's possible to exclude it from the monitoring and keep the configurations ready for a future re-enabling.
- **Modbus Protocol** (only reading): if the COM Port selected is of the Modbus type (configured in the node settings, see chap. 8.1), the flag is enabled automatically.

After having inserted the data of the new instrument from the Info menu and having saved them, depending on the type of instrument and the configuration of the Telenet, additional bar menus will appear.



## Alarm - no link Menu:

It contains informations related to alarm relay excites time following a no-link situation regarding the instrument



## Alarms Menu:

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 instrument and contains the specific alarms for that particular instrument.

Alarms	
Description	Alarm delay (min)
▶ Alarm EEPROM	0
Ambient temperature alarm MAX	0
Ambient temperature alarm MIN	0
Compressor protection	0
Ambient temperature alarm	0
Tele.NET Alarm - Ambient temperature	120

# 10 DEVICE CONFIGURATION

## **Publish data Menu:**

Allows selecting the sizes and parameters to publish for each instrument. The amendments to the items in this menu can only be carried out with monitoring at stand still.

For the use and correct configuration of this menu, see in chapter 6.1 Publish data Menu.

Publish data		
Description	ID	Publish
A1 (min temperature alarm)	3168a42c-b317-4cca-b823-631f271fd3be	<input type="checkbox"/>
A2 (Max temperature alarm)	a224eeeb-3439-4b9b-a0f2-f7f713ea7bc3	<input type="checkbox"/>
ALd (temperature alarm delay)	e4ef68b3-4b74-454b-86f7-ca48e1d09030	<input type="checkbox"/>
EEPROM error	3f810de7-56ca-4db8-99b0-f7e6855f2579	<input type="checkbox"/>
Ambient Probe alarm	176af162-083a-4069-8943-5f949efbbaff	<input type="checkbox"/>

## **HACCP Setup Menu:**

For the selected instrument, it is used to enable/disable the HACCP function and to select which quantities are to be monitored.

HACCP Setup	
Enable HACCP	<input type="checkbox"/>
Description	Enabled
Ambient temperature	<input type="checkbox"/>

## 10.2 MODIFY INSTRUMENT

To amend an instrument it must be selected from the Instrument network tree:


Instrument network tree


Select the instrument

Modify instrument


# 10 DEVICE CONFIGURATION


The window containing information relating to the instrument is displayed in the work area of the main interface.

By pressing the amendment button  the editable fields become active. (the Module and Node fields in the **Info menu** are disabled as they cannot be amended).

Once the amendments have been made, press the save button  to memorise the changes.


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

By pressing the amendment button  the editable fields become active.

Once the amendments have been made, press the save button  to memorise the changes.

## Deleting an instrument:

To be able to delete an instrument, this must be disabled (remove the flag from the Enabled field and save the information).

Subsequently, it is possible to delete it by clicking on the basket icon .

**Attention:** the deletion of an instrument entails the deletion from database of all registrations. A second safety message will request confirmation to delete the instrument.

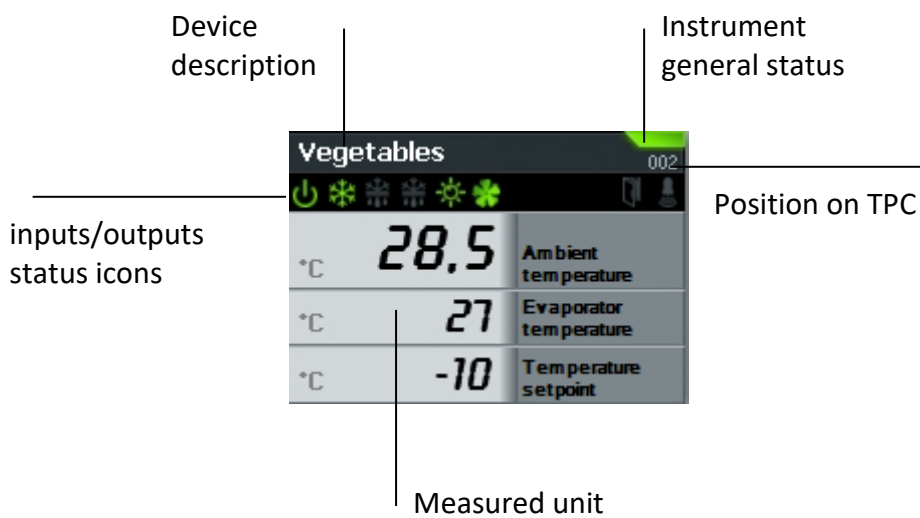
# 11 TPC CONFIGURATION

## 11.1 TPC (TOTAL PANEL CONTROL) CONFIGURATION






Total Panel Control is the working area where the instruments are shown with main informations related to the available measure units, status of main inputs and outputs, and to disabled, normal, cycling or alarm status



Instrument representation on Total Panel Control



Instrument general status icons

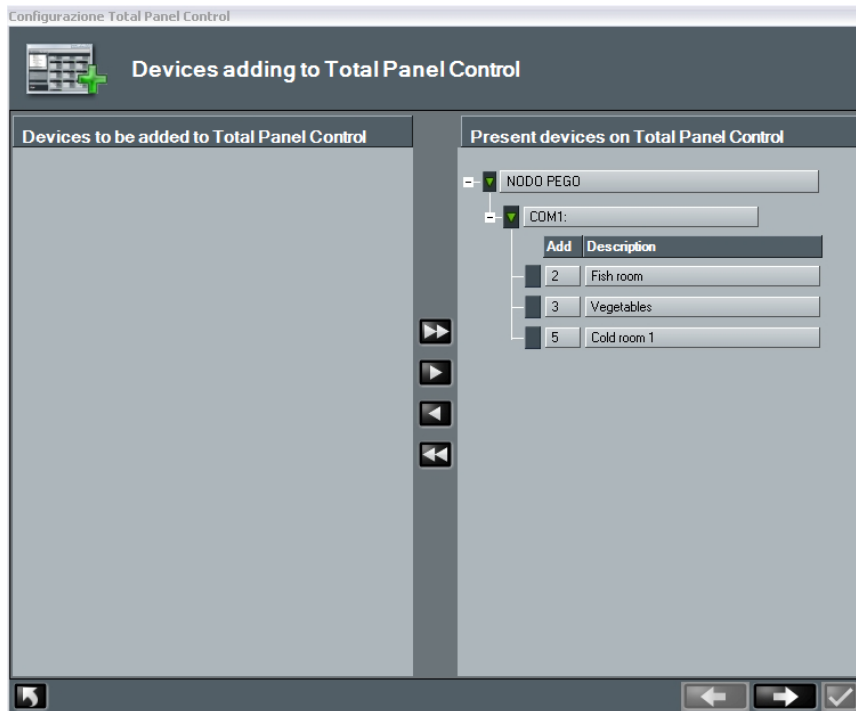
no icon	monitoring disabled
 grey	instruments disabled
 green	monitoring enabled and device active
 yellow	pre-alarm
 red	alarm
 light blue	automatic cycle in progress

# 11 TPC CONFIGURATION

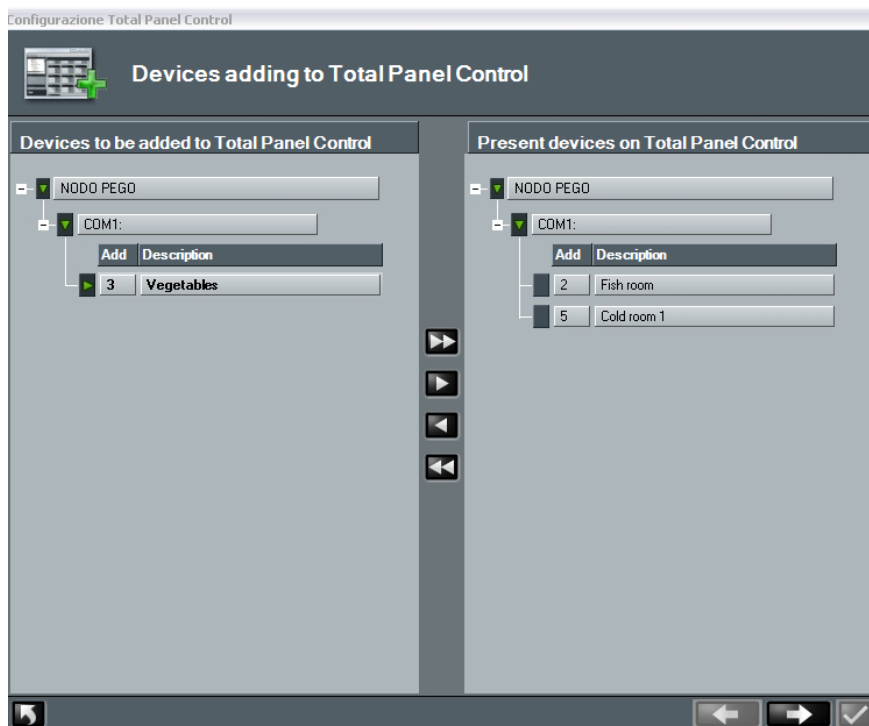
From main menu Total Panel Control can be configured. TPC configuration allows to organize the instruments choosing the order of appearance, if they can be displayed and which physical units to show.

First step is to add and delete instruments on TPC.

Select the desired instrument and use the scrolling keys in the middle of the two sections:

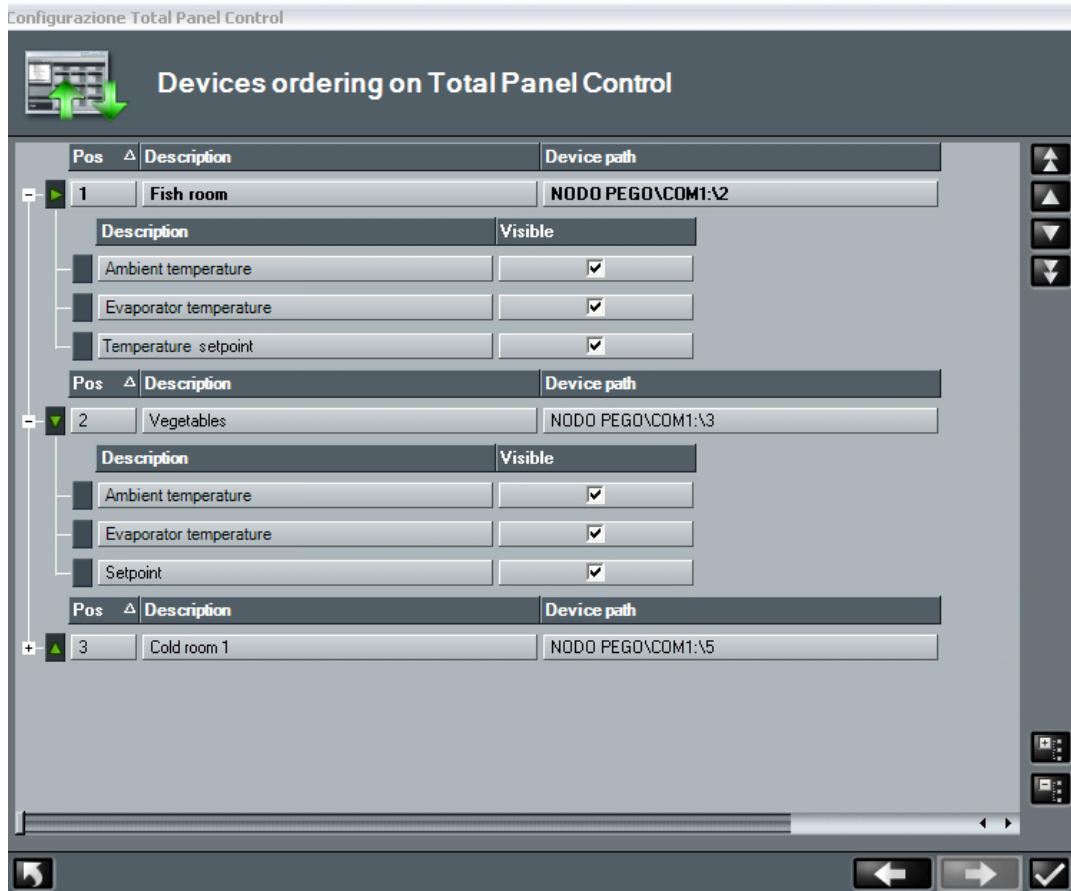



In this example one instrument was deleted from TPC:



# 11 TPC CONFIGURATION

On the next section can be chosen the measure unit to be shown for each device and move the order of appearance selecting the instrument and using the scrolling arrows on the upper left side:



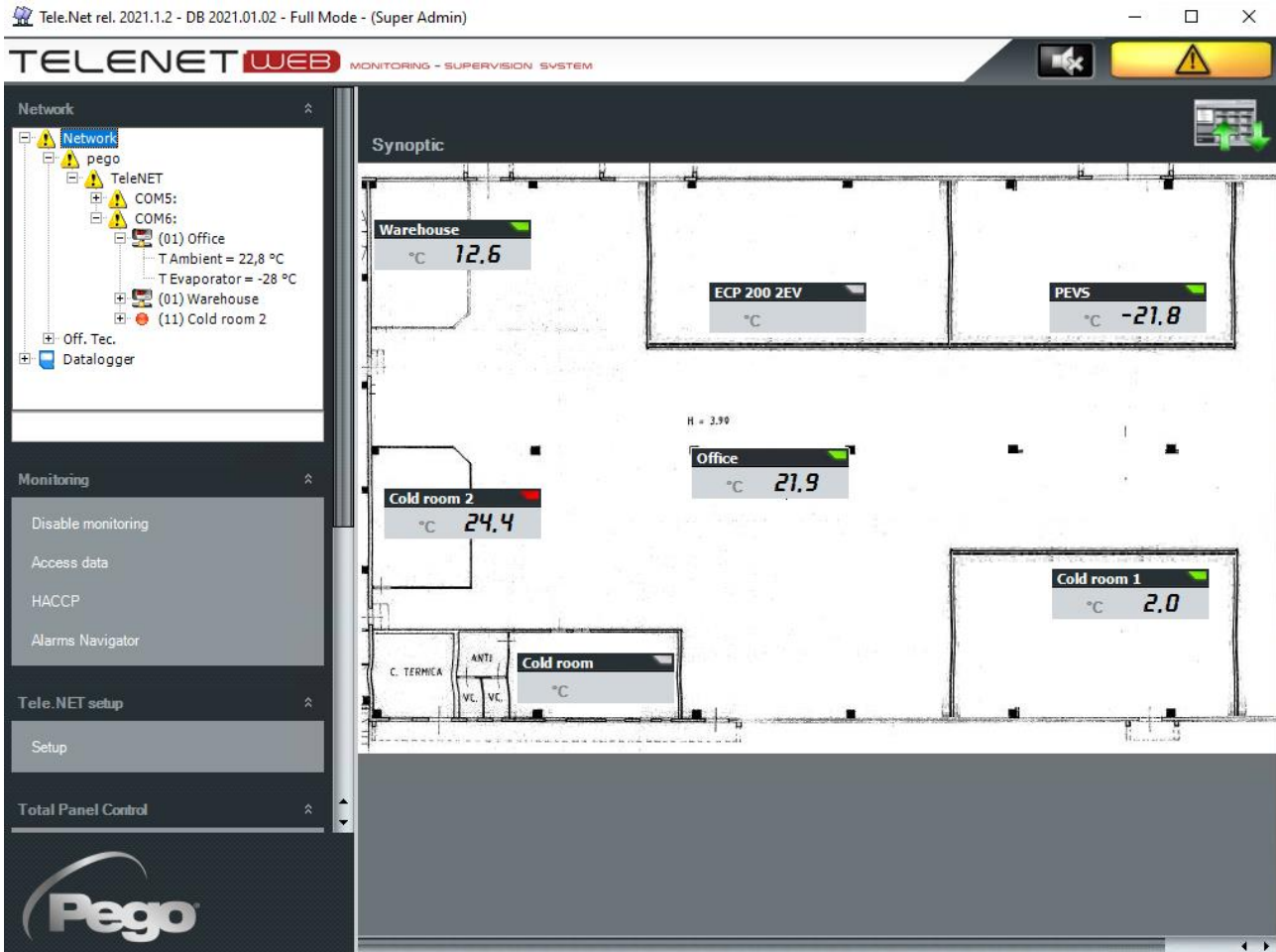
At the end of configuration confirm with the key .

# 12 SYNOPTIC

## 12.1 SYNOPTIC ACTIVATION

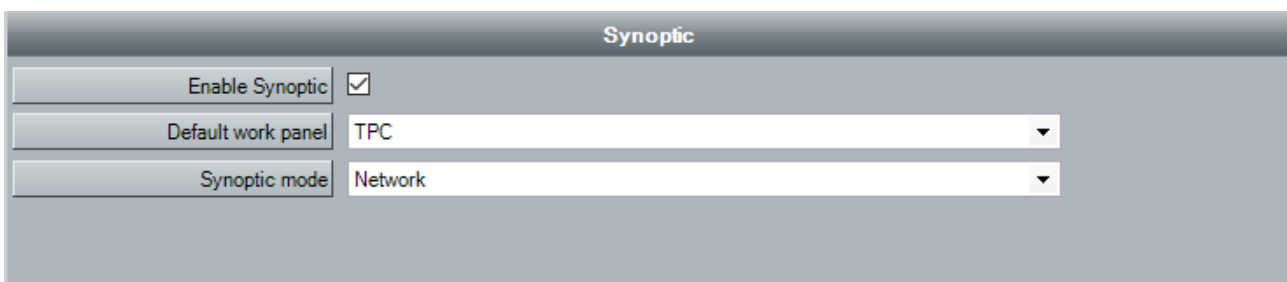
The synoptic is an area where the devices are displayed in a minimal style with their respective states and a single physical dimension each. You can double-click an instrument to view its full tracking.

You can load the floor plan or a neutral background to have a quick overview of the situation:



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

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



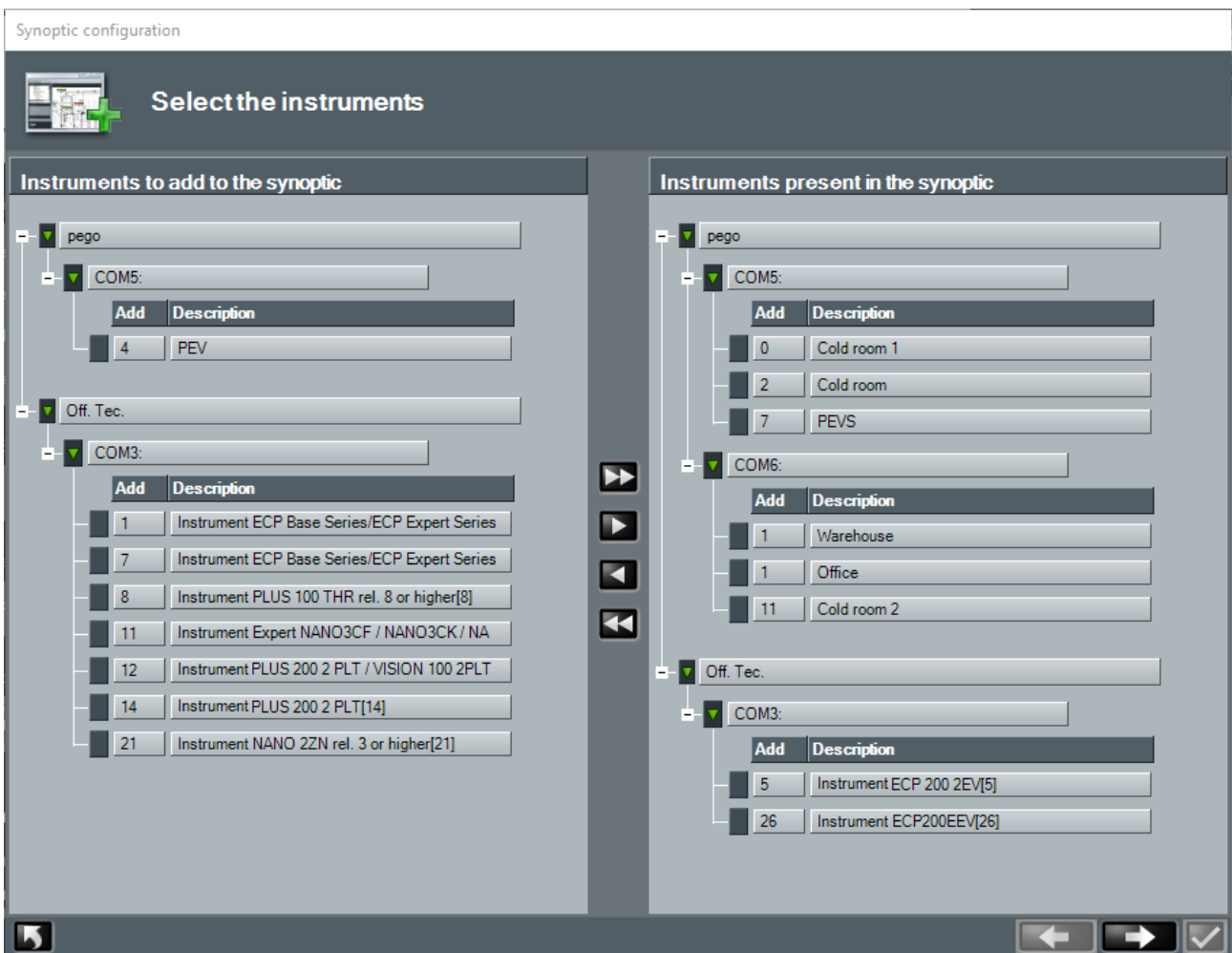
# 12 SYNOPTIC

If you work in a network with several nodes, you can use a "local" synoptic for each TeleNET station, displaying only the respective local devices; on the contrary you can use a single synoptic shared with all the nodes of the "network", being able to view the instruments of other nodes as well.

## 12.2 SYNOPTIC CONFIGURATION

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

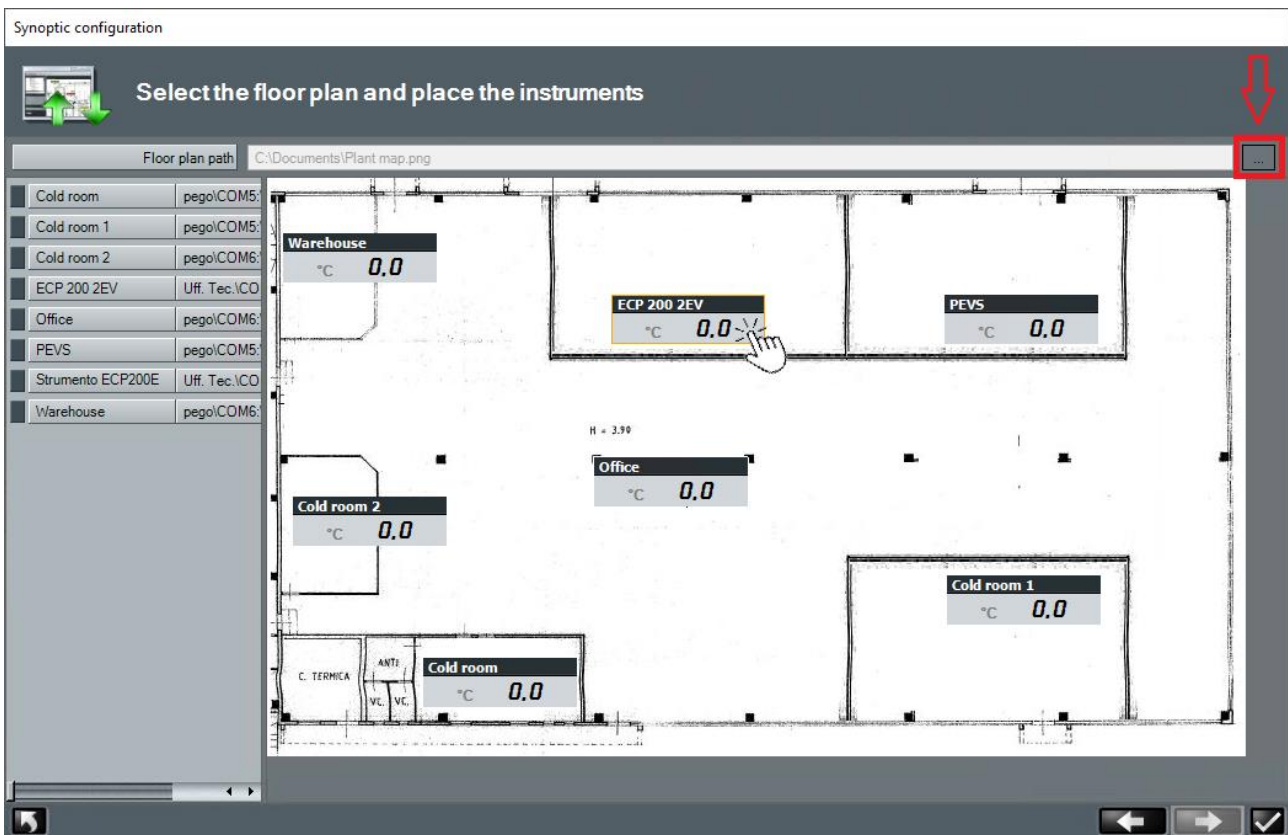
At this point the instruments selection panel appears; here it is possible to select the instruments to be made visible or not in the synoptic. As in the example, in the case of network mode any additional network nodes will also appear:





# 12 SYNOPTIC

Once the configuration is confirmed, you move on to the last configuration page, where you can load the floor plan and drag each individual instrument to the appropriate position on the map:



## 12.3 SWITCH FROM TPC TO SYNOPTIC AND VICEVERSA

The button at the top right, under the general status icon, has the purpose of switching from the TPC to the synoptic and vice versa:

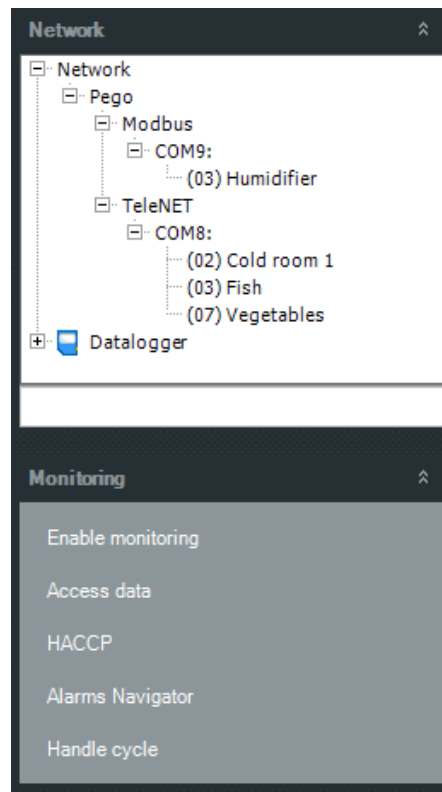


# 13 MONITORING

## 13.1 MONITORING ENABLE

Selecting Network the menu below is activated:

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






"Enable monitoring" command on the menu above shown, enable TeleNET to monitor the instruments physically connected to the node by serial interface.

After monitoring activation, on the menu above shown "Enable monitoring" command become "Disable monitoring".

TeleNET monitoring activity stops selecting the command Disable monitoring.

On the upper right side there are icons of general status.

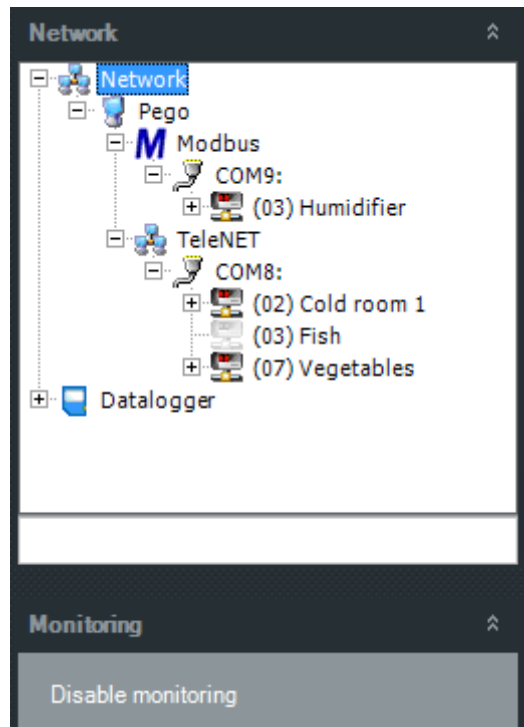
	Monitoring enabled and no alarms
	Monitoring enabled and alarm present
	Monitoring disabled

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

# 13 MONITORING

## 13.2 MONITORING READING

During monitoring it's possible to visualize on network tree all connected devices and a summary of instrument status and values of the measured units.



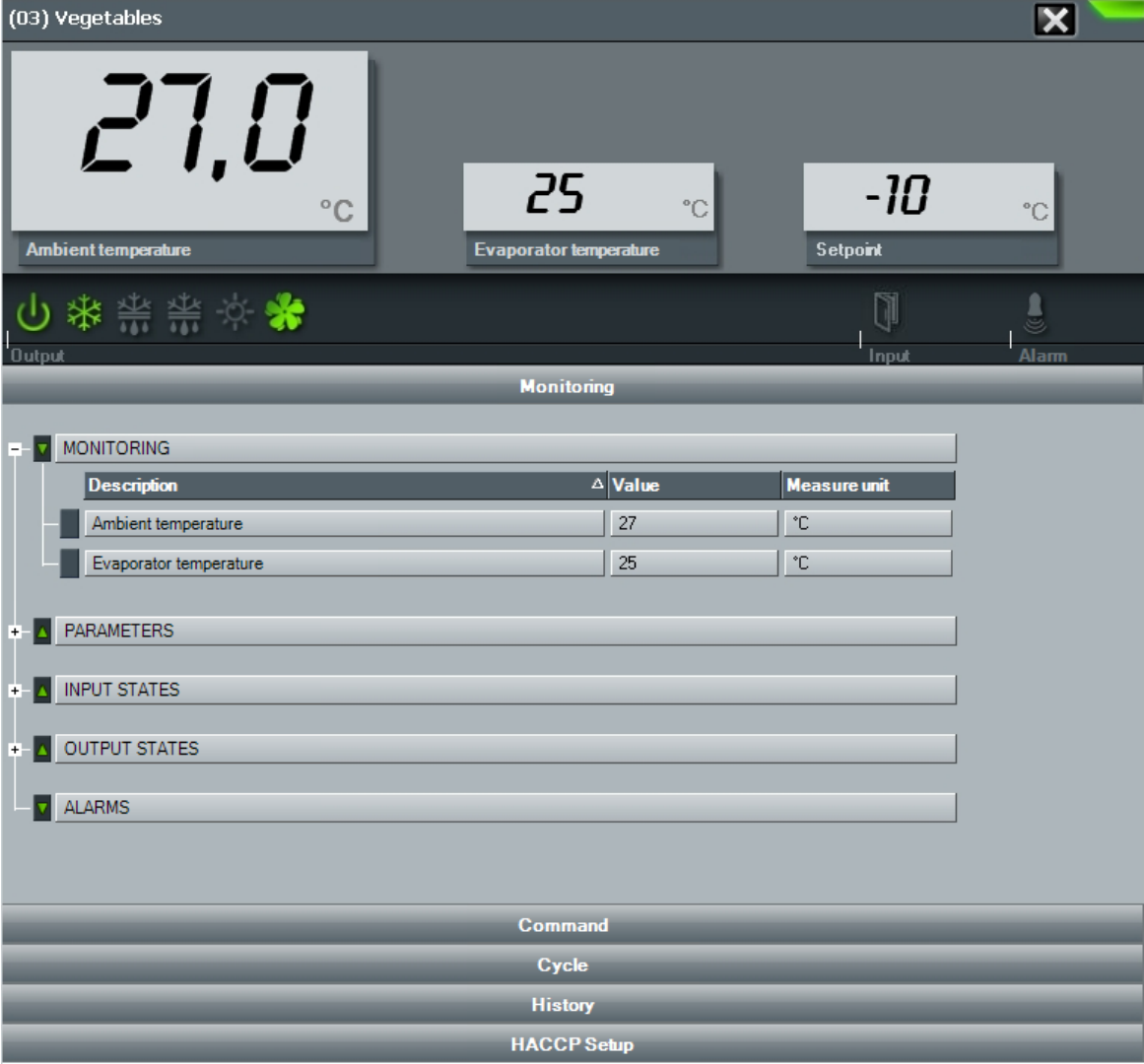
Summary of network tree icons:

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

# 13 MONITORING

## 13.3 DEVICE PROPERTIES

If the user needs to have the detail of all the informations from the instrument, selecting the device on the tree, the device properties folder is shown.



Device properties folder allows user to arrange informations for every column on the folder; this can be done by clicking on the column title where it's needed to make the sorting.

# 13 MONITORING

## 13.4 DEVICE PROGRAMMING

TeleNET allows user to send a command to the device modifying the configuration (i.e. min. and/or max. temperature limit, stand-by, defrost activation, ...).

To send a command to instruments, access Command area on the device properties folder, where are shown the configuration informations that can be modified.


In particular the second-last column contains current value and last one contains the desired value to set for the device. At the end of this desired values setting, sending to the instruments can be done clicking key "Confirm". The key "Cancel" reset the settings to current values of the instrument.

The screenshot displays the TeleNET interface for device (03) Vegetables. At the top, there are three temperature readouts: Ambient temperature at 27.0°C, Evaporator temperature at 26°C, and Overheating temperature at -10°C. Below these are icons for Output, Input, and Alarm. The main section is a table for configuration parameters, divided into Monitoring and Command sections. The Command section contains a table with columns for Name, Unit of measure, Value, and Setting.

Name	Unit of measure	Value	Setting
r0 (Temperature setpoint differential)	°C	2	2
<b>Defrost duration</b>	<b>min</b>	<b>16</b>	18
Defrost interval	h	5	5
Cold room light		<input type="checkbox"/>	<input type="checkbox"/>
Defrost		<input type="checkbox"/>	<input type="checkbox"/>
Setpoint	°C	-10	-10
Stand-by		<input type="checkbox"/>	<input type="checkbox"/>
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

# 13 MONITORING


## 13.5 INSTRUMENT HISTORY AND GRAPHICS



Setting the dates in boxes "From" and "To" and confirm pressing , data of any period can be displayed. The tab menu allows selecting the following kinds of display:

**Graphic:** displays the graphic of the registered measures in the selected period.


**Events:** displays in table form the alarms in the selected period.

**Monitoring:** displays in table form the registered measures in the selected period.

For each of these modes,  can be printed and for those in table form, data can be exported in

Excel format . The go back key  allows accessing the selection page of measures to be displayed and colours to be used for the graphic.

## 13.6 HACCP SETUP

By setting the date in the "Date" box and confirming the entry with the button , it is possible to view, print and save in Excel format the maximum and minimum daily temperature values and the hourly averages. (see chapter 17.3)

## 13.7 TELENET CONTROLS FROM CONTROL LINE

Telenet allows the execution of instructions from control line.

### STRING OF CONTROL INTRODUCTION:

Telenet.exe [-U<nameuser>] [-P<pswuser>] [-A]

### CONTROL OPTIONS:

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

Examples:

C:\Programs\PEGO\Telenet\TeleNet.exe -Uadminlogin -P -A

C:\Programs\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 place a command shortcut (or a script or batch file) in the Windows Startup folder: "C:\Users\\*user\*\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup".

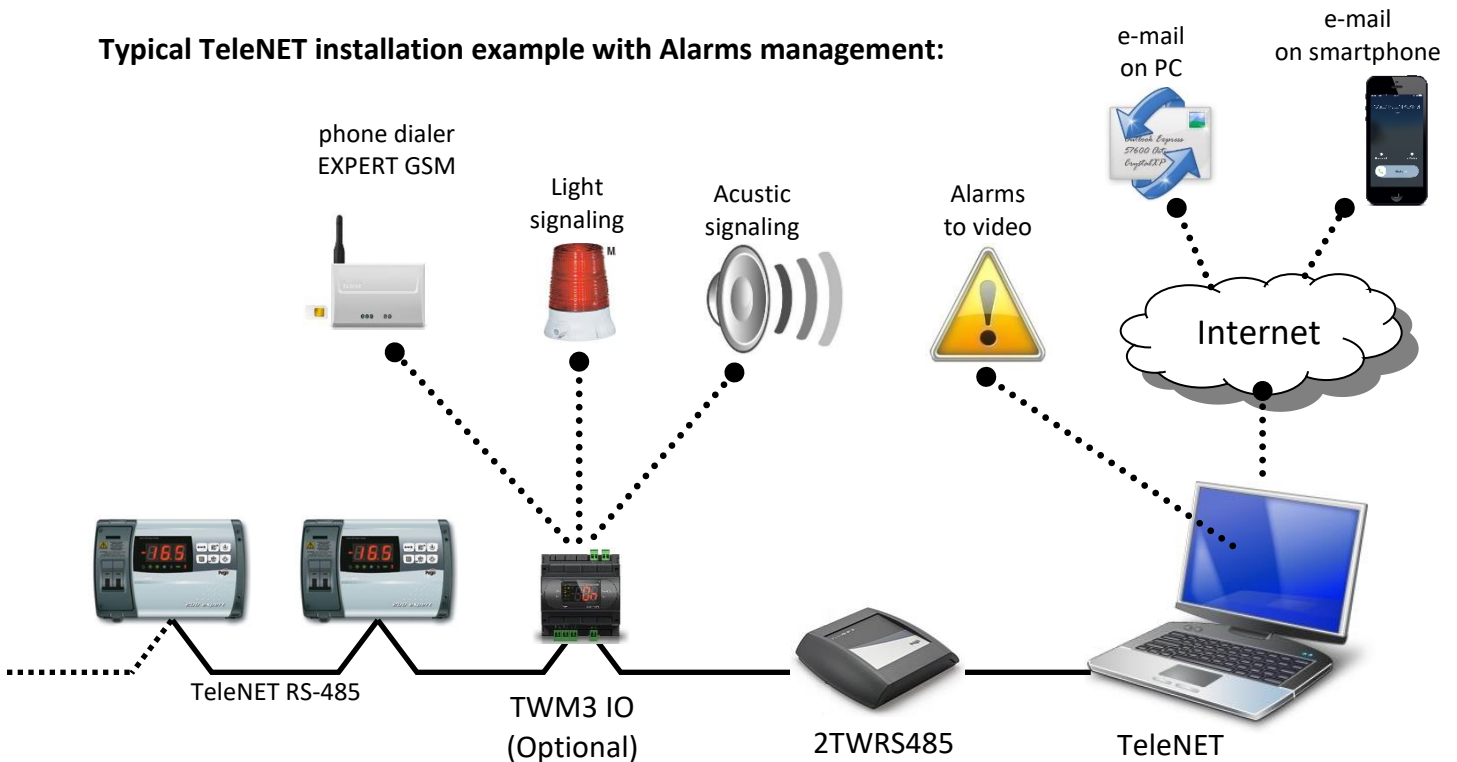
# 14 ALARMS

## 14.1 ALARMS VIEW

TeleNET is an application for the monitoring and supervision of the cooling and air-conditioning systems, controlled by Pego electronic equipment. The instruments network sends the data on to personal computers from which it is possible to display and print reports, manage alarms, amend operational parameters, monitor the entire system.

This chapter illustrates how to configure the system for a correct management of the alarms and how they are communicated to the operator.

### Typical TeleNET installation example with Alarms management:



The alarms signal possibilities given by the TeleNET system are three:

- **ALARMS MANAGEMENT ON SCREEN:**  
Signal through status icons and error messages.  
Alarms display in real time, alarms historical consultation.
- **LOCAL ALARMS MANAGEMENT:**  
TWM3 IO module (optional) for external device control which acoustic signal, luminous signal or EXPERT GSM phone dialer.
- **REMOTELY CONTROLLED ALARMS MANAGEMENT:**  
Multiple sending of e-mails to mobile telephones and computer with detailed description of the alarm event. Sending of e-mail of restored alarm. Alarms sending exclusion time bands.

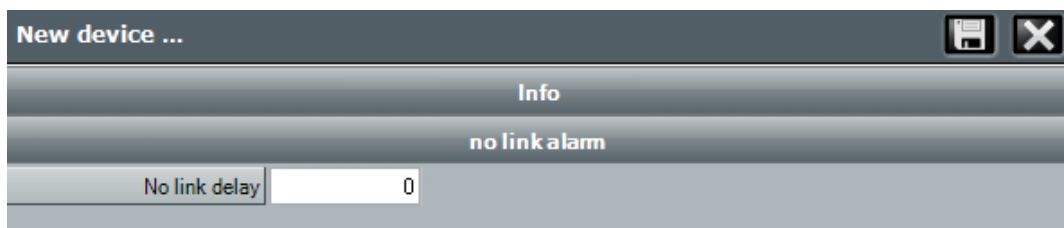
# 14 ALARMS

## 14.2 ALARMS BASIC CONFIGURATION

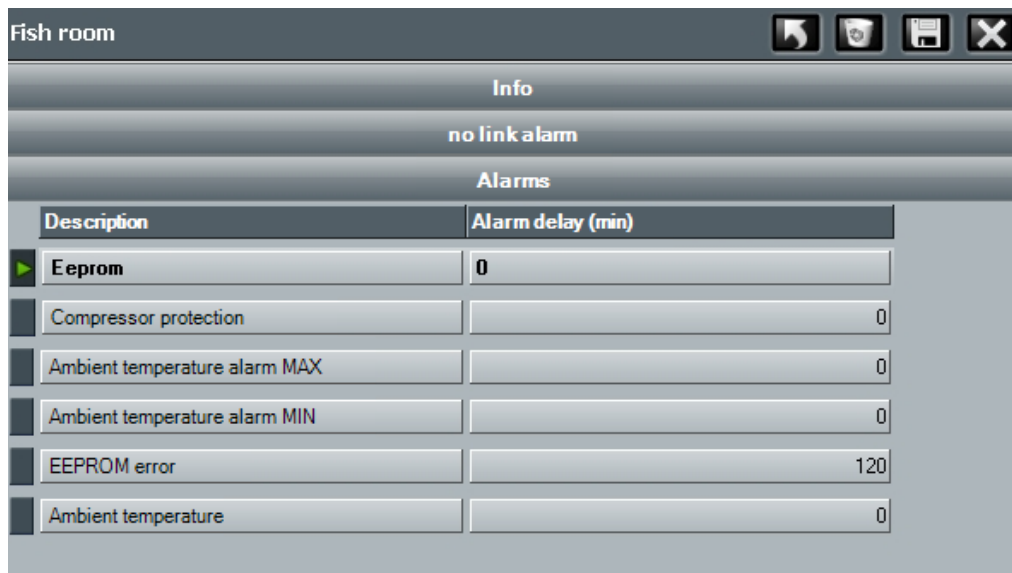
TeleNET envisions a default configuration for the settings relating to the alarms that makes it operational on first start-up. We recommend controlling that these basic settings are in accordance with your requirements.

Every instrument envisions one or more alarms delay configuration screens. It is possible to access said configuration either during creation of a new instrument or after its selection in "Network" (instrument network), by pressing the "Modify device" button in the interactive menu.

1. **Alarm area – no link-**, window containing information relating to the excitation times of the alarm relay following the detection of a no link situation regarding the instrument. This window is always present in every instrument.



2. **Alarms area**, window containing timing relating to the activation of software alarms following the permanence of a determined alarm situation. The alarm area differs from the type of instrument and contains the specific alarms for the particular instrument.

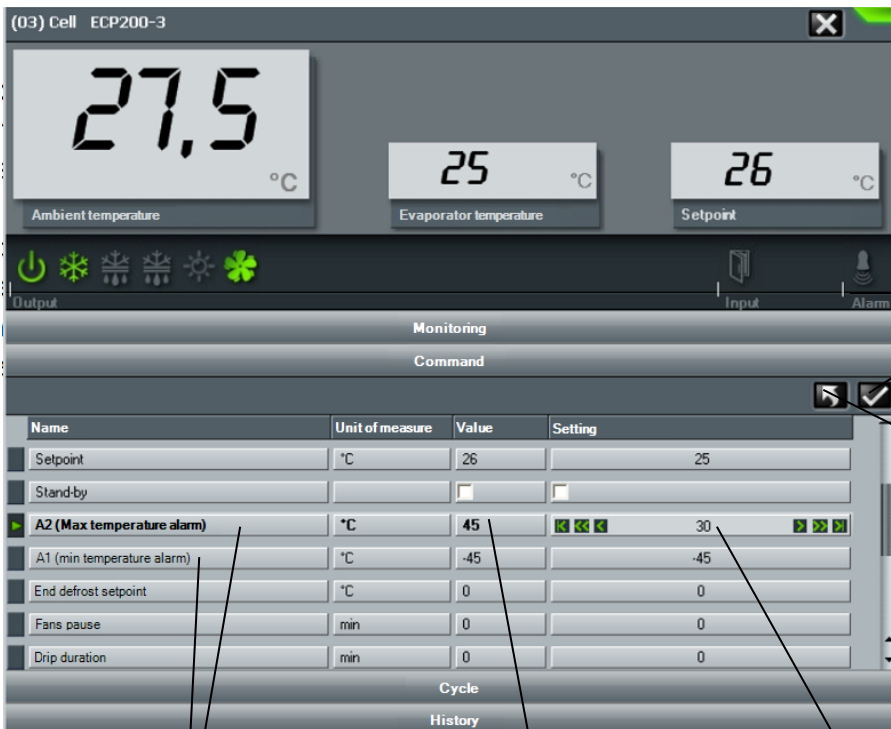


The alarm settings for the exceeding of a detected measure (temperature, humidity, pressure alarm etc.) with minimum and maximum threshold setting, are present on the "instrument window" in the "Command" area. With the measure outside the set range, the alarm status will be signalled after the delay times.

In particular, the second last column contains the current value and the last the value to be set for the instrument. Once setting of the wanted values is complete, sending to the instrument happens but clicking the Confirmation key. Whereas, the Cancel key resets the settings at the current values of the instrument.



# 14 ALARMS



Setting of minimum and maximum ambient temperature alarms

Value currently set

New value you want to set

## 14.3 ALARMS MANAGEMENT ON DISPLAY

TeleNET envisions a series of display signals that allow to immediately verify the present of alarms and the checking of their origin.

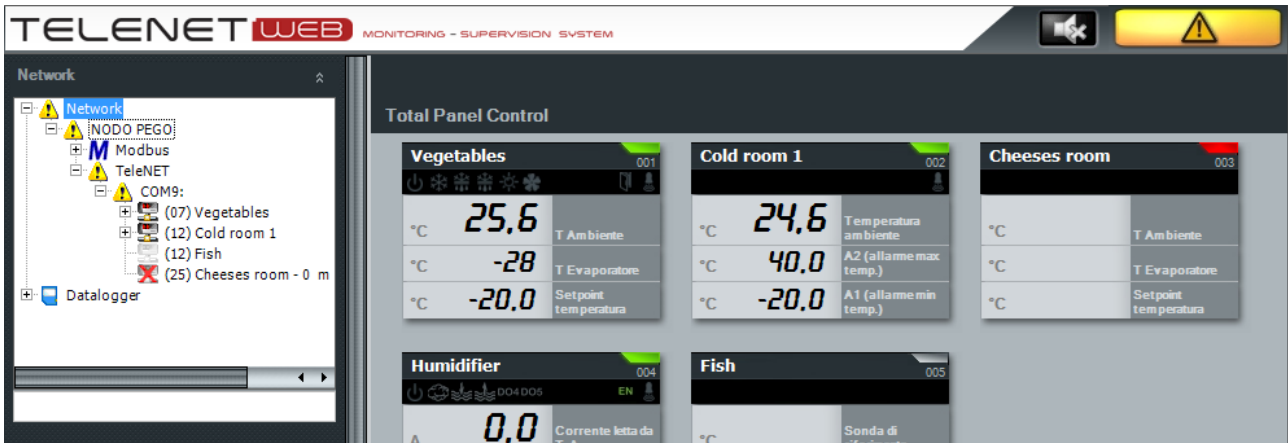
1. **Alarm main icon.** The presence of an alarm is easily detected by the presence of a yellow attention triangle in the top right area of TeleNET

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

2. **Alarms represented on Network.** On the instrument tree (Network) the alarm signal with a yellow attention triangle is recalled. The instrument in alarm is searched by opening the

# 14 ALARMS

Network branch. The time highlighted at the side of the instrument indicates how long the alarm has been active for.



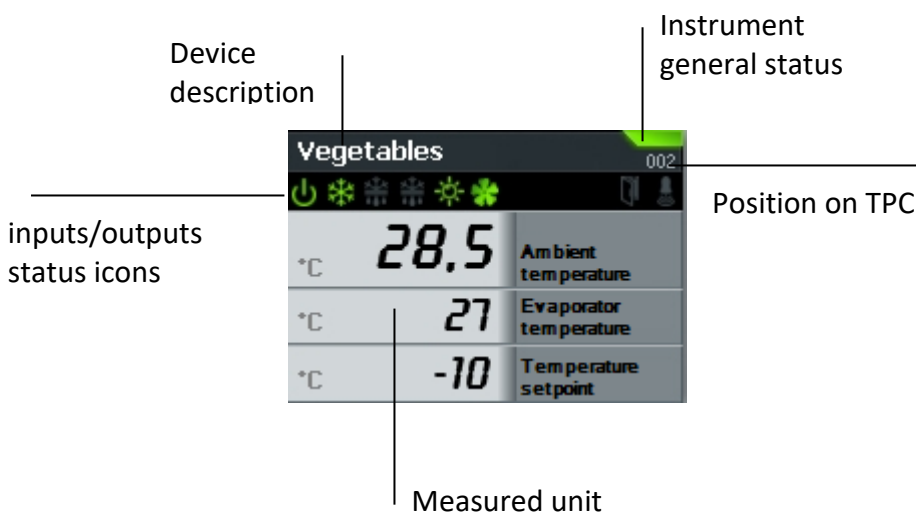
If when setting the node the sound signal  Buzzer enable  has been enabled at every alarm, an acoustic alarm is given using the sound window of the computer, together with icon



An acoustic alarm inhibitor is also present in the top right corner

- Instrument alarm icon.** In the Total panel control each instrument has a status icon that highlights the alarm status.

Instrument representation on the total panel control:

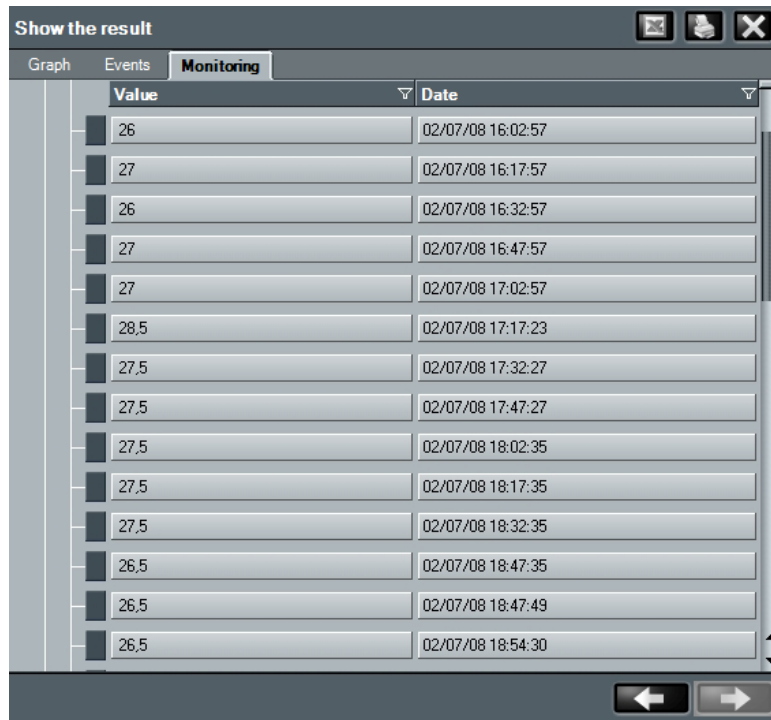


Instrument general status icons

no icon	monitoring disabled
grey	instrument disabled
green	monitoring nabled and instrument active
yellow	pre-alarm
red	alarm
blue	automatic cycle in progress

# 14 ALARMS

4. **Alarms historical.** It is possible to search the alarms in the events section in the registration history.



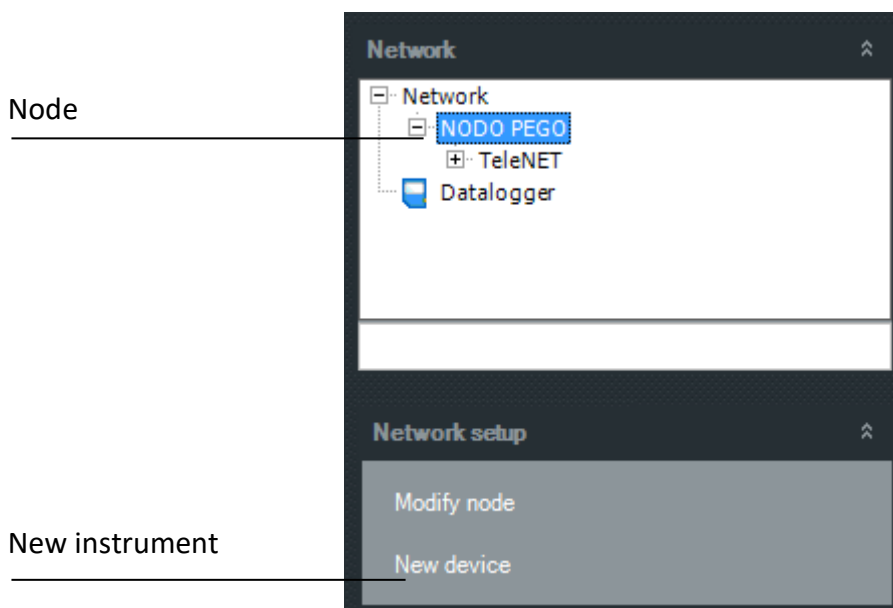
Value	Date
26	02/07/08 16:02:57
27	02/07/08 16:17:57
26	02/07/08 16:32:57
27	02/07/08 16:47:57
27	02/07/08 17:02:57
28,5	02/07/08 17:17:23
27,5	02/07/08 17:32:27
27,5	02/07/08 17:47:27
27,5	02/07/08 18:02:35
27,5	02/07/08 18:17:35
27,5	02/07/08 18:32:35
26,5	02/07/08 18:47:35
26,5	02/07/08 18:47:49
26,5	02/07/08 18:54:30

## 14.4 LOCAL ALARMS MANAGEMENT

The TWM3 IO optional module is made of a 6DIN module, with a relay on board that, once configured, activates in the presence of an alarm.

With this it is in fact possible to act on an external device which light signaling, acoustic signaling or EXPERT GSM phone dialer to warn the operator in the most appropriate manner.

The TWM3 IO module must be inserted and configured in "Network" (instrument network) like all TWM modules. Select the node (NODO PEGO in the example) and subsequently select *New device*.

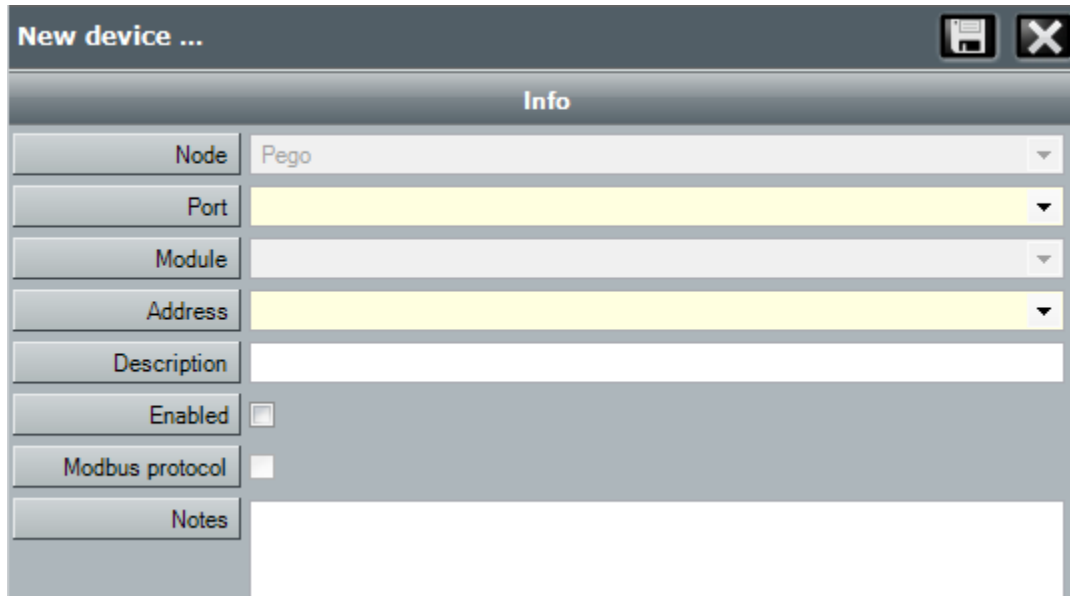


# 14 ALARMS

The window containing the information relating to the new instrument is displayed in the main interface work area. This window is initially subdivided into two bar menus:

## Info Menu:

Allows to configure the connected instrument.



The screenshot shows a window titled "New device ..." with a standard Windows-style title bar (minimize, maximize, close buttons). Below the title bar is a sub-header "Info". The main area contains several configuration fields:

- Node:** A dropdown menu with "Pego" selected.
- Port:** A dropdown menu with a yellow highlight.
- Module:** A dropdown menu.
- Address:** A dropdown menu with a yellow highlight.
- Description:** A text input field.
- Enabled:** A checkbox that is currently unchecked.
- Modbus protocol:** A checkbox that is currently unchecked.
- Notes:** A text area for additional information.

Fields description:

- **Node:** indication of node to which the instrument is physically connected (by default it coincides with the node selected in the instrument tree and cannot be amended).
- **Port:** COM port to which the 2TWRS485 interface is physically connected.
- **Module:** select the type of instrument; in case of TWM3 IO select TWMIO
- **Address:** instrument address that can assume a value between 32 and 40.
- **Description:** description of the instrument displayed in the instrument tree.
- **Enabled:** insert the flag to enable the instrument to the monitoring.
- **Modbus Protocol** (only reading): disabled in the case of TWMIO instrument.

## No link alarm Menu:

Contains information relating to the excitation times of the alarm relay following the detection of a no link situation regarding the instrument.

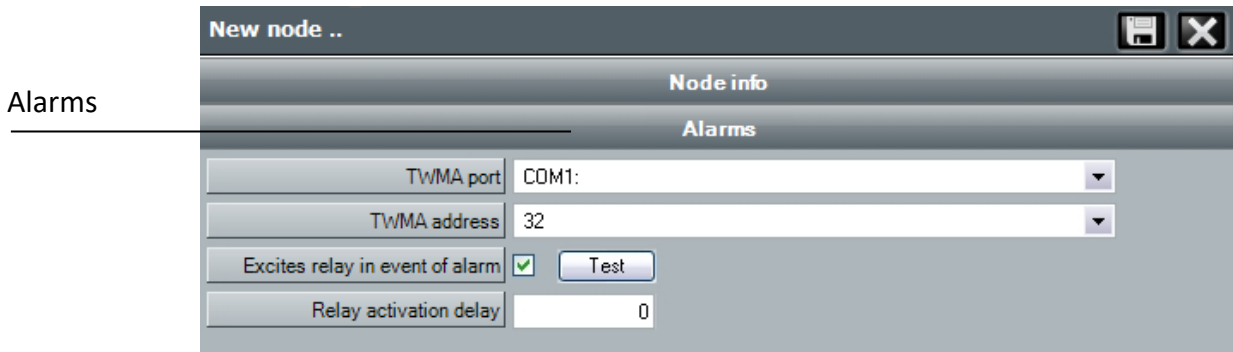


The screenshot shows the same "New device ..." window, but now the sub-header is "no link alarm". Below this, there is a single configuration field:

- No link delay:** A text input field containing the value "0".

# 14 ALARMS

Once module TWM3 IO has been configured in “instrument network” it must be linked to the Node. Select the node and subsequently press “modify device”; therefore select the “Alarms” bar present in the right area.



Module TWM3 IO (if present) is configured in this section to activate the alarm relay.

Fields description:

- **TWMA Port:** serial port to which interface 2TWRS485 is connected to which TWM3 IO is connected.
- **TWMA Address:** refer to the manual of the TWM3 IO module.
- **Excites relay in event of alarm:** insert flag in the box to enable the activation of the relay on TWM3 IO. It is possible to simulate the intervention of an alarm and verify the functioning of the relay by pressing the Test button.
- **Relay activation delay:** delay in minutes between alarm signal on TeleNET and the activation of the TWM3 IO relay.

Once setting is complete save the information.  
Program re-start will be requested.

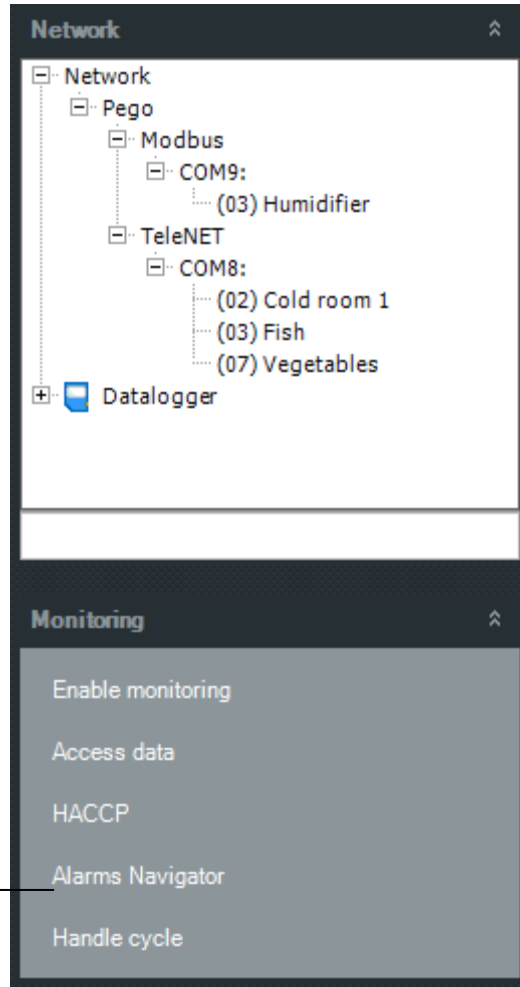
## 14.5 REMOTELY CONTROLLED ALARMS

TeleNET envisions the sending of alarm signals via e-mail. The computer must be connected to the Internet network and have an e-mail account to use for sending e-mails. For configuration refer to chapter 6.1 "Mail Menu".

# 13 ALARM NAVIGATOR

## 15.1 ALARM NAVIGATOR

TeleNET allows displaying some sequence of alarms relative to the instruments currently defined. To access the alarms navigator from the main menu:



Alarms navigator

The tab menu allows selecting the following kind of display:

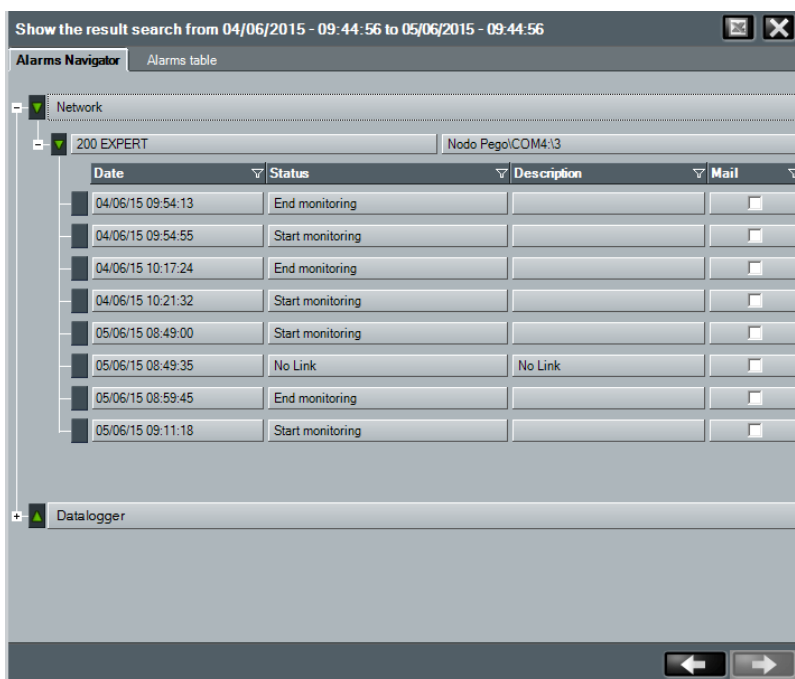
**Alarms navigator:** displays the alarms registered in the selected period, keeping them divided for origin (Network or Datalogger) and instrument, according to a tree structure.

**Alarms table:** displays in table form the alarms in the selected period.

# 15 ALARM NAVIGATOR



Select the period for which the historical should be analysed.  
In case no data are registered in the period, the next screen will be blank.

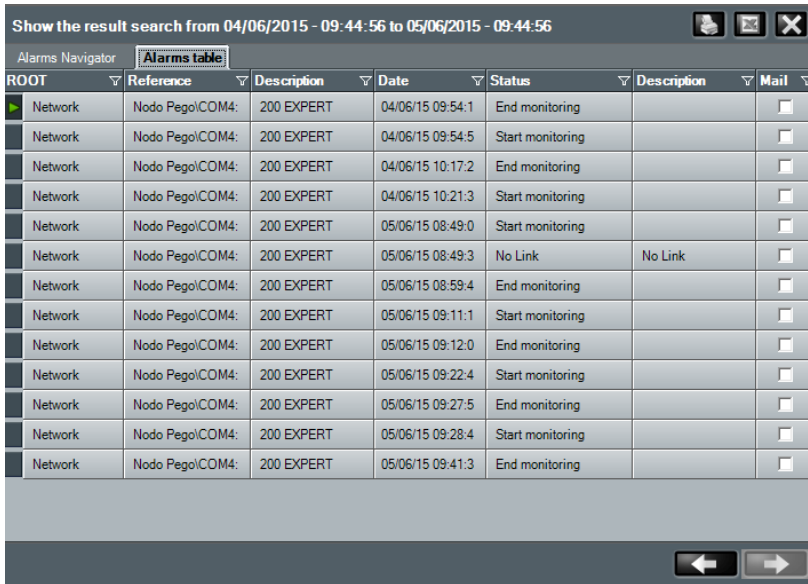


Select the instruments required, among those available. Alarms and time of start and end of the monitoring are displayed for each of them, with relative hour, description and notice of email sent.

The registered alarms can also be exported in Excel format. Selecting the Excel icon, the directory where to save the file will be required.

# 15 ALARM NAVIGATOR

Export and print



Show the result search from 04/06/2015 - 09:44:56 to 05/06/2015 - 09:44:56

Alarms Navigator | Alarms table

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

The “Alarms table” card contains the same information described in “Alarms navigator”, but in table form.

Besides the export in Excel format, registered alarms can be printed.



# 16 AUTOMATIC CYCLES

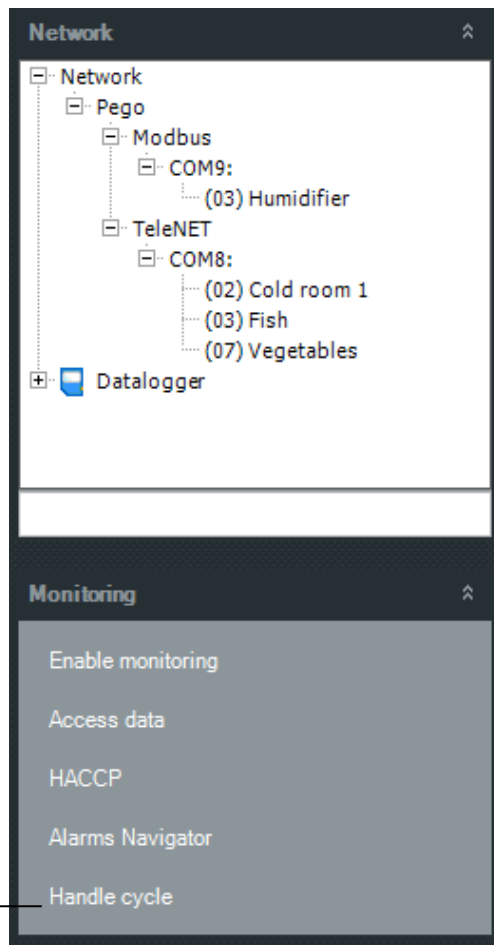
## 16.1 CYCLE MANAGEMENT

A cycle allows definition of a configuration series that a device will follow in a sequence, each one will be kept for a specified period.



TeleNET allows for each instrument definition of a cycle library. Each cycle is made of a sequence of phases with defined duration, and every phase is characterized by settings sequence that the instrument will follow.

Cycle management is only available for Telenet instruments (therefore it is not possible to set cycles in the instruments that communicate via modbus).

To access cycle management from main menu:



Cycles management

Select "Handle cicle" and subsequently press button  to create a new cycle or button  to amend an existing one.

Add New cycle | Edit existing cycle



# 16 AUTOMATIC CYCLES

This folder is made of two defined areas:

1. Heading of cycle containing Name and Description of the cycle. The field Module is significant, and has the function to indicate device which will follow the cycle (can be modified only for a new cycle).
2. Cycle detail, divided into two levels:
  - a. Phase: heading with the indication of phase duration.
  - b. Phase detail: definition of single settings that characterized the phase.

For deleting a whole phase or part of contained set up, to use delete key.

The screenshot shows a software window titled "Handle cycles" with a dark header bar containing navigation icons. The main area is a light gray form with the following fields:

- Device:** A dropdown menu showing "Instrument CP 200/ECP 100".
- Name:** An empty text input field.
- Description:** An empty text input field.
- Enabled:** A checked checkbox.

Below these fields are three expandable sections, each with a table header:

Nr	Description	Duration (min)
1	Phase 1	30

Variable	Value	UDM
Setpoint	10	°C

Nr	Description	Duration (min)
2	Phase 2	20

Variable	Value	UDM
Setpoint	15	°C

At the bottom, there is a partially visible table header:

Nr	Description	Duration (min)

# 16 AUTOMATIC CYCLES

## 16.2 CYCLE PLANNING

TeleNET allows to plan a cycle execution for a device, and display his course.

To plan, displaying cycle status, access Cycles area on device properties folder.

The screenshot shows the TeleNET interface for a device named '(03) Vegetables'. At the top, there are three temperature displays: 'Ambient temperature' at 27.0 °C, 'Ambient temp. setpoint' at 25 °C, and 'Overheating setpoint' at -10 °C. Below these are icons for power, cooling, and heating. The main area is titled 'Monitoring' and contains a table with the following data:

Description	Value	UdM
Ambient temperature	27	°C
Evaporator temperature	25	°C

Below the table are sections for 'PARAMETERS', 'INPUT STATES', 'OUTPUT STATES', and 'ALARMS'. At the bottom, there are buttons for 'Command', 'Cycle', 'History', and 'HACCP'. A line labeled 'Cycle' points to the 'Cycle' button.

# 16 AUTOMATIC CYCLES

Field	Value
Cycle	Ciclo di lavorazione
Started	<input checked="" type="checkbox"/>
Planned on	30/07/2008 09.09.00
Current phase	1
Description	Phase 1
Start	30/07/08 09.09
Expected end	30/07/08 09.39
Duration (min)	30
Residual time (min)	29
Cyclic	<input type="checkbox"/>
Start phase	

Field meaning:

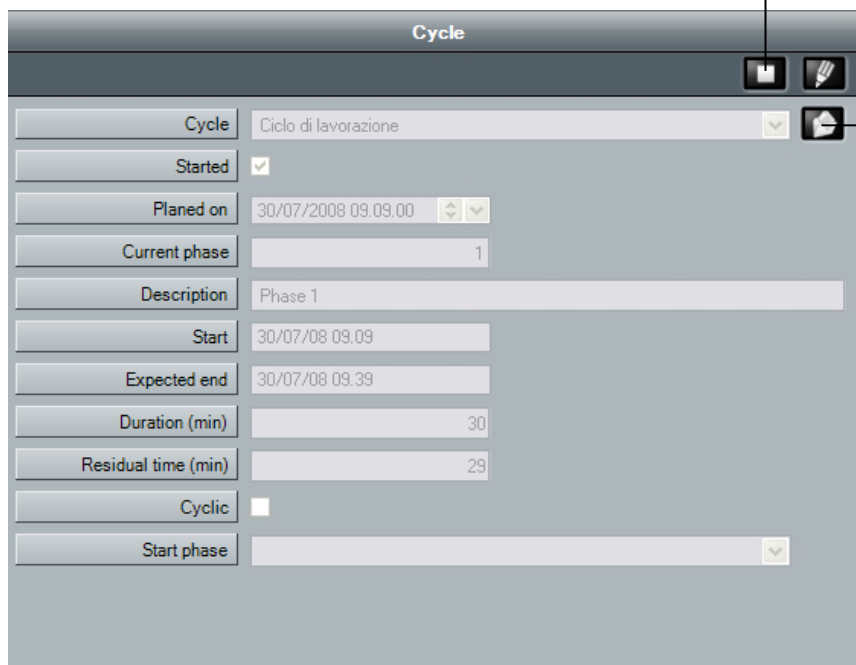
- **Cycle:** contains cycle to be planned (that is started) chosen from cycles available for the selected device.
- **Started:** shows cycle start status (flag automatically appears when cycle is started). Cycle start is keynoted by the "blue" colour of device status icon.
- **Planned on:** date and hour for cycle start.
- **Current phase:** cycle phase actually running (only reading).
- **Description:** description of cycle phase actually running (only reading).
- **Start:** date and hour for phase start (only reading).
- **Expected end:** date and hour for phase end (only reading).
- **Duration:** phase duration, in minutes (only reading).
- **Residual time:** time remaining to phase end, in minutes (only reading).
- **Cyclic:** shows if the sequence is cyclic that means after the last phase it starts automatically again from phase 1.
- **Start phase:** allows to start a phase different than the first one.

# 16 AUTOMATIC CYCLES

N.B. for a new cycle planning the field "Started" must not be flagged to show cycle starting; it will be automatically flagged when it starts as requested by the planning.

Key for cycle interruption

Current cycle summary



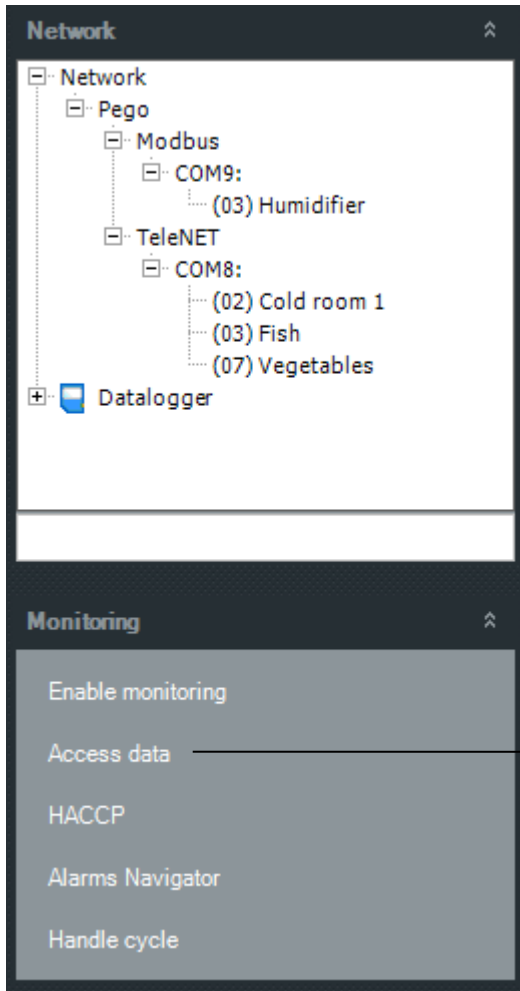
The screenshot shows a 'Cycle' configuration window with the following fields and values:

Field	Value
Cycle	Ciclo di lavorazione
Started	<input checked="" type="checkbox"/>
Planned on	30/07/2008 09.09.00
Current phase	1
Description	Phase 1
Start	30/07/08 09.09
Expected end	30/07/08 09.39
Duration (min)	30
Residual time (min)	29
Cyclic	<input type="checkbox"/>
Start phase	

The window title is 'Cycle'. In the top right corner, there are two icons: a square with a diagonal line (labeled 'Key for cycle interruption') and a document icon (labeled 'Current cycle summary').

# 17 HISTORY

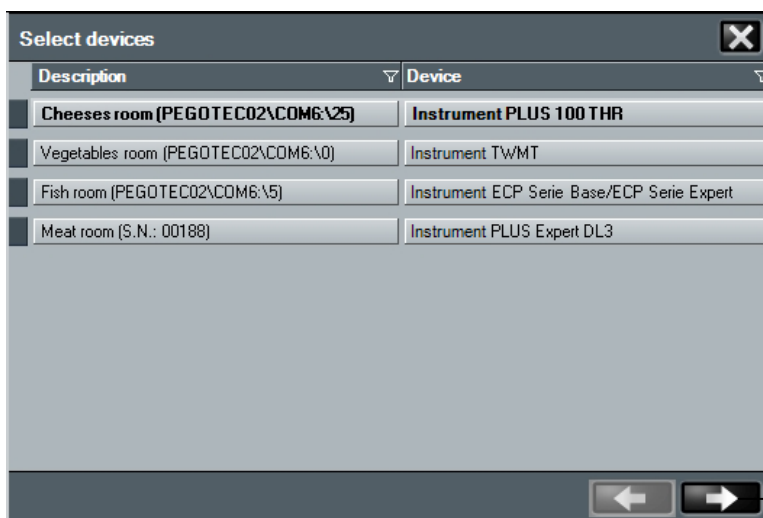
## 17.1 HISTORICAL DATA ANALYSIS



To display data monitored it's available a simple wizard for the user to guide on the searching of data to be displayed.

To display the history select *Access data* from main menu.

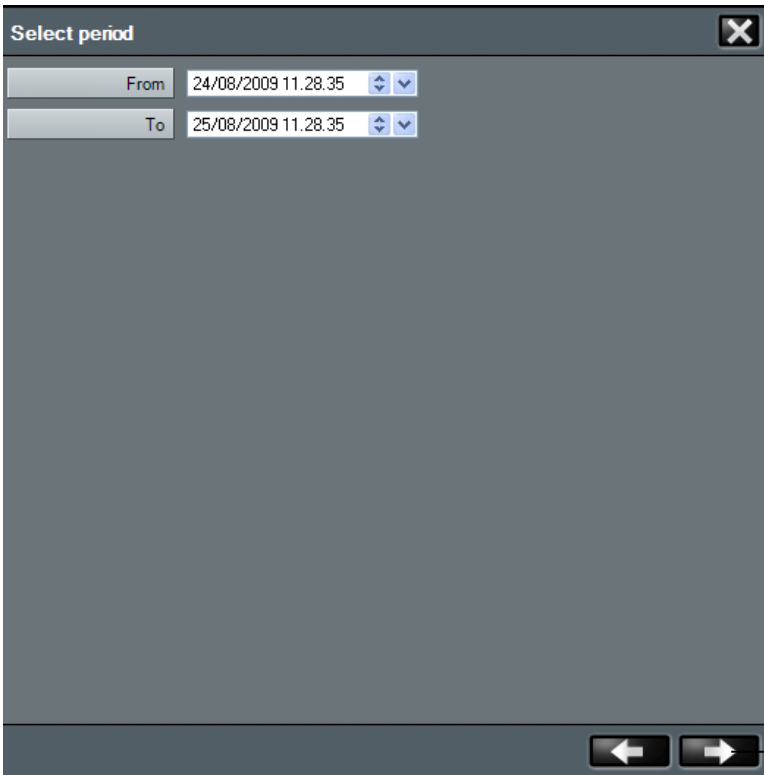
Access  
historical data



Select the device which history analysis is needed (it's possible to select up to 4 instruments at the same time, in case a comparison is requested).

Proceed with the right arrow

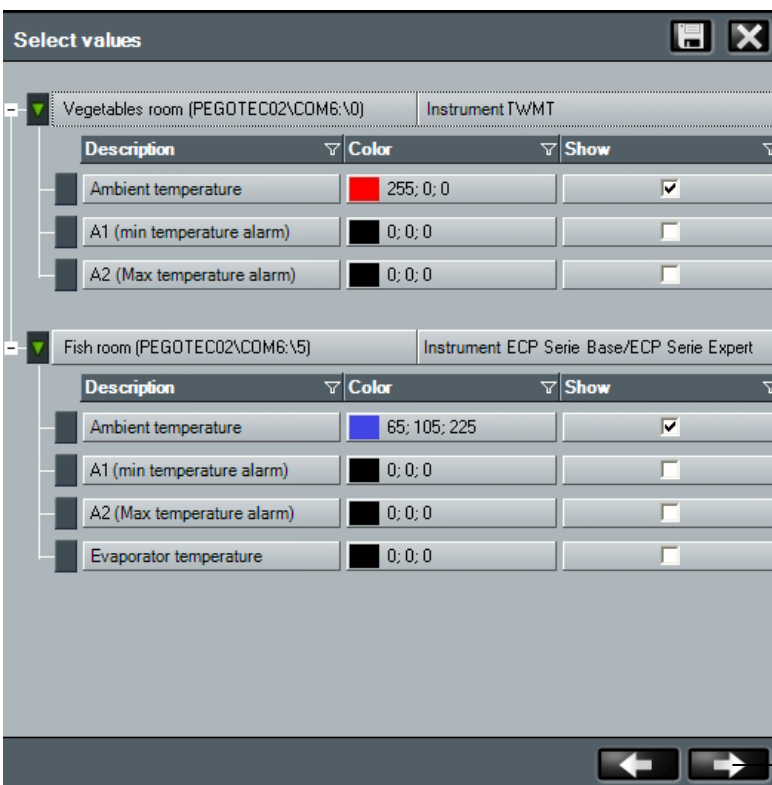
# 17 HISTORY



Select the historical time period to be analysed.

In case of no registered data during that period, the following screen will be empty.

Proceed with the right arrow



Select, choosing from the ones available the desired measured units. It's possible to associate a different colours to each of these units.

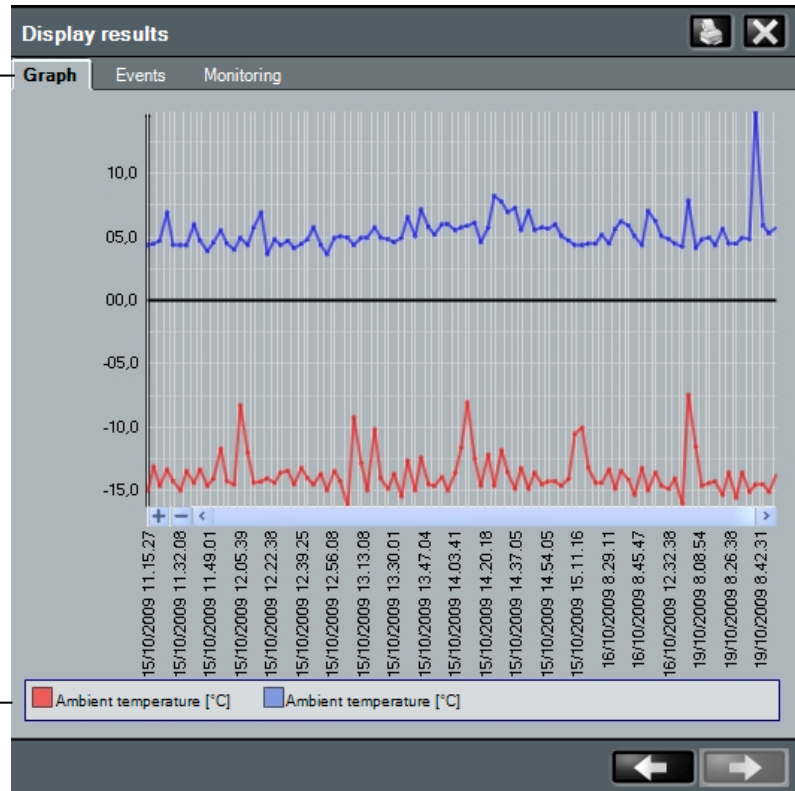
Proceed with the right arrow

# 17 HISTORY

Visualizations:

- Graph
- Events
- Monitoring

Legend



## 17.2 DATA EXPORT

From menus "Events" and "Monitoring" it's possible to print the registered data or export them in Excel format.

Selecting Excel icon it will be directly asked the path where to save the file.

Data export and print

The screenshot shows a 'Show the result' window with a 'Monitoring' tab selected. The table displays the following data:

Value	Date
26	02/07/08 16:02:57
27	02/07/08 16:17:57
26	02/07/08 16:32:57
27	02/07/08 16:47:57
27	02/07/08 17:02:57
28,5	02/07/08 17:17:23
27,5	02/07/08 17:32:27
27,5	02/07/08 17:47:27
27,5	02/07/08 18:02:35
27,5	02/07/08 18:17:35
27,5	02/07/08 18:32:35
26,5	02/07/08 18:47:35
26,5	02/07/08 18:47:49
26,5	02/07/08 18:54:30

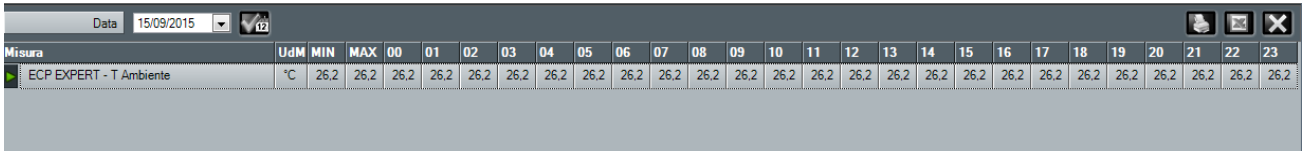


# 17 HISTORY

## 17.3 HACCP

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


Telenet is used to display, print and save the maximum and minimum daily temperature values as well as the hourly averages, in excel format, for the relevant tools, on a specific date that can be selected by the user.







Misura	UdM	MIN	MAX	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ECP EXPERT - T Ambiente	°C	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	

**IMPORTANT NOTE:** This function is not available for the following tools: PEV, SC600, DIN3RK, TWMIO.

To use the function, on the Configure TeleNet menu select HACCP and then use the tools for which you wish to display the data.

Select the date and click on  to confirm.

You can now print  and export the data in Excel format . The "go back" button  is used to access the tool selection page in order to perform a new analysis on different tools.

In order to perform a new analysis on the same tools but on a different date, the date at the top to the left can be changed, confirming by clicking on .

The data will be updated on the selected date.

**IMPORTANT NOTE:** in order to use this function, it must be enabled in the "Configure HACCP" menu in Modify tool (Chap. 10.1).

# 18 PROBLEMS AND SOLUTIONS

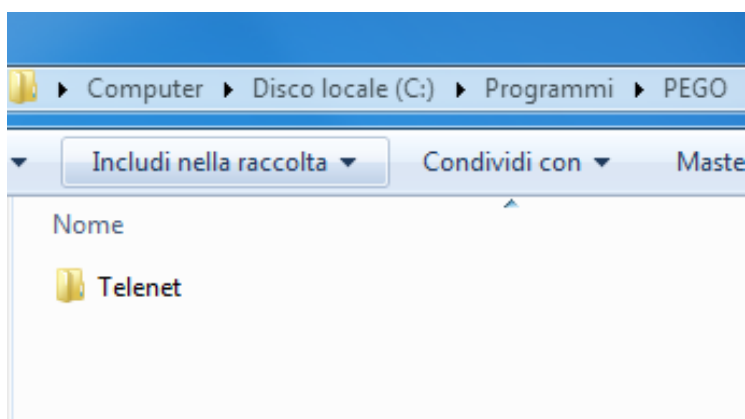
## 18.1 PROBLEMS AND SOLUTIONS

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 <b>18.3</b>
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 TELENET UNINSTALLATION

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:

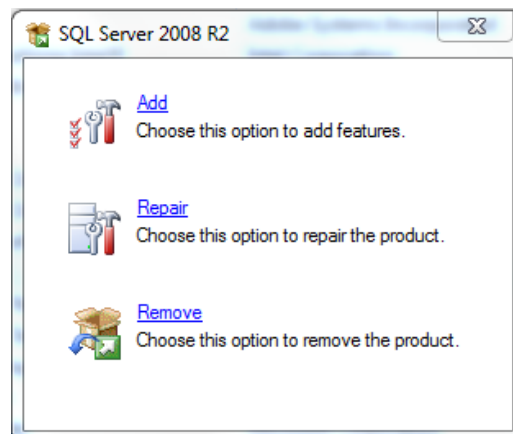
# 18 PROBLEMS AND SOLUTIONS

## Disinstalla o modifica programma

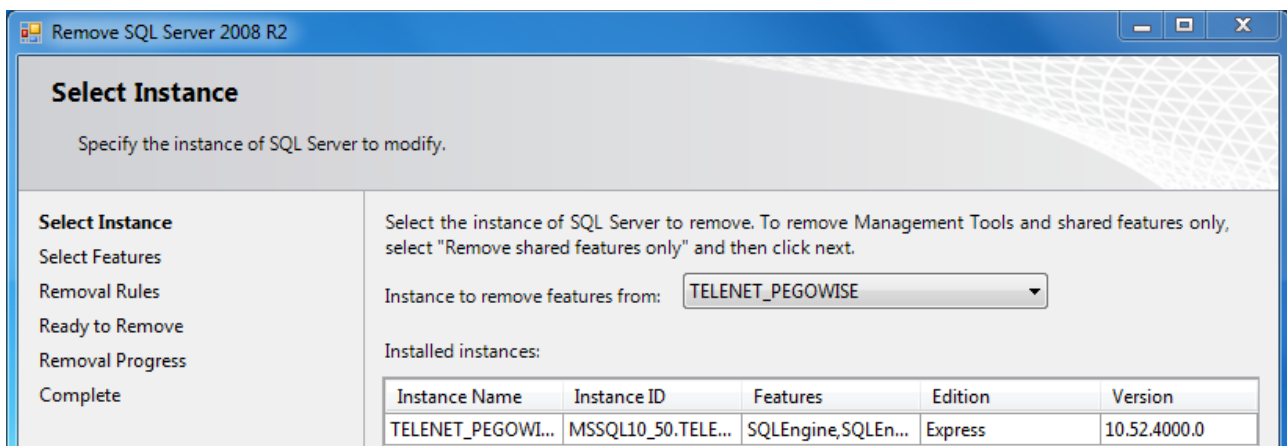
Per modificare un programma selezionarlo dall'elenco, quindi fare clic su Disinstalla,

Nome	Autore
Microsoft SQL Server 2008 R2 Native Client	Microsoft Corporation
Microsoft SQL Server 2008 Setup Support Files	Microsoft Corporation
Microsoft SQL Server 2012 Native Client	Microsoft Corporation
Microsoft SQL Server 2014	Microsoft Corporation
Microsoft SQL Server 2014 Setup (English)	Microsoft Corporation
Microsoft SQL Server 2014 Transact-SQL ScriptDom	Microsoft Corporation
Microsoft SQL Server 2016 LocalDB	Microsoft Corporation
Microsoft SQL Server 2019 (64-bit)	Microsoft Corporation
Microsoft SQL Server 2019 Setup (English)	Microsoft Corporation
Microsoft SQL Server Management Studio - 18.10	Microsoft Corporation

Select "Remove" in the following window.

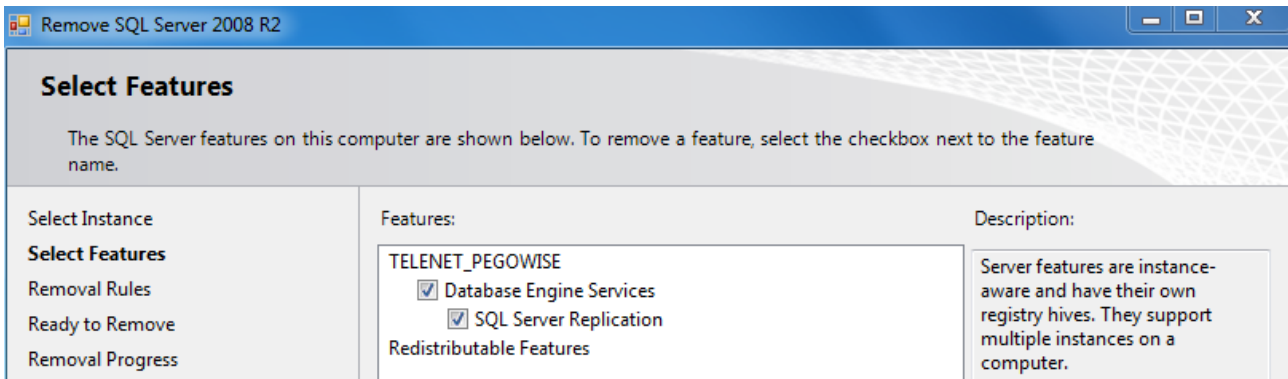


The uninstallation procedure will run a check, at the end of which you must click on OK. At this point, you can select the TELENET\_PEGOWISE instance from the dropdown menu and click on Next.

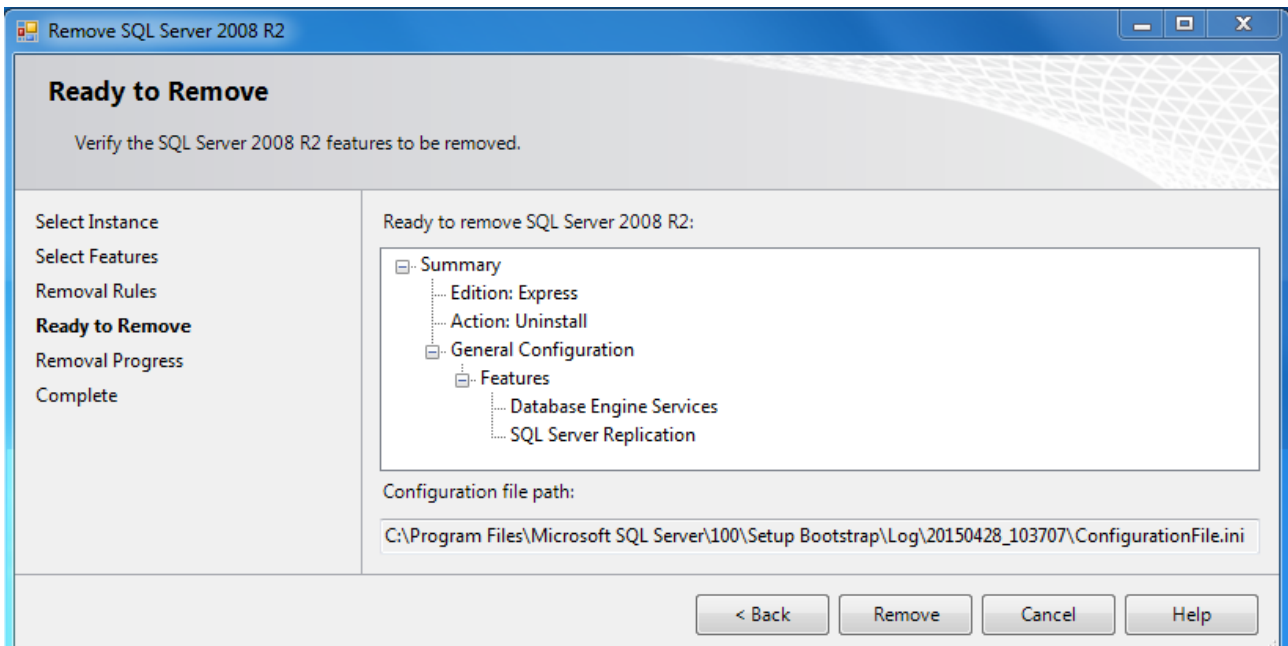


# 18 PROBLEMS AND SOLUTIONS

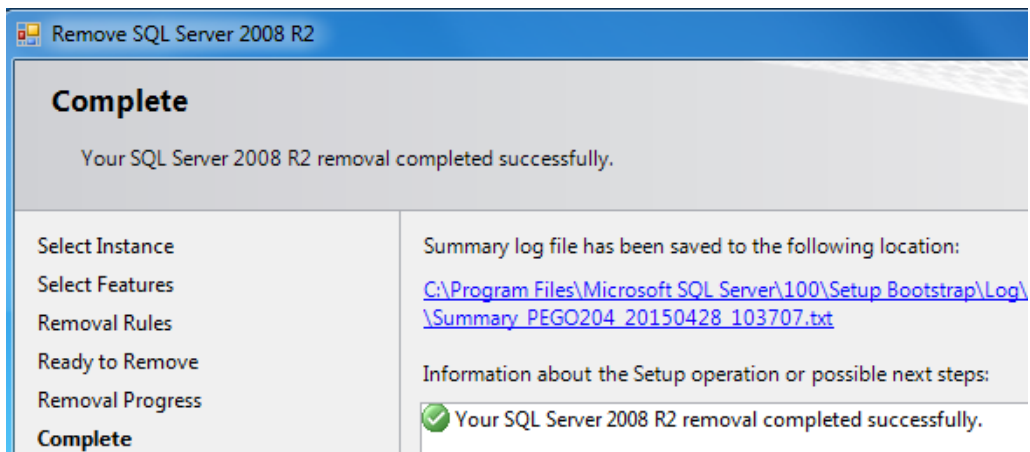
You will be prompted to select the features to be removed: select “Database Engine Services” and the relative feature will also be selected automatically. Confirm by clicking on Next.



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.

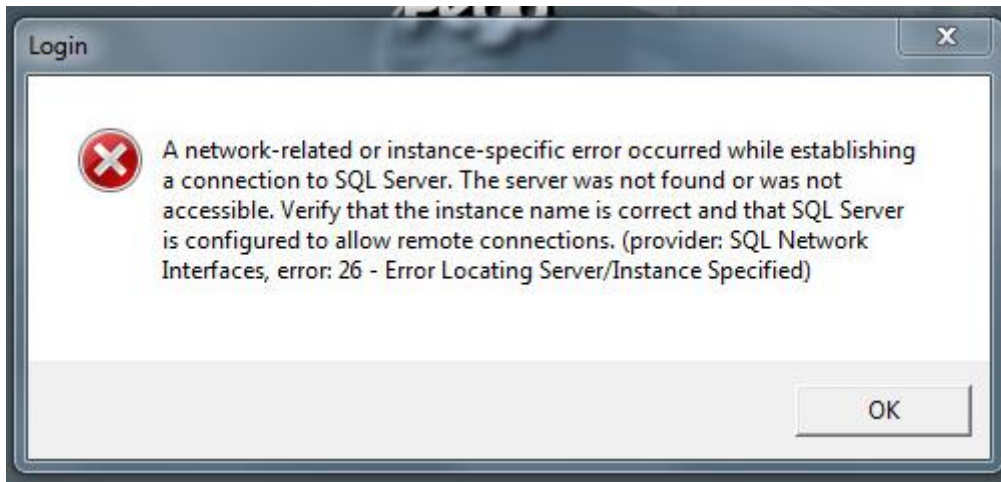


At the end of the procedure, uninstallation is complete.



# 18 PROBLEMS AND SOLUTIONS

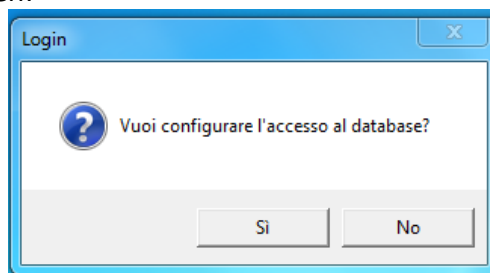
## 18.3 GENERAL ERRORS



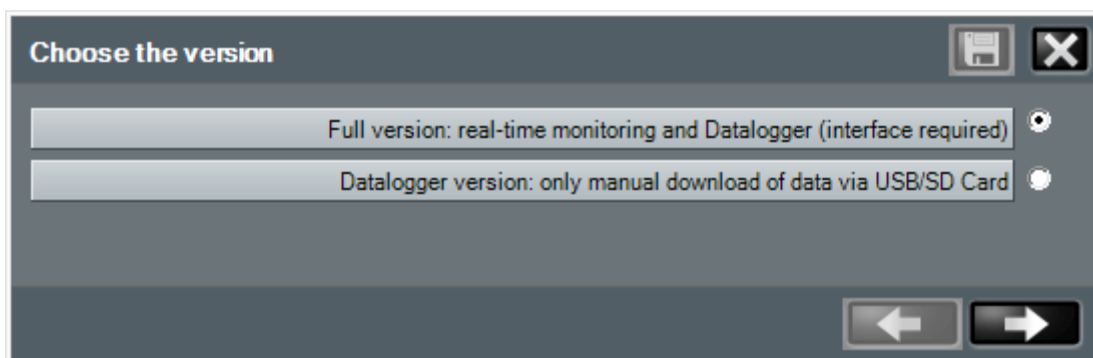
### **Solution A: the PC name has been changed**

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:



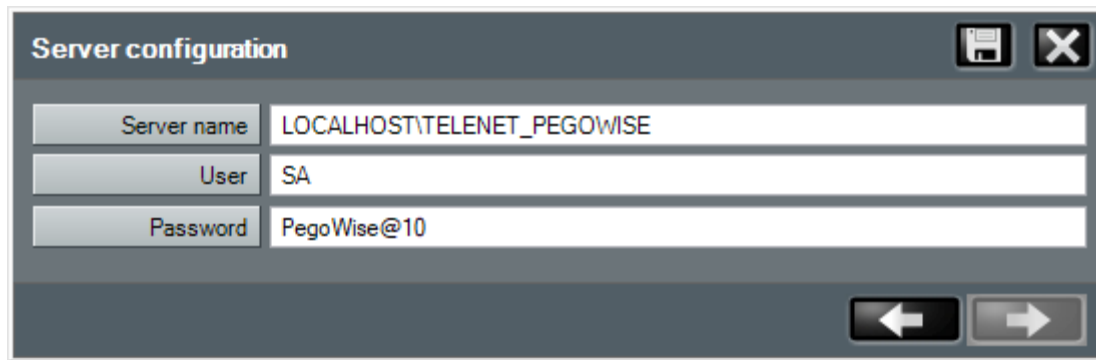
By clicking "Yes" the window to choose the version will appear:



In order to change the PC name in the Server Name field, select the first option "Full version". For the "Datalogger version" option see chapter 18.4.

# 18 PROBLEMS AND SOLUTIONS


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 check if the SQL instance is installed.

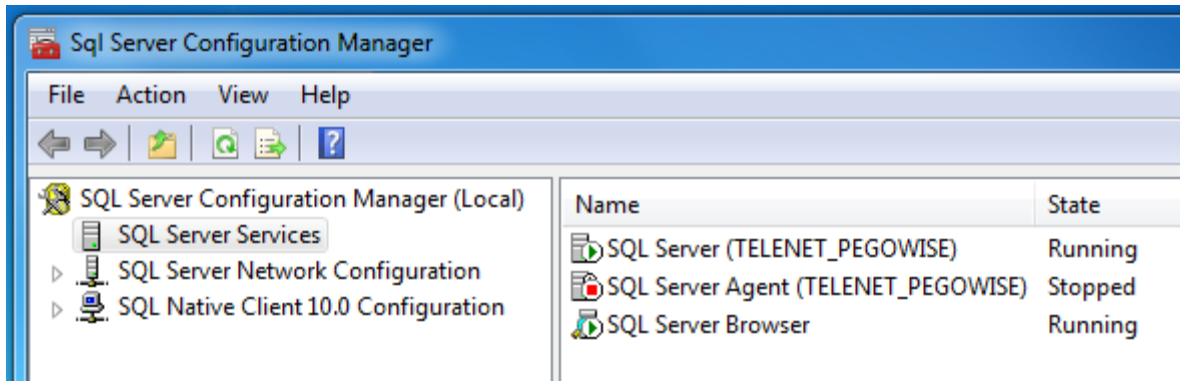
From the **START** menu -> **All programs** look for the **Microsoft SQL Server 2014 or 2008 R2** folder:

- No folder: the SQL instance is not installed; therefore, you must uninstall the Client (see 18.2) and proceed with Complete Installation (see 2.2).
- Folder present: open it and open "SQL Server 2014 Configuration Manager":



# 18 PROBLEMS AND SOLUTIONS

The following window will open, from which you can check the status of the "SQL Server (TELENET\_PEGOWISE)" instance.



## 1. SQL Server (TELENET\_PEGOWISE) instance missing

Only the Client was installed and, therefore, the instance was not installed. Uninstall the Client (see 18.2) and then proceed with Complete Installation (see 2.2).

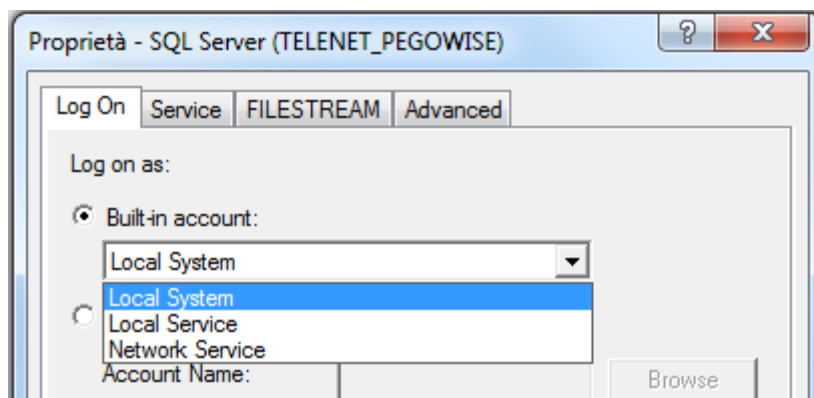
## 2. Status = Running

The Client was not installed successfully. Uninstall it (see 18.2) and run Complete Installation (see 2.2).

## 3. Status = Stopped

Right-click on the SQL instance and select "Start". If it does not launch or if the problem persists, go on to the following solution.

Right-click on the SQL instance and select "Properties". In the "Log On" tab, the "Built-in account" parameter has three accounts you can select from a dropdown menu.



Select one and click on "OK". If the problem persists, select another account. If the problem persists with every account, you must uninstall the Client and then remove the SQL instance (see 18.2).

Once uninstalled, launch Complete Installation (see 2.2).

# 18 PROBLEMS AND SOLUTIONS

## 18.4 DATALOGGER VERSION ONLY

In case TeleNET is used only to manually import data from a Datalogger, it could 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 it is not possible to restore the proper functioning of the SQL Database.

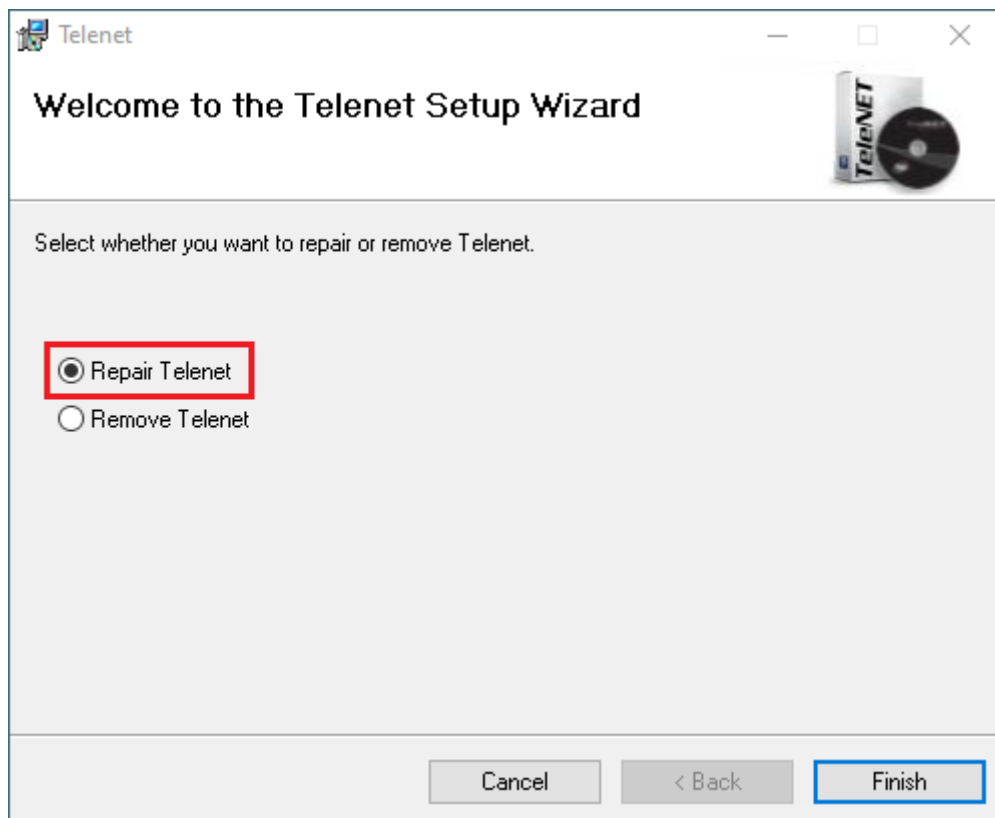
By activating this mode the SQL database is not deleted but simply ignored and a new completely independent empty Access database is created.

See chapter 7.5 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).

Performing the complete installation, the following screen will appear:

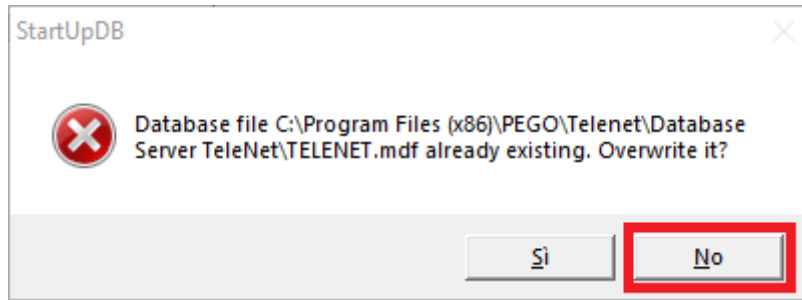


Select “Repair Telenet” and click on “Finish”.



# 18 PROBLEMS AND SOLUTIONS

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



This request has been specially minimized in the Windows taskbar to avoid the risk of inadvertently overwriting the database, irreparably losing all data and configurations. It is advisable to continue by selecting "NO".

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

## 18.6 CLONE NODE

Sometimes it happens that the node associated with a PC disassociates for various reasons, even for a backup restore.

The problem occurs when: all the instruments are viewable in the TPC, the monitoring cannot be started and the "New node" button appears.

It is necessary to disassociate the node concerned and reassociate it to the PC following the procedure described in chapter 5.5 by moving the node from the right box to the left one, then save and move the node back from the left box to the right one.

If the node is already in the left box it could be due to a backup restore, move it to the right.

## 18.7 RESTORE BACKUP

To restore a backup, simply go to the configuration menu and then Backup and DB maintenance (see chapter 6.1).

Once the path file of the backup file has been entered, select "Restore".

After loading the backup, it is necessary to reassociate the node following the "Clone node" procedure described in paragraph 18.6.



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installation of TeleNET software.



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