



TECHNICAL MANUAL SYSTEM MANAGEMENT SOFTWARE



etermPCmanager

Rev. 06/2014

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1 INTRODUCTION

etermPCmanager is a software that allows the configuration, management and remote control of the following devices:

- NEREIX MASTER
- NEREIX CLIMA MODULE
- NEREIX METERING MODULE
- CENTRAL PLANT NEREIX METERING MODULE
- MBUS CENTRALIZER
- BOILER MANAGEMENT BOARD (BMB)
- PLANT MANAGEMENT BOARD (PMB)

etermPCmanager NOT ALLOW THE READING OF ENERGY MEASURED BY MODULES NEREIX

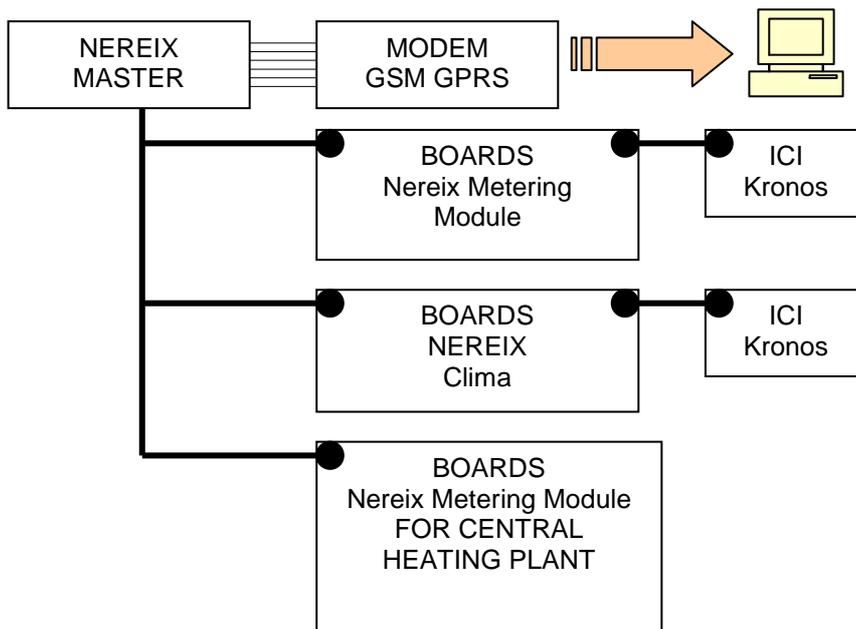
More units, among which is intended a master one (Nereix or Boiler), form an “**eterm installation**”

Possible connections:

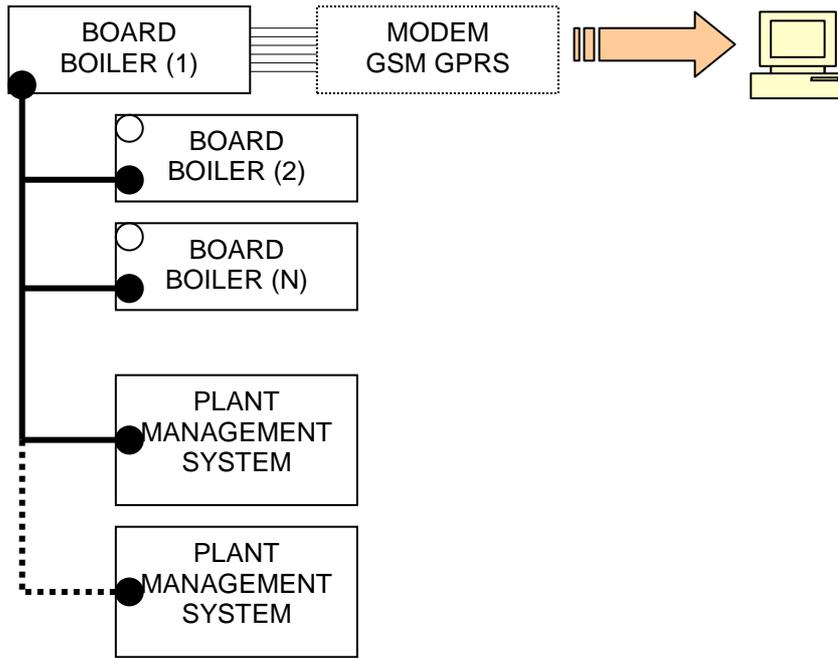
- USB Direct connection: All tabs
- RS232 direct connection (serial port): only NEREIX MASTER board
- remote control via modem GSM-GPRS: NEREIX MASTER board and BOILER MANAGEMENT board
- remote control via internet: NEREIX MASTER board and BOILER MANAGEMENT board

2 REGULAR “ETERM INSTALLATION”

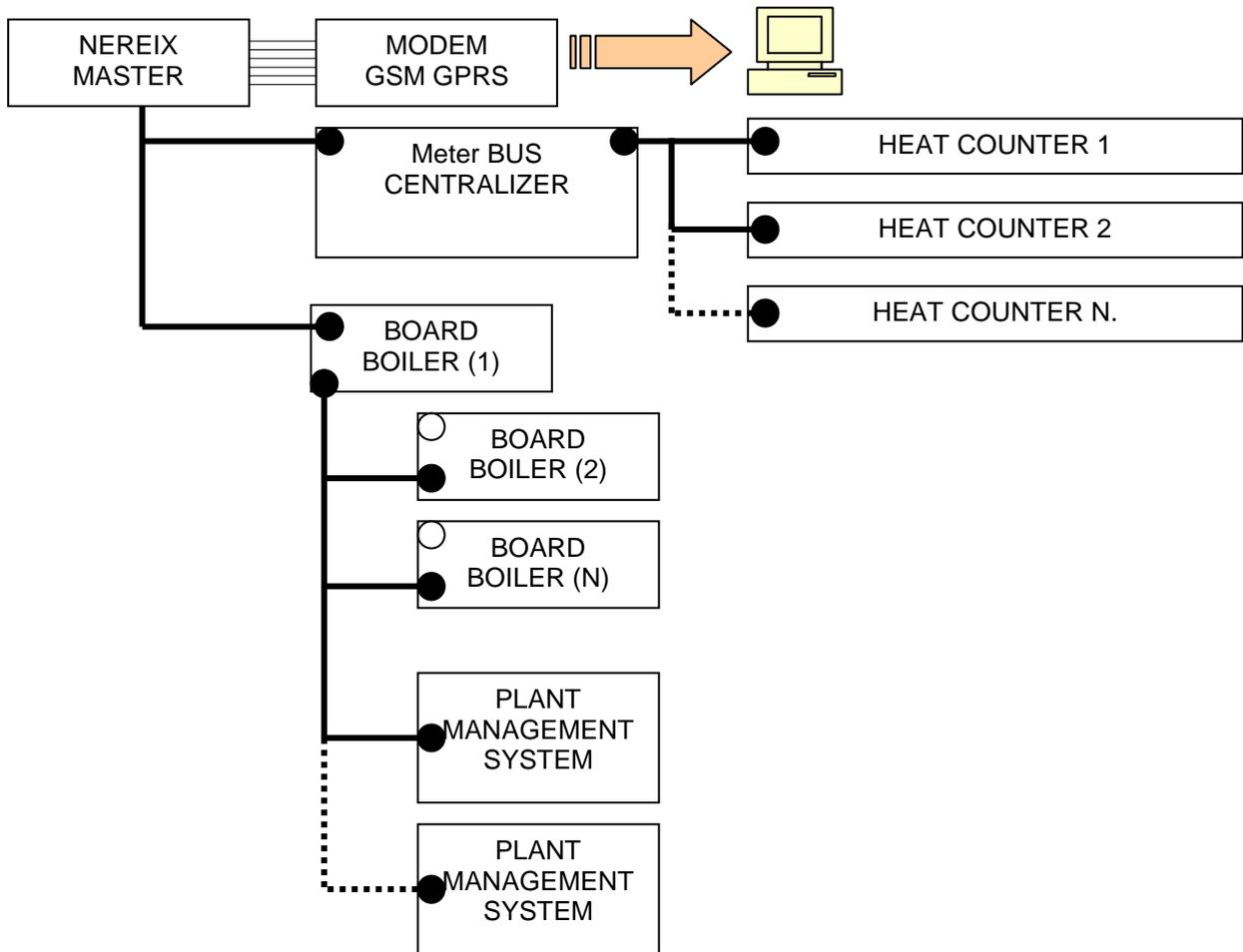
Example 1



Example 2

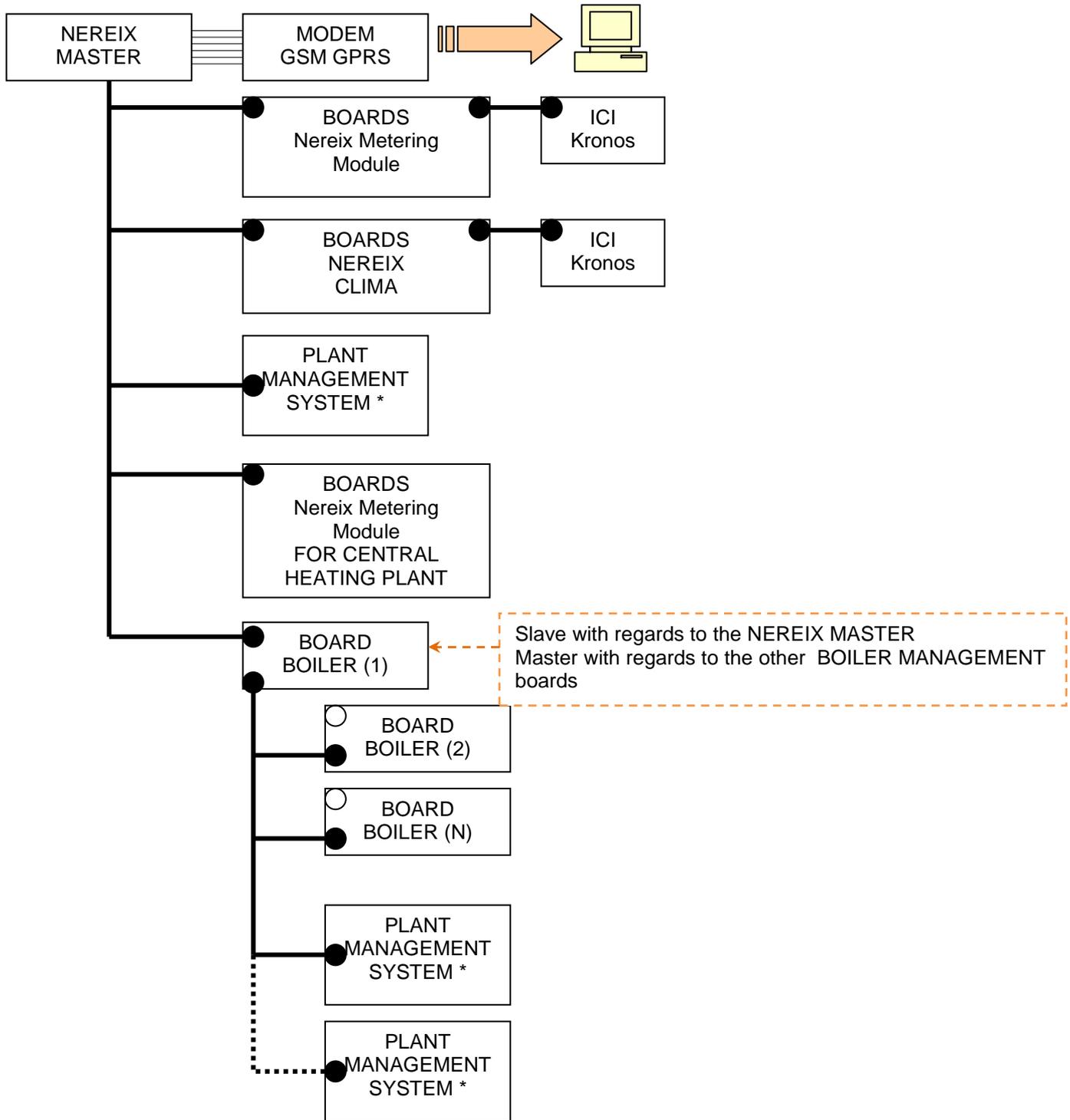


Example 3



A Master Nereix can be connected to more Meter Bus centralizers, who do not occupy addresses on the primary bus, but, for each Master Nereix, can be associated to a maximum total of 250 Meter Bus counters.

Example 4



The diagram suggests that there are two available bus levels:

- First level bus – MASTER NEREIX with a maximum number of 250 slave boards among which :
 - o NEREIX CLIMA BOARDS
 - o NEREIX METERING BOARDS
 - o BOILER BOARDS
 - o PLANT MANAGEMENT BOARDS
- Second level bus – part of a BOILER BOARD that is slave with regards to a MASTER NEREIX and master with regards to the other boards (maximum 15):
 - o BOILER BOARDS
 - o PLANT MANAGEMENT BOARDS

*** NOTE: The PLANT MANAGEMENT BOARDS can communicate with each other for information interchange regarding the inputs status only if they are on a secondary bus (slave for a BOILER BOARD).**

3 SOFTWARE FEATURES

- Master Nereix and Master Boiler registry configuration
- Master Nereix and Master Boiler routing
- Firmware upgrade
- Nereix slave volumetric consumption alignment

etermPCmanager – for enabled “eterm installations” allows via WEB communication.

4 SYSTEM REQUIREMENTS

Operating system:

- Windows XP SP2 or subsequent with Microsoft .NET Framework 3.5 or subsequent
- Windows Vista,
- Windows7 – 32-64 bit
- Windows8 – 32-64 bit

Communication: USB 2.0

Minimum screen resolution: 1024 x 768

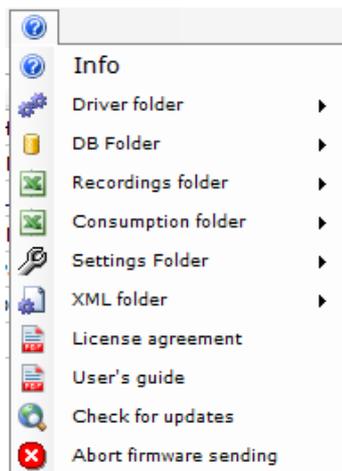
5 SOFTWARE INSTALLATION

An internet connection is necessary for the registration of the software license.

Perform the set-up of the application.

If a not registered software starts you must view and accept the license contract.

The license contract will be available in .pdf from the menu “?”:



SW01

When the software starts, it searches on internet for any available updates

If the software finds any updates you must follow the installation procedure.

The check for updates can be overriding from the menu “?”

If the program is not web registered and it has never been enabled, the following window will be displayed.



SW02

In order to obtain a “Key code” click on **Code request**, the predefined browser will open on the page that will guide you through the registration and eventually the purchase of the license.

If the program is not web registered but it has been enabled in the past, the following window will be displayed.



SW03

In order to start the software or to enable it without web registration, press **START**.

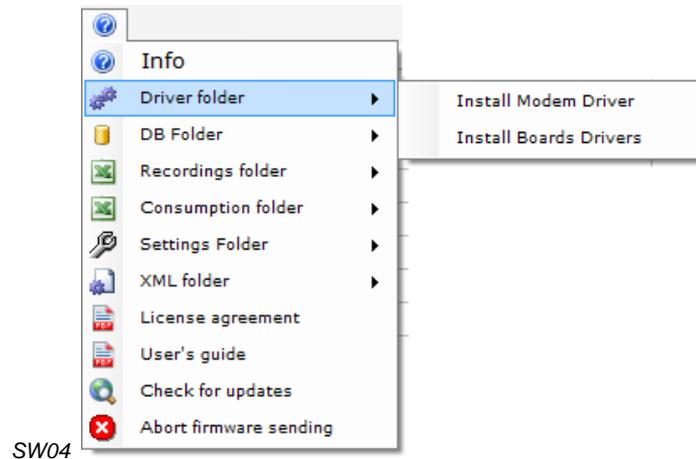
In order to activate some features we recommend that you register the program on the web site as soon as possible, in the presence of previous qualifications, registration is free.

Without web registration, some web functions of the software will not be available

When the program is registered the window SW02 appears by selecting “Info” from the menu “?”

6 DRIVER INSTALLATION

For the communication with the electronic boards and with the USB modem install the drivers using the commands in menu “?”:



Before connecting the peripherals, you must install the driver following the guided procedure.

7 ETERM INSTALLATIONS

The home window displays a table containing the created “eterm installations”; at first use it will be empty.

ID ETERM	ID INSTALLATION	DESCRIPTION	SLAVE NUMBER	MASTER TYPE	SCHEDULED CALL	REPORT SCHEDULED CALL	ALARM SLAVES
ITA0001	AGEC001	AGEC	36	NEREIX	YES	OK (30/09/13 00:32)	
	AXPO001	Hotel Macchiavelli	3	NEREIX	NO		
ITA0001	CASA1MM	Casa SpA PUC1	26	NEREIX	NO		
ITA0001	CASA2MM	Casa SpA PUC2	40	NEREIX	NO		
	INFO000	Palaz.A,D + Vil. Gard.Sc A,B,C	23	NEREIX	NO		
ITA0001	LAB0001	Laboratorio Corsi	24	NEREIX	NO		

SW 05

For each “eterm installation” are indicated in the table the following items:

eterm ID

It can be entered at the plant registration via WEB

ETERM INSTALLATION ID

”eterm installation” identification element – there cannot be two identical identification elements on the same PC
The “eterm installation” identification element cannot be changed if in the board was written and eterm identification element.

INSTALLATION DESCRIPTION

SLAVE NUMBER

It indicates how many slaves are configured in “eterm installation”.

MASTER TYPE (Nereix or Boiler)

SCHEDULED CALL

(YES/NO) It indicates if automatic calls are scheduled by the PC

SCHEDULED CALL RESULT

It indicates if the result of the last performed scheduled call that can be:

- OK
- FAILED: connection problems
- INCOMPLETE: incomplete data download
- CONF. MODIFIED: during the call the configuration saved on the PC is compared with the one saved on the plant master board. This message indicates that there are differences; use the “COMPARE CONFIGURATIONS” function to view the differences and save on the database or on the plant boards the correct configurations.

SLAVE IN ALARM CONDITION

It indicates the list of the addresses of the slaves in alarm condition.

CONFIGURE CALLS

For each "eterm installation" using the command **CONFIGURE** the following window will be displayed:



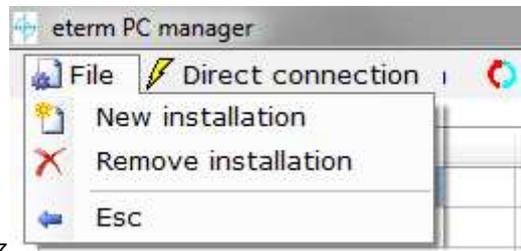
SW 06

From this window you can configure automatic call by choosing the data to be downloaded during the connections. With the frequency fixed, the PC will call the Master. The calling will be sent via GSM, internet or COM port based on the "INSTALLATION CONFIGURATION"

In the main window will be signalled the result of the call and any alarms detected.

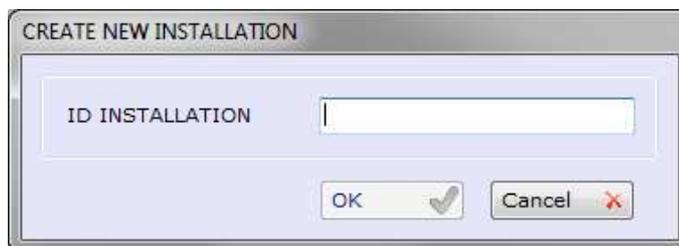
8 CREATE AND CANCEL ETERM INSTALLATIONS

The commands can be found in menu **File**:



SW 07

Command **New installation**



SW 08

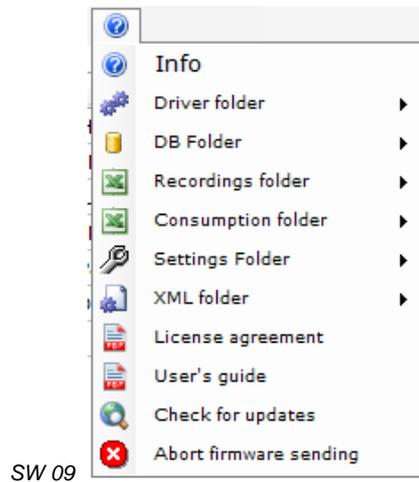
By means of this function you can create a new "eterm installation".

Each "eterm installation" will be identified by a **unique** INSTALLATION ID (for the PC where the program is performed) of 7 alpha-numeric characters.

The INSTALLATION ID will be used as file name, in format .sdf, that will be generated in the DB File folder (that can be accessed from menu "?")

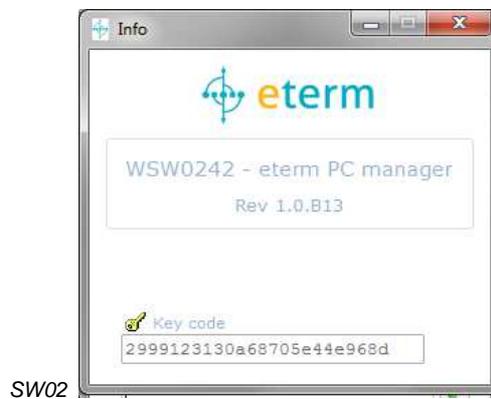
In order to cancel an installation use the command **Cancel installation** – a confirmation will be requested,

9 MENU ?



Info

Display the window:



Install Driver

Allows you to install the driver ([Chapter 6](#))

DB Folder

Quick access to the folder containing the database, in format .sdf, with all the data regarding the “eterm installations”.

Records folder

Quick access to the folder containing the exports in Excel of the records (photo) SGC and SGI.

Setting Folder

Quick access to the folder containing the exports of the configurations saved for Boiler Boards, Plant Boards.

10 INSTALLATION CONFIGURATION

INSTALLATION

Plant details

Master Type
NEREIX

ID eterm
ITA0001

ID installation
WEBTEST

Serial number
1234567

Previous serial number

Firmware version
0.0.24 T2

Date
26/06/2012

Date/Hour last config.
12/03/2014 12:46

Description
TEST WEB

Address
Via Giovanni Pascoli

City
VERONA

Province
VR

Country
IT

Note

GSM number
+393355252751

SMS Message Center
+393492000200

License code
2999123130a68705e44e968d

Serial
65131525

Password
webtest

Phone for SMS alarms
1 +393488910755
2
3
4
5

Connection details

USB
 COM 10
 GSM
 Internet

SMS alarms from Master
 GPRS

www.eterm.it

MASTER
MODIFY
CANCEL
SAVE
CONNECT
READ
SEND
PASSWORD MANAGEMENT

GPRS

Enable GPRS

Operator
TIM

APN
ibox.tim.it

Username

Password

SW 10

After creating an “eterm installation” the configuration window will be displayed.

First select the **Master Type**:

It represents the type of hardware for which the installation was performed; it can be BOILER BOARD (identified by BOILER) or MASTER NEREIX (identified by NEREIX).

After first configuration sending or saving, the selection can no longer be modified.

After choosing the **Master Type** press **MODIFY** in order to edit the configuration fields:

eterm ID

it will be assigned before web registration of the plant

INSTALLATION ID

Identification assigned at the start of the installation.

It cannot be modified if an eterm ID was entered

On the same PC cannot be more installations having the same “INSTALLATION ID”.

Serial number:

Read only field representing the serial number of the connected Mater board.

The field remains empty until first hardware connection.

The serial number automatically acquired by the software, can be read on the plate applied on the board transformer; it is a number made of seven digits.

Previous serial number:

If in an “eterm installation”, the Master board is replaced, the code of the previous board will be displayed.

Firmware Version:

Read only field, indicates the firmware version loaded on the Master Board.

Installation date

Official date for starting the plant; it must be set by the installer or by the plant manager.

Date/time of the last configuration:

The start date and time when the last configuration change occurred.

Description: Installation description (empty alpha-numeric field).

Address: Installation address.

Town: Installation town.

Province: Installation province.

Country: Installation country.

Notes: Free field.

GSM Master Number: Telephone number of the SIM installed in the modem connected to the Master.

Service centre number: Telephone number of the SMS service centre of the telephone operator.

Software license code: Code of the etermPCmanager software license.

Password:

Field in which you must enter and save the password for accessing a "protected" plant.

WARNING:

The password entered in this field is not sent or set on the equipments; it is used for access.

This field is compared with the value entered in the Master boards using the command "PASSWORD MANAGEMENT"

Numbers for alarm SMS:

5 mobile phone numbers can be entered; any occurred alarms will be signalled to these telephone numbers via SMS.

Communication:

It indicates that the master connection was performed:

USB = direct current connection; key CONNECT is disabled

COM = direct connection to a master connected on a COM; key CONNECT is disabled

GSM = by pressing the key CONNECT the modem dialogue window will be opened
the GSM Master Number must be set)

Internet = by pressing CONNECT the internet connection will be activated
the user name and password must be set

SMS Alarms from Master:

By entering this function, in case of alarm, the master sends via modem a SMS to the inserted numbers.

It enables the function that generates xml files to each variation of the data base

MASTER This key opens the master configuration window; see paragraph MASTER NEREIX

CHANGE Allows you to edit or modify the configuration.

CANCEL Allows you to cancel the modifications entered.

SAVE Allows you to save in the database (file .sdf) the configurations inserted or read by a connected Master.

CONNECT The key is enabled if communication via WEB or GSM is selected

This key activates the modem dialogue window or the WEB connection.

READ If connected to a Master, it allows you to import its configuration.

If there is a different configuration on the PC it will be overwritten – after pressing "READ" a confirmation is requested.

SEND If connected to a Master, it allows you to transfer the configuration from the PC to the board.

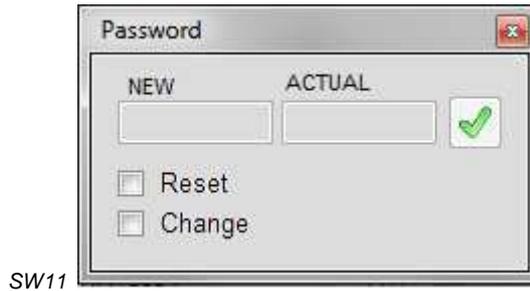
All previous configurations will be overwritten - confirmation is requested.

By performing the command, the board serial number is read; if on the PC the corresponding field is empty, the serial number will be automatically inserted without requesting any confirmation; if on the PC is already a different serial number, the software will ask if you want to update the number on the PC.

If the serial numbers match no other confirmation will be requested

PASSWORD MANAGEMENT

By pressing this key you can manage a master password:



If you choose to Change or Reset the password:

In the field "Current" will be suggested the password inside the "INSTALLATION" window (PC database). In order to render the command effective, the "Current" password must coincide with the one on the electronic board.



The command is sent by pressing . If the master has no password assigned, the field "Current" can be left empty.

The password sent to the master becomes the master of the slave boards and it must be entered for direct connection to them.

The slave will accept the new password if:

- they do not already have another password
- if they have one and it is indicated in the "Current" field

REGISTER PLANT See paragraph ETERM INSTALLATION WEB REGISTRATION

11 "ETERM INSTALLATION" WEB REGISTRATION

To register an eterm INSTALLATION use USB or GSM connection:

- Set a password for the plant
- Enable GPRS check.
- Select GPRS parameters
- Close the connection to allow the connection between card and eterm server, the recording will be done automatically.

To check the registration still use the USB or GSM connection.

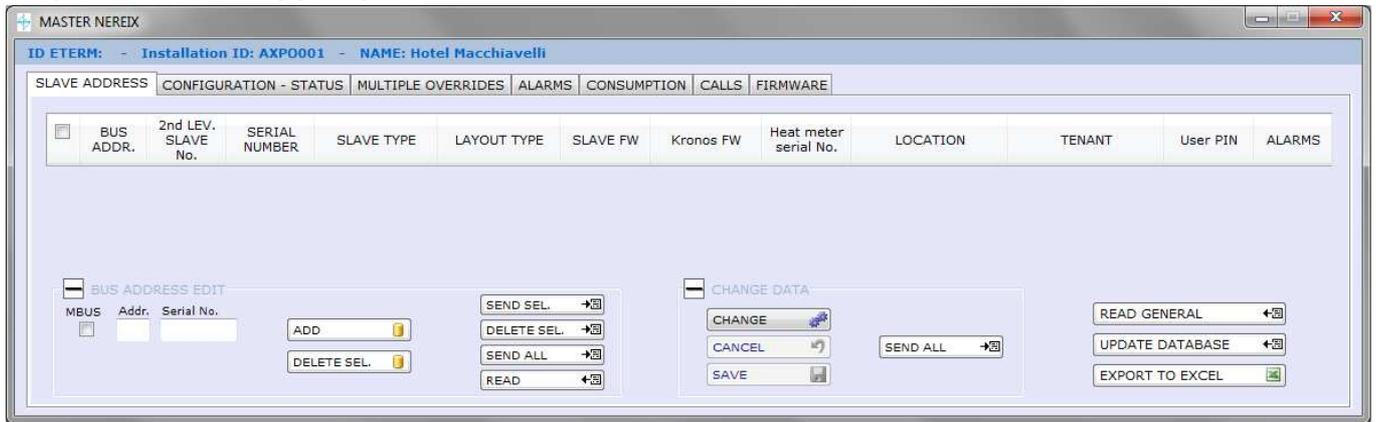
If the registration is successful you will see the **ID eterm** assigned.

From now on, you can connect via Internet: select this connection mode and click on "CONNECT"

12 MASTER NEREIX

Click on MASTER in window "INSTALLATION".
If the chosen "Master Type" is "Nereix", the following window will appear.

MASTER NEREIX - ROUTING



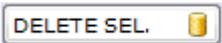
MN 01

ROUTING MODIFICATION

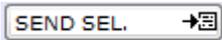
 **BUS ADDRESS EDIT** Click on + if the keys are not displayed



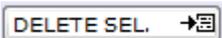
By pressing this key, after entering the the address and serial number of the slave, a new row will be added in the database. You cannot enter double addresses or serial numbers.
Even if operating without being connected to the boards, the routing will be saved in the database.



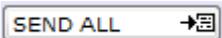
By pressing this key, the selected rows will be deleted from the database.



By pressing this key the routing of the selected rows will be sent to the master board.
The master will search inside the bus only for the boards subject to the new routing.



By pressing this key the selected addresses will be deleted from the database and the master board.



By pressing this key, the routing of all the slaves in the database will be sent to the master board.
The master will search all the boards inside the bus.

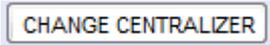
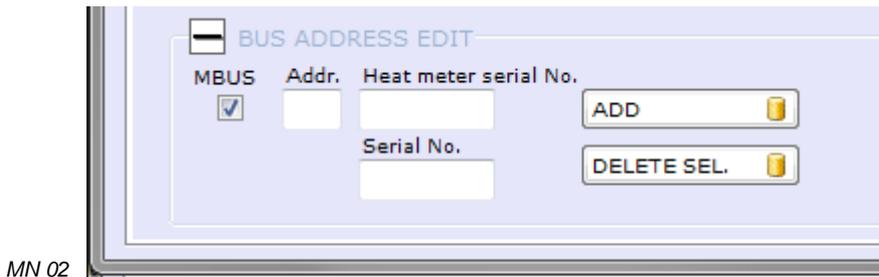


It allows you to read the routing inside the master

MBus calorimeter routing on centralizer.

By selecting the MBUS check box, two box will be enabled, in which you must enter:

- the calorimeter serial number
- the centralizer serial number

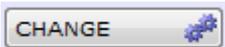


It allows you to change the serial number of a MBus centralizer to which are associated calorimeters. By pressing this key the serial numbers inside the routing will be highlighted (one for each board) The serial numbers can be changed and by pressing the key again, the database will be updated. To activate the routing you must send it to the master.

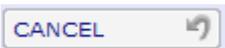
CHANGE DATA



Click on + if the keys are not displayed



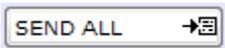
It renders available, in the routing grid, the possibility to change the location, the tenant and the User PIN.



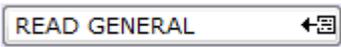
It cancels any modification performed and not saved.



It saves the performed modifications inside the database.



It sends the modifications performed to the master board and to the slaves.



By pressing this button the data in the routing grid are read from the slaves.

Meanings of the symbols inside the ALARMS column



No alarm



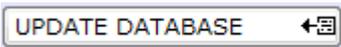
Alarm in progress



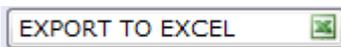
The board does not communicate or the reading was not performed



The board cannot be read or written because it is password protected

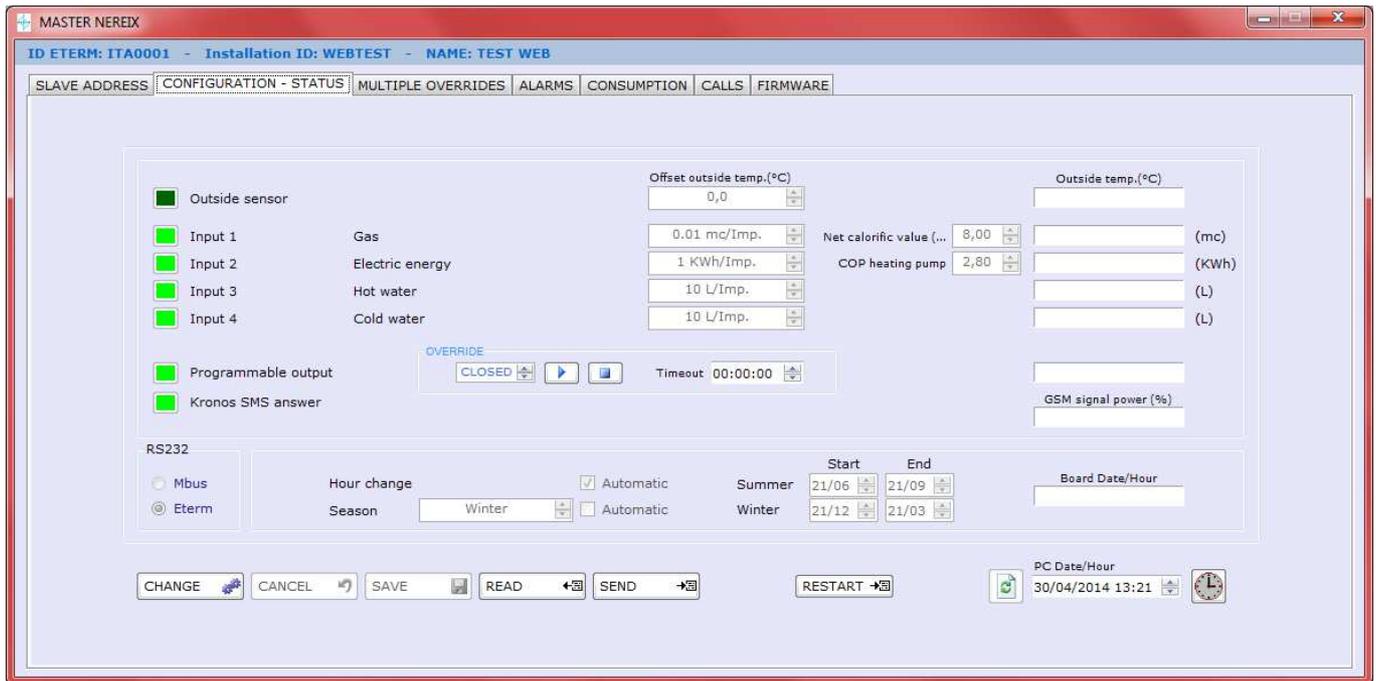


By pressing this key, all the master and slave configurations are read and saved on the database.



It allows you to export in an Excel table the data inside the routing grid.

CONFIGURATION / NEREIX MASTER STATUS



MN 03

External Probe:

Press this button to enable the external probe connected to the Nereix Master.

In the corresponding box on the right will appear the value read or the error message for probe "open" or "short".

External temperature offset:

It allows you to correct the value detected by the probe, by +/- 10 °K, to compensate the errors generated by the connection cable and by the physical position of the probe.

Configuration pulse inputs 1/2/3/4:

Press the buttons to enable the pulses counters

The inputs are provided for:

- Input 1 = Gas counter; you can configure the following items:

- Pulse value
- Calorific power

- Input 2 = Electric energy counter (heat pump / chiller); you can configure the following items:

- Pulse value
- Performance (heat pump)

- Input 3 = Hot Water

you can configure the following items:

- Pulse value

- Input 4 = Cold Water

- Pulse value

RS232 (not editable):

Serial output setting:

Mbus: the serial port communicates following the MBus standard

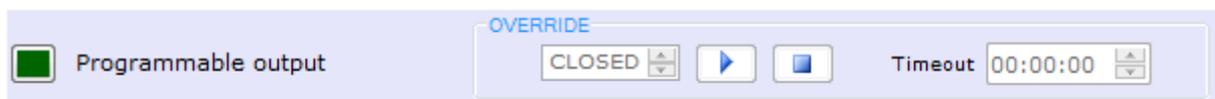
eterm: the serial port communicates with the eterm protocol

Programmable output:

Press the button to enable the programmable output 1; if there is a heating request or cleaning request from at least one Slave, the output will be activated (the contact will be closed).

After reading the status, the corresponding box on the right indicates the status of the programmable output (open/closed)

The output can be overriding while opening or closing by setting a period of time (TIMEOUT) for the overriding.



ICI Kronos response SMS:

Press the button to send an SMS, from the Master board, to confirm that an SMS command was correctly performed.

SMS signal power (%):

It represent the power of the signal available at the plant modem.

Season:

You can set the season in progress (summer – winter – intermediate) or you can activate the automatic function by setting the beginning and the end for winter and summer.

Hour change	<input type="checkbox"/> Automatic	Summer	Start 21/06	End 21/09
Season	<input type="checkbox"/> Automatic	Winter	21/12	21/03

DATE TIME


PC Date/Hour


14/10/2013 17:03

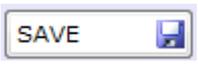
In the PC Date/Time box is displayed the current time that can be locked and corrected clicking on the digits and using the arrows on the right.

To return to current Date and Time of the PC press 

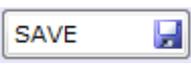
To send to the Nereix Master the Date and Time displayed in the box press 

 Allows you to modify the settings.

 Allows you to cancel the modifications before sending them.

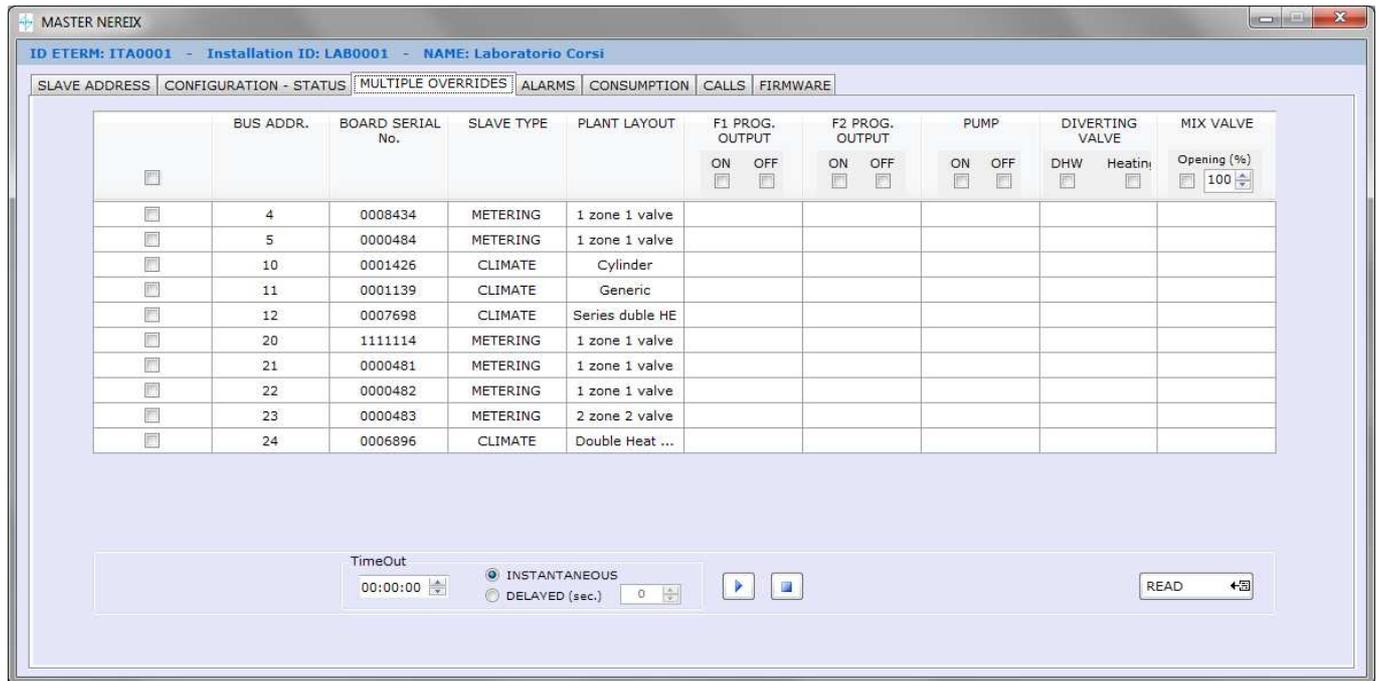
 Allows you to save the modifications without sending them to the Master.

 Allows you to read the inputs status, date and time of the settings; to save the data read

to the database press 

 Allows you to send new settings to the Master board

MULTIPLE OVERRIDING



MN 04

Allows you to read the status by pressing the key  and to force one or more slaves at the same time.

In order to perform the forcing:

- Select the slaves to be overriding (you can use the keys SELECT / DESELECT ALL;
- Select the command to be performed.
- Set the TIMEOUT (time after which the forcing stops)
- Establish whether you want a delay between the forcing of the first module and the following ones by checking the option DELAYED, the forcing takes place in the Slave address order
- Set the forcing delay expressed in seconds.

- Activate the forcing by pressing 

You can deactivate the forcing before the TIMEOUT elapses by pressing  .

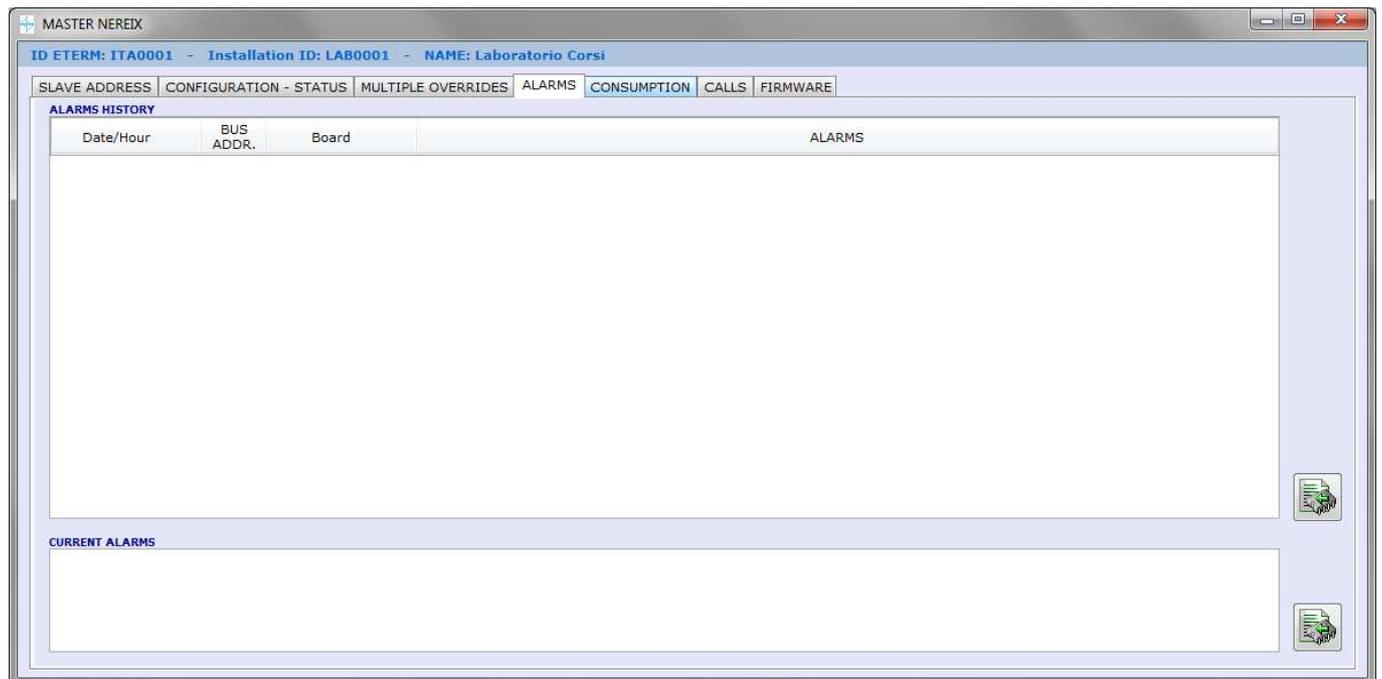
ALARMS

Each detected alarm, on any Nereix board of the plant, is saved on the Master unit. By pressing the button  next to the table "ALARMS HISTORY" all alarms identified after the last reading will be added to the PC Database.

By pressing the button  next to the table "ALARMS IN PROGRESS". all the alarms on the different boards of the plant will be displayed.

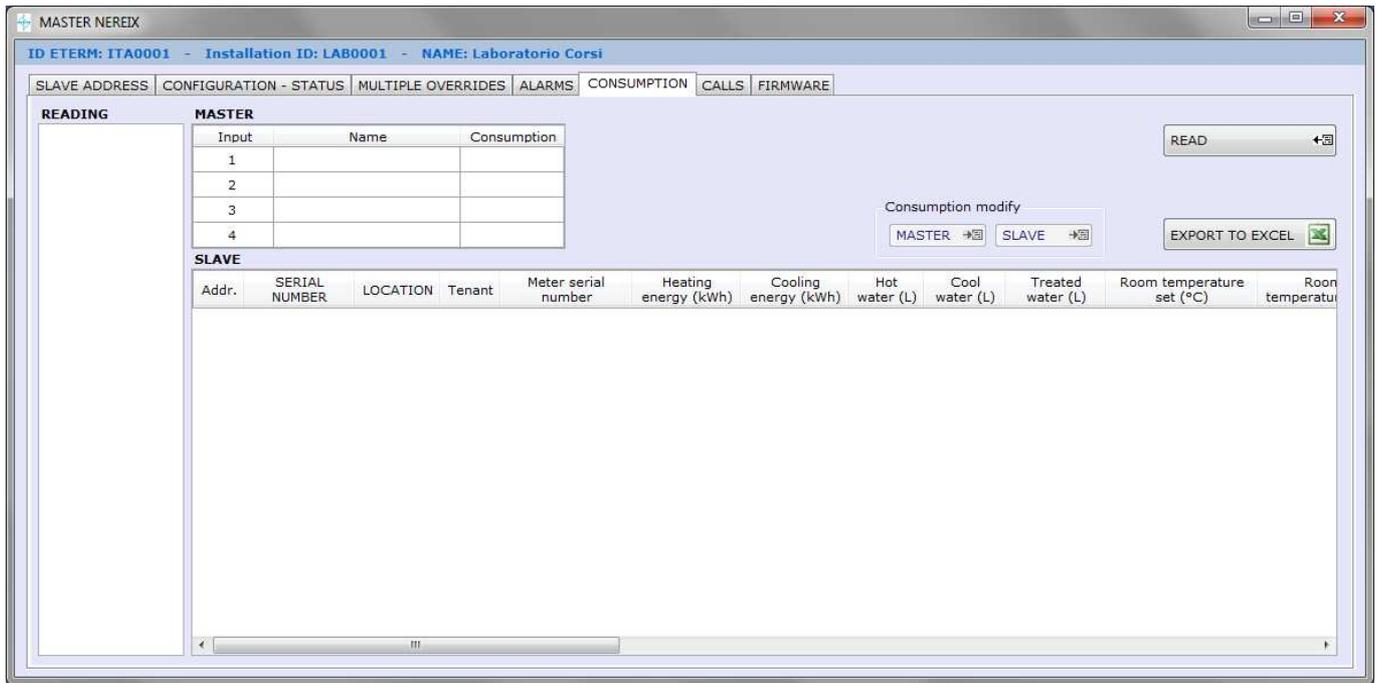
The Master board updates the status of the alarms in progress or of the ones stopped each 60 minutes as well as in case of restart after a shut-down. As a consequence, in this window can be displayed passed alarms that cannot be tracked reading directly the concerned Slave.

This window does not display any boiler boards and/or plant management error messages.



MN 05

CONSUMPTIONS

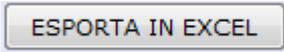


MN 06

This window displays the last reading, the energy consumptions are not displayed.



Instantly reads the consumptions of all present Slaves and saves them in the database.



It generates the file .xls with the consumptions data.

CHANGE CONSUMPTIONS AND TIME



It enables the alignment mode for the Slave consumptions and the heating / cleaning times. The reading on volumetric counters may differ from that electronically memorised if consumptions occurred while equipments were turned off or not configured. After pressing the button, the fields in Slave table that can be modified are highlighted. Perform the modifications and press again the key to save to modifications on Slave; a confirmation will be requested.



It enables the Master consumptions alignment mode. After pressing the button, the fields in Master table that can be modified are highlighted. Perform the modifications and press again the key to save to modifications on Master; a confirmation will be requested.

DESCRIPTION OF THE COLUMNS OF THE CONSUMPTIONS TABLE

Add.: Slave bus address (from 001 to 250)

Serial number: Serial number of electronic slave card

Location: Description of the physical installation place (for example interior number, floor, staircase, etc.)

Tenant: Name of the tenant

Calorimeter series no.: Serial number of the first calorimeter connected to the Slave

2° calorimeter serial number: Serial number of the second calorimeter connected to the Slave

En. Heat. (KWh): Heating energy detected by the calorimeter **(not displayed)**

En. Cool. (KWh): Cooling energy detected by the calorimeter **(not displayed)**

Hot water (L): Consumption in litres from the counter connected to input 1

Cold water (L): Consumption in litres from the counter connected to input 2

Treated water (L): Consumption in litres from the counter connected to input 3

Heat. Time (hh:mm): Overall heating operation time

DHW Time (hh:mm): Overall domestic operation time

Temp. ext. (°C) temperature detected by the external probe

Mixing valve opening (%): Opening percentage of the mixing valve

Set.Heat.Flow.Temp (°C) Setpoint of flow (heating or cooling circuit)

Act.Heat.Flow.Temp (°C) Actual flow temperature (heating or cooling circuit)

Prim.Flow.Temp (°C) Flow temperature of primary circuit - read by the calorimeter

Prim.Return.Temp. (°C) Return temperature of primary circuit - read by the calorimeter

Inst. Flow rate (L/h): Instant flow rate read by the calorimeter

Total Flow (L): Total flow read by the calorimeter

Power (kW): Power calculated by the calorimeter

Set Temp. Zone 1 (°C) Set environment temperature (only if Kronos present)

Actual Temp. Zone 1 (°C) Set environment temperature (only if Kronos present)

TA1 Status: Status of room thermostat zone 1 (ON / OFF)

Kronos Cycle Zone 1: ON / OFF (only if ICI Kronos present)

Set Temp. Zone 2 (°C) Set environment temperature (only if Kronos present)

Actual Temp. Zone 2 (°C) Set environment temperature (only if Kronos present)

TA2 Status: Status of room thermostat zone 2 (ON / OFF)

Kronos Cycle Zone 5: ON / OFF (only if ICI Kronos present)

Season: Summer / Winter / Intermediate

Code of the Alarms in progress: Presence or absence of alarms and their codes.

CALLS

Each operation performed is stored in the installation database.

The window displays the operations performed on the plant ordered by date.

The direct and remote (Type) calls are specifically identified and for the remote ones is also displayed the duration of the call.

Date/Hour	Run time (hours/min./sec.)	Slave	Type	Description
26/09/2013 13:12:29			GSM	Writing Slave Address
26/09/2013 13:12:52			GSM	Updating database
26/09/2013 13:13:12			GSM	Updating database
26/09/2013 13:13:22		(1:0)	GSM	Read Slave Address
26/09/2013 13:13:41		(1:0)	GSM	Writing Slave Address
26/09/2013 13:14:01		(2:0)	GSM	Read Slave Address
26/09/2013 13:14:04		(2:0)	GSM	Writing Slave Address
26/09/2013 13:14:21		(3:0)	GSM	Read Slave Address
26/09/2013 13:14:24		(3:0)	GSM	Writing Slave Address
26/09/2013 13:15:13			GSM	Updating database
26/09/2013 13:16:17			GSM	Writing-General
26/09/2013 13:16:44		(1:0)	GSM	General Reading
26/09/2013 13:17:08			GSM	General Reading

MN 07

FIRMWARE

MN 08

The window allows you to send firmware updates to all the boards of the plant.

On first level bus:

Clima and Metering Slave, ICI Kronos, Meter Bus Centralizer, Boiler and Plant Management Board

On second level bus:

Plant and Boiler Management Board.

Using the keys  /  you can select / deselect all the boards in the suggested lists for first and second level.

The window suggests the firmware loaded with the software or with subsequent updates.

13 SLAVE COMMUNICATION

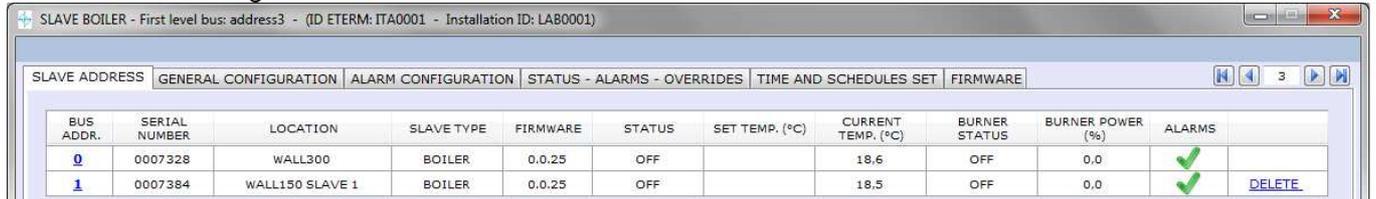
CONNECTION VIA MASTER

Nereix Master Routing



MN 01

Boiler Master Routing

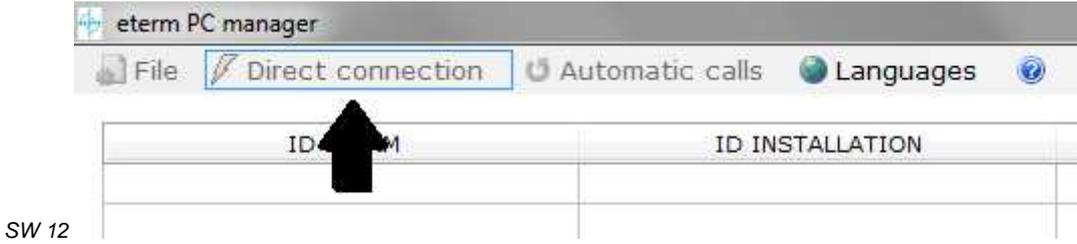


SGC 01

The slave can be accessed by clicking on the number corresponding to the bus address. For slave of the same type you can pass from one address to another by using the cursor in the lower side of the configuration windows. The slave communication is interrupted and it has a password different from that inserted in the master with which it communicates.

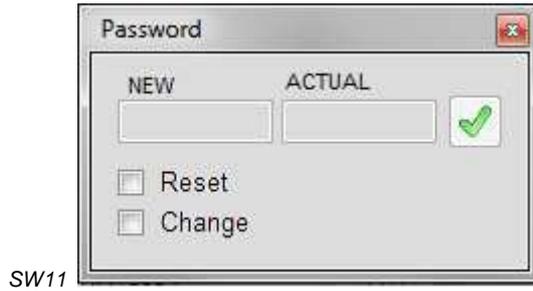
SLAVE DIRRECT CONNECTION

By pressing the "Direct connection" button the user will be requested to connect the slave via USB and to press OK



After performing the connection, if the board contains a password, the user must enter it, having the possibility to change and reset it.

In order to reset or change the password you must correctly enter the current one.



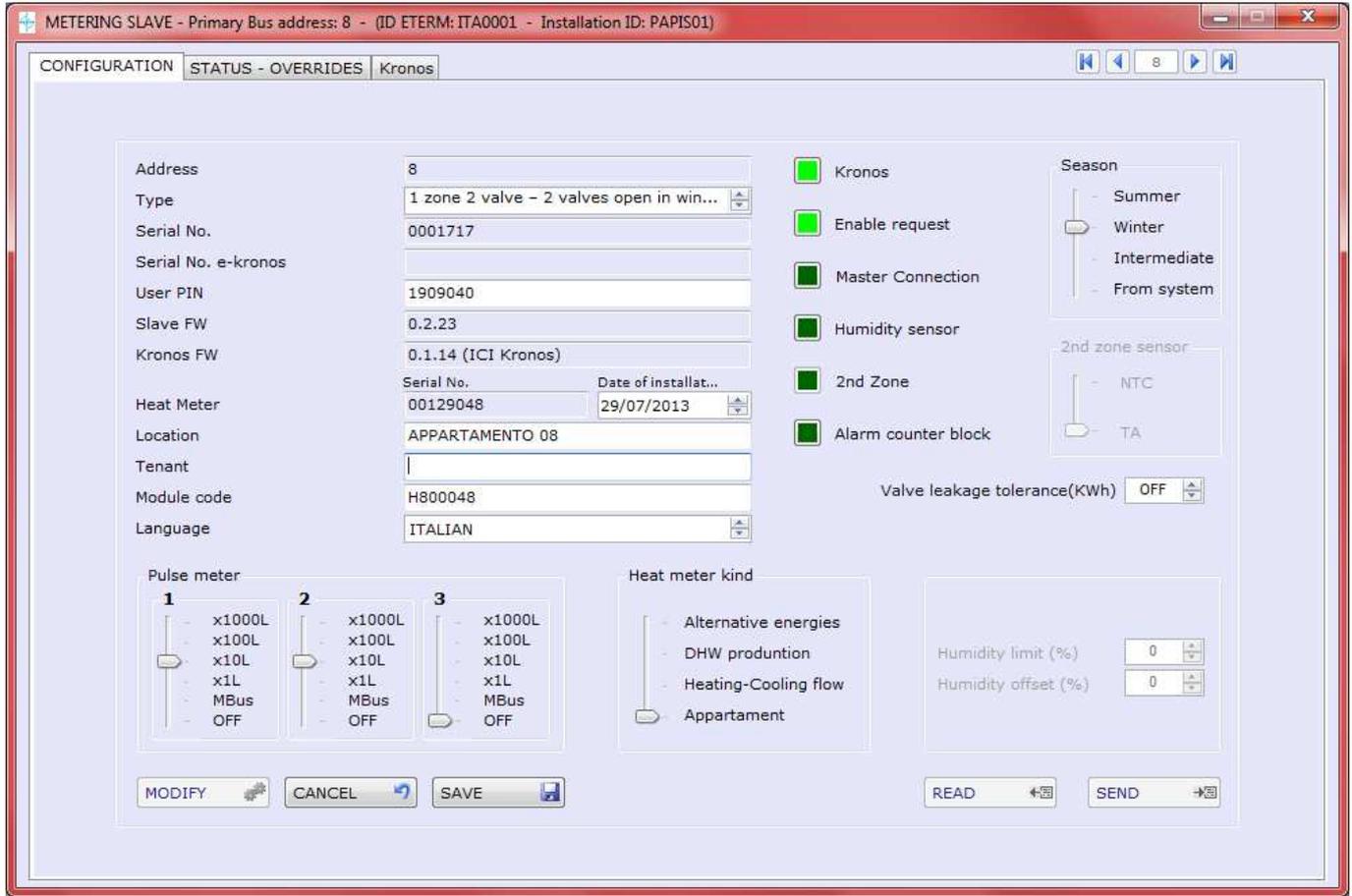
If there is no set password, the configuration window will open automatically. set/ reset/ password change window.

After the password check, the specific configuration window for the connected slave will open. By removing the USB, the window will close.

If the software checks that the serial number of the detected board belongs to one of the existing database, the database itself will be updated if the board configuration is changed.

14 METERING SLAVE

CONFIGURATION



CO 01

This window allows you to read and set configuration parameters.

The same configuration can be sent to more than one board in the network, without the fields that belong to the individual enabled unit (PIN User - Location - Tenant name - Notes).

The configuration is stored in the database.

The cursor in the lower side "SLAVE ADDRESS" (not available for slave direct communication) allows you to access the Slave to be read / modified (as an alternative you can enter the number of the Slave directly in the white box next to the selector).

Address: Bus address assigned to the Slave (see Master configuration).

Type: Factory set parameter based on the type of module, to be checked and eventually modified if the electronic board is replaced.

Based on the "Type" the module operating logic changes:

Type1: Modules 1 zone 1 valve

Module with single double effect valve (opening command – F1 and closing command – F2).

With traditional thermostat (contact NO):

The opening / closing depends on the command sent to the TA contact.

The operation does not depend on the season.

With ICI Kronos (CB928) or e-kronos (CB1137)

The valve opening occurs when commanding the kronos if the TA is closed.

Type 2: Modules 2 zones 2 valves

Module with one / two single effect valves (opening command with voltage on F1/F2 and closing without voltage).

Management 2 zones with traditional thermostats (contact NO):

The TA closing generates the opening of the valve zone 1 (phase on F1)

The NTC closing generates the opening of the valve zone 2 (phase on F2) independently from TA

The functioning of both the areas does not depend on the season.

With e-kronos (code CB1137)

Enable Kronos, Zone 2 and input NTC for zone 2;

Connect the environment probe for zone 2 to NTC input.

e-kronos will open the valve Zone 1 (phase on F1) or Zone 2 (phase on F2) depending on the settings performed and the temperatures read: Zone 1 e-kronos – Zone 2 NTC probe

Attention: model “ICI Kronos” code CB928 does not manage Zone 2.

Closing the TA contact is a mandatory condition for the e-kronos requests to be taken into consideration (both for Zone 1 and for Zone 2).

With ICI Kronos (CB928) or e-kronos (CB1137) on zone 1 and traditional thermostat (contact NO) on zone 2:

Enable Kronos, Zone 2 and input TA for zone 2;

Connect the environment thermostat (contact NO) for zone 2 to NTC input.

ICI Kronos or e-kronos will open the valve Zone 1 (phase on F1) based on its setting and the temperature read if the TA is closed.

The NTC closing generates the opening of the valve zone 2 (phase on F2) independently from the season and the status of the TA

Type 3: Modules 1 zone 2 valves – 2 opened valves during winter

Module with two single-effect valves (command for opening with voltage on F1/F2 and closing without voltage) for the management of a single area with fan coils (valve on F1) and radiators (valve on F2).

The consent for heat or cold provision is given by the closing of the TA contact with an environment thermostat (clean contact) or by ICI Kronos or e-kronos only if the TA contact is closed.

During winter the heat request generates the opening of both valves (activation of F1 and F2 contacts).

During summer the cooling request generates the opening of the fan coils valve (activation output F1).

If the NTC contact is closed (for example by a limit thermostat) the output F1 (delivery fan coils) is disabled regardless the season and the request.

In the intermediate season, without Kronos, the TA request is not taken into consideration.

Type 4: Modules 1 zone 2 valves – 1 opened valve during winter

Similar to Type 3 except for winter, on heating request, is activated only output F2 (radiators) instead of both outputs.

Type 5: Modules 1 zone 1 valve – dehumidifier output

Module with one single effect valve (opening command with voltage on F1 and closing without voltage) and with under voltage output for dehumidifier activation (F2).

The consent for heat or cold provision is given by the closing of the TA contact with an environment thermostat (clean contact) or by ICI Kronos or e-kronos (only if the TA contact is closed).

In the presence of the humidity sensor the output F2 is enabled above the set “humidity limit”.

The output is disabled when the humidity drops below 3 % with regards to the set limit.

The operation does not depend on the season.

Serial number: Read only field representing the serial number of the connected Slave board.

PIN User: Code necessary for sending, via SMS, some commands to the Slav unit (see *relative chapter*) and to use reading WEB services.

By inserting the name of the tenant and the location, the code will be automatically generated, but it can be manually modified. In the same “eterm installation” there cannot be two identical codes; the system automatically rejects the insertion of a copy.

Slave Firmware Version: Read only field representing the firmware loaded in the connected Slave board.

ICI Kronos Firmware Version: Read only field representing the firmware loaded in the ICI Kronos (environment unit) eventually connected to the Slave.

Calorimeter

Serial number: Read only field, representing the serial number of the calorimeter connected to the Slave.

Installation date Calorimeter start-up date.

Location: Description of the physical installation place (for example interior number, floor, staircase, etc.)

Tenant name: Free field.

Notes: Free field.

Language: Setting that affects the ICI Kronos (if present)

Enabling - Kronos: Activate this button when an ICI Kronos is connected (if the function is activated and the ICI Kronos device is not connected, an alarm will be triggered).

Enabling – e-kronos: Activate this button when an ICI Kronos is connected (if the function is activated and the e-kronos device is not connected, an alarm will be triggered).

Anti-locking (sec.): Anti-locking function direction – from 1 to 250 sec. - OFF = function disabled.

Enabling – Humidity sensor: Activate this button when a corresponding humidity sensor is connected:

- Remote humidity sensor
- HIDRO Kronos
- e-kronos H

Humidity threshold: Threshold used if the slave is set as “Type 5”

Humidity offset: Correction of the value read by the relative humidity probe.

Heat counter type:

The identified consumption data are managed by the acquiring systems based on the type set.

Counters with pulses 1-2-3: allow you to enable the reading of the volumetric counters connected to the pulses inputs or of the MBus calorimeter

Season selector: it allows switching in summer – winter – OFF – from system:

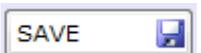
- Summer = heating requests excluded – cooling requests active (with ICI Kronos)
- Winter = heating requests active – cooling requests excluded (with ICI Kronos)
- OFF = heating requests – cooling excluded
- From system = The season cannot be modified from ICI Kronos



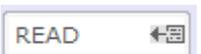
Allows you to modify the settings.



Allows you to cancel the modifications before sending them.

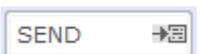
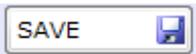


Allows you to save the modified settings on the database

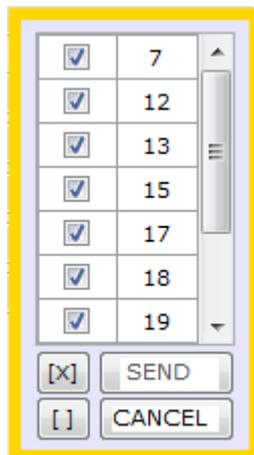


Allows you to read the status of the inputs and settings (without saving them on the PC) to

save them press

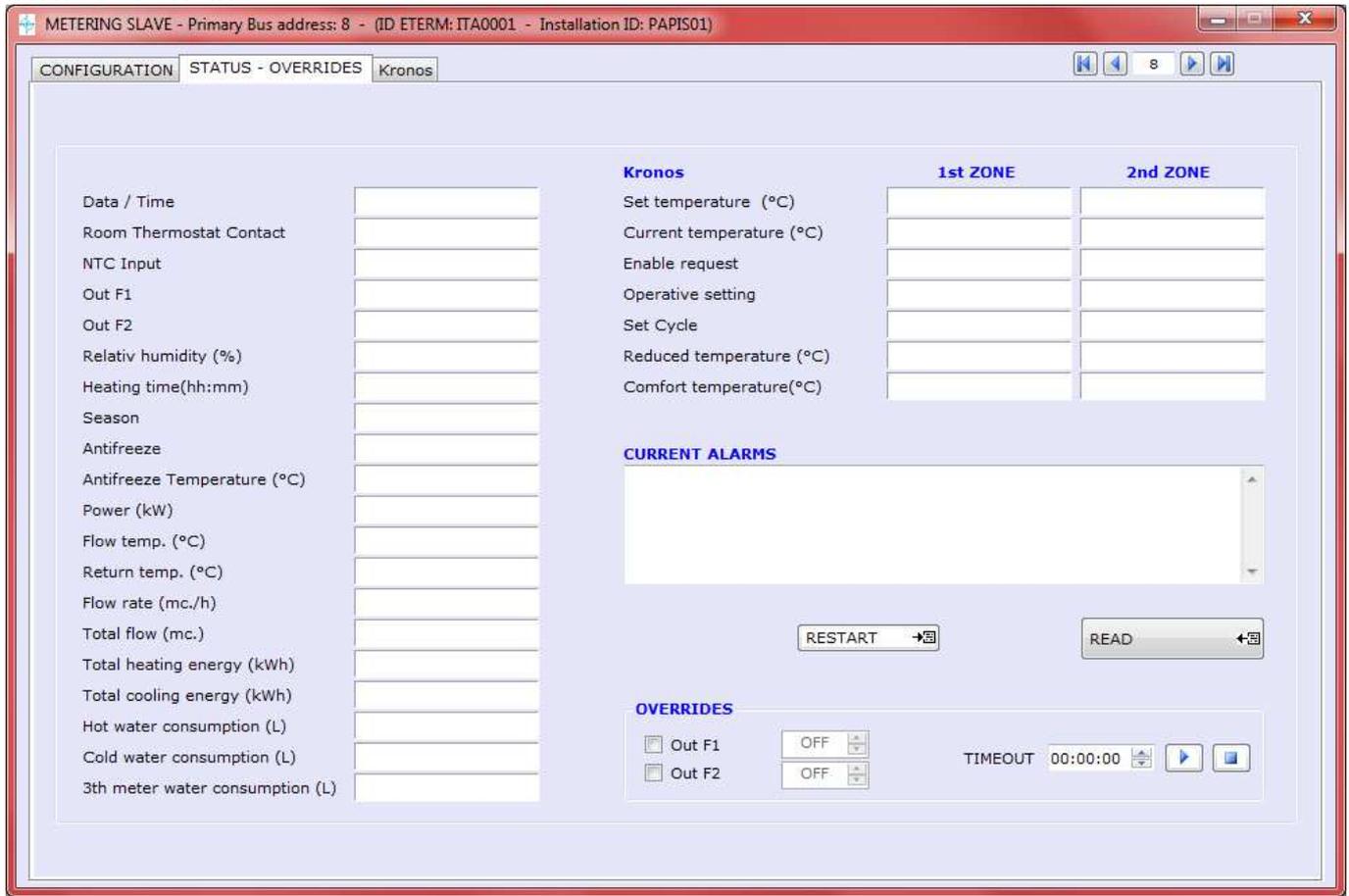


Allows you the new settings to the ICI Kronos; the user must select the parameters to be sent and the slaves to which they must be sent besides those on which the user operates:



CO 03

STATUS - FORCING



CO 02

This window allows you to view the alarms present and the status parameters of the metering slave.

TA Contact: It can be Opened or Closed.

NTC Input: It can be Opened or Closed or it can signal the temperature detected by a NTC probe.

Output F1: It can be ON or OFF

Output F2: It can be ON or OFF

Relative humidity: Value read by the probe (optional)

Heating time (min.): Heat provision time counter

Power (KW): Power calculated by the calorimeter.

Delivery Temp. (°C): Delivery temperature detected by the calorimeter.

Return Temp. (°C): Return temperature detected by the calorimeter.

Instantaneous capacity (L/h): Capacity detected by the calorimeter.

Total capacity (L): Capacity detected by the calorimeter.

Total heat. energy: (KWh): Heating energy detected by the calorimeter **(not displayed)**

Total cool. energy: (KWh): Cooling energy detected by the calorimeter **(not displayed)**

Hot water consumption (L): Consumption in litres read by the counter connected to input 1

Cold water consumption (L): Consumption in litres read by the counter connected to input 2

Water consumption 3 (L): Consumption in litres read by the counter connected to input 3

Actual temperature zone 1/2: Temperature read by Kronos (if present)

Requested temperature zone 1/2: Temperature requested by Kronos (if present)

ALARMS PRESENT: Here are described the alarms active on the selected Slave unit.

FORCING PANEL

It allows you to force the zone valve using an ON/OFF selector.

TIMEOUT: before starting the forcing, by pressing , you must set the duration (hours-minutes and seconds)

the forcing can be deactivated before the set time by pressing .

ICI Kronos / e-kronos

METERING SLAVE - Primary Bus address: 8 - (ID ETERM: ITA0001 - Installation ID: PAPIS01)

CONFIGURATION STATUS - OVERRIDES Kronos

General

Visual mode: OFF

Antifreeze set point (°C): OFF

Limits enable: Winter OFF, Summer OFF

Comfort Limit (°C): Winter 30,0, Summer 15,0

Reduced Limit (°C): Winter 30,0, Summer 15,0

1st zone

Operative setting: OFF

Manual Temp.(°C): 19,5

Comfort Temp.(°C): Winter 20,0, Summer 24,0

Reduced Temp.(°C): Winter 18,0, Summer 26,0

Sensor Offset (K): 0,0

MODIFY CANCEL SAVE READ SEND

PROGRAM 1

Monday to Sunday

0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

READ PROGRAMS READ LIMITS WRITE PROGRAMS WRITE LIMITS + PROGRAMS

KR 01

e-kronos

CLIMA SLAVE - Primary Bus address: 2 - (ID ETERM: ITA0001 - Installation ID: WEBTEST)

CONFIGURAZIONE STATO - FORZATURE Kronos

General

Visual mode: OFF

Antifreeze Temp.(°C): OFF

Limits enable: Winter OFF, Summer OFF

Comfort Limit (°C): Winter 40,0, Summer 7,0

Reduced Limit (°C): Winter 40,0, Summer 7,0

Zone 1

Operative setting: Manual

Manual Temp. (°C): 22,0

Comfort Temp. (°C): Winter 20,0, Summer 20,0

Reduced Temp. (°C): Winter 16,0, Summer 25,0

Sensor Offset (K): 0,0

Zone 2

Operative setting: Manual

Manual Temp. (°C): 22,0

Comfort Temp. (°C): Winter 20,0, Summer 25,0

Reduced Temp. (°C): Winter 16,0, Summer 30,0

Sensor Offset (K): 0,0

MODIFY CLEAR SAVE READ SEND

Schedule 1

Monday to Sunday

0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

Schedule 2

Monday to Sunday

19 OFF

READ PROGRAMS READ LIMITS WRITE PROGRAMS WRITE LIMITS + PROGRAMS

KR 02

The window Kronos or KRONOS is available if the devices are enabled in the CONFIGURATION window.

CONTENTS

VISUAL MODE: If selecting "ON", the ICI Kronos unit is switched on Visual mode (see ICI Kronos manual)

Enabling Zone 2 (only e-kronos): If selecting "ON" the parameters in zone 2 can be set

Time Sched. from ICI Kronos – Winter / Summer:

If selecting "OFF" the user will not be able to:

- Change the schedule unless lowering the temperature fixed on the PC:
 - o If set on Comfort the user can choose between Reduced or OFF.
 - o If set on Reduced the user can choose only OFF.
 - o If set on OFF the user cannot choose any other setting
- Switch ICI Kronos on Manual

Comfort Limit (°C): Maximum temperature set by the user for operation in Comfort mode

Reduced Limit (°C): Maximum temperature set by the user for operation in Reduced mode

Manual Limit (°C): Maximum temperature set by the user for operation in Manual mode

CONFIGURATION / READING STATUS ZONE 1/2 (only e-kronos)

Automatic Selector - Manual - OFF

The Manual function cannot be set if time scheduling is disabled by ICI Kronos.

Actual Temp. (°C): Value read by ICI Kronos or by NTC probe

Activation request: It indicates if for the zone is active a heating / cooling request

Relative humidity (%): Value read by a humidity probe

SETTINGS

Manual Temp. (°C) * – Winter / Summer: Temperature set point in manual operation mode

Reduced Temp. (°C) * – Winter / Summer: Temperature set point in reduced operation mode

Comfort Temp. (°C) * – Winter / Summer: Temperature set point in comfort operation mode

Anti-freeze Temp. (°C) * : Anti-freeze temperature set point - below 0°C the function is disabled (OFF)

NB: If the ICI Kronos is in VISUAL version the inserted data have no effect.

Schedule ZONE 1 – ZONE 2 (only e-kronos):

It allows you to set a schedule that can be sent to the slaves using the appropriate command.

In order to set / change a program press key  and place the cursor in period of time to be changed.

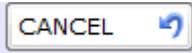
By clicking this range of time you can set for it one of these 3 modes:

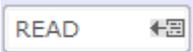
OFF = panel empty

Reduced = half panel

Comfort = full panel

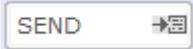
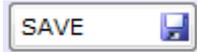
 Allows you to modify the settings.

 Allows you to cancel the modifications before sending them.

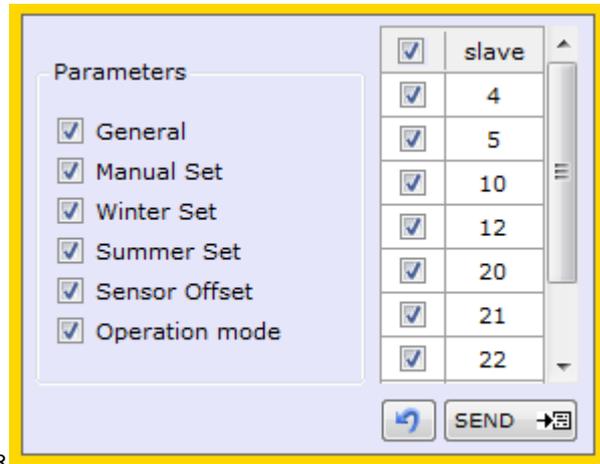


Allows you to read the status of the inputs and settings (without saving them on the PC) to

save them press



Allows you to send the new saved settings to the ICI Kronos; the user must select the parameters to be sent and the slaves to which they must be sent besides those on which the user operates:



KR 03

TIME PROGRAMS AND LIMITS

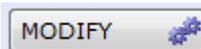
Schedules and limits can be read and set using the buttons below the window "Kronos"

WARNING: The schedules and limits are not saved in the database.

FIRMWARE

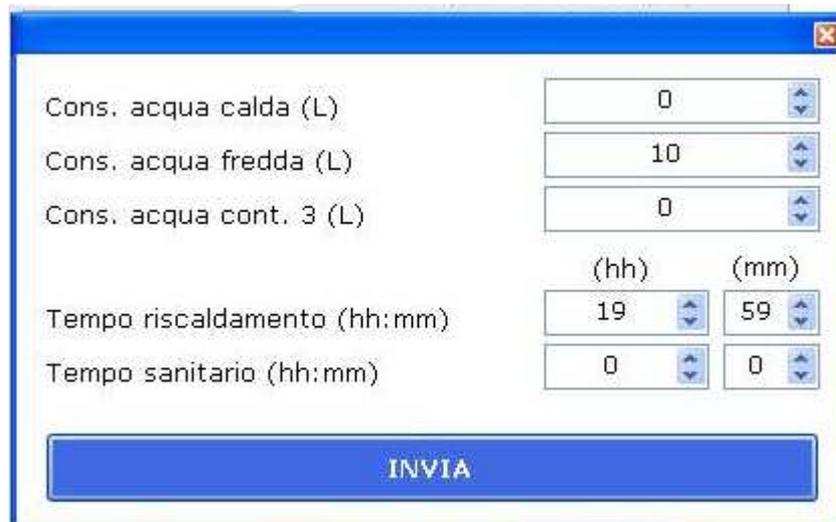
The window is available only for "Direct connection" and allows you to send the firmware.

CHANGE CONSUMPTION AND TIMES WITH DIRECT CONNECTION



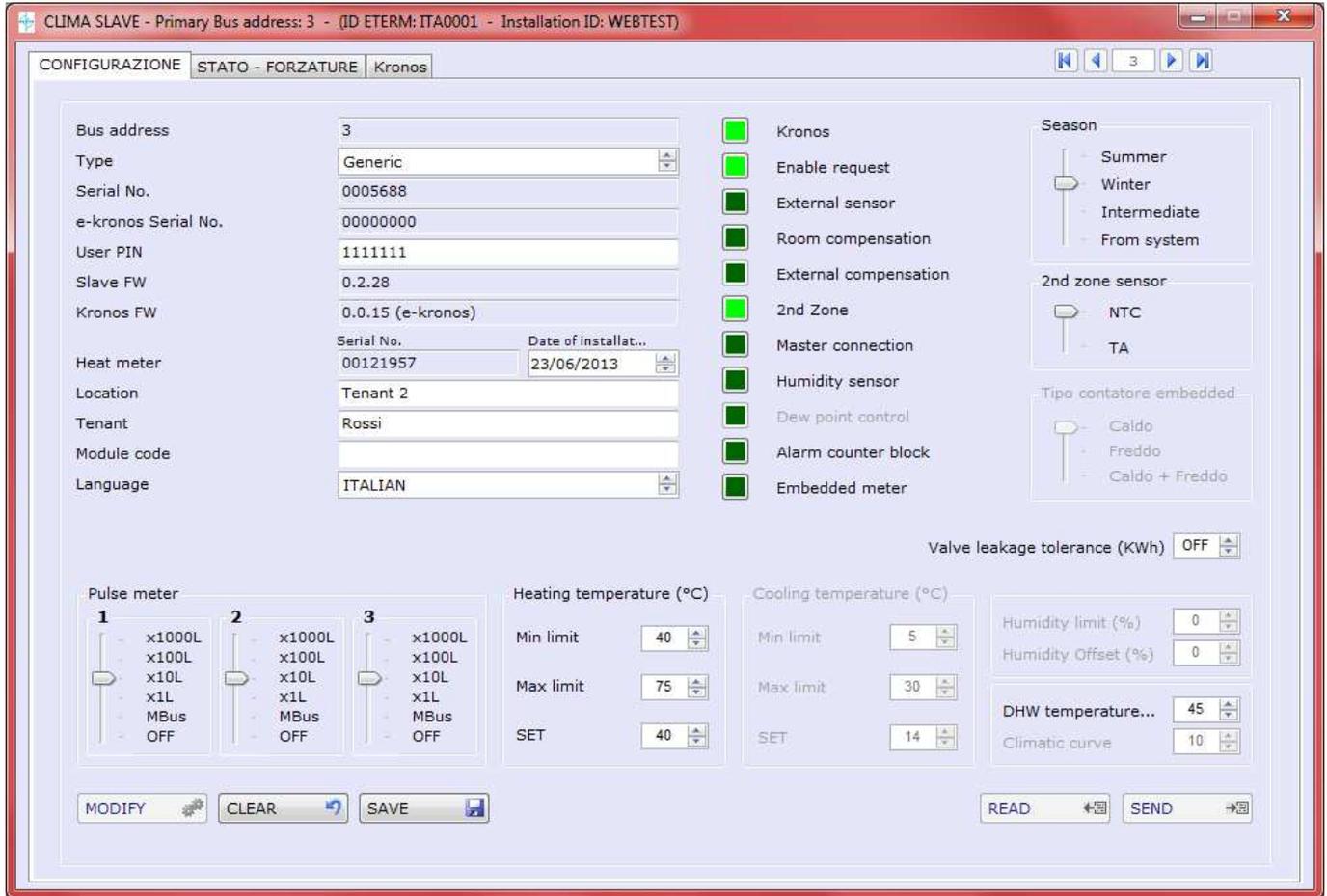
With direct connection, in the window is showed this button

Pressing the button a box will be presented with the opportunity to enter new values for the volumetric flow meters and counter heating time:



15 CLIMA SLAVE

CLIMA SLAVE CONFIGURATION



CL 01

This window allows the reading of the configuration parameters of the Clima slave.

The same configuration can be sent to more than one Clima slave in the network, without the fields that belong to the individual enabled unit (PIN User - Location - Tenant name - Notes). The configuration is stored in the database.

The cursor in the lower side "SLAVE ADDRESS" (not available for slave direct communication) allows you to access the Slave to be read / modified (as an alternative you can enter the number of the Slave directly in the white box next to the selector).

Address: Bus address assigned to the Slave (see Master configuration).

Type: It represents the type of NEREIX CLIMA on which the board is installed (general, with boiler, for floor plants, etc.) to set this parameter please consult the manual of the installed NEREIX user module).

Serial number: Read only field representing the serial number of the connected Slave board.

PIN User: Code necessary for sending, via SMS, some commands to the Slav unit (see *relative chapter*) and to use reading WEB services.

By inserting the name of the tenant and the location, the code will be automatically generated, but it can be manually modified. In the same "eterm installation" there cannot be two identical codes; the system automatically rejects the insertion of a copy.

Slave Firmware Version: Read only field representing the firmware loaded in the connected Slave board.

ICI Kronos Firmware Version: Read only field representing the firmware loaded in the ICI Kronos (environment unit) eventually connected to the Slave.

Calorimeter

Serial number: Read only field, representing the serial number of the calorimeter connected to the Slave.

If there are two calorimeter the second serial number appear in the same box, separated by a minus sign

Installation date Calorimeter start-up date.

Location: Description of the physical installation place (for example interior number, floor, staircase, etc.)

Tenant name: Free field.

Module code: Free field.

Language: Setting that takes effect on the Kronos and on the module display

Requests enabling: Press the button and activate YES for the heating and hot water requests to be met by the NEREIX user module

Enabling – Kronos: Activate this button when an ICI Kronos is connected (if the function is activated and the ICI Kronos device is not connected, an alarm will be triggered).

Enabling – External probe: Enabling of the input of an external probe (if any) on the slave board; if the function is enabled and the probe is missing or is damaged, the anomaly will be signalled.

Enabling – Comp. T environment: Press the button and activate YES to enable the compensation of the delivery temperature based on the environment temperature (only if ICI Kronos present)

Enabling – Comp. T external: Press the button and activate YES to enable the compensation of the delivery temperature based on the external temperature (only if external probe present on Slave or Master)

Enabling – Humidity sensor: Activate this button when a corresponding humidity sensor is connected:

Dew point control: By activating this function, in the presence of the humidity sensor, the cooling delivery temperature will not drop below the dew point.

Alarme counter block: By activating this function, a check is performed automatically based on the logic of the operation of the module that generates an alarm in case the meter is locked

Embedded meter: Enabling this feature will have the following effects :

- The external sensor input will be associated with the primary flow sensor
- The inlet probe second zone will be associated with the primary return sensor
- The entry will be associated with the third flow meter flow meter of the primary fluid
- The entry will be unused MBus
- The value of the third counter is always 0 regardless of the input configuration, the flow rate will in fact receive data between the calorie counter.

Season selector: it allows switching in summer – winter – OFF – from system:

- Summer = heating requests excluded – cooling requests active (with ICI Kronos)
- Winter = heating requests active – cooling requests excluded (with ICI Kronos)
- OFF = heating requests – cooling excluded
- From system = The season cannot be modified from ICI Kronos

Probe selector Zone 2: If the module provides two zones you can set the type of sensor used in the environment (NTC/TA) for Zone 2.

Pulses counters 1-2-3: pulses counters enabling; each counter can be configured to pulse every 1000, 100, 10 or 1 liter.

In the case of pulse inputs calorie counter you can select the MBus option. In this case, the pulses will also be saved in the same counts calories..

SET - Hot water temperature (°C): Set the temperature of the hot water

SET – Hot water limit temperature (°C): Set the limit temperature of the hot water

SET – Climatic curve: Set the climatic curve (see graphic in the user module manual)

Heating temperature (°C) – Minimum limit: Minimum delivery temperature that can be set by the user.
If the delivery compensation is set based on the internal and/or external temperature, the calculated delivery temperature will not drop below the temperature set in this field.

Heating temperature (°C) – Maximum limit: Maximum delivery temperature that can be set by the user.
If the delivery compensation is set based on the internal and/or external temperature, the calculated delivery temperature will not rise above the temperature set in this field.

Heating temperature (°C) – SET: Value of the requested delivery temperature; the value can be changed by the user on the NEREIX user module and/or on ICI Kronos. This set will not be taken into consideration if the delivery compensation is set based on the internal and/or external temperature.

Cooling temperature (°C) – Minimum limit: Minimum delivery temperature that can be set by the user.
If the delivery compensation is set based on the internal and/or external temperature, the calculated delivery temperature will not drop below the temperature set in this field.
If the dew point check provided, the delivery temperature will not drop below the dew point calculated based on the relative humidity read by the appropriate probe.

Cooling temperature (°C) – Maximum limit: Maximum delivery temperature that can be set by the user.
If the delivery compensation is set based on the internal and/or external temperature, the calculated delivery temperature will not rise above the temperature set in this field.

Cooling temperature (°C) – SET: Value of the requested delivery temperature; the value can be changed by the user on the NEREIX user module and/or on ICI Kronos. This set will not be taken into consideration if the delivery compensation is set based on the internal and/or external temperature.
The actual delivery temperature can be greater than the SET one if established so by the dew point check.

Humidity threshold: Threshold used if intended by the “Type” set for the slave

STATUS – CLIMA SLAVE FORCING

CLIMA SLAVE - Primary Bus address: 3 - (ID ETERM: ITA0001 - Installation ID: WEBTEST)

CONFIGURAZIONE STATO - FORZATURE Kronos

Date / Hour
Power (kW)
Primary Flow Temp. (°C)
Primary Return Temp. (°C)
Heating temperature (°C)
DHW temperature (°C)
External temperature (°C)
Flow rate (mc./h)
Total flow rate (mc.)
Total heating energy (kWh)
Total cooling energy (kWh)
Season
Antifreeze Cycle
Antifreeze temperature (°C)
Hot water consumption (L)
Cold water consumption (L)
3th meter water consumption (L)
Mixing valve opening (%)
Divertin valve
Flow sensor
Pump
Programmable Out F1
Programmable Out F2
Relativ humidity (%)
Dew point (°C)
Heating time(hh:mm)
DHW duration (hh:mm)

Kronos

Room Thermostat contact
Set temperature (°C)
Current temperature (°C)
Enable
Operative setting
Set Cycle
Reduced set point (°C)
Comfort set point(°C)

1st ZONE

2nd ZONE

ACTIVE ALLARMS

OVERRIDES

Programmable Out F1
 Programmable Out F2
 Pump
 Diverting valve
 Mixing valve

OFF
OFF
OFF
HEATING
0

TIMEOUT 00:00:00

SENSOR CALIBRATION →
RESET EMBEDDED METER →
RESTART →

READ ←

CL 02

This window allows you to view the alarms present and the status parameters of the Clima slave.

Date / Hour: Displays the date and time of the displayed reading

Power (KW): Power calculated by the calorimeter.

Primary Flow Temp. (°C): Flow temperature detected by the calorimeter.

Primary Return Temp. (°C): Return temperature detected by the calorimeter.

Heating temperature (°C): Temperature detected by the heating probe.

DHW temperature (°C): Temperature detected by the hot water probe.

External temperature (°C): Temperature detected by the external probe (by system or by board).

Flow rate (L/h): Flow rate detected by the calorimeter.

Total flow rate (L): Total flow detected by the calorimeter.

Total heating energy: (KWh): Heating energy detected by the calorimeter **(not displayed)**

Total cooling energy: (KWh): Cooling energy detected by the calorimeter **(not displayed)**

Season: Season (Winter – Summer – Intermediate)

Antifreeze cycle: Indicates whether the antifreeze cycle is in progress or not

Antifreeze temperature (°C): Antifreeze cycle temperature

Hot water consumption (L): Consumption in litres read by the counter connected to input 1

Cold water consumption (L): Consumption in litres read by the counter connected to input 2

3th meter water consumption (L): Consumption in litres read by the counter connected to input 3

Mixing valve opening (%): Opening percentage of the mixing valve

Divertin valve: It can be Sanitary / Heating or Radiators / Dehumidifier for floor cooling plants with dehumidifier.

Flow sensor: It can be ON or OFF

Pump: It can be ON or OFF

Programmable Out F1: It can be ON or OFF

Programmable Out F2: It can be ON or OFF

Relative humidity (%): Value read by the probe (optional)

Dew point (°C): Value calculated according to the relative humidity read by the probe (optional)

Heating time (min.): Heat provision time counter

DHW duration (min.): Hot water provision time counter

Room Thermostat contact: Room Thermostat State, can be OPEN or CLOSED
Set Temperature (°C): Temperature setting on the Kronos
Current Temperature (°C): Temperature reading on the Kronos (1st ZONE) o sonda NTC (2nd ZONE)
Enable: Can be YES or NO. Depends on the Room Thermostat and Kronos
Operative setting: Can be: Automatic – Manual – OFF
Set Cycle: Can be: OFF – Comfort – Reduced
Reduced set point (°C): Reduced cycle programmed Temperature
Comfort set point (°C): Comfort cycle programmed Temperature

ALARMS PRESENT: Here are described the alarms active on the selected Slave unit.

FORCING PANEL

It allows selective forcing of:

- Output F1 (ON/OFF)
- Output F2 (ON/OFF)
- Pump (ON/OFF)
- Diverter valve (Sanitary / Heating or Radiators / Dehumidifier)
- Mixing valve (0-220 Pitches)

TIMEOUT: before starting the forcing, by pressing , you must set the duration (hours-minutes and seconds)

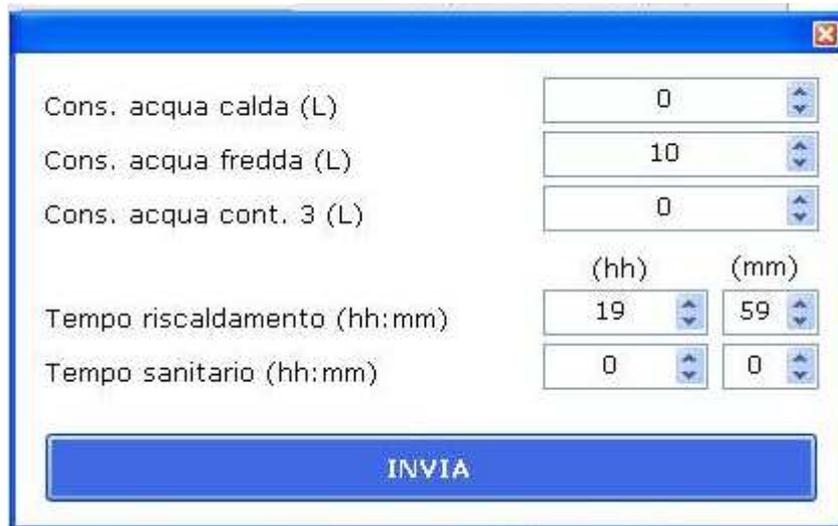
the forcing can be deactivated before the set time by pressing 

SENSOR CALIBRATION: This key is used to calibrate the sensors for flow and return in the case in which is used the function of "embedded meter". Press this button when it is assumed that the probes are at the same temperature.

RESET EMBEDDED METER: This button will reset all the data stored in the on board embedded meter

RESTART: Off and on the slave board

MODIFY: With direct connection, pressing the button a box will be presented with the opportunity to enter new values for the volumetric flow meters and counter heating time:



Cons. acqua calda (L)	0	
Cons. acqua fredda (L)	10	
Cons. acqua cont. 3 (L)	0	
	(hh)	(mm)
Tempo riscaldamento (hh:mm)	19	59
Tempo sanitario (hh:mm)	0	0

INVIA

ICI Kronos / e-kronos

See paragraph corresponding to Metering Slave

FIRMWARE

The window is available only for "Direct connection" and allows you to send the firmware.

MBUS CENTRALIZER SLAVE

Mbus calorimeter routing on centralizer: see master Nereix routing

SLAVE MBUS - Primary level Bus address33 - (ID ETERM: ITA0001 - Installation ID: LAB0001)

Bus address	33	Heating power(kW)	
User PIN	0000026	Cooling power (kW)	
Heat meter	00145372	Flow Temperature (°C)	
Location	QUNDO G21	Return Temperature (°C)	
Tenant name	CONTACALORIE 4	Flow rate (m3/h)	
Module code		Total flow (m3)	
Heat meter enables	<input checked="" type="checkbox"/>	Total heating energy (kWh)	
Heat meter kind	Appartement	Total cooling energy (kWh)	
		DHW consumption (L)	
		DCW consumption (L)	
		3th counter consumption (L)	

ACTIVE ALLARMS

MODIFY CANCEL SAVE READ SEND

AC 01

By opening the window regarding the Slave Centralizer, the following parameters / data will be displayed:

- Address
- PIN User
- Counter (serial number and installation date)
- Location
- Name of the tenant
- Notes
- Power (KW)
- Delivery Temp. (°C)
- Return Temp. (°C)
- Instantaneous capacity (m3/h)
- Total capacity (m3):
- Total heat. energy (kWh) **(not displayed)**
- Total cool. energy (kWh) **(not displayed)**
- Hot water consumption (L)
- Cold water consumption (L)
- Water consumption 3 (L)
- ALARMS PRESENT:

Heat counter type:

The identified consumption data are managed by the acquiring systems based on the type set.

16 MASTER BOILER BOARD

Click on MASTER after opening the installation window.

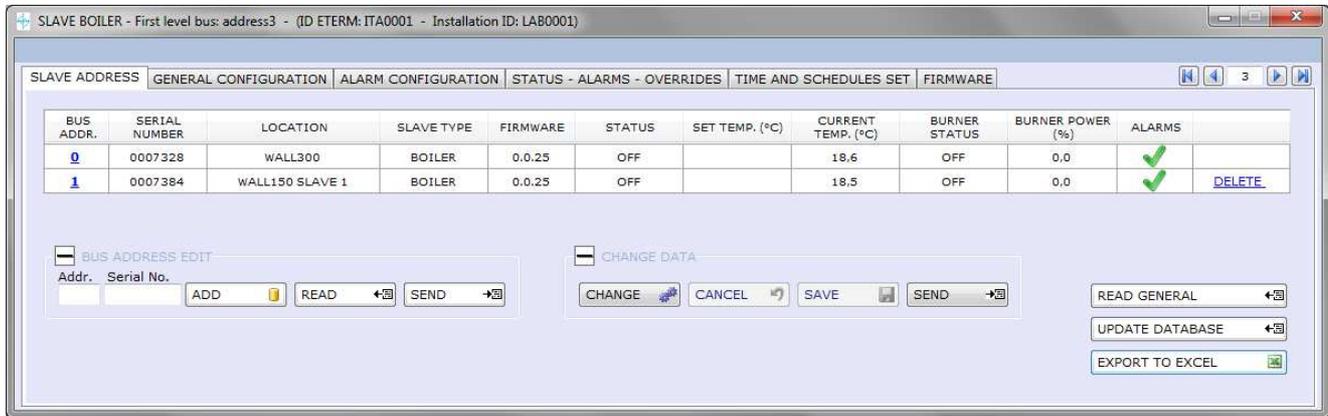
If the chosen "Master Type" is "BOILER", the BOILERS MASTER ROUTING window will appear.

Boiler Master Routing

This routing window can be displayed even if the boiler board is slave of a Master Nereix.

In this case it can still become master for other boiler and/or plant management boards.

The following screen is displayed also by clicking the bus address of a boiler board in the routing window of the Master Nereix.



SGC 01

ROUTING MODIFICATION

BUS ADDRESS EDIT Click on + if the keys are not displayed

ADD Press this key after entering the Slave address and the serial number of the slave hardware. Even if operating without being connected to the boards, the routing will be automatically saved.

After entering the serial number, on the right side of the screen will be enabled the fields "LOCATION", "TENANT", "PIN User" (they become yellow) for filling.

READ It allows you to import the routing from the Master board. The routing reading cancels any routing on the PC - confirmation required.

SEND It allows you to send the new routing to the Master if the latter is connected. When the routing is sent, the system fills the other fields of the table reading the parameters and the settings of the connected boards. By sending the routing, any previous routings of the Master will be cancelled - confirmation required.

CHANGE DATA

CHANGE DATA Click on + if the keys are not displayed

CHANGE The data that can be edited are highlighted in the table; overwrite the fields to be changed.

CANCEL Cancels the modification

SAVE Saves the modifications on the database.

SEND Allows you to send the saved modifications to the Master.

READ GENERAL It allows you to view the data and the alarms in progress for the connected slave.

UPDATE DATABASE It allows you to write the data of all the device on the PC database

EXPORT TO EXCEL It allows you to create .xls file.

ALARMS



- No alarm
- Alarm in progress
- The board does not communicate or the reading was not performed
- The board cannot be read or written because it is password protected

REMOVE SLAVE FROM ROUTING

Click on the row [REMOVE](#) corresponding to the slave to be excluded; confirmation required.

BOILER GENERAL CONFIGURATION

SGC 02

This window allows you to view and send the configuration of the boiler management boards (both slave and master).

For the list and meaning of the parameters, please consult the Boiler Management Board manual.

CONTROLS

The controls are available by clicking the key



Change it changes the parameters



Cancel the last modifications are not saved



Save the modifications performed



Send it transfers the saved configuration to the board

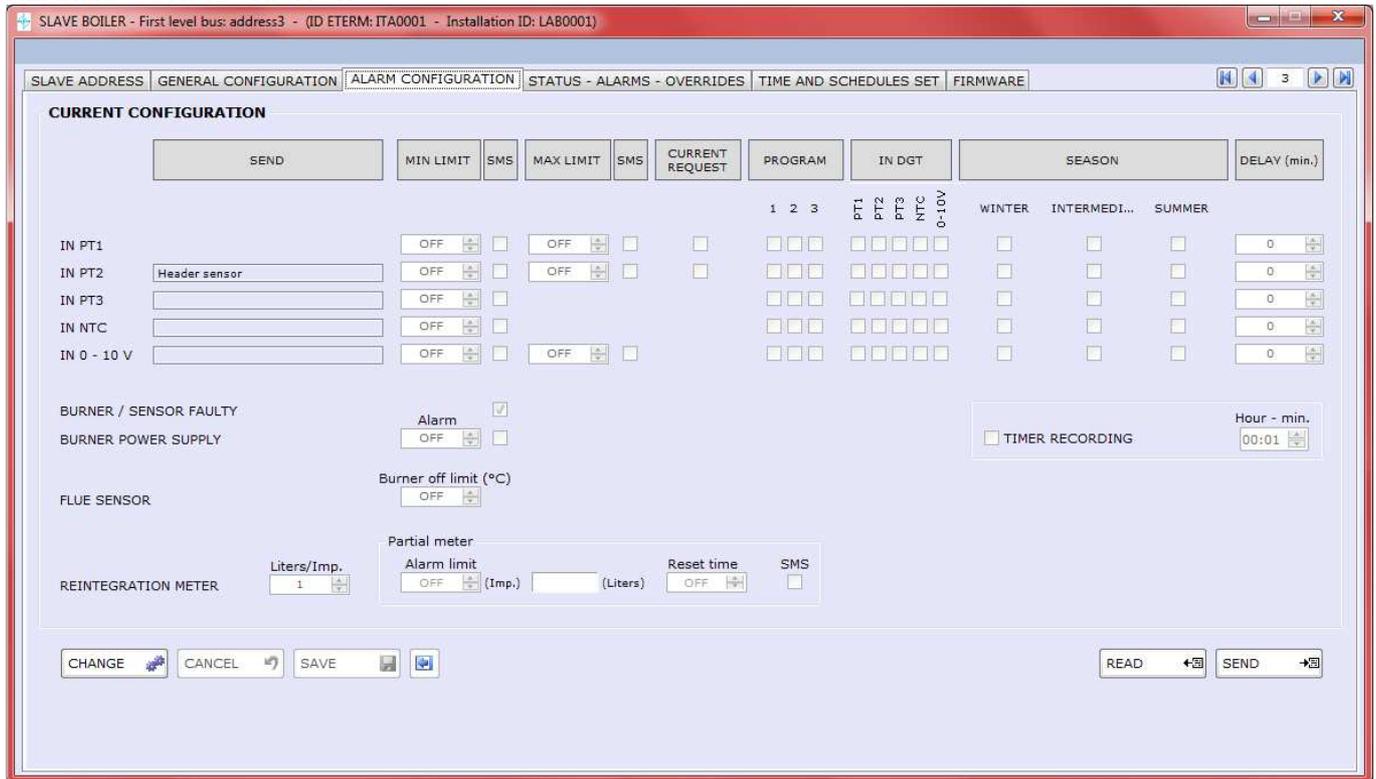


Save file creates a file that contains the slave configuration.



Open file allows you to write on the DB and in the salve the saved configuration.

ALARMS CONFIGURATION



SGC 03

The parameters in this window are read and saved together with those concerning the general configuration.

Thanks to these parameters you can set the conditions for which must be generated alarms and you can establish whether the alarm must generate a SMS to the eterm installation modem.

Analog inputs PT1-PT2-PT3-NTC-0/10V-4/20mA: you can set a minimum and a maximum alarm threshold; if set on OFF, the alarm is not active.

Digital inputs PT2-PT3-NTC-0/10V: you can set whether the opening or closing of the contact are to be considered alarm causes.

REQUEST IN PROGRESS: By checking this parameter the alarm will be generated only when there is a “request” (in other words a set point for heating plant, boiler, mixing area)

PROGRAM / IN DIGITAL / SEASON: By checking one or more of these parameters the alarm will be generated when all the chosen conditions are met. You can select at the same time “REQUEST IN PROGRESS” and other conditions.

DELAY: The alarms are activated / sent if the condition that generates them persists for the time set in the delay field.

BURNER LOCK / PROBE DAMAGE: these conditions represent causes for alarms; you can set whether they generate an SMS or not.

BURNER SUPPLY: it can be considered an alarm by selecting “ON”; you can decide whether it generates an SMS or not.

TIMED REGISTRATION: by selecting this parameter and period of time, “photos” of the status will be taken at regular intervals.

The board memory stores up until 900 timed photos - Periodically download the photos! – When the memory is full, the last photo will replace the oldest photo.

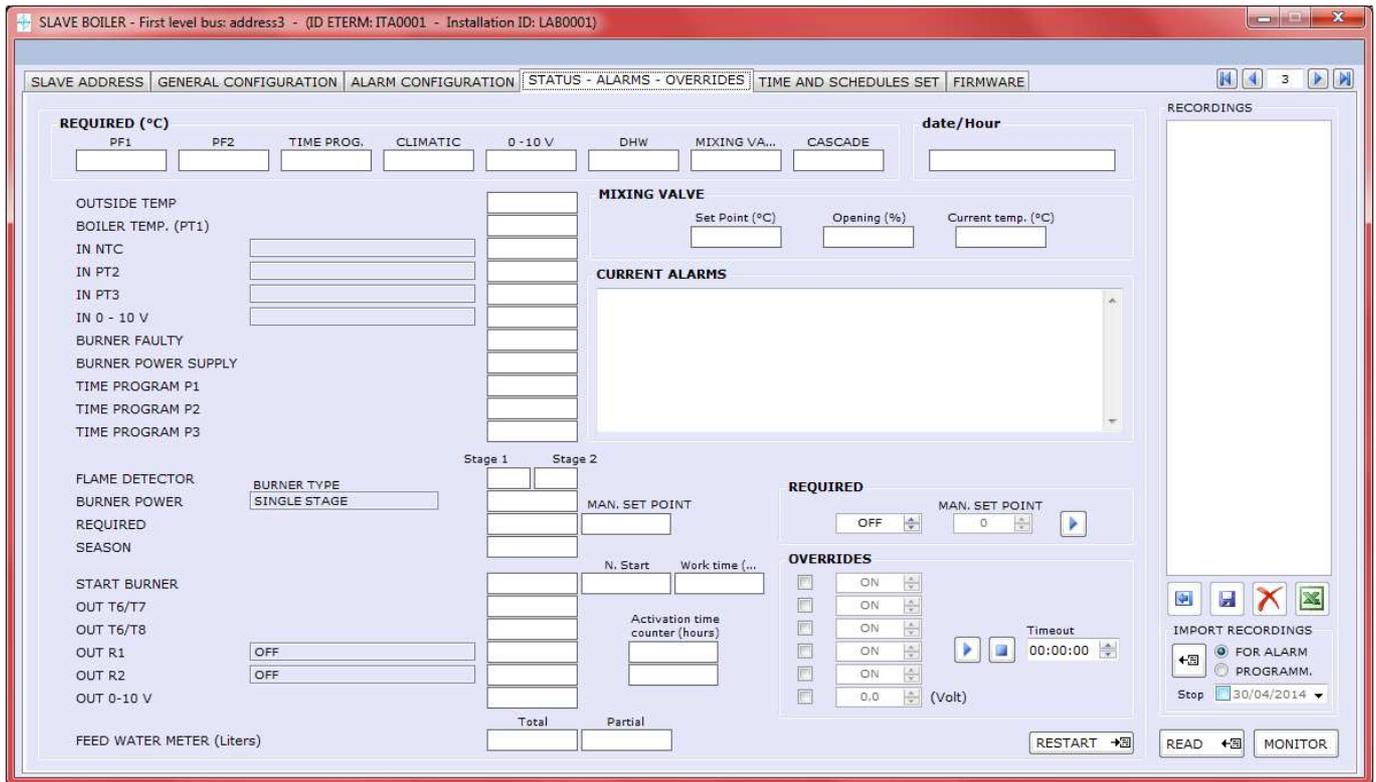
Each alarm generates a photo - The memory of the board stores up until 50 alarm photos - Periodically download the photos! – When the memory is full, the last photo will replace the oldest photo.

To cancel the scheduled photos press CRTL+ALT+P from window “forcing alarms status”

To cancel the alarm photos press CRTL+ALT+A from window “forcing alarms status”

For the command to take effect you must be connected to the board - confirmation required.

STATUS - ALARMS - FORCING



SGC 04

Requests

It indicates the temperature required by the following automatic functions:

- Operation on request fixed point 1
- Operation on request fixed point 2
- Operation on schedule
- climate-dependant operation
- Operation on command 0-10 Volt
- Operation on sanitary request
- Operation on mixing valve request

If there is no request inside the box will be displayed dashes.

The highest request is highlighted in yellow and it represents the actual set point the boiler tends to.

DATE / TIME It indicates the current date and time.

EXTERNAL TEMPERATURE It can be the value read by NTC or the one coming from the system master board

BOILER TEMPERATURE Value read by probe PT1

IN NTC / PT2 / PT3 / 0-10V Value read by the corresponding input (digital or analog); in the box is indicated the function associated with the input (if any).

BURNER LOCK ALARM Detects whether there is voltage at the corresponding input of the board.

BURNER SUPPLY Detects whether there is voltage at the corresponding input of the board.

TIME SCHEDULE 1/2/3 Allow you to view the current status of the three time schedules.

FLAME PRESENCE

The output of the burners are displayed (first and second flame).

NB Some burners are not provided with all the outputs mentioned.

BURNER POWER

It indicates the modulation percentage and the current operation status.

For better understanding is indicated the set type of burner.

If OFF appears, the burner may not start.

START BURNER

It indicates if the burner is allowed to start, how many start-ups were scheduled and the overall operation time.

OUT T6 / OUT T7 It represents the status of the corresponding outputs.

OUT R1 / OUT R2 It represents the status of the corresponding outputs; it indicates the function associated to the output and its overall activation time.

OUT 0/10V It represents the status of the corresponding output.

Operation commands:



You can set OFF / MAN (with relative set point) / AUTO

Press the key  to send the command

Mixing valve status

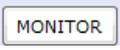


The boxes under this entry indicate:

- Mixing valve set point temperature
- Mixing valve opening percentage
- Mixing valve actual temperature

 key

Allows you to read the status.

 key

By pressing this button, the system will perform continuous readings of the status. The status update frequency depends on the communication quality.

Press CTRL+ALT+R to reset all counters

For the command to take effect you must be connected to the board - confirmation required.

FORCING:

START BURNER

Close contact T1/T2

Close contact T6/T7

Close contact T6/T8

Close contact R1

Close contact R2

Output percentage 0-10 Volt

In order to activate the forcing, set the TIMEOUT and press key .

The forcing is deactivated at the end of the TMEOUT; to close it sooner press key .

Records

This window contains a list of records that are represented by “photos” of the status at a certain time.

In order to view the photos you must select the record identified by date and time.

The records containing alarms are identified by the red character.

The records can be deleted fro the database; after selecting them. press key .

While viewing a record you can also pass to window “ALARMS CONFIGURATION”; to return to the last reading

press .

The records can be saved:

- manually, by pressing  (save reading) after reading the status.
- by import, pressing the specific key relative to alarm photos history
- by import, pressing the specific key relative to scheduled photos history
- or the photos automatically scheduled by the board (timed and/or for alarms).

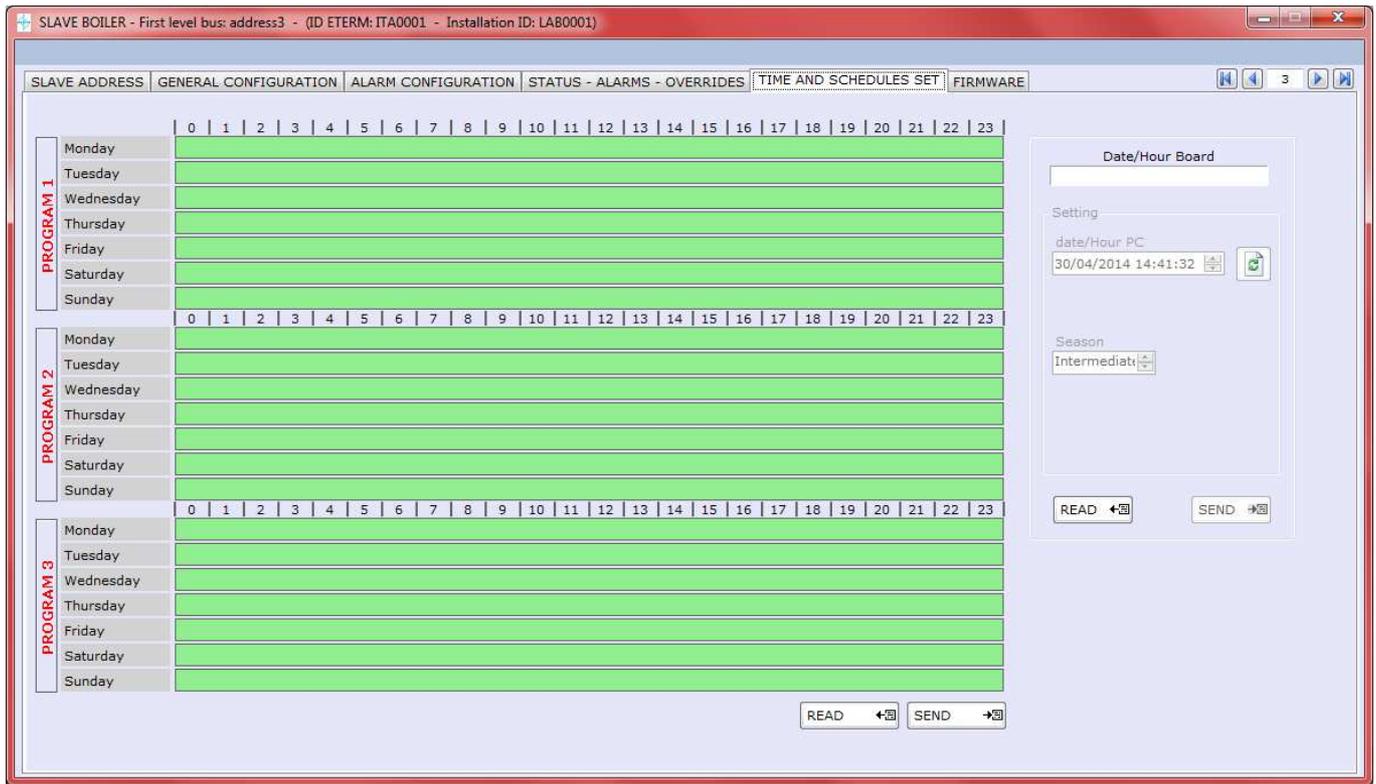
By pressing the key  all records saved in the PC will be exported in Excel.

In order to cancel inside the board the scheduled photos memory, press CTRL+ALT+P

In order to cancel inside the board the alarm photos memory, press CTRL+ALT+A

For the command to take effect you must be connected to the board - confirmation required.

SCHEDULES AND PROGRAMS CONFIGURATION



SGC 05

Season:

You can set the season in progress (summer – winter – intermediate) or you can activate the automatic function by setting the beginning and the end for winter and summer.

DATE TIME

In the PC Date/Time box is displayed the current time that can be locked and corrected clicking on the digits and using the arrows on the right.

To return to current Date and Time of the PC press



In order to send the Date and Time displayed in the box to the board  by pressing READ the date and time set on the board will be updated in the upper box.

**IF THE BOARD IS SLAVE FOR ANOTHER BOILER OR FOR A MASTER NEREIX,
THE DATE- TIME - SEASON CANNOT BE CHANGED**

PROGRAM 1 – PROGRAM 2 – PROGRAM 3:

It allows you to set a schedule that can be sent to the slaves using the appropriate command.

In order to set / change a program place the cursor in period of time to be changed.

By clicking this range of time you can set for it one of these 3 modes:

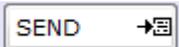
OFF = panel empty (green)

Reduced = half panel red

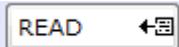
Comfort = panel completely red



(Date / Time box) It allows you to read the date and time of the board.



(Date / Time box) It allows you to send the date and time to the board.

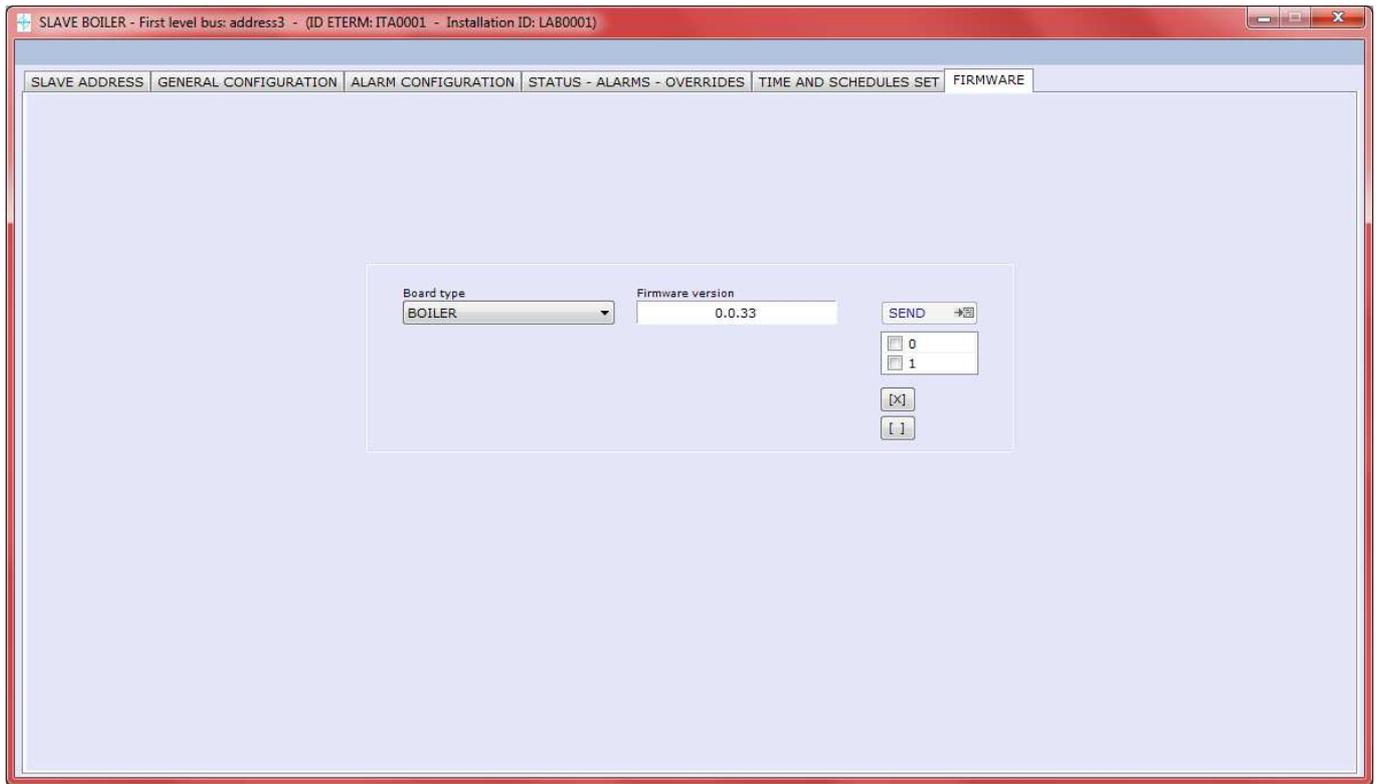


(Time schedules box) It allows you to read the board time schedules



(Time schedules box) It allows you to send the time schedules to the board.

FIRMWARE



SGC 09

Inside this window you can enter the firmware on a connected board

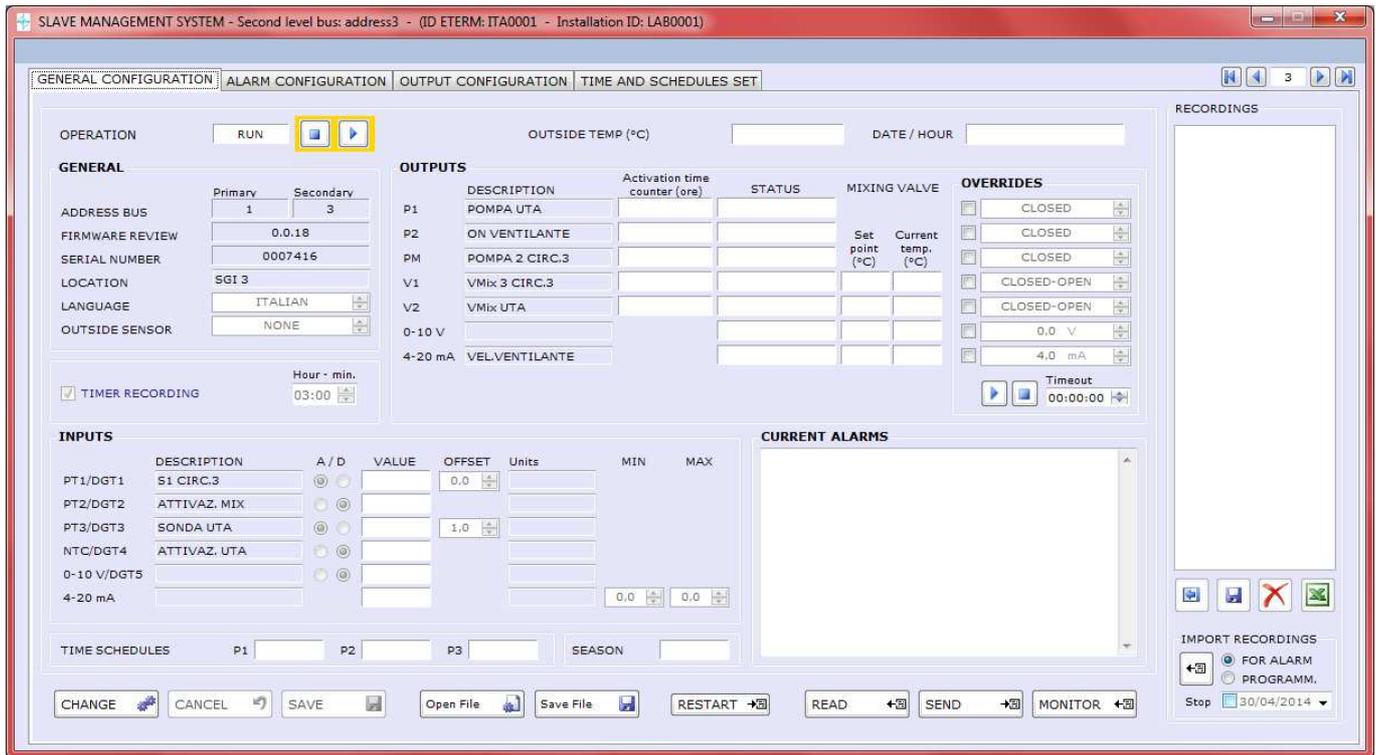
The window suggests the firmware loaded with the software or with subsequent updates.

17 SLAVE BOILER BOARD

If communicating with a boiler board routed as slave, the window "ROUTING" will not be displayed.

18 PLANT MANAGEMENT SLAVE

GENERAL CONFIGURATION - PLANT MANAGEMENT SLAVE



SGI 01

This window allows you to perform the following operations on the plant management boards:

- read and send the configuration of the inputs and outputs
 - set A/D (analog / digital) of the inputs
 - name and measuring unit of the inputs
 - name of the outputs
 - Probes Offset
- force analog and digital outputs
- activate / deactivate the board operation (RUN / OFF)
- read the set point (if any), modulation percentage and actual temperature of the circuits with mixing valve
- read the digital outputs activation time counters (counters not active for the outputs that control the mixing valves)
- read the alarms in progress (if any)
- perform and read and delete status photos (as boiler management board)

The reading can be individual (READ key) or continuous (MONITOR key)

TIMED REGISTRATION: by selecting this parameter and period of time, "photos" of the status will be taken at regular intervals.

The board memory stores up until 900 timed photos - Periodically download the photos! – When the memory is full, the last photo will replace the oldest photo.

Each alarm generates a photo - The memory of the board stores up until 50 alarm photos - Periodically download the photos! – When the memory is full, the last photo will replace the oldest photo.

Press **CRTL+ALT+R** to reset all counters

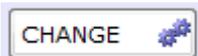
In order to cancel the scheduled photos memory, press **CRTL+ALT+P**

In order to cancel the alarm photos memory, press **CRTL+ALT+A**

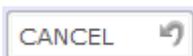
For the command to take effect you must be connected to the board - confirmation required.

CONTROLS

The controls are available by clicking the key



Change it changes the parameters



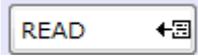
Cancel the last modifications are not saved



Save the modifications performed



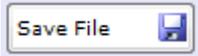
Send the saved configuration to the board



Read the board configuration



Monitor for a continues reading of device

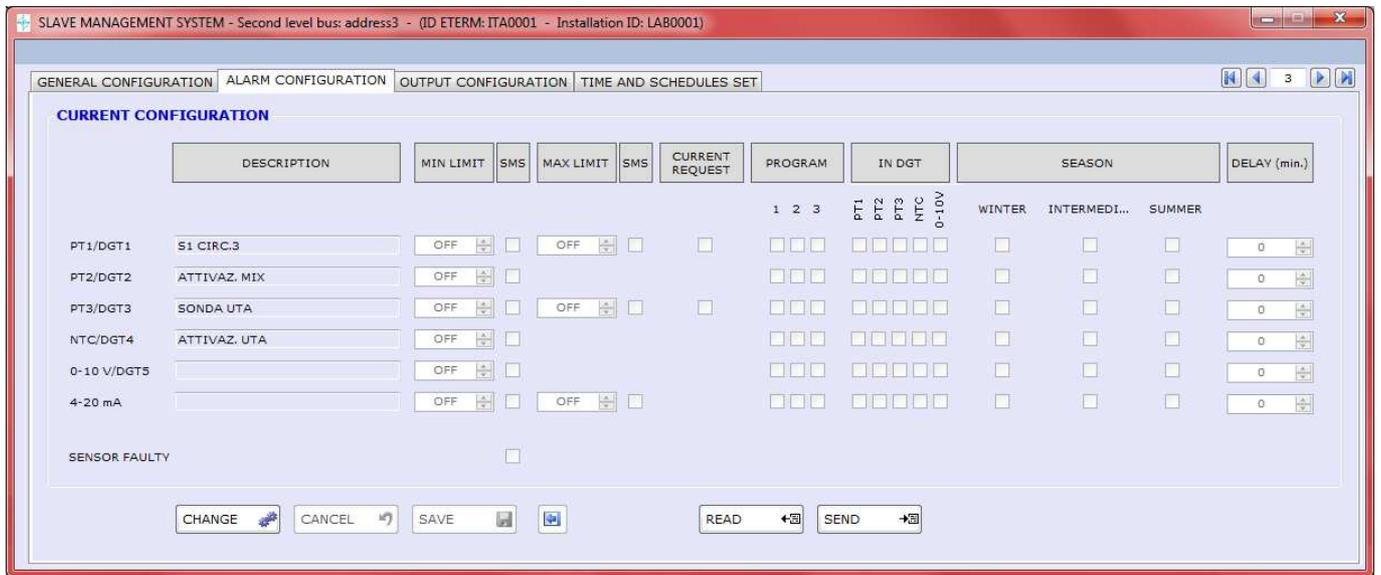


Save file creates a file that contains the slave configuration.



Open file allows you to write on the DB and in the slave the saved configuration.

ALARMS CONFIGURATION



SGI 02

The parameters in this window are read and saved together with those concerning the general configuration.

Thanks to these parameters you can set the conditions for which must be generated alarms and you can establish whether the alarm must generate a SMS to the eterm installation modem.

Analog inputs PT1-PT2-PT3-NTC-0/10V-4/20mA: you can set a minimum and a maximum alarm threshold; if set on OFF, the alarm is not active.

Digital inputs DGT 1-2-3-4-5: you can set whether the opening or closing of the contact are to be considered alarm causes.

REQUEST IN PROGRESS: By checking this parameter the alarm will be generated only when there is a "request" (in other words a set point for mixing area)

PROGRAM / IN DIGITAL / SEASON: By checking one or more of these parameters the alarm will be generated when all the chosen conditions are met. You can select at the same time "REQUEST IN PROGRESS" and other conditions.

DELAY: The alarms are activated / sent if the condition that generates them persists for the time set in the delay field.

SMS ALARMS PROBES DAMAGE: these conditions represent causes for alarms; you can set whether they generate an SMS or not.

P1-P2 OUTPUTS CONFIGURATION - PLANT MANAGEMENT SLAVE

SGI 03

For the list and meaning of the parameters, please consult the Plant Management Board manual.

PM OUTPUT CONFIGURATION - PLANT MANAGEMENT SLAVE

SGI 04

For the list and meaning of the parameters, please consult the Plant Management Board manual.

V1-V2 OUTPUTS CONFIGURATION - PLANT MANAGEMENT SLAVE

SGI 05

For the list and meaning of the parameters, please consult the Plant Management Board manual.

0-10 VOLT OUTPUT CONFIGURATION - PLANT MANAGEMENT SLAVE

SLAVE MANAGEMENT SYSTEM - Second level bus: address1 - (ID ETERM: ITA0001 - Installation ID: LAB0001)

GENERAL CONFIGURATION | ALARM CONFIGURATION | **OUTPUT CONFIGURATION** | TIME AND SCHEDULES SET

OUTPUTS

- P1
- P2
- PM
- V1
- V2
- 0-10 V**
- 4-20 mA

CHANGE

CANCEL

SAVE

READ

SEND

Output Configuration0: 10V :

MIXING VALVE OUTPUT

PARALLEL: [OFF]

CONSENT MIXING VALVE: [OFF]

CONSENT FROM INPUT DGT: [NO]

TIME PROGRAM: [HOT]

WORKING TYPE: [PT1]

REFERENCE SENSOR: [OFF]

Boiler No. request: [0]

BOILER-MIXING V. DIFFERENTIAL: [0]

SAMPLING PERIOD (sec.): [0]

PROPORZIONAL FACTOR PID: [0,0]

INTEGRAL FACTOR PID: [0,0]

DERIVATIVE FACTOR PID: [0,0]

TIME TO MIN / MAX POWER (sec.): [0]

HOT: [0] COOL: [0]

REDUCED FIXED POINT: [0]

COMFORT FIXED POINT: [0]

TEMPERATURE CURVE: [0]

REDUCED ROOM TEMP.: [0]

COMFORT ROOM TEMP.: [0]

MAXIMUM CALCULATED: [0]

MINIMUM CALCULATED: [0]

PROPORTIONAL OUTPUT TO THE ANALOG INPUT

REFERENCE BOARD: [0]

SENSOR A: [PT1] SENSOR B: [PT1]

MIN DIFFERENTIAL(K): [0]

MAX DIFFERENTIAL (K): [0]

PROPORTIONAL OUTPUT ON NEREIX DEMAND

MODULE: FROM [1] TO [1]

OUTPUTS: MIN [0] MAX [0]

SGI 06

For the list and meaning of the parameters, please consult the Plant Management Board manual.

4-20 mA OUTPUT CONFIGURATION - PLANT MANAGEMENT SLAVE

SLAVE MANAGEMENT SYSTEM - Second level bus: address1 - (ID ETERM: ITA0001 - Installation ID: LAB0001)

GENERAL CONFIGURATION | ALARM CONFIGURATION | **OUTPUT CONFIGURATION** | TIME AND SCHEDULES SET

OUTPUTS

- P1
- P2
- PM
- V1
- V2
- 0-10 V
- 4-20 mA**

CHANGE

CANCEL

SAVE

READ

SEND

Output Configuration4: 20mA : POMPA NEREIX 1

MIXING VALVE OUTPUT

PARALLEL: [OFF]

CONSENT MIXING VALVE: [OFF]

CONSENT FROM INPUT DGT: [NO]

TIME PROGRAM: [HOT]

WORKING TYPE: [PT1]

REFERENCE SENSOR: [OFF]

Boiler No. request: [0]

BOILER-MIXING V. DIFFERENTIAL: [0]

SAMPLING PERIOD (sec.): [0]

PROPORZIONAL FACTOR PID: [0,0]

INTEGRAL FACTOR PID: [0,0]

DERIVATIVE FACTOR PID: [0,0]

TIME TO MIN / MAX POWER (sec.): [0]

HOT: [0] COOL: [0]

REDUCED FIXED POINT: [0]

COMFORT FIXED POINT: [0]

TEMPERATURE CURVE: [0]

REDUCED ROOM TEMP.: [0]

COMFORT ROOM TEMP.: [0]

MAXIMUM CALCULATED: [0]

MINIMUM CALCULATED: [0]

PROPORTIONAL OUTPUT TO THE ANALOG INPUT

REFERENCE BOARD: [0]

SENSOR A: [PT1] SENSOR B: [PT1]

MIN DIFFERENTIAL(K): [0]

MAX DIFFERENTIAL (K): [0]

PROPORTIONAL OUTPUT ON NEREIX DEMAND

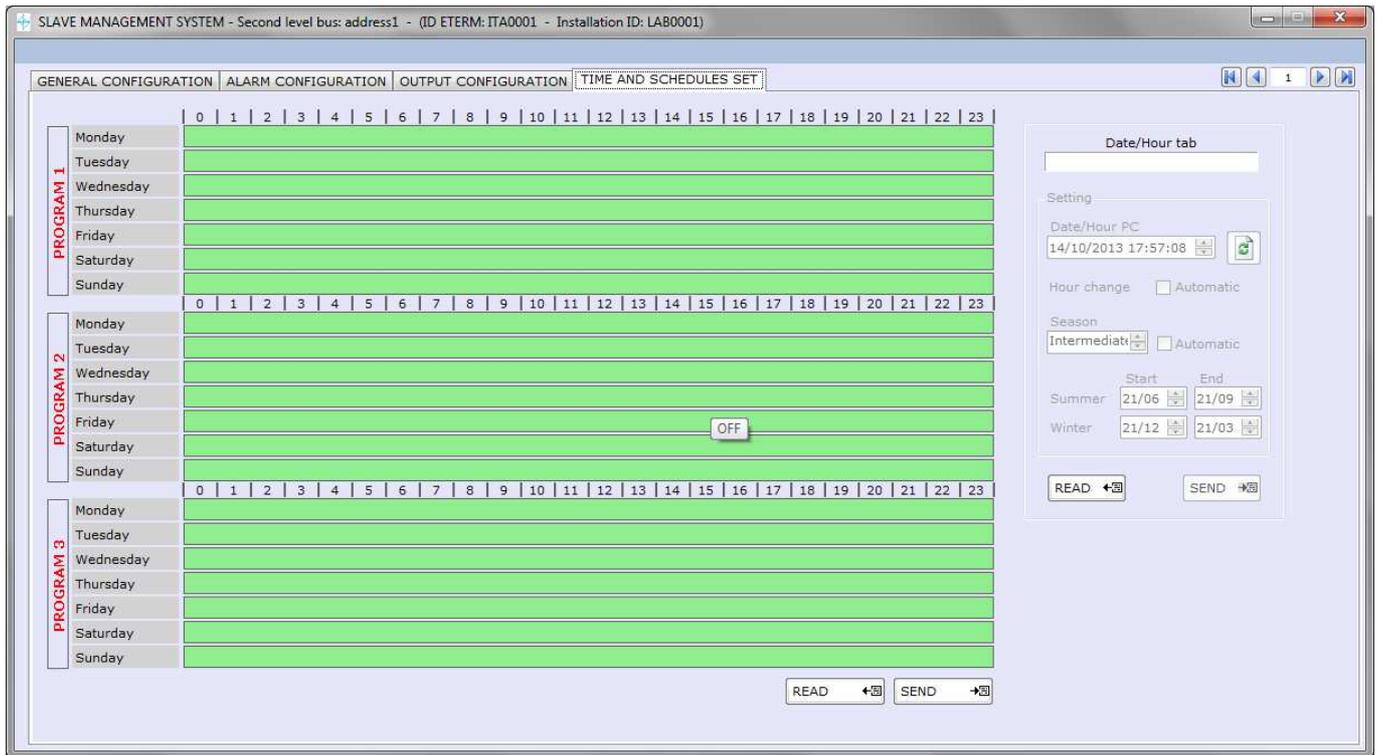
MODULE: FROM [17] TO [22]

OUTPUTS: MIN [0] MAX [100]

SGI 07

For the list and meaning of the parameters, please consult the Plant Management Board manual.

SCHEDULES AND PROGRAMS - PLANT MANAGEMENT SLAVE



SGI 08

Season:

You can set the season in progress (summer – winter – intermediate) or you can activate the automatic function by setting the beginning and the end for winter and summer.

DATE TIME

In the PC Date/Time box is displayed the current time that can be locked and corrected clicking on the digits and using the arrows on the right.

To return to current Date and Time of the PC press .

In order to send the Date and Time displayed in the box to the board  by pressing READ the date and time set on the board will be updated in the upper box.

IF THE BOARD IS SLAVE FOR ANOTHER BOILER OR FOR A MASTER NEREIX, THE DATE- TIME - SEASON CANNOT BE INDIVIDUALLY SET

PROGRAM ZONE 1 – ZONE 2 – ZONE 3:

It allows you to set a schedule that can be sent to the slaves using the appropriate command.

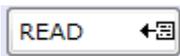
In order to set / change a program place the cursor in period of time to be changed.

By clicking this range of time you can set for it one of these 3 modes:

OFF = panel empty (green)

Reduced = half panel red

Comfort = panel completely red



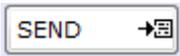
(Date / Time box) It allows you to read the date and time of the board.



(Date / Time box) It allows you to send the date and time to the board.

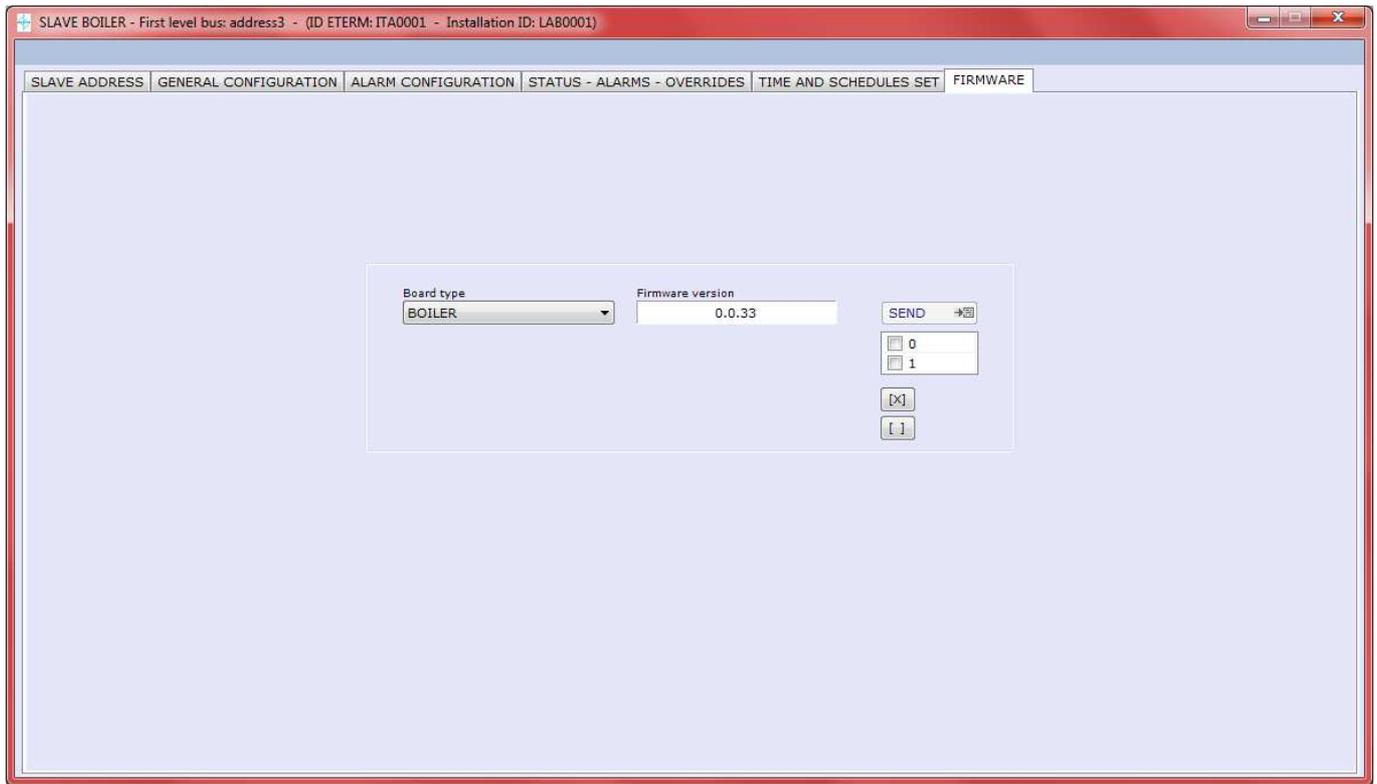


(Time schedules box) It allows you to read the board time schedules



(Time schedules box) It allows you to send the time schedules to the board.

FIRMWARE



SGC 09

Inside this window you can enter the firmware on a connected board

The window suggests the firmware loaded with the software or with subsequent updates.

19 RESTORE SPECIAL CONTROLS FROM KEYBOARD

Function description	Command execution window	Command CTRL+ALT+..
Special unlocking key	Info	T
Mbus centralizer monitoring	Master Nereix routing (MN 01)	M
Reset boiler board counter	Boiler forcing alarms status (SGC 04)	R
Reset boiler alarms memory	Boiler forcing alarms status (SGC 04)	A
Reset boiler scheduled readings	Boiler forcing alarms status (SGC 04)	P
Reset plant board counters	Plant general configuration (SGI 01)	R
Reset plant alarms memory	Plant general configuration (SGI 01)	A
Reset plant scheduled readings	Plant general configuration (SGI 01)	P



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