IntesisBox® Modbus Server
Notifier ID3000 / ID3002 fire panels

User Manual
v10 r11 eng
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Intesis Software S.L.
Milà i Fontanals, 1 bis - 1º
08700 Igualada
Spain

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Gateway for the integration of Notifier ID3000 / ID3002 fire panels in Modbus enabled monitoring and control systems.

Order code:

IBOX-MBS-NID3000
INDEX

Description .......................................................................................................................... 5
1.1  Introduction .................................................................................................................. 5
1.2  Functionality .............................................................................................................. 6
1.3  Capacity of IntesisBox .............................................................................................. 7
Modbus interface of IntesisBox ......................................................................................... 8
1.4  Description .................................................................................................................. 8
1.5  Register’s addresses and values ................................................................................. 8
1.6  Functions supported .................................................................................................... 8
LinkBoxMB. Configuration & monitoring tool for IntesisBox Modbus Server series .......... 9
1.7  Introduction ................................................................................................................ 9
1.8  Project definition ........................................................................................................ 10
1.9  Connections configuration ......................................................................................... 14
1.10 Signals ....................................................................................................................... 16
1.11 Event values ............................................................................................................. 18
1.12 Bit Coded values ....................................................................................................... 20
1.13 Sending the configuration to IntesisBox ................................................................. 21
1.14 Signals viewer .......................................................................................................... 22
1.15 System commands ................................................................................................... 23
1.16 Files ......................................................................................................................... 24
Set-up process and troubleshooting ................................................................................. 25
1.17 Pre-requisites ........................................................................................................... 25
1.18 Set-up procedure ..................................................................................................... 25
Connections ..................................................................................................................... 28
Mechanical & electrical characteristics .......................................................................... 30
Functional characteristics ............................................................................................... 31
Dimensions ....................................................................................................................... 32
Modbus address map ....................................................................................................... 33
Procedure to configure the RS232 port in the Notifier panel ........................................... 37
Description

1.1 Introduction

Integration of Notifier ID3000 series fire panels into a Modbus master device or system, using IntesisBox Modbus Server - Notifier ID3000 gateway.

The aim of this integration is to make available points states of Notifier ID3000 series fire panels from a Modbus master device. For this, IntesisBox Modbus Server - Notifier ID3000 gateway works, from the Modbus system point of view, acting as a Modbus slave device responding to data polls coming from the Modbus master, and from the Notifier system point of view, acting as a serial device connected to its RS232 port, and serving the data received from Notifier to the Modbus side.

IntesisBox connects to the RS232 port of the Notifier panel, either through the RS232 port of the mother board, or through the isolated ISO-RS232 port (optional card), this last is the recommended and the use of a baud rate of 2400bps.

If there is more than one Notifier fire panel connected in network, any of them can be integrated using the IntesisBox, but only one panel. IntesisBox can be physically connected to one panel but communicating with another panel connected to the Notifier network.

Integration of Notifier ID3000 fire panel using IntesisBox Modbus Server
1.2 Functionality

General overview

The communication protocol Notifier ID3000 is based on events, the states of the panel’s elements (detectors, modules, etc.) are transmitted through the protocol in the form of events whenever they occur.

The role of IntesisBox consists in associate the elements of the Notifier ID3000 panel with Modbus register addresses.

IntesisBox has a fixed association of Notifier ID3000’s elements with Modbus register addresses. The Modbus value to represent each state of the panel or the panel’s element is configurable using LinkBoxMB software tool in a simple and friendly way.

The procedure of configuration of IntesisBox consists basically in the following:
- Introduction of the communication parameters for Modbus side and for Notifier side.
- Assign the values desired in Modbus for each state to integrate.
- Once this configuration has been done with the configuration software tool LinkBoxMB, you have to download this configuration to IntesisBox via a serial connection and IntesisBox will reboot with the new configuration working.

The numerical values that will represent, in the Modbus registers, the different possible states of the Notifier points can be selected in the configuration process.

IntesisBox can be configured as Modbus TCP slave or Modbus RTU (RS232/RS485) slave.

The whole capacity of one single Notifier panel is supported.

The control of the Notifier panel is permitted, this is, commands toward the panel are permitted.

All Notifier elements (detectors, outputs and zones) are configured in IntesisBox by default for a single panel.

Also all the general events of the panel are detected by IntesisBox and translated to Modbus registers.

The integration operation is as follow:

Once IntesisBox is configured and connected to both systems (Notifier and Modbus), it maintains a "keep alive" message with the panel through the panel’s serial port, being this message the request/response of panel status, also it listens continuously for new events coming from the panel. With every event, the new state received is updated in the IntesisBox’s memory and become available to be read by the Modbus master device through the corresponding Modbus register address.

As mentioned before, the protocol in the serial port of the Notifier panel is based in spontaneous messages, that is, only changes of states are sent through the protocol whenever they occur. When IntesisBox starts up, a message is sent to the panel to force a response of current state of all elements to update IntesisBox Modbus registers with correct value (according to panel’s or element’s states).
1.3 Capacity of IntesisBox

<table>
<thead>
<tr>
<th>Element</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Panels</td>
<td>1</td>
<td>IntesisBox can only integrate one single panel, no matter if it is in network with others.</td>
</tr>
<tr>
<td>Number of Points</td>
<td>All of one panel</td>
<td>Number of Notifier elements or points defined into IntesisBox.</td>
</tr>
</tbody>
</table>

Ref.: IBOX-MBS-NID3000
Modbus interface of IntesisBox

1.4 Description

IntesisBox acts as a slave device in its Modbus interface, this interface can be the Ethernet port (if using Modbus TCP), or the RS232 port or the RS485 port (if using Modbus RTU). To access the points of the IntesisBox from Modbus system, you must specify as the Modbus register addresses those fixedly configured inside IntesisBox corresponding to Notifier panel’s elements. See details of the Modbus address map below in this document.

1.5 Register’s addresses and values

All the Modbus registers are of type analog. Each register in IntesisBox corresponds to a predefined Notifier element (see Modbus address map below in this document for details). Every possible element's state (FIRE, FIRE DISABLED, TEST…) is expressed by a value in the Modbus register associated, this value is configurable and can be coded in two different ways in the Modbus register:

- Each possible state (Alarm, PreAlarm, Test, Fault…) can be associated with a numerical value, this numerical value will be the register’s value read from Modbus when the associated Notifier element is in this state (i.e. 1 for Fire, 2 for Test, 3 for Fault…), in this case the last state received from the panel is the one remaining in the Modbus register, or

- Each possible state (Alarm, PreAlarm, Test, Fault…) can be bit-coded in a different bit in the word (i.e. bit 0 for Alarm, bit 1 for PreAlarm, bit 2 for Fault…). See more details about all possibilities for register’s values below in this document.

1.6 Functions supported

Modbus functions 03 and 04 (read holding registers and read input registers) can be used to read Modbus registers.

Modbus function 06 must be used to write Modbus registers.

If poll records are used to read more than one register, it is necessary that the range of addresses requested contains valid addresses, if not the corresponding Modbus error code will be returned.

All the registers are of 2 bytes and its content is expressed in MSB..LSB.

Modbus error codes are fully supported, they will be sent whenever a non valid Modbus action or address is required.
1.7 Introduction

LinkBoxMB is a Windows® compatible software developed specifically to monitor and configure IntesisBox Modbus Server series. It is possible to configure all external protocols available for IntesisBox Modbus Server and to maintain different customer’s configurations based on a LinkBoxMB project for every different installation. Maintaining always on hard disk a copy of the last configuration files for every external protocol and customer, that is to say for every project.

From LinkBoxMB, as well as configure the integration signals list and connection parameters for every external protocol, it is permitted to select the serial port to use to connect to IntesisBox Modbus Server and the use of some tools for monitoring and debugging de device. Some of these tools will be explained in this document but only some of them, the rest of available debugging tools and commands will not be explained here because they are for exclusive use under the recommendations of Intesis Software technical support.

LinkBoxMB allows configuring all IntesisBox Modbus Server series independently of the external system used. For every external system, LinkBoxMB has a specific configuration window. Periodically, new free versions of LinkBoxMB are released incorporating the latest developed integrations for external systems.
1.8 Project definition

The first step to do in LinkBoxMB for a new installation is to create the installation’s project giving a descriptive name to it. When you create a project, a new folder is created with the name of the project containing the configuration files needed depending on the external protocol selected for the project. It is strongly recommended that you create a new project for every installation, if not, overwriting of configuration files of previous installations using the same external protocol may occur, loosing the configuration data for those previous installations. The projects folder is located in AppFolder\ProjectsMB, where AppFolder is the installation folder of LinkBoxMB (by default C:\Program Files\Intesis\LinkBoxMB). Inside the projects folder, a new folder will be created for every project defined in LinkBoxMB with the files needed for the project.

When you open LinkBoxMB, the project selection window will appear inviting you to select a project or create a new one. A demo project for every external protocol supported is provided with the standard installation of LinkBoxMB. You can create a new project or select a demo project based on the external protocol desired, and create a new one from the demo one selected.

![Project selection window]

To create a new project, select a project using the same external protocol you want to use in the new project and click on New button. You will be prompted to create a copy of the selected project (useful for similar installations) or create a brand new one.
If you select Yes you will be prompted to specify a name and a description for the new project that will be based on the same external protocol than the selected one. If you select No you can specify a name, a description and an external protocol to use from the list of available external protocols.

On Accept, a new folder will be created inside the projects folder with the name given to the project, this folder will contain the template configuration files if the project is a brand new one, or a copy of the configuration files if it is a copy of a selected one.

A description of the files created for a Notifier ID3000 protocol based project can be found in section Files in this document.

From all the possibilities of LinkBoxMB, only changes in configuration for the integration and configuration file generation can be performed while disconnected from IntesisBox (working off-line), allowing you to do these tasks in the office more comfortably. Before any monitoring or downloading action to IntesisBox can be performed, the connection between IntesisBox and the PC running LinkBoxMB must be established (working on-line). To do so follow these steps:

1. Make sure IntesisBox is powered-up a correctly connected to the Modbus system via the Ethernet connection (Modbus TCP) or serial connection (Modbus RTU) and to Notifier panel via the RS232 connection (consult details for connection and pin assignments in section Connections of this document).

2. Connect a free PC serial port to the IntesisBox serial port marked as PC Console. (Use the standard serial cable supplied with the device or a customer’s cable following the pin assignments specified in section Connections in this document).

3. Select in LinkBoxMB the PC serial port used for the connection to IntesisBox. Use menu Configuration -> Connection.
4. Check the checkbox *off-line* under the menu bar (it will change automatically to *on-line*) and LinkBoxMB will ask for INFO about the IntesisBox connected to it via the serial connection, if the connection is ok then IntesisBox will respond with its identification (this can be monitored in the *IntesisBox Communication Console* window, as showed below).

Once connected to IntesisBox, all the options of LinkBoxMB are fully operative.

To monitor the communication between IntesisBox and the Modbus master device, select the menu *View* -> *Bus* -> *Modbus*. The *Modbus communication Viewer* window will be opened. This window show in real time all the communication frames between IntesisBox and the Modbus master device as well as debugging messages referent to internal protocol (Modbus) sent by IntesisBox.
To monitor the communication between IntesisBox and the external system (Notifier in this case), select the menu View -> Bus -> Notifier ID3000. The External protocol communication viewer window will be opened. This window show in real time all the communication frames between IntesisBox and Notifier panel as well as debugging messages referent to external protocol (ID3000) sent by IntesisBox.
1.9 Connections configuration

To configure the IntesisBox's connection parameters and the Modbus values for each possible state, select menu Configuration -> IntesisBox. The Notifier ID3000 Configuration window will be opened.

Select the Connection tab to configure the connection parameters.

Two kinds of information are configured using this window, the referent to the Modbus side and the referent to the Notifier side.

Modbus side configuration parameters:

1. Select the type of connection desired (TCP or RTU).

If Modbus TCP is selected, then:

2. Enter the IP address for IntesisBox.
3. Enter the IP net mask for IntesisBox.
4. Enter the default router address to use by IntesisBox, leave blank if there is no need of router address.
5. Enter the TCP port to use, by default 502.
6. Enter the Keep Alive Timeout (in seconds). This is the time without Modbus TCP traffic after which IntesisBox will send a Keep Alive packet to the master(s) connected to it, this is to maintain alive the TCP connection.

If Modbus RTU is selected, then:

7. Select the port to use (RS232 or RS485).
8. Select the baud rate to use.
9. Select the parity.
10. Enter the Modbus slave number for IntesisBox.

Notifier side configuration parameters:

1. Number of Notifier panel to integrate, although only one panel can be integrated it can be the panel physically connected to the IntesisBox or any other panel connected in network (Notifier network), so the number to introduce here can be:
   - 0 in case the panel to integrate is the one physically connected to the IntesisBox.
   - 1 to 7 in case of a panel in an RS485 master/slaves network.
   - 1 to 32 in case of a panel in an ID2net network.
2. Notifier protocol to use:
   - Select Full Duplex if the RS232 port of the main board of the panel is used. See Annex 1 for details of the procedure to follow to configure this port in the panel.
   - Select Half Duplex if the optional ISO-RS232 card is used. This is the connection recommended. See in Annex 1 for details of the procedure to follow to configure this port in the panel.
   *In both cases, a selection of 2400bps baud rate is highly recommended for a proper handling of communication messages by the panel.*
3. Baud rate to use to communicate with the panel.
4. Data bits to use to communicate with the panel.
5. Parity to use to communicate with the panel.
6. Time to wait for response of the panel before resend the communication telegram (in milliseconds). After four attempts without response of the panel the communication error signal will be activated.
7. Minimum time to wait (in milliseconds) between two consecutive telegrams.
8. Time to wait (in seconds) between two consecutive poll cycles.
9. When unchecked, Modbus register's values are based on numerical values assigned to each panel's or element's event (see section Event Values below for details).
checked, Modbus register's values are based on bit-coding of each panel's or element's state (see section Bit Coded Values below for details).

1.10 Signals

Select the Points tab for a description of the IntesisBox's datapoints.

### Points list

This window is just for information purposes about the datapoints existing into the IntesisBox and its functionality.

1. **Address/Formula.** Indicates the Modbus address corresponding to each datapoint, with the following remarks:
   - The Modbus address 1 corresponds to the communication error datapoint, there will be a zero value in this Modbus register when the communication with the panel is ok, and a one when the panel is not communicating with the IntesisBox. This is a read-only datapoint.
   - The Modbus address 2 corresponds to the last event received from the panel, in this Modbus register there will be directly the event code received from the panel, is just for information and debugging purposes. See Notifier documentation for a list of event codes and its meaning. This is a read-only datapoint.
   - The Modbus addresses 3 to 16 correspond to general events received from the panel, there will be a zero value in these Modbus registers when the event is not active,
and a one when it is active. See description of each event in "signal" column. These are read-only datapoints.

- The Modbus addresses 17 to 23 correspond to general commands to send to the panel. Writing a one in these Modbus registers will send the corresponding command to the panel. See description of each command in "signal" column. These are read/write datapoints, although a read of them will always return zero value.

- The Modbus addresses 257 to 2559 correspond to states of Detectors, Modules and Zones. These datapoints are of type read and write, this means you will read in these Modbus addresses the value corresponding to the state of the associated detector, module or zone, the value read being the one defined for the corresponding state in tab Event Values or Bit Coded Values (see below), and you can write also the corresponding value to send a command to the panel. The only commands permitted for detectors are enable/disable, for modules enable/disable and activate/deactivate test, and for zones enable/disable and start/stop test.

To know which Modbus register address correspond to which detector, module or zone, use the following formula:

**For detectors**

Modbus address = (Loop x 256) + detector

Loop: 1 to 8
Detectors: 1 to 99

**For modules**

Modbus address = (Loop x 256) + module + 100

Loop: 1 to 8
Modules: 1 to 99

**For zones**

Modbus address = zone + 2304
Zones: 1 to 255

See at the end of this document a table with the full Modbus address map.
1.11 Event values

Select the Event Values tab to configure the value desired in the Modbus register for each possible event of the panel. This tab is only available when checkbox States in Modbus Registers Bit Coded is unchecked in Connection tab.

Points list

This window is just a relation table between the event codes used by the panel and the values reflecting these event codes in the Modbus registers.

1. Modbus Value. Indicates the value that will appear in the Modbus register when this event is sent by the panel. When the event disappears, then the value in the Modbus register returns to zero. Entering a value of 255 here means that the value in the Modbus register will be the same as of the panel code for the event (the one indicated in column "Event"). Entering a value of 254 here means that this event will not be taken into account by the IntesisBox.

2. Event. Indicates the code used by the panel for each event, just for your information.

3. Description. The description of each event, just for your information, in Spanish.

4. Description. The description of each event, just for your information, in English.

5. Write enabled for. Indicates which object in the panel accepts this event, just for your information.

Remarks:
- The command test(FIRE) is only usable for Zones, and is just to test the fire alarm of the zone.
• The commands *device ENABLED* and *device DISABLED* are usable for Detectors, Modules and Zones, and are just to enable/disable.

• The commands *output module test activation* and *output module test deactivation* are usable only for Modules of type output, and are just to activate/deactivate the test of the module.

• After receiving a panel’s reset event, all the values in Modbus registers return to zero.

In column *Modbus value* you can enter the desired value individually per cell or you can auto enumerate some consecutive cells, for this last follow the steps below:

1. Select using the left mouse button (clicking and dragging) all the rows in the list to which you want to automatically assign values (must be consecutive rows).

2. Click right mouse button over the selected fields and select *Auto Enumeration* option from the pop-up menu that will appear.

3. Enter the first value to assign.

4. Enter the increment between consecutive assignments. For example selecting 255 for the first value and an increment of 0, the values generated will be always 255.
1.12 Bit Coded values

Select the Bit Coded Values tab to configure the value desired in the Modbus register for each possible state of the panel’s elements. This tab is only available when checkbox States in Modbus Registers Bit Coded is checked in Connection tab. This feature is only available in IntesisBoxes with firmware version 42.0.8 or higher.

Points list

This window is just a relation table between the possible elements’ states in the panel and the values reflecting these states in the Modbus registers.

1. **Element.** Indicates the type of element in the panel to which apply the next columns.

2. **Bit.** Indicates the bit into the word (Modbus register’s data) where is coded the state of the element. When the state in the element is this one, then the value of this bit will be 1, otherwise will be 0. For example, let’s imagine a detector in alarm and disabled, then when reading the corresponding modbus register, the bit 0 of the word will be = 1 and the bit 3 will be also = 1, in this case the value in the modbus register reflecting this situation will be 9 (this is $2^0 + 2^3$). Note that using this method of expressing modbus value by bit-coding different states of the panel’s elements requires bit-decoding in the Modbus master receiving the analog value of the register.

3. **State.** Indicates which element’s state corresponds to the bit.

4. **Value.** Indicate which analog value must be written in the modbus register to perform this command in the panel, this is only used to send commands to the associated element in the panel (i.e. writing 1 will disable the associated detector).

5. **Value to write in Modbus register to execute command.** Explanation of which command will be executed in the panel when writing the value in the modbus register.
1.13 Sending the configuration to IntesisBox

When the configuration has been saved (button Accept) and the IntesisBox configuration binary file has been generated (remember to select yes when asked if you want to generate the IntesisBox file), to send the configuration file to IntesisBox click on the button Send File. The process of file transmission can be monitored in the IntesisBox Communication Console window. If the file transmission is ok, IntesisBox will reboot automatically with the new configuration loaded.

Remember that saving the configuration and generating the IntesisBox bin file only saves to the hard disk on the PC the configuration files. **Do not forget to send the configuration binary file to the IntesisBox (using button Send File) after saving the configuration.**
1.14 Signals viewer

Once IntesisBox is running with the correct configuration, to supervise the status of the configured signals, select menu View -> Signals. The Signals Viewer window will be opened. This window shows all the active IntesisBox's signals with its main configuration parameters and its real time value in the column Value. After a reset of IntesisBox or after sending a configuration file to the IntesisBox, all the signal's values will be updated automatically in the signals viewer, in case you connect to the IntesisBox when it is already running, you should press the Update button to get updated values, press just once the button to update all the signal values, from this moment the signal values will be maintained updated until the connection is closed.

![Signals Viewer](image)

The signals viewer can be used although only one system is connected to the IntesisBox, Notifier or Modbus, and is very useful for supervision and test.

It is possible to force a specific value to any signal for test purposes, to do so just double click on the row and select the desired value and Accept in the Data Test window. The new value entered will be available through the Modbus interface, the same way as if it has been received from the Notifier panel.

![Detector office 1](image)
This tool is very useful to test the communication in the Modbus side from the Modbus master device for example, without the need to have the Notifier panel connected and running.

The signals viewer window has a button to copy to the Windows Clipboard all the contents of the window (in tab separated text format).

1.15 System commands

LinkBoxMB includes an option to send to IntesisBox a set of system commands for debugging and control purposes; this list is available in the commands list as shown in the figure below. To send a command to IntesisBox just select it from the list, or type it with the correct format, and press Enter or click on button Send. IntesisBox will act accordingly with the command received; the process can be monitored in the IntesisBox Communication Console window. The use of some of these commands can be critical for IntesisBox normal functioning, having this in mind use only these commands following the recommendations of Intesis Software technical support. A list of the more commonly used commands and the way to use them will be returned by IntesisBox after sending the HELP command.
1.16 Files

LinkBoxMB saves the integration configuration in the following files inside the project folder:

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT.INI</td>
<td>.ini file containing general information referent to the project</td>
</tr>
<tr>
<td>NOTIFIERID3000.INI</td>
<td>.ini file containing the information referent to the connection window and other special adjustments</td>
</tr>
<tr>
<td>NOTIFIERID3000.EVT</td>
<td>Text file (tab separated values) with the event values information (Event values list).</td>
</tr>
<tr>
<td>NOTIFIERID3000.LBOX</td>
<td>Binary file created from the information in the two files described above. This is the file downloaded to the IntesisBox.</td>
</tr>
</tbody>
</table>

It is strongly recommended to back up the project folder containing these files in external media, once the installation process is finished. This way you will be able to do future configuration changes in case of reinstallation of LinkBoxMB due, for example, to a failure of the hard disk in the PC where LinkBoxMB was installed.

*The configuration cannot be uploaded from IntesisBox to LinkBoxMB, only can be downloaded.*
Set-up process and troubleshooting

1.17 Pre-requisites

It is necessary to have the Modbus master device operative and well connected to the Modbus port of IntesisBox, remember to respect the maximum of 15 meters cable distance if using RS232 communication.

It is necessary to have the Notifier panel with an RS232 port operative and at a distance of IntesisBox installation site of 15 meters maximum (due to RS232 communication).

Connectors, connection cables, PC for LinkBoxMB, and other auxiliary material, if needed, are not supplied by Intesis Software for this standard integration. The items supplied by Intesis Software for this integration are:

- IntesisBox Modbus Server device with Notifer ID3000 external protocol firmware loaded.
- LinkBoxMB software to configure IntesisBox.
- Console cable needed to download the configuration to IntesisBox.
- Product documentation.

1.18 Set-up procedure

1. Install LinkBoxMB on your laptop, use the setup program supplied for this and follow the instructions given by the Installation wizard.

2. Install IntesisBox in the desired installation site. The mounting can be on DIN rail or on a stable not vibrating surface (DIN rail mounted inside a metallic industrial cabinet connected to ground beside the Panel is recommended).

3. Connect the communication cable coming from the Modbus master device to the port marked as Modbus of IntesisBox (used either RS232, RS485 or Ethernet port depending on the type of Modbus communication to use). (See details for this communication cable in section Connections of this document).

4. Connect the communication cable coming from the RS232 port of the Notifier to the port marked as Notifier of IntesisBox. (See details for this communication cable in section Connections of this document).

5. Power up IntesisBox. The supply voltage can be 9 to 30 Vdc or just 24 Vac. Take care of the polarity of the supply voltage applied.

**WARNING!** In order to avoid earth loops that can damage IntesisBox and/or any other equipment connected to it, we strongly recommend:

- The use of DC power supplies, floating or with the negative terminal connected to earth. **Never use a DC power supply with the positive terminal connected to earth.**
- The use of AC power supplies only if they are floating and not powering any other device.
6. Connect the communication cable coming from the serial port of your laptop PC to the port marked as **PC Console** of IntesisBox. (See details for this communication cable in section **Connections** of this document).

7. Open LinkBoxMB, create a new project selecting a copy of the one named **DEMO Notifier ID3000** and give it the name desired, select the serial port used to connect to IntesisBox (menu Configuration -> Connection) and switch working mode to **online** (checkbox **off-line/on-line**). The IntesisBox identification must appear in the **IntesisBox communication console** window as showed below.

8. Modify the configuration as desired, save it and download the configuration file to IntesisBox as explained before.

9. Open the **Modbus Communication Viewer** window (menu View -> Bus -> Modbus) and check that there is communication activity, some TX frames and some other rx frames. This means that the communication with the Modbus master device is ok. In case there is no communication activity between IntesisBox and the Modbus master device check that it is operative, check the baud rate, and check also the communication cable used to connect both devices. (See details for this communication cable in section **Connections** of this document).

10. Open the **External Protocol Communication Viewer** window (menu View -> Bus Notifier ID3000) and check that there is communication activity, some RX frames as showed in the figure below. This means that the communication with the Notifier panel is ok. In
case of no communication activity between IntesisBox and Notifier, check that the RS232 port of Notifier panel is operative and well configured, and check also the communication cable used to connect both devices. (See details for this communication cable in section Connections of this document).
Connections

**IntesisBox® Modbus - Server Notifier ID3000**

**Modbus TCP**

**C1**

**Ethernet RJ45**

**C4**

**Notifier**

**Modbus RTU**

**C2**

**RS485**

**RS232**

**PC (LinkBoxMB)**

**PC Console**

**Power**

**IntesisBox** (RJ45 F)

**Cable** (RJ45 M)

**Modbus TCP Connection**

**Master TCP Device** (RJ45 F)

**Ethernet**

**Cable UTP/FTP Cat5 Crossed**

**1 device**

**Cable UTP/FTP Cat5 Straight**

**Hub**

**N devices**

**IntesisBox** (DB9 M)

**C2**

**Modbus RTU Connection**

**Master RTU** (DB9 M)

**RS-232** (Crossed)

**RS-485**

**RX** 2

**TX** 3

**GND** 5

**Cable** (DB9 F)

**TX/RX+** +

**TX/RX-** -

**TX/RX+**

**TX/RX-**


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PC Connection (LinkBoxMB)

IntesisBox (DB9 F) | C3
---|---
Cable (DB9 M) | TX 2
       | RX 3
       | GND 5

PC (DB9 M) | Cable (DB9 F)
---|---
2 | RX
3 | TX
5 | GND

Notifier connection through ISO-RS232 optional card (RS232 in a terminal block)

IntesisBox (DB9 M) | C4
---|---
Cable (DB9 F) | RX 2
       | TX 3
       | GND 5

Notifier ISO-RS232 card 1 2 4

Cable
2 | TX
4 | RX
1 | GND

Notifier connection through RS232 on main board (RS232 in a DB9 connector)

IntesisBox (DB9 M) | C4
---|---
Cable (DB9 F) | RX 2
       | TX 3
       | GND 5

Notifier RS232 on main board (DB9 F)

Cable (DB9 F) 2 | TX
3 | RX
5 | GND
Mechanical & electrical characteristics

<table>
<thead>
<tr>
<th>Enclosure</th>
<th>Plastic, type PC (UL 94 V-0). Dimensions: 107mm x 105mm x 58mm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Light Grey. RAL 7035.</td>
</tr>
<tr>
<td>Power</td>
<td>9 to 30Vdc +/-10% 1.4W. 24Vac +/-10% 1.4VA. Plug-in terminal bloc for power connection (2 poles).</td>
</tr>
<tr>
<td>Mounting</td>
<td>Surface. Wall. DIN rail EN60715 TH35.</td>
</tr>
<tr>
<td>Modbus TCP port</td>
<td>1 x Ethernet 10BT RJ45.</td>
</tr>
<tr>
<td>Modbus RTU ports</td>
<td>1 x RS232. DB9 male connector (DTE). 1 x RS485. Plug-in terminal bloc (2 poles).</td>
</tr>
<tr>
<td>Notifier port</td>
<td>1 x RS232. DB9 male connector (DTE).</td>
</tr>
<tr>
<td>LED indicators</td>
<td>1 x Power. 2 x Notifier port activity (Tx, Rx). 2 x Modbus RTU port activity (Tx, Rx). 2 x Ethernet port link and activity (LNK, ACT).</td>
</tr>
<tr>
<td>Console port</td>
<td>RS232. DB9 female connector (DCE).</td>
</tr>
<tr>
<td>Configuration</td>
<td>Via console port. ¹</td>
</tr>
<tr>
<td>Firmware</td>
<td>Allows upgrades via console port.</td>
</tr>
<tr>
<td>Operational temperature</td>
<td>-40°C to +70°C</td>
</tr>
<tr>
<td>Operational humidity</td>
<td>5% to 95%, non condensing</td>
</tr>
<tr>
<td>Protection</td>
<td>IP20 (IEC60529).</td>
</tr>
<tr>
<td>RoHS conformity</td>
<td>Compliant with RoHS directive (2002/95/CE).</td>
</tr>
<tr>
<td>Certifications</td>
<td>CE</td>
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</tbody>
</table>

¹ Standard cable DB9male-DB9female 1.8 meters long is supplied with the device for connection to a PC COM port for configuring and monitoring the device. The configuration software, compatible with Windows® operating systems, is also supplied.
Functional characteristics

<table>
<thead>
<tr>
<th>Notifier interface</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Serial RS232 for connection to Notifier RS232 port.</td>
</tr>
</tbody>
</table>
| Configuration parameters | • Panel number, allows integrating any panel in network.  
• Baud rate, data bits, parity.  
• Protocol (Half or Full Duplex).  
• Timeout for waiting for response of the panel |
| Interactivity with Notifier system | • Notifier points can be read and write from the gateway.  
• Modbus value reflecting each possible state is fully configurable. |

<table>
<thead>
<tr>
<th>Modbus interface</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Device type</td>
<td>Slave.</td>
</tr>
<tr>
<td>Modbus modes supported</td>
<td>TCP, RTU RS232 or RS485.</td>
</tr>
</tbody>
</table>
| Modbus TCP configuration parameters | • IP address.  
• Subnet mask.  
• Default gateway.  
• TCP port. |
| Modbus RTU configuration parameters | • RS232/RS485.  
• Baud rate.  
• Slave number. |

<table>
<thead>
<tr>
<th>Points</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Modbus data types</td>
<td>All the points are of data type UNSIGNED INT in the Modbus interface.</td>
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</tbody>
</table>
Dimensions

Recommended available space for its installation into a cabinet (wall or DIN rail mounting), with space enough for external connections.
## Modbus address map

The following tables show the whole Modbus address map of the IntesisBox (Addr means Modbus register address).

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**Doc:** IntesBox Modbus - Server Notifier ID3000 User Manual v10 r13 eng

**URL:**
http://www.intesis.com
info@intesis.com
+34 938047134

**IntesisBox** is a registered trademark of Intesis Software SL.
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Procedure to configure the RS232 port in the Notifier panel

To enable the RS232 port of the main board, follow these steps in the menu of the panel (to unlock the keypad and have access the menu, turn the service key located on the front panel, beside the keypad, a quarter to the right):

6. Configuration
   6. Panel Configuration
      18. Conf. RS232 on main board

3. Integration protocol
   9600 bps
   Version: 1: 003A
   Controls: disabled
   Supervision com.: disabled
   Supervision time: 0

In bold the compulsory selections.
Default Level 3 password: 27835

To enable the RS232 port of the ISO-RS232 optional card, follow these steps in the menu of the panel (to unlock the keypad and have access the menu, turn the service key located on the front panel, beside the keypad, a quarter to the right):

6. Configuration
   6. Panel Configuration
      18. Conf. Port RS232 isolated

3. Integration Protocol
   2400 bps
   Version: 2: 010A (only if Half Duplex is not available)
   Controls: disabled
   Supervision com.: disabled
   Supervision time: 0

In bold the compulsory selections.
Default Level 3 password: 27835