IntesisBox® Modbus Server

Notifier ID3000 / ID3002 / ID50 / ID60 fire panels

User Manual

v10 r11 eng

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Gateway for the integration of Notifier ID3000 / ID3002 / ID60 / ID50 fire panels in Modbus enabled monitoring and control systems.

Order code:

IBOX-MBS-NID3000

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INDEX

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Description

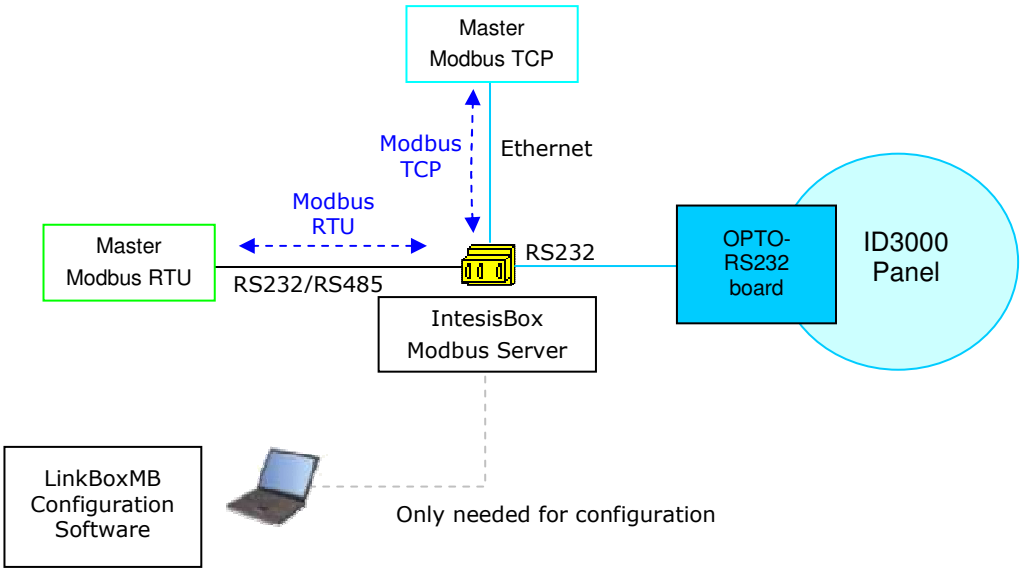
1.1 Introduction

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 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*

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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).

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1.3 Capacity of IntesisBox

Element	Max.	Notes
Number of Panels	1	IntesisBox can only integrate one single panel, no matter if it is in network with others.
Number of Points	All of one panel	Number of Notifier elements or points defined into IntesisBox.

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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.

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LinkBoxMB. Configuration & monitoring tool for IntesisBox Modbus Server series

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.

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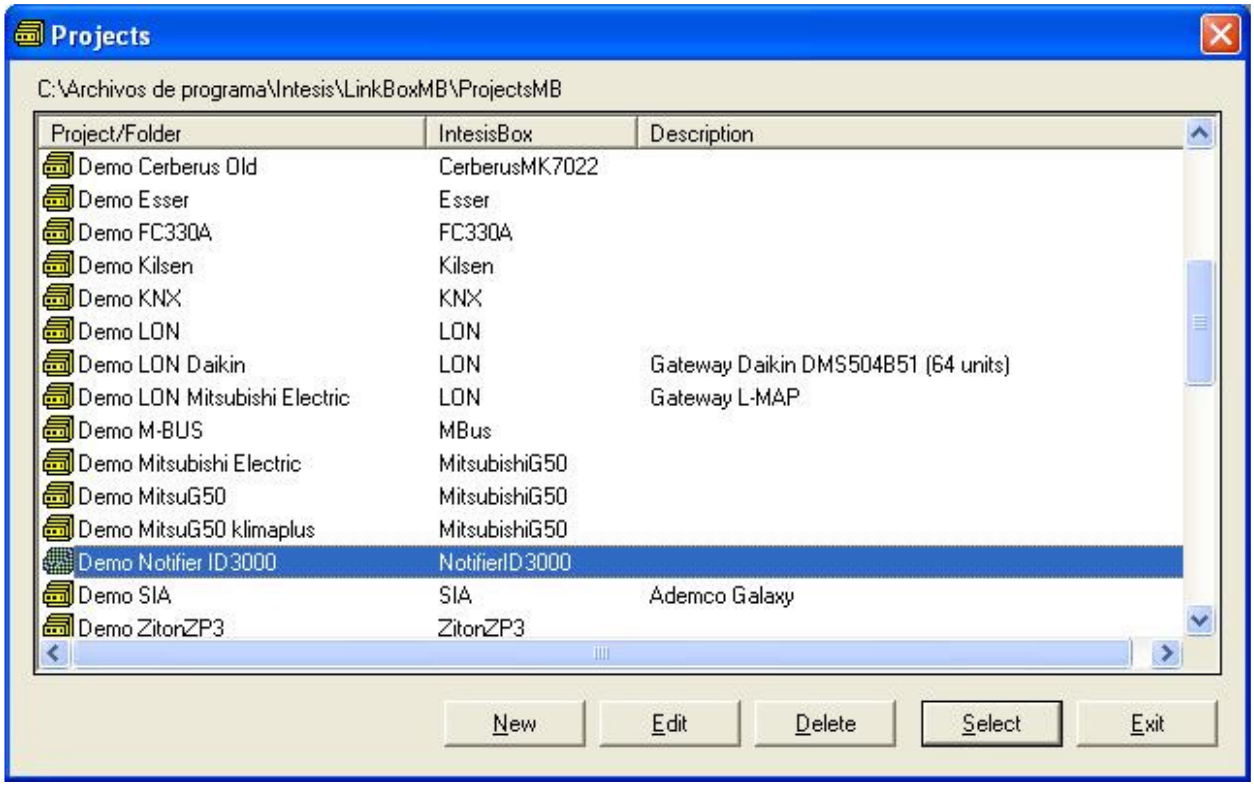
1.8 Project definition

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.

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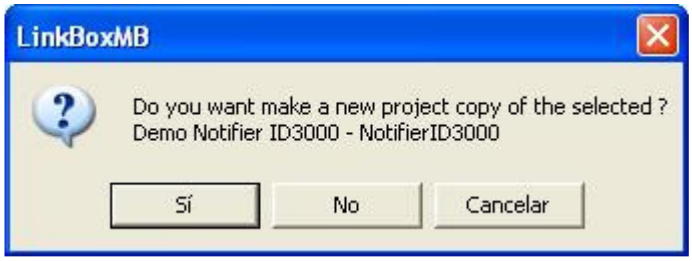
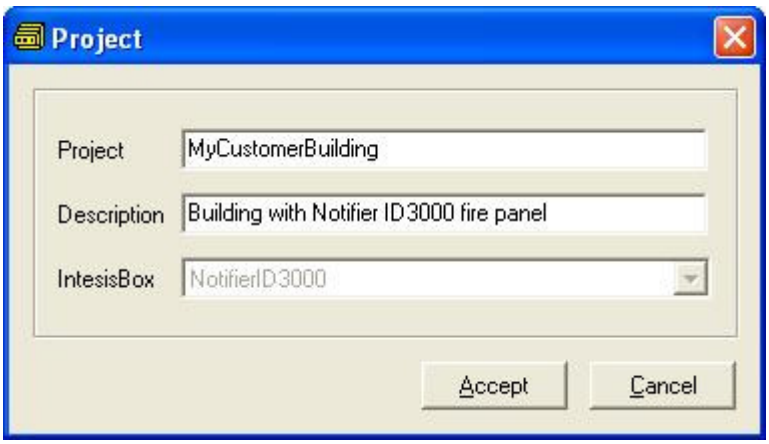


If you select *Yes* you will be prompted to specify a name and a description for the new project that will be based on the same external protocol than the selected one. If you select *No* you can specify a name, a description and an external protocol to use from the list of available external protocols.



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 *Connection*s 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.

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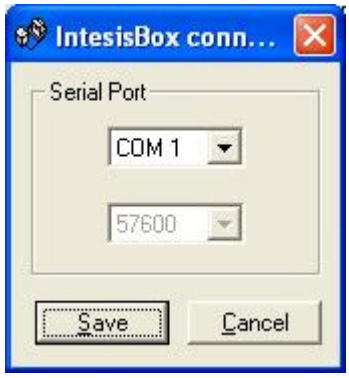
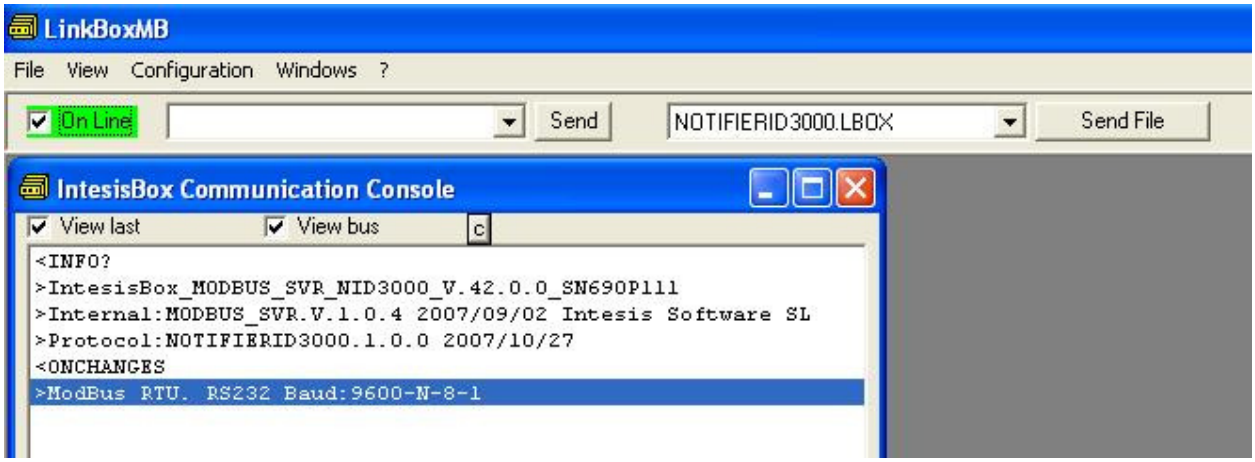


4. Check the checkbox *off-line* under the menu bar (it will change automatically to *on-line*) and LinkBoxMB will ask for INFO about the IntesisBox connected to it via the serial connection, if the connection is ok then IntesisBox will respond with its identification (this can be monitored in the *IntesisBox 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.

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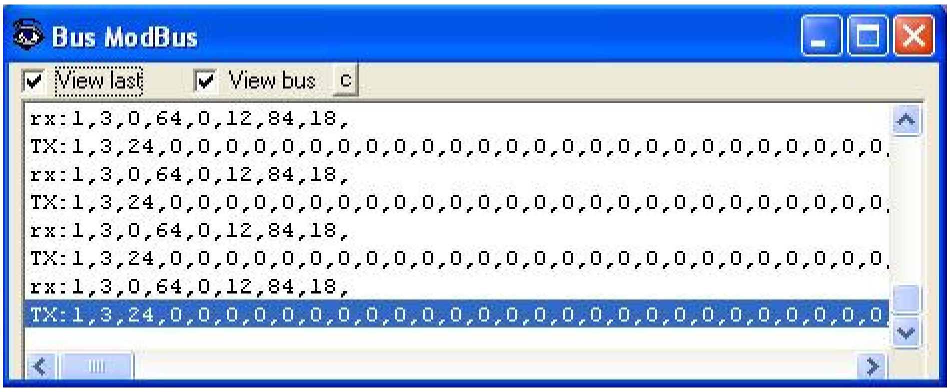
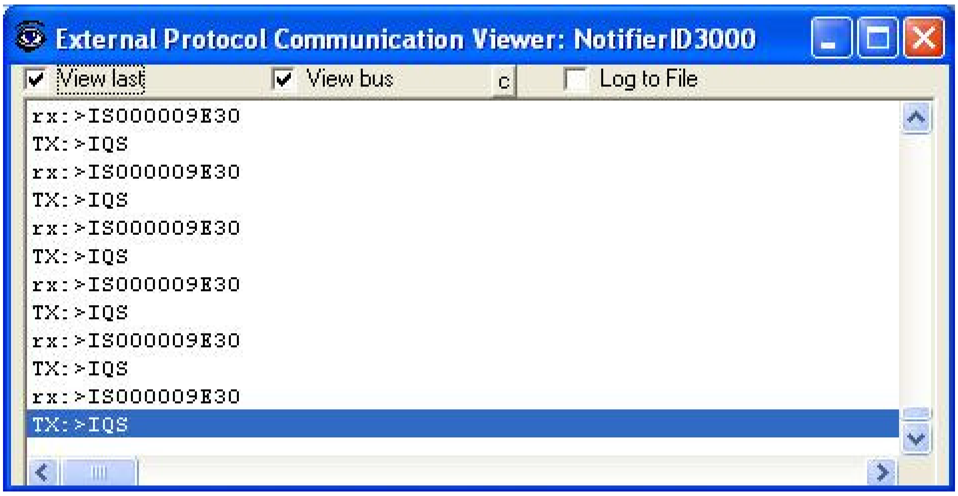


To monitor the communication between IntesisBox and the external system (Notifier in this case), select the menu *View -> Bus -> Notifier ID3000*. The *External protocol communication viewer* window will be opened. This window show in real time all the communication frames between IntesisBox and Notifier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



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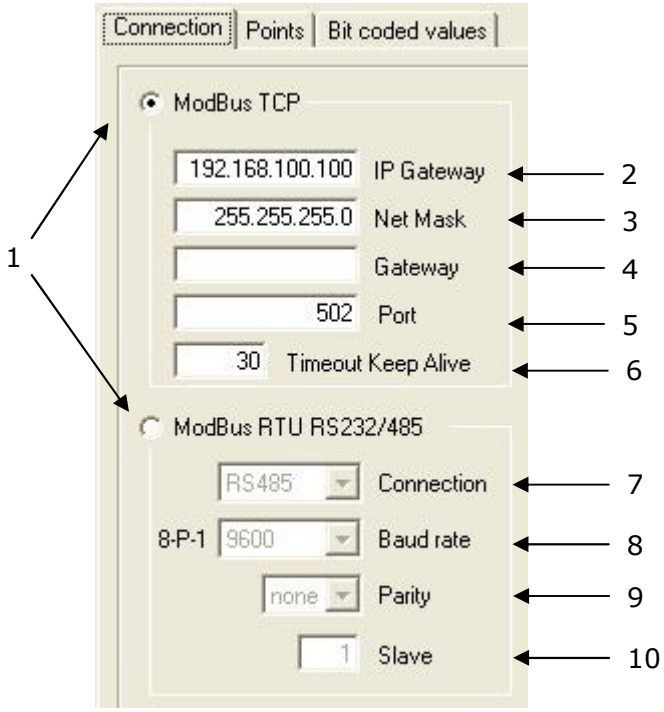
1.9 Connections configuration

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:



Modbus interface configuration.

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).

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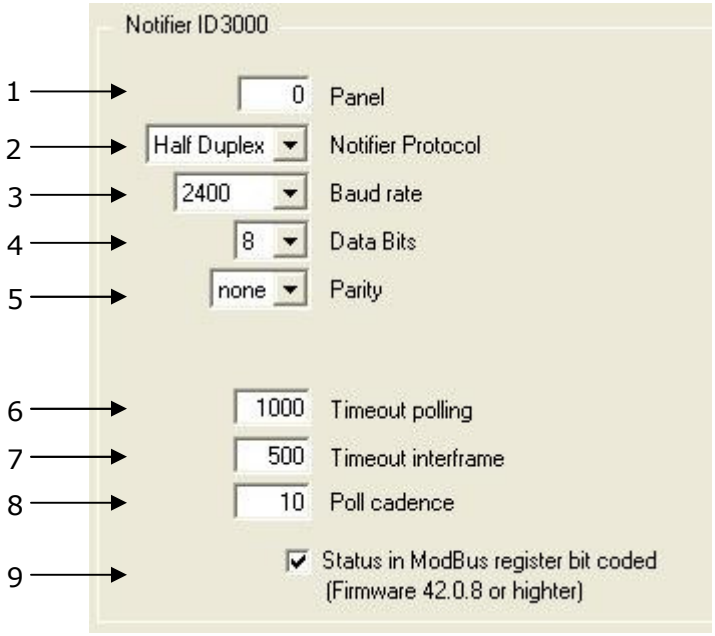
8. Select the baud rate to use.
9. Select the parity.
10. Enter the Modbus slave number for IntesisBox.

Notifier side configuration parameters:



Notifier interface Configuration.

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). When

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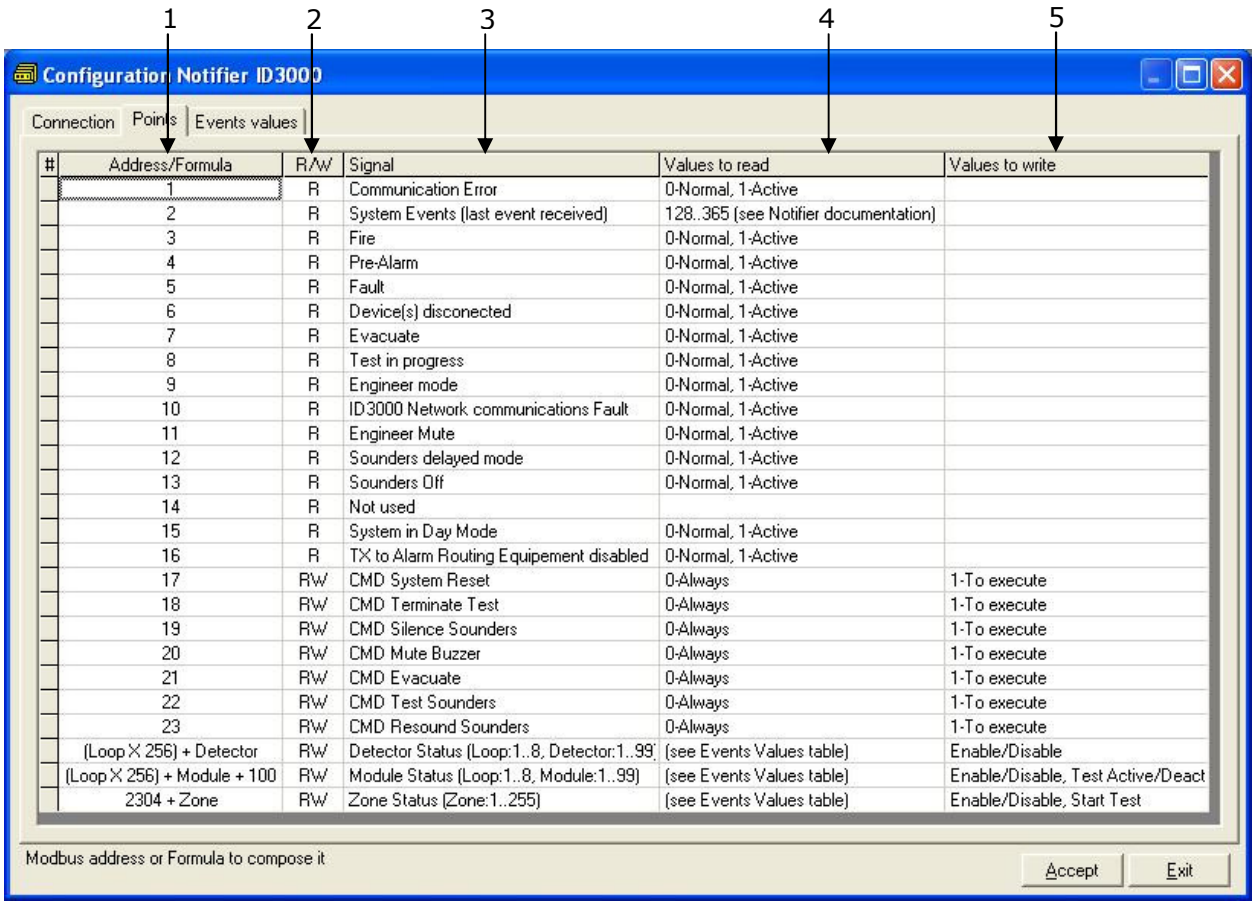
checked, Modbus register's values are based on bit-coding of each panel's or element's state (see section *Bit Coded Values* below for details).

1.10 Signals

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



#	Address/Formula	R/W	Signal	Values to read	Values to write
	1	R	Communication Error	0-Normal, 1-Active	
	2	R	System Events (last event received)	128..365 (see Notifier documentation)	
	3	R	Fire	0-Normal, 1-Active	
	4	R	Pre-Alarm	0-Normal, 1-Active	
	5	R	Fault	0-Normal, 1-Active	
	6	R	Device(s) disconected	0-Normal, 1-Active	
	7	R	Evacuate	0-Normal, 1-Active	
	8	R	Test in progress	0-Normal, 1-Active	
	9	R	Engineer mode	0-Normal, 1-Active	
	10	R	ID3000 Network communications Fault	0-Normal, 1-Active	
	11	R	Engineer Mute	0-Normal, 1-Active	
	12	R	Sounders delayed mode	0-Normal, 1-Active	
	13	R	Sounders Off	0-Normal, 1-Active	
	14	R	Not used		
	15	R	System in Day Mode	0-Normal, 1-Active	
	16	R	TX to Alarm Routing Equipement disabled	0-Normal, 1-Active	
	17	RW	CMD System Reset	0-Always	1-To execute
	18	RW	CMD Terminate Test	0-Always	1-To execute
	19	RW	CMD Silence Sounders	0-Always	1-To execute
	20	RW	CMD Mute Buzzer	0-Always	1-To execute
	21	RW	CMD Evacuate	0-Always	1-To execute
	22	RW	CMD Test Sounders	0-Always	1-To execute
	23	RW	CMD Resound Sounders	0-Always	1-To execute
	(Loop X 256) + Detector	RW	Detector Status (Loop:1..8, Detector:1..99)	(see Events Values table)	Enable/Disable
	(Loop X 256) + Module + 100	RW	Module Status (Loop:1..8, Module:1..99)	(see Events Values table)	Enable/Disable, Test Active/Deact
	2304 + Zone	RW	Zone Status (Zone:1..255)	(see Events Values table)	Enable/Disable, Start Test

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,

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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.

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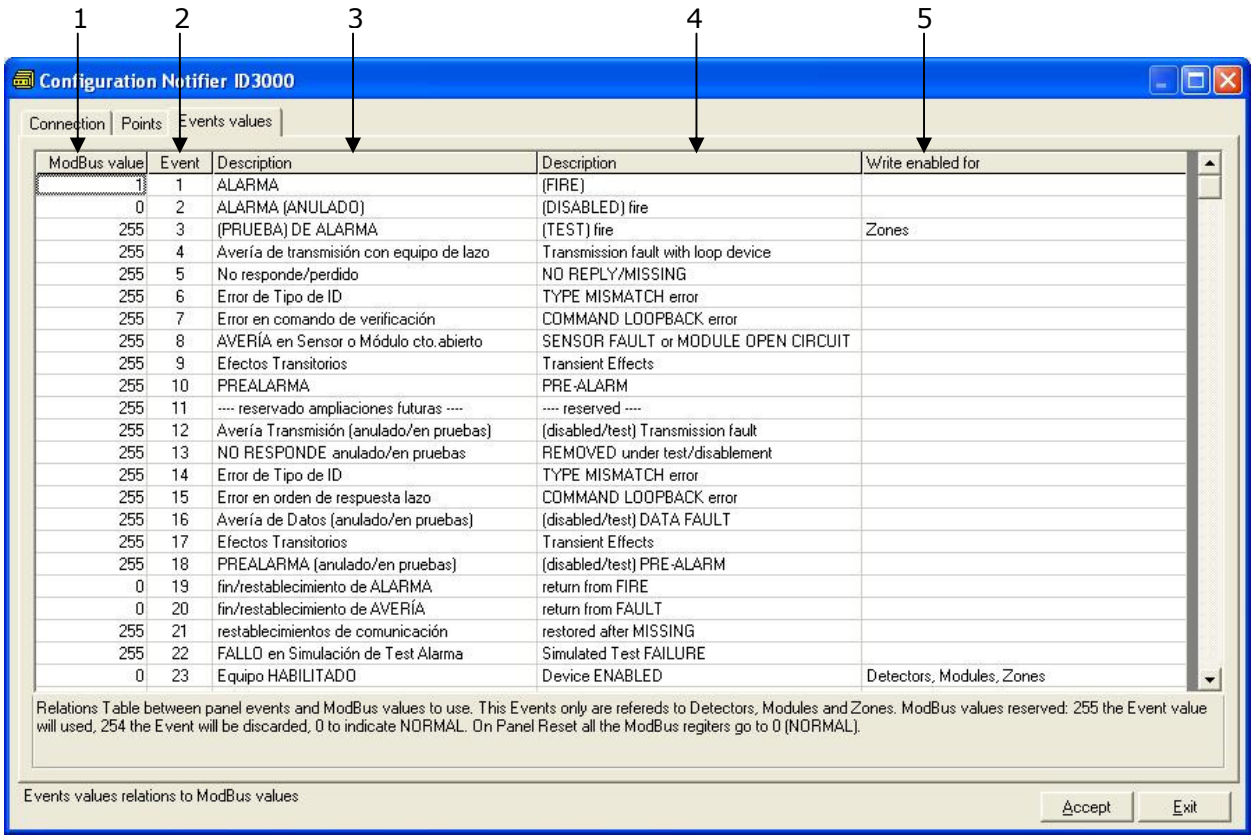
1.11 Event values

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.

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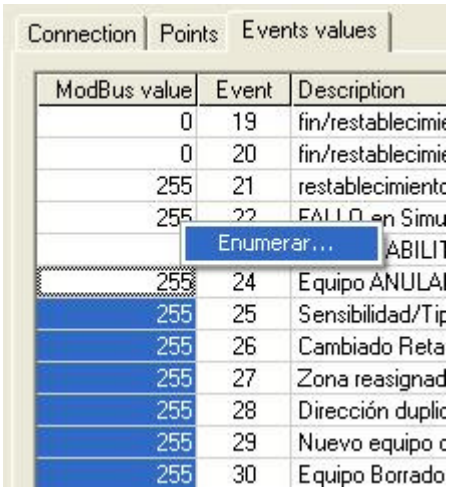
- The commands *device ENABLED* and *device DISABLED* are usable for Detectors, Modules and Zones, and are just to enable/disable.
- The commands *output module test activation* and *output module test deactivation* are usable only for Modules of type output, and are just to activate/deactivate the test of the module.
- After receiving a panel's reset event, all the values in Modbus registers return to zero.

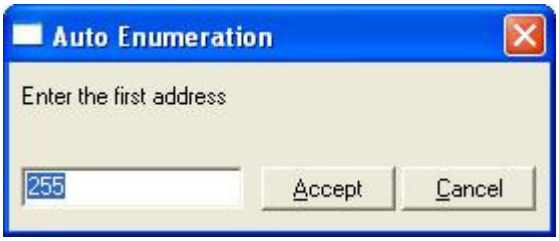
In column *Modbus value* you can enter the desired value individually per cell or you can auto enumerate some consecutive cells, for this last follow the steps below:

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).

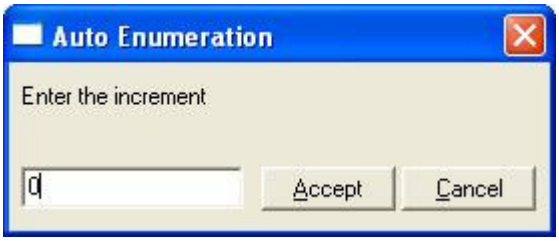
2. Click right mouse button over the selected fields and select *Auto Enumeration* option from the pop-up menu that will appear.



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.



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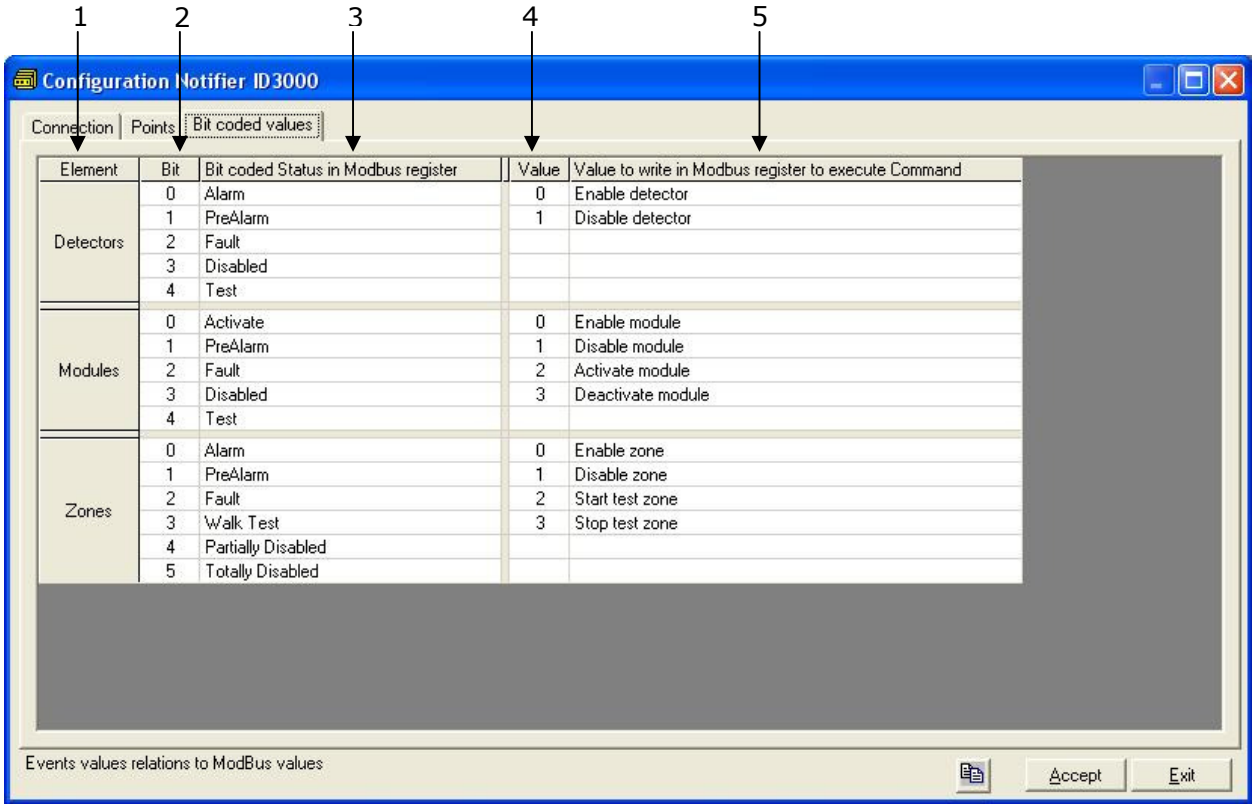
1.12 Bit Coded values

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.

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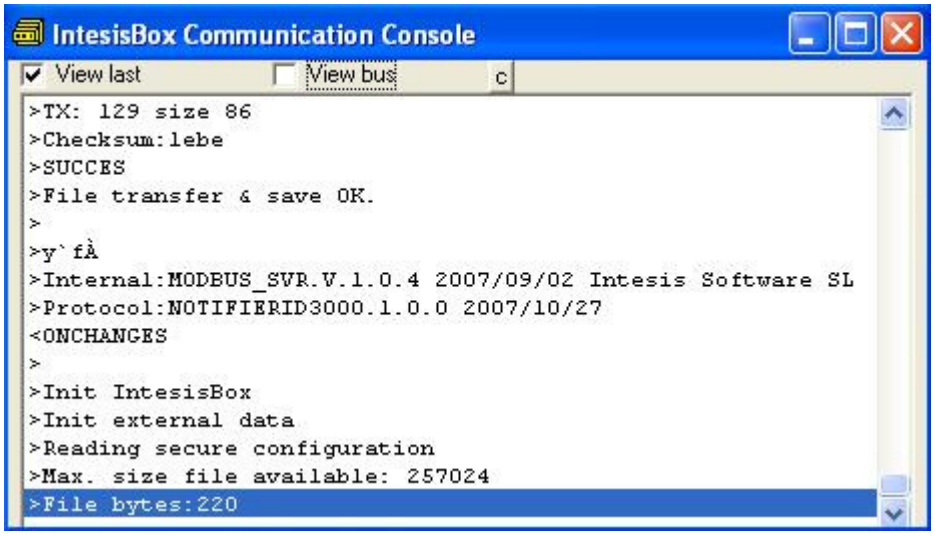
1.13 Sending the configuration to IntesisBox

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.**

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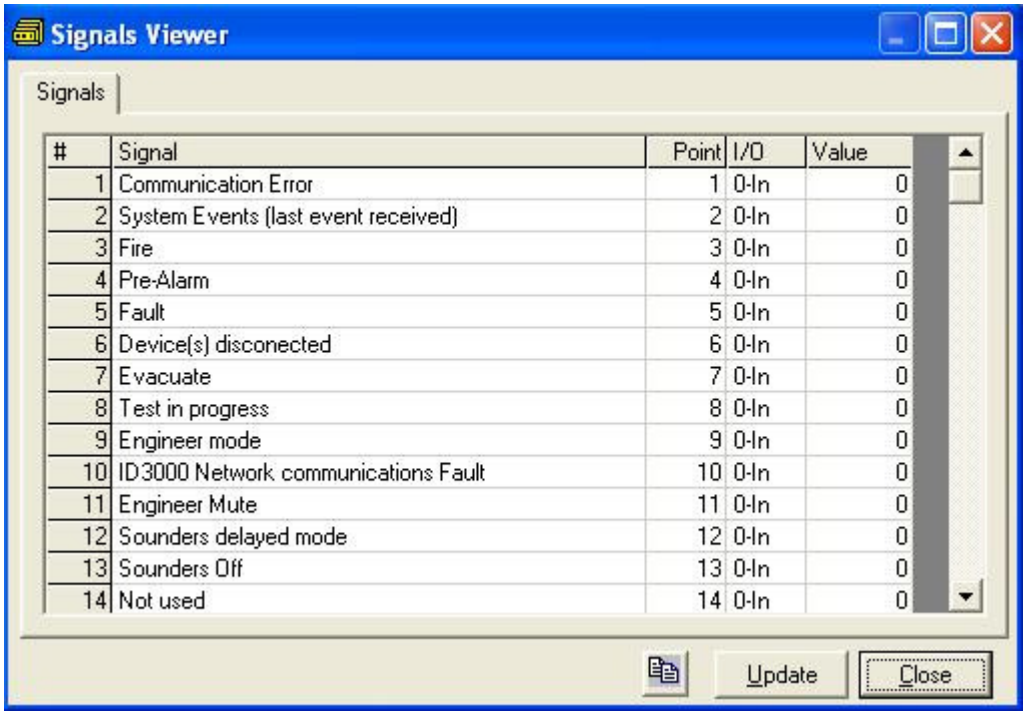
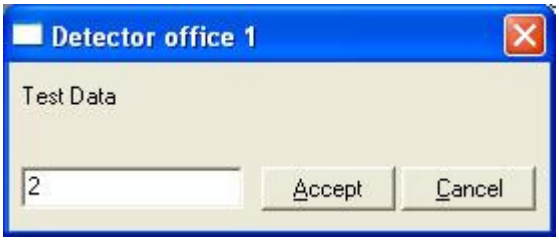
1.14 Signals viewer

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.



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.



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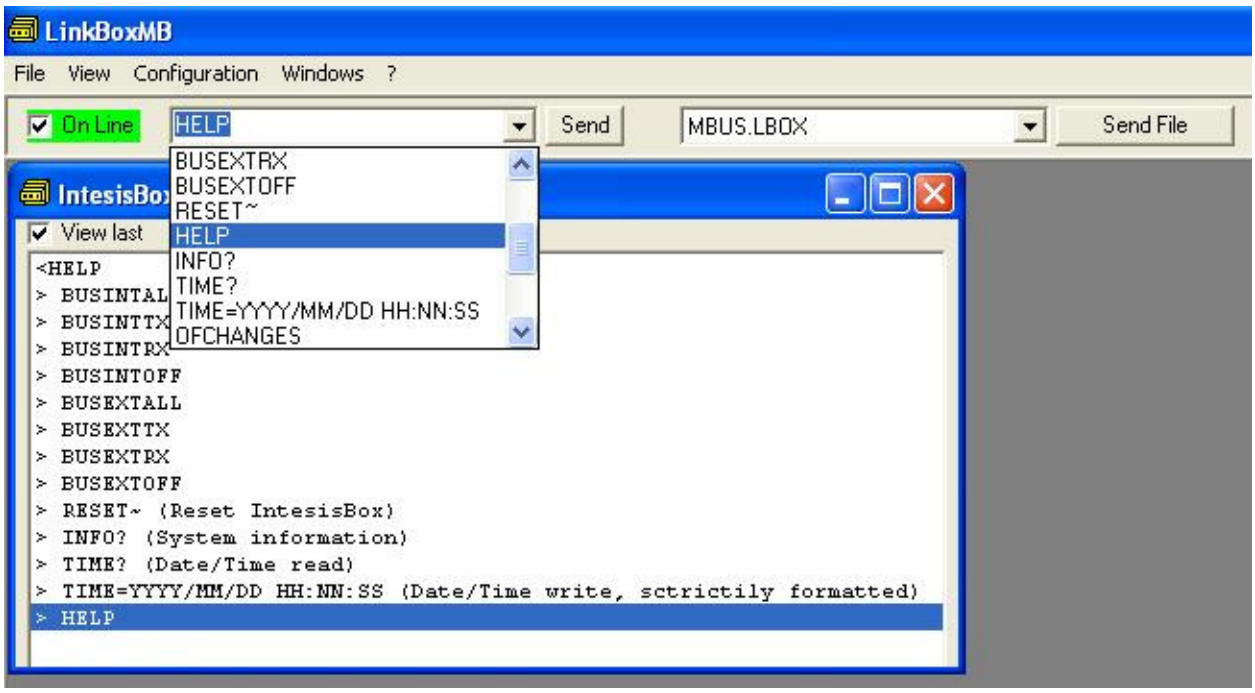
This tool is very useful to test the communication in the Modbus side from the Modbus master device for example, without the need to have the Notifier panel connected and running.

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.



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1.16 Files

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

PROJECT.INI	.ini file containing general information referent to the project
NOTIFIERID3000.INI	.ini file containing the information referent to the connection window and other special adjustments
NOTIFIERID3000.EVT	Text file (tab separated values) with the event values information (Event values list).
NOTIFIERID3000.LBOX	Binary file created from the information in the two files described above. This is the file downloaded to the IntesisBox.

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.

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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.

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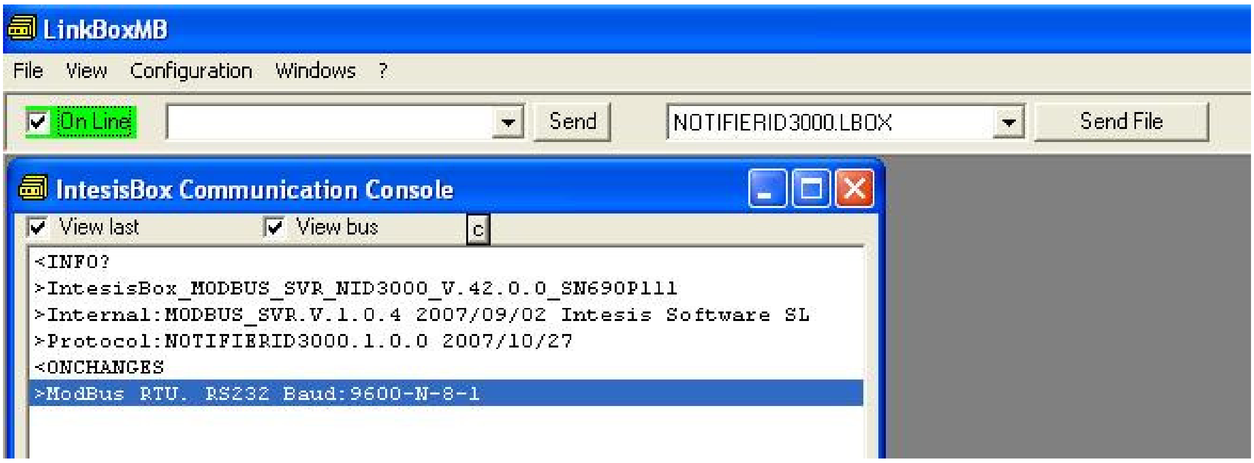
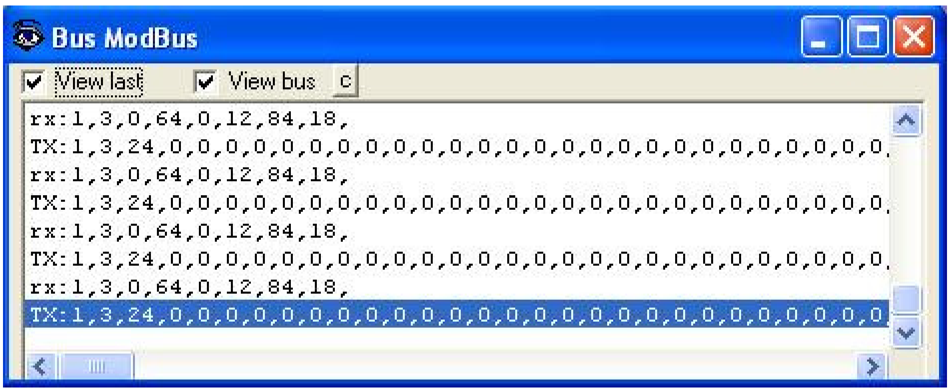
6. Connect the communication cable coming from the serial port of your laptop PC to the port marked as **PC Console** of IntesisBox. (See details for this communication cable in section *Connections* of this document).

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 *on-line* (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

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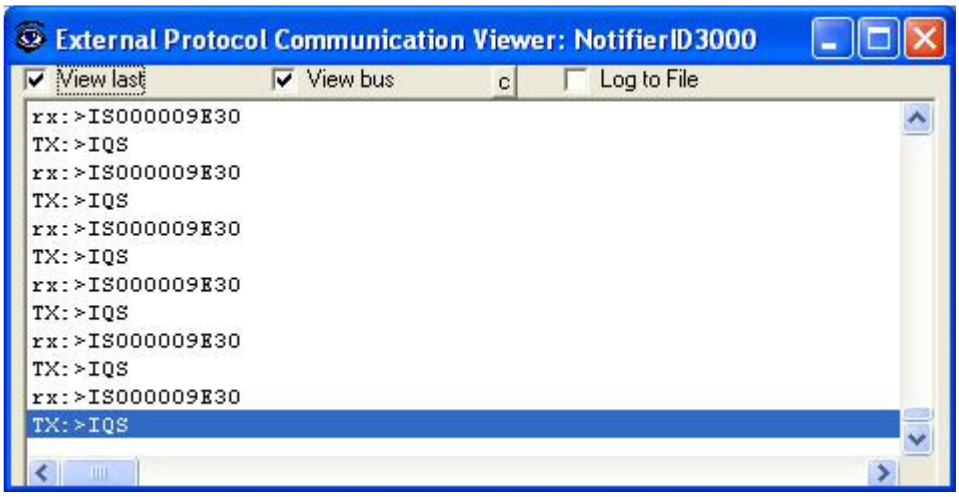
case of no communication activity between IntesisBox and Notifier, check that the RS232 port of Notifier panel is operative and well configured, and check also the communication cable used to connect both devices. (See details for this communication cable in section *Connections* of this document).



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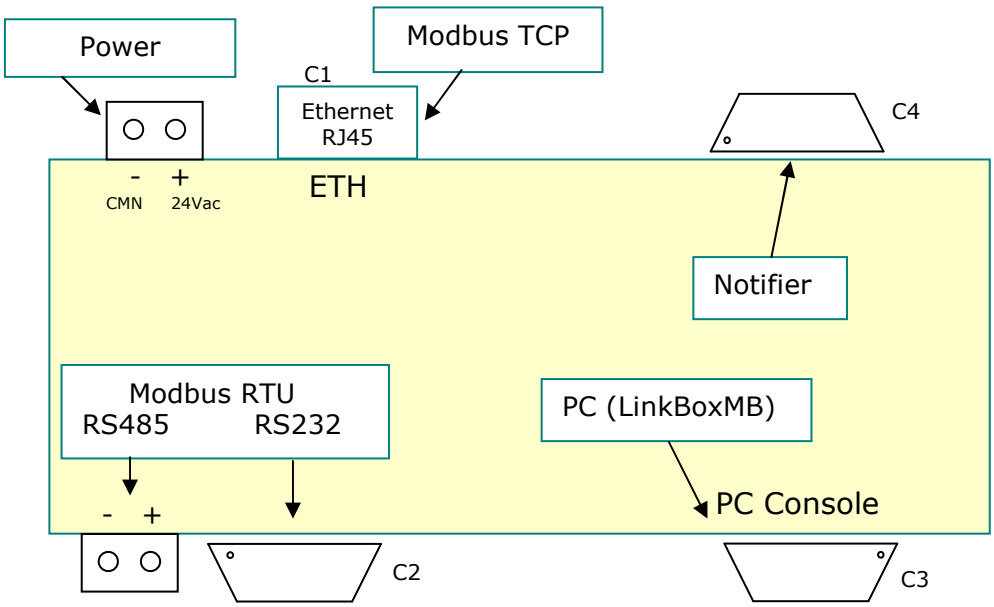
Connections



IntesisBox (RJ45 F)	C1	Modbus TCP Connection		Master TCP Device (RJ45 F)
Cable (RJ45 M)		Ethernet		Cable (RJ45 M)
		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)
Cable (DB9 F)		RS-232 (Crossed)		Cable (DB9 F)
RX	2		2	RX
TX	3		3	TX
GND	5		5	GND
Cable (DB9 F)		or RS-485		
TX/RX+	+			TX/RX+
TX/RX-	-			TX/RX-

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IntesisBox (DB9 F)	C3	PC Connection (LinkBoxMB)		PC (DB9 M)
Cable (DB9 M)		RS-232 (Straight)		Cable (DB9 F)
TX	2	→	2	RX
RX	3	←	3	TX
GND	5	↔	5	GND

IntesisBox (DB9 M)	C4	Notifier connection through ISO-RS232 optional card (RS232 in a terminal block)		Notifier ISO-RS232 card 1 2 4
Cable (DB9 F)				Cable
RX	2	←	2	TX
TX	3	→	3	RX
GND	5	↔	1	GND

IntesisBox (DB9 M)	C4	Notifier connection through RS232 on main board (RS232 in a DB9 connector)		Notifier RS232 on main board (DB9 F)
Cable (DB9 F)				Cable (DB9 M)
RX	2	←	2	TX
TX	3	→	3	RX
GND	5	↔	5	GND

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Mechanical & electrical characteristics

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

[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.

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Functional characteristics

Notifier interface	
Type	Serial RS232 for connection to Notifier RS232 port.
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.
Modbus interface	
Device type	Slave.
Modbus modes supported	TCP, RTU RS232 or RS485.
Modbus TCP configuration parameters	• IP address. • Subnet mask. • Default gateway. • TCP port.
Modbus RTU configuration parameters	• RS232/RS485. • Baud rate. • Slave number.
Points	
Modbus data types	All the points are of data type UNSIGNED INT in the Modbus interface.

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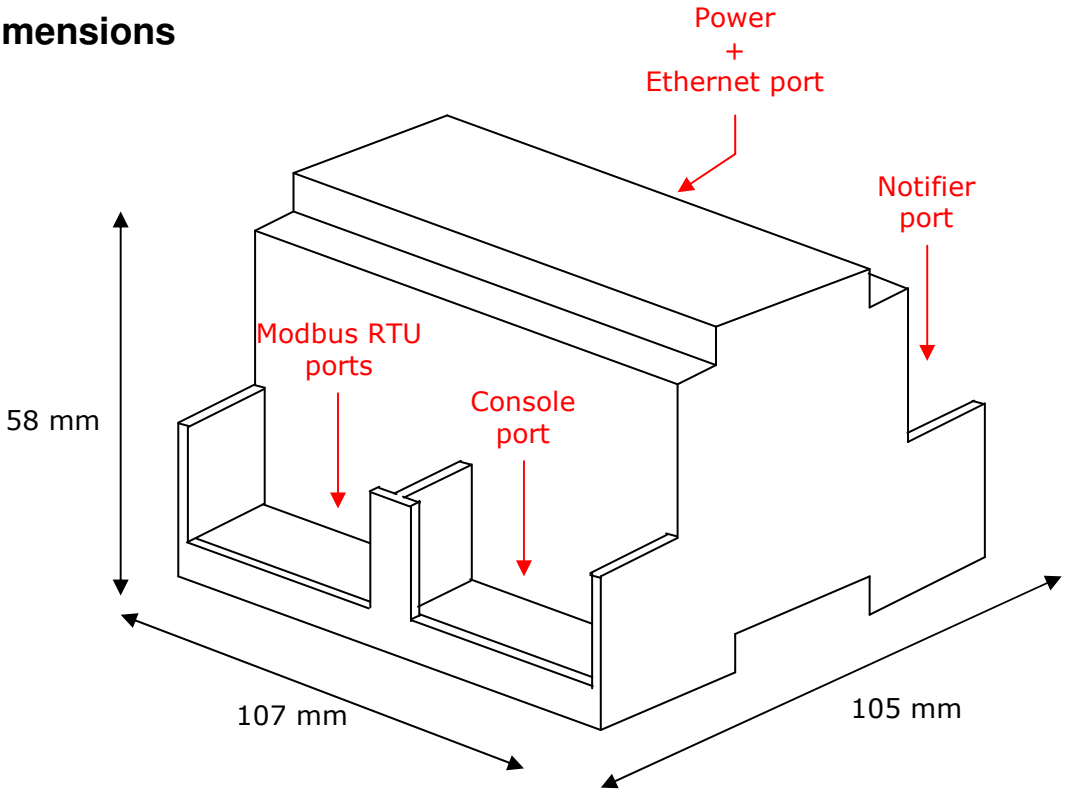
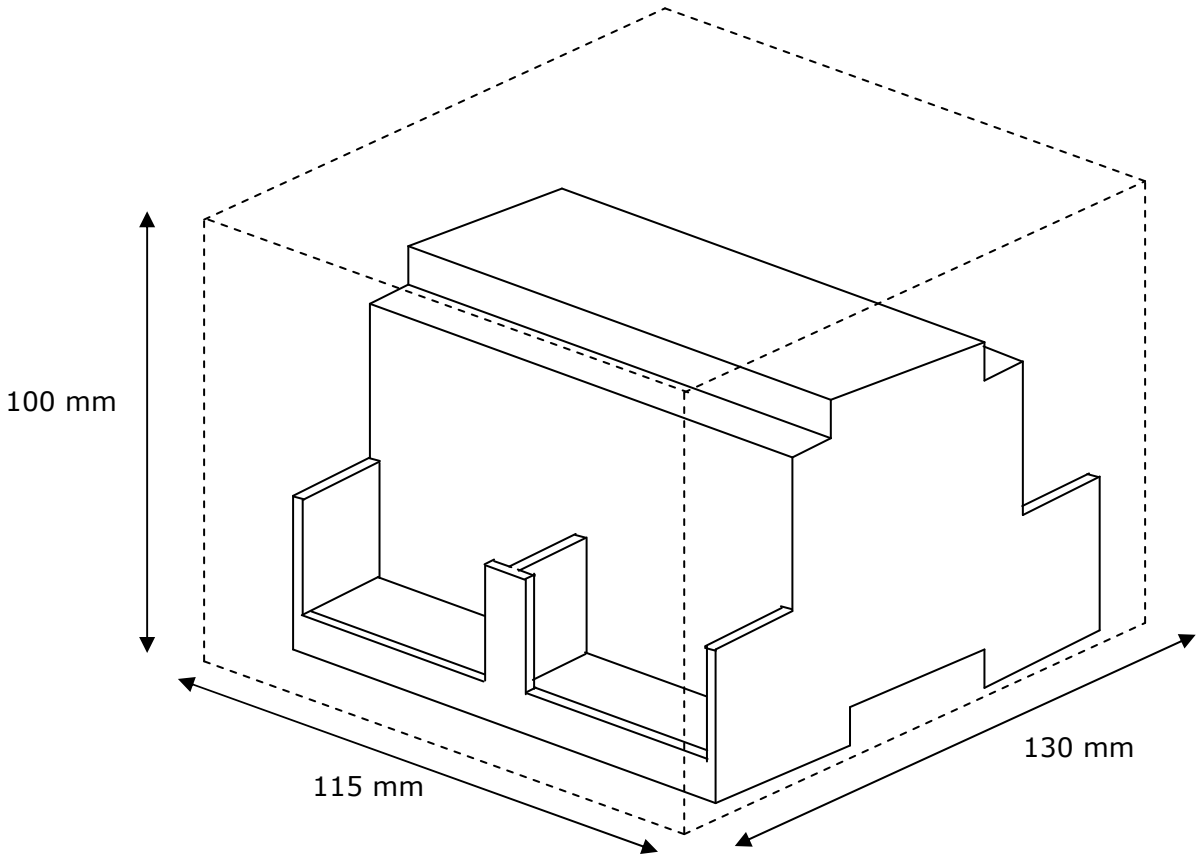
Dimensions



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



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Modbus address map

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

Loop	1				2				3				4			
	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr
	1	257	1	357	1	513	1	613	1	769	1	869	1	1025	1	1125
	2	258	2	358	2	514	2	614	2	770	2	870	2	1026	2	1126
	3	259	3	359	3	515	3	615	3	771	3	871	3	1027	3	1127
	4	260	4	360	4	516	4	616	4	772	4	872	4	1028	4	1128
	5	261	5	361	5	517	5	617	5	773	5	873	5	1029	5	1129
	6	262	6	362	6	518	6	618	6	774	6	874	6	1030	6	1130
	7	263	7	363	7	519	7	619	7	775	7	875	7	1031	7	1131
	8	264	8	364	8	520	8	620	8	776	8	876	8	1032	8	1132
	9	265	9	365	9	521	9	621	9	777	9	877	9	1033	9	1133
	10	266	10	366	10	522	10	622	10	778	10	878	10	1034	10	1134
	11	267	11	367	11	523	11	623	11	779	11	879	11	1035	11	1135
	12	268	12	368	12	524	12	624	12	780	12	880	12	1036	12	1136
	13	269	13	369	13	525	13	625	13	781	13	881	13	1037	13	1137
	14	270	14	370	14	526	14	626	14	782	14	882	14	1038	14	1138
	15	271	15	371	15	527	15	627	15	783	15	883	15	1039	15	1139
	16	272	16	372	16	528	16	628	16	784	16	884	16	1040	16	1140
	17	273	17	373	17	529	17	629	17	785	17	885	17	1041	17	1141
	18	274	18	374	18	530	18	630	18	786	18	886	18	1042	18	1142
	19	275	19	375	19	531	19	631	19	787	19	887	19	1043	19	1143
	20	276	20	376	20	532	20	632	20	788	20	888	20	1044	20	1144
	21	277	21	377	21	533	21	633	21	789	21	889	21	1045	21	1145
	22	278	22	378	22	534	22	634	22	790	22	890	22	1046	22	1146
	23	279	23	379	23	535	23	635	23	791	23	891	23	1047	23	1147
	24	280	24	380	24	536	24	636	24	792	24	892	24	1048	24	1148
	25	281	25	381	25	537	25	637	25	793	25	893	25	1049	25	1149
	26	282	26	382	26	538	26	638	26	794	26	894	26	1050	26	1150
	27	283	27	383	27	539	27	639	27	795	27	895	27	1051	27	1151
	28	284	28	384	28	540	28	640	28	796	28	896	28	1052	28	1152
	29	285	29	385	29	541	29	641	29	797	29	897	29	1053	29	1153
	30	286	30	386	30	542	30	642	30	798	30	898	30	1054	30	1154
	31	287	31	387	31	543	31	643	31	799	31	899	31	1055	31	1155
	32	288	32	388	32	544	32	644	32	800	32	900	32	1056	32	1156
	33	289	33	389	33	545	33	645	33	801	33	901	33	1057	33	1157
	34	290	34	390	34	546	34	646	34	802	34	902	34	1058	34	1158
	35	291	35	391	35	547	35	647	35	803	35	903	35	1059	35	1159
	36	292	36	392	36	548	36	648	36	804	36	904	36	1060	36	1160
	37	293	37	393	37	549	37	649	37	805	37	905	37	1061	37	1161
	38	294	38	394	38	550	38	650	38	806	38	906	38	1062	38	1162
	39	295	39	395	39	551	39	651	39	807	39	907	39	1063	39	1163
	40	296	40	396	40	552	40	652	40	808	40	908	40	1064	40	1164
	41	297	41	397	41	553	41	653	41	809	41	909	41	1065	41	1165
	42	298	42	398	42	554	42	654	42	810	42	910	42	1066	42	1166
	43	299	43	399	43	555	43	655	43	811	43	911	43	1067	43	1167
	44	300	44	400	44	556	44	656	44	812	44	912	44	1068	44	1168
	45	301	45	401	45	557	45	657	45	813	45	913	45	1069	45	1169
	46	302	46	402	46	558	46	658	46	814	46	914	46	1070	46	1170
	47	303	47	403	47	559	47	659	47	815	47	915	47	1071	47	1171
	48	304	48	404	48	560	48	660	48	816	48	916	48	1072	48	1172
	49	305	49	405	49	561	49	661	49	817	49	917	49	1073	49	1173
	50	306	50	406	50	562	50	662	50	818	50	918	50	1074	50	1174
	51	307	51	407	51	563	51	663	51	819	51	919	51	1075	51	1175
	52	308	52	408	52	564	52	664	52	820	52	920	52	1076	52	1176
	53	309	53	409	53	565	53	665	53	821	53	921	53	1077	53	1177
	54	310	54	410	54	566	54	666	54	822	54	922	54	1078	54	1178
	55	311	55	411	55	567	55	667	55	823	55	923	55	1079	55	1179
	56	312	56	412	56	568	56	668	56	824	56	924	56	1080	56	1180
	57	313	57	413	57	569	57	669	57	825	57	925	57	1081	57	1181
	58	314	58	414	58	570	58	670	58	826	58	926	58	1082	58	1182
	59	315	59	415	59	571	59	671	59	827	59	927	59	1083	59	1183
	60	316	60	416	60	572	60	672	60	828	60	928	60	1084	60	1184
	61	317	61	417	61	573	61	673	61	829	61	929	61	1085	61	1185
	62	318	62	418	62	574	62	674	62	830	62	930	62	1086	62	1186
	63	319	63	419	63	575	63	675	63	831	63	931	63	1087	63	1187
	64	320	64	420	64	576	64	676	64	832	64	932	64	1088	64	1188
	65	321	65	421	65	577	65	677	65	833	65	933	65	1089	65	1189

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66	322	66	422	66	578	66	678	66	834	66	934	66	1090	66	1190
67	323	67	423	67	579	67	679	67	835	67	935	67	1091	67	1191
68	324	68	424	68	580	68	680	68	836	68	936	68	1092	68	1192
69	325	69	425	69	581	69	681	69	837	69	937	69	1093	69	1193
70	326	70	426	70	582	70	682	70	838	70	938	70	1094	70	1194
71	327	71	427	71	583	71	683	71	839	71	939	71	1095	71	1195
72	328	72	428	72	584	72	684	72	840	72	940	72	1096	72	1196
73	329	73	429	73	585	73	685	73	841	73	941	73	1097	73	1197
74	330	74	430	74	586	74	686	74	842	74	942	74	1098	74	1198
75	331	75	431	75	587	75	687	75	843	75	943	75	1099	75	1199
76	332	76	432	76	588	76	688	76	844	76	944	76	1100	76	1200
77	333	77	433	77	589	77	689	77	845	77	945	77	1101	77	1201
78	334	78	434	78	590	78	690	78	846	78	946	78	1102	78	1202
79	335	79	435	79	591	79	691	79	847	79	947	79	1103	79	1203
80	336	80	436	80	592	80	692	80	848	80	948	80	1104	80	1204
81	337	81	437	81	593	81	693	81	849	81	949	81	1105	81	1205
82	338	82	438	82	594	82	694	82	850	82	950	82	1106	82	1206
83	339	83	439	83	595	83	695	83	851	83	951	83	1107	83	1207
84	340	84	440	84	596	84	696	84	852	84	952	84	1108	84	1208
85	341	85	441	85	597	85	697	85	853	85	953	85	1109	85	1209
86	342	86	442	86	598	86	698	86	854	86	954	86	1110	86	1210
87	343	87	443	87	599	87	699	87	855	87	955	87	1111	87	1211
88	344	88	444	88	600	88	700	88	856	88	956	88	1112	88	1212
89	345	89	445	89	601	89	701	89	857	89	957	89	1113	89	1213
90	346	90	446	90	602	90	702	90	858	90	958	90	1114	90	1214
91	347	91	447	91	603	91	703	91	859	91	959	91	1115	91	1215
92	348	92	448	92	604	92	704	92	860	92	960	92	1116	92	1216
93	349	93	449	93	605	93	705	93	861	93	961	93	1117	93	1217
94	350	94	450	94	606	94	706	94	862	94	962	94	1118	94	1218
95	351	95	451	95	607	95	707	95	863	95	963	95	1119	95	1219
96	352	96	452	96	608	96	708	96	864	96	964	96	1120	96	1220
97	353	97	453	97	609	97	709	97	865	97	965	97	1121	97	1221
98	354	98	454	98	610	98	710	98	866	98	966	98	1122	98	1222
99	355	99	455	99	611	99	711	99	867	99	967	99	1123	99	1223

Loop	5				6				7				8			
	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr
	1	1281	1	1381	1	1537	1	1637	1	1793	1	1893	1	2049	1	2149
	2	1282	2	1382	2	1538	2	1638	2	1794	2	1894	2	2050	2	2150
	3	1283	3	1383	3	1539	3	1639	3	1795	3	1895	3	2051	3	2151
	4	1284	4	1384	4	1540	4	1640	4	1796	4	1896	4	2052	4	2152
	5	1285	5	1385	5	1541	5	1641	5	1797	5	1897	5	2053	5	2153
	6	1286	6	1386	6	1542	6	1642	6	1798	6	1898	6	2054	6	2154
	7	1287	7	1387	7	1543	7	1643	7	1799	7	1899	7	2055	7	2155
	8	1288	8	1388	8	1544	8	1644	8	1800	8	1900	8	2056	8	2156
	9	1289	9	1389	9	1545	9	1645	9	1801	9	1901	9	2057	9	2157
	10	1290	10	1390	10	1546	10	1646	10	1802	10	1902	10	2058	10	2158
	11	1291	11	1391	11	1547	11	1647	11	1803	11	1903	11	2059	11	2159
	12	1292	12	1392	12	1548	12	1648	12	1804	12	1904	12	2060	12	2160
	13	1293	13	1393	13	1549	13	1649	13	1805	13	1905	13	2061	13	2161
	14	1294	14	1394	14	1550	14	1650	14	1806	14	1906	14	2062	14	2162
	15	1295	15	1395	15	1551	15	1651	15	1807	15	1907	15	2063	15	2163
	16	1296	16	1396	16	1552	16	1652	16	1808	16	1908	16	2064	16	2164
	17	1297	17	1397	17	1553	17	1653	17	1809	17	1909	17	2065	17	2165
	18	1298	18	1398	18	1554	18	1654	18	1810	18	1910	18	2066	18	2166
	19	1299	19	1399	19	1555	19	1655	19	1811	19	1911	19	2067	19	2167
	20	1300	20	1400	20	1556	20	1656	20	1812	20	1912	20	2068	20	2168
	21	1301	21	1401	21	1557	21	1657	21	1813	21	1913	21	2069	21	2169
	22	1302	22	1402	22	1558	22	1658	22	1814	22	1914	22	2070	22	2170
	23	1303	23	1403	23	1559	23	1659	23	1815	23	1915	23	2071	23	2171
	24	1304	24	1404	24	1560	24	1660	24	1816	24	1916	24	2072	24	2172
	25	1305	25	1405	25	1561	25	1661	25	1817	25	1917	25	2073	25	2173
	26	1306	26	1406	26	1562	26	1662	26	1818	26	1918	26	2074	26	2174
	27	1307	27	1407	27	1563	27	1663	27	1819	27	1919	27	2075	27	2175
	28	1308	28	1408	28	1564	28	1664	28	1820	28	1920	28	2076	28	2176
	29	1309	29	1409	29	1565	29	1665	29	1821	29	1921	29	2077	29	2177
	30	1310	30	1410	30	1566	30	1666	30	1822	30	1922	30	2078	30	2178
	31	1311	31	1411	31	1567	31	1667	31	1823	31	1923	31	2079	31	2179
	32	1312	32	1412	32	1568	32	1668	32	1824	32	1924	32	2080	32	2180
	33	1313	33	1413	33	1569	33	1669	33	1825	33	1925	33	2081	33	2181
	34	1314	34	1414	34	1570	34	1670	34	1826	34	1926	34	2082	34	2182
	35	1315	35	1415	35	1571	35	1671	35	1827	35	1927	35	2083	35	2183
	36	1316	36	1416	36	1572	36	1672	36	1828	36	1928	36	2084	36	2184
	37	1317	37	1417	37	1573	37	1673	37	1829	37	1929	37	2085	37	2185
	38	1318	38	1418	38	1574	38	1674	38	1830	38	1930	38	2086	38	2186

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39	1319	39	1419	39	1575	39	1675	39	1831	39	1931	39	2087	39	2187
40	1320	40	1420	40	1576	40	1676	40	1832	40	1932	40	2088	40	2188
41	1321	41	1421	41	1577	41	1677	41	1833	41	1933	41	2089	41	2189
42	1322	42	1422	42	1578	42	1678	42	1834	42	1934	42	2090	42	2190
43	1323	43	1423	43	1579	43	1679	43	1835	43	1935	43	2091	43	2191
44	1324	44	1424	44	1580	44	1680	44	1836	44	1936	44	2092	44	2192
45	1325	45	1425	45	1581	45	1681	45	1837	45	1937	45	2093	45	2193
46	1326	46	1426	46	1582	46	1682	46	1838	46	1938	46	2094	46	2194
47	1327	47	1427	47	1583	47	1683	47	1839	47	1939	47	2095	47	2195
48	1328	48	1428	48	1584	48	1684	48	1840	48	1940	48	2096	48	2196
49	1329	49	1429	49	1585	49	1685	49	1841	49	1941	49	2097	49	2197
50	1330	50	1430	50	1586	50	1686	50	1842	50	1942	50	2098	50	2198
51	1331	51	1431	51	1587	51	1687	51	1843	51	1943	51	2099	51	2199
52	1332	52	1432	52	1588	52	1688	52	1844	52	1944	52	2100	52	2200
53	1333	53	1433	53	1589	53	1689	53	1845	53	1945	53	2101	53	2201
54	1334	54	1434	54	1590	54	1690	54	1846	54	1946	54	2102	54	2202
55	1335	55	1435	55	1591	55	1691	55	1847	55	1947	55	2103	55	2203
56	1336	56	1436	56	1592	56	1692	56	1848	56	1948	56	2104	56	2204
57	1337	57	1437	57	1593	57	1693	57	1849	57	1949	57	2105	57	2205
58	1338	58	1438	58	1594	58	1694	58	1850	58	1950	58	2106	58	2206
59	1339	59	1439	59	1595	59	1695	59	1851	59	1951	59	2107	59	2207
60	1340	60	1440	60	1596	60	1696	60	1852	60	1952	60	2108	60	2208
61	1341	61	1441	61	1597	61	1697	61	1853	61	1953	61	2109	61	2209
62	1342	62	1442	62	1598	62	1698	62	1854	62	1954	62	2110	62	2210
63	1343	63	1443	63	1599	63	1699	63	1855	63	1955	63	2111	63	2211
64	1344	64	1444	64	1600	64	1700	64	1856	64	1956	64	2112	64	2212
65	1345	65	1445	65	1601	65	1701	65	1857	65	1957	65	2113	65	2213
66	1346	66	1446	66	1602	66	1702	66	1858	66	1958	66	2114	66	2214
67	1347	67	1447	67	1603	67	1703	67	1859	67	1959	67	2115	67	2215
68	1348	68	1448	68	1604	68	1704	68	1860	68	1960	68	2116	68	2216
69	1349	69	1449	69	1605	69	1705	69	1861	69	1961	69	2117	69	2217
70	1350	70	1450	70	1606	70	1706	70	1862	70	1962	70	2118	70	2218
71	1351	71	1451	71	1607	71	1707	71	1863	71	1963	71	2119	71	2219
72	1352	72	1452	72	1608	72	1708	72	1864	72	1964	72	2120	72	2220
73	1353	73	1453	73	1609	73	1709	73	1865	73	1965	73	2121	73	2221
74	1354	74	1454	74	1610	74	1710	74	1866	74	1966	74	2122	74	2222
75	1355	75	1455	75	1611	75	1711	75	1867	75	1967	75	2123	75	2223
76	1356	76	1456	76	1612	76	1712	76	1868	76	1968	76	2124	76	2224
77	1357	77	1457	77	1613	77	1713	77	1869	77	1969	77	2125	77	2225
78	1358	78	1458	78	1614	78	1714	78	1870	78	1970	78	2126	78	2226
79	1359	79	1459	79	1615	79	1715	79	1871	79	1971	79	2127	79	2227
80	1360	80	1460	80	1616	80	1716	80	1872	80	1972	80	2128	80	2228
81	1361	81	1461	81	1617	81	1717	81	1873	81	1973	81	2129	81	2229
82	1362	82	1462	82	1618	82	1718	82	1874	82	1974	82	2130	82	2230
83	1363	83	1463	83	1619	83	1719	83	1875	83	1975	83	2131	83	2231
84	1364	84	1464	84	1620	84	1720	84	1876	84	1976	84	2132	84	2232
85	1365	85	1465	85	1621	85	1721	85	1877	85	1977	85	2133	85	2233
86	1366	86	1466	86	1622	86	1722	86	1878	86	1978	86	2134	86	2234
87	1367	87	1467	87	1623	87	1723	87	1879	87	1979	87	2135	87	2235
88	1368	88	1468	88	1624	88	1724	88	1880	88	1980	88	2136	88	2236
89	1369	89	1469	89	1625	89	1725	89	1881	89	1981	89	2137	89	2237
90	1370	90	1470	90	1626	90	1726	90	1882	90	1982	90	2138	90	2238
91	1371	91	1471	91	1627	91	1727	91	1883	91	1983	91	2139	91	2239
92	1372	92	1472	92	1628	92	1728	92	1884	92	1984	92	2140	92	2240
93	1373	93	1473	93	1629	93	1729	93	1885	93	1985	93	2141	93	2241
94	1374	94	1474	94	1630	94	1730	94	1886	94	1986	94	2142	94	2242
95	1375	95	1475	95	1631	95	1731	95	1887	95	1987	95	2143	95	2243
96	1376	96	1476	96	1632	96	1732	96	1888	96	1988	96	2144	96	2244
97	1377	97	1477	97	1633	97	1733	97	1889	97	1989	97	2145	97	2245
98	1378	98	1478	98	1634	98	1734	98	1890	98	1990	98	2146	98	2246
99	1379	99	1479	99	1635	99	1735	99	1891	99	1991	99	2147	99	2247

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Zone	Addr	Module	Addr	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr	Detector	Addr	Module	Addr
1	2305	33	2337	65	2369	97	2401	129	2433	161	2465	193	2497	225	2529
2	2306	34	2338	66	2370	98	2402	130	2434	162	2466	194	2498	226	2530
3	2307	35	2339	67	2371	99	2403	131	2435	163	2467	195	2499	227	2531
4	2308	36	2340	68	2372	100	2404	132	2436	164	2468	196	2500	228	2532
5	2309	37	2341	69	2373	101	2405	133	2437	165	2469	197	2501	229	2533
6	2310	38	2342	70	2374	102	2406	134	2438	166	2470	198	2502	230	2534
7	2311	39	2343	71	2375	103	2407	135	2439	167	2471	199	2503	231	2535
8	2312	40	2344	72	2376	104	2408	136	2440	168	2472	200	2504	232	2536
9	2313	41	2345	73	2377	105	2409	137	2441	169	2473	201	2505	233	2537
10	2314	42	2346	74	2378	106	2410	138	2442	170	2474	202	2506	234	2538
11	2315	43	2347	75	2379	107	2411	139	2443	171	2475	203	2507	235	2539
12	2316	44	2348	76	2380	108	2412	140	2444	172	2476	204	2508	236	2540
13	2317	45	2349	77	2381	109	2413	141	2445	173	2477	205	2509	237	2541
14	2318	46	2350	78	2382	110	2414	142	2446	174	2478	206	2510	238	2542
15	2319	47	2351	79	2383	111	2415	143	2447	175	2479	207	2511	239	2543
16	2320	48	2352	80	2384	112	2416	144	2448	176	2480	208	2512	240	2544
17	2321	49	2353	81	2385	113	2417	145	2449	177	2481	209	2513	241	2545
18	2322	50	2354	82	2386	114	2418	146	2450	178	2482	210	2514	242	2546
19	2323	51	2355	83	2387	115	2419	147	2451	179	2483	211	2515	243	2547
20	2324	52	2356	84	2388	116	2420	148	2452	180	2484	212	2516	244	2548
21	2325	53	2357	85	2389	117	2421	149	2453	181	2485	213	2517	245	2549
22	2326	54	2358	86	2390	118	2422	150	2454	182	2486	214	2518	246	2550
23	2327	55	2359	87	2391	119	2423	151	2455	183	2487	215	2519	247	2551
24	2328	56	2360	88	2392	120	2424	152	2456	184	2488	216	2520	248	2552
25	2329	57	2361	89	2393	121	2425	153	2457	185	2489	217	2521	249	2553
26	2330	58	2362	90	2394	122	2426	154	2458	186	2490	218	2522	250	2554
27	2331	59	2363	91	2395	123	2427	155	2459	187	2491	219	2523	251	2555
28	2332	60	2364	92	2396	124	2428	156	2460	188	2492	220	2524	252	2556
29	2333	61	2365	93	2397	125	2429	157	2461	189	2493	221	2525	253	2557
30	2334	62	2366	94	2398	126	2430	158	2462	190	2494	222	2526	254	2558
31	2335	63	2367	95	2399	127	2431	159	2463	191	2495	223	2527	255	2559
32	2336	64	2368	96	2400	128	2432	160	2464	192	2496	224	2528		

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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

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