ADEBUS

&

AdebusExplorer

Monitoring control panel
Installation manual & cabling
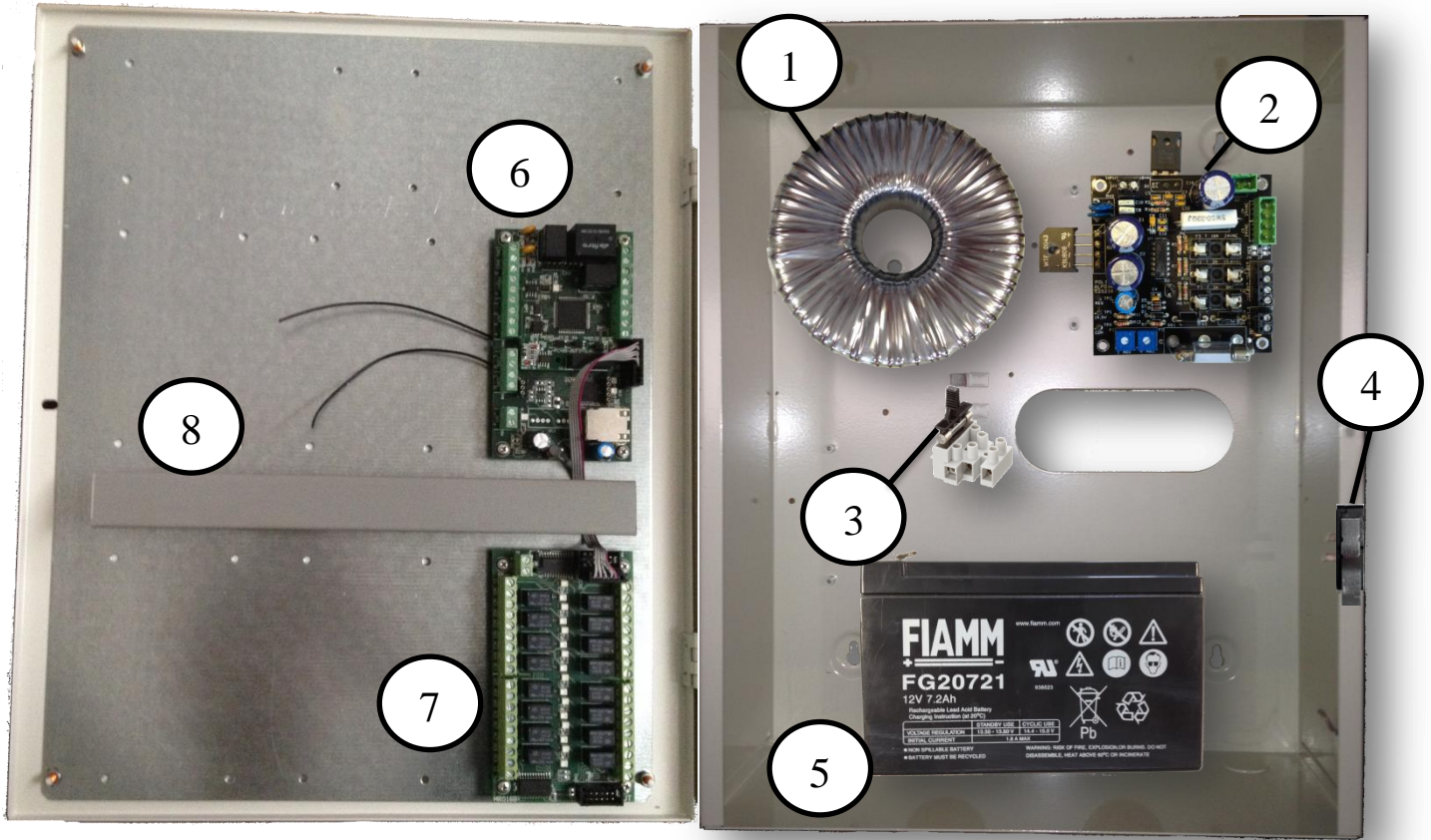
V 2.0.1

POLITEC
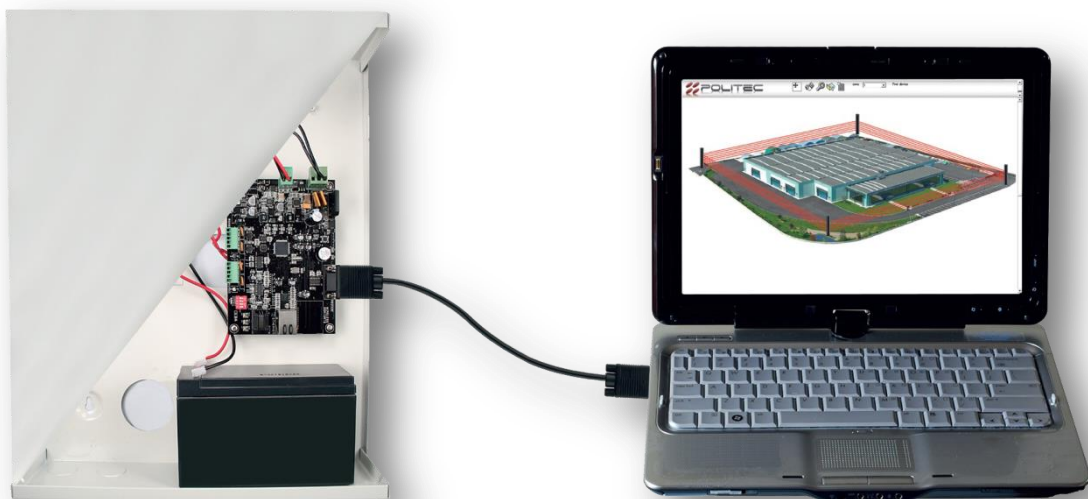
INDEX

1. ADEBUS COMPONENTS

	CODICE POLITEC	DESCRIZIONE
1	TRASF LAR22S	Trasformer 18/24 Vac
2	ALPO1B	Supply card
3	MORS 3 CONN. Fuse	
4	TAMPER	
5	BATTERY (Non inclusa)	Battery location up to 17Ah
6	ADEBUS SC	CA230 card
7	ADEBUS ESP	Expansion 16 relay output
8	Cable passage	

ALPO1B
Supply Card
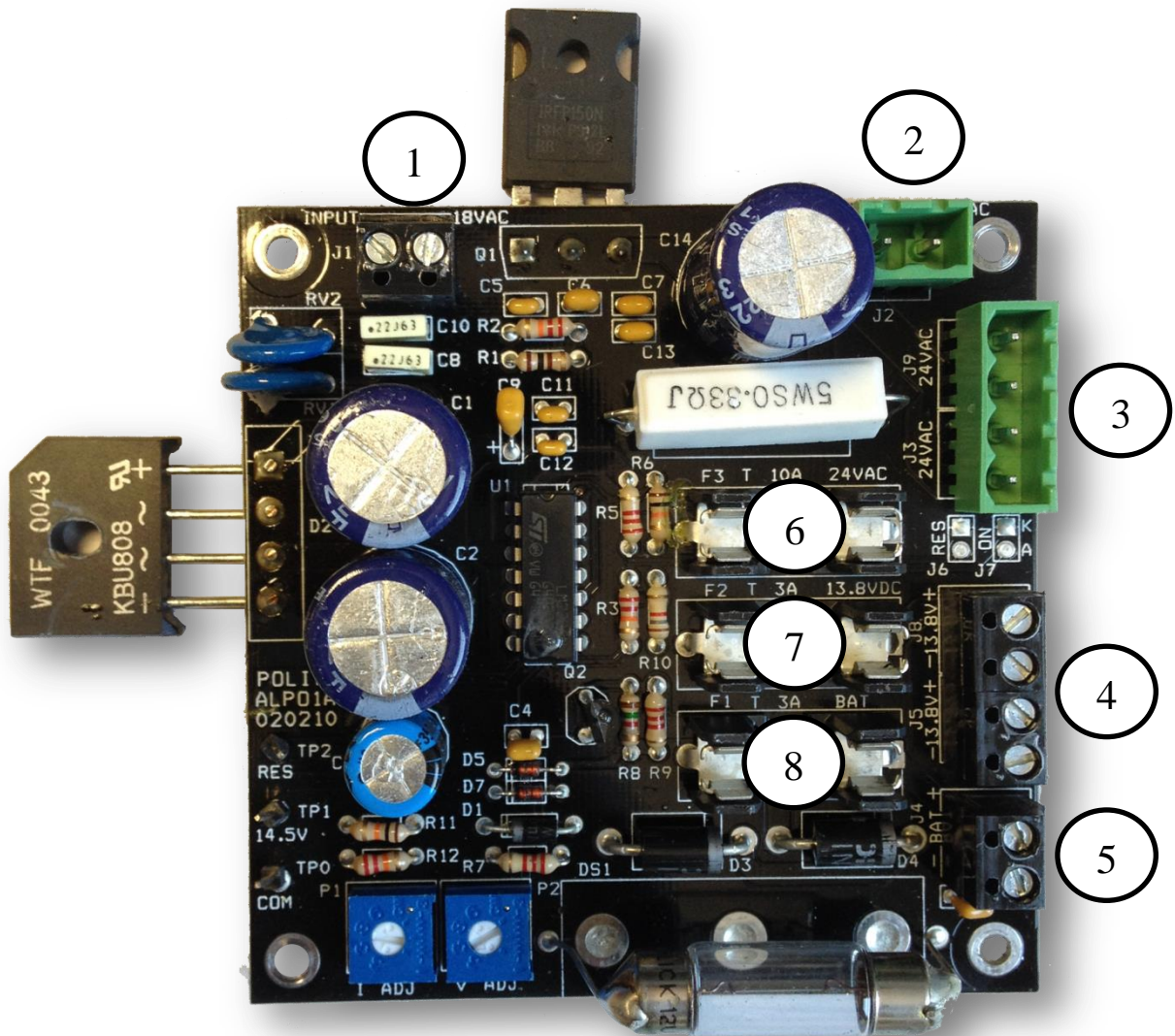
Componenti

1	18VAC IN	**5**	BATTERY OUT
2	24VAC IN	**6**	FUSE 10A (24Vac)
3	24VAC OUT	**7**	FUSE 3A (12Vdc)
4	0-13,8VDC OUT	**8**	FUSE 3A (battery)
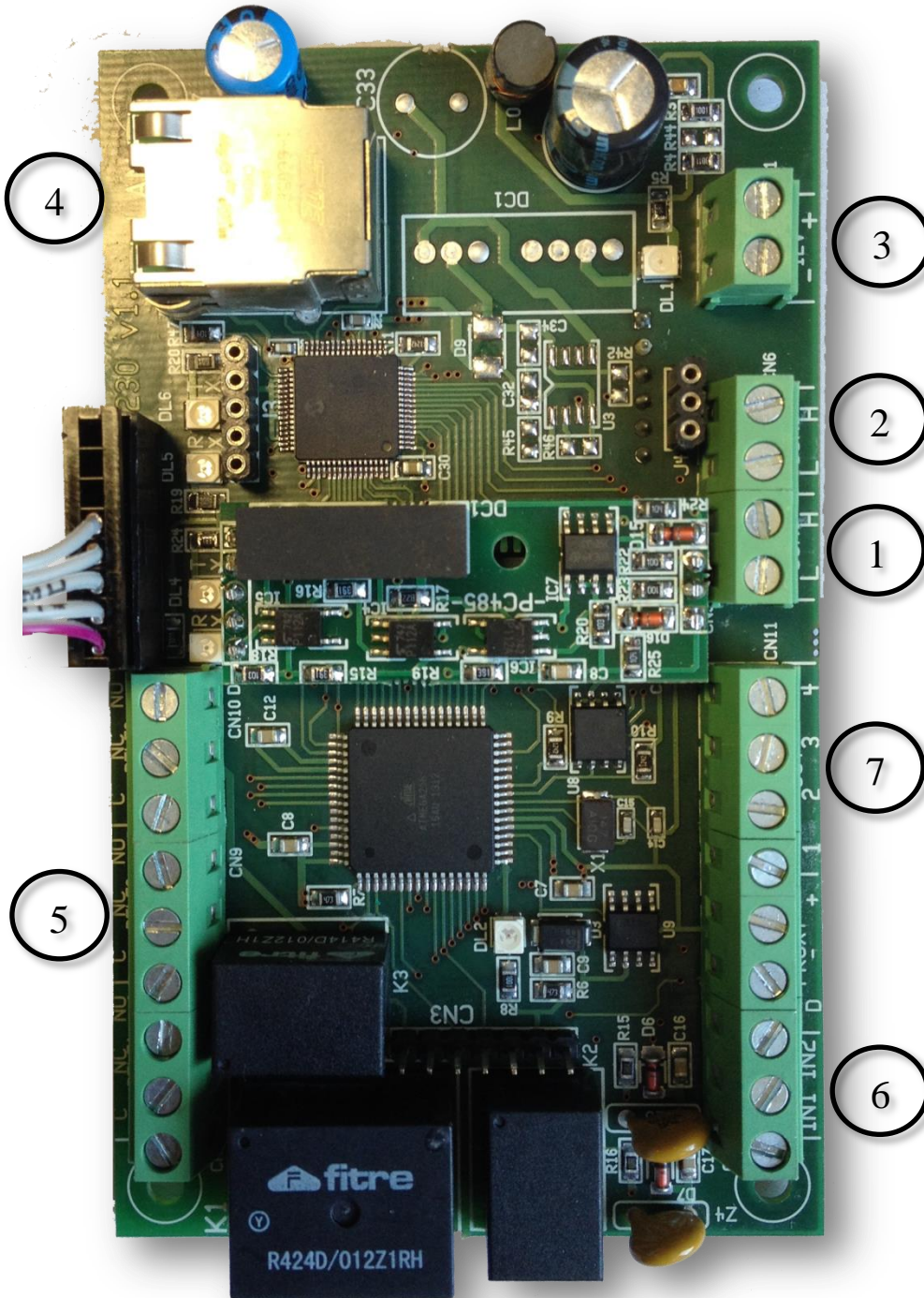
Componenti

1	SERIAL COM0 IN
2	SERIAL COM1 IN
3	0-12VCC IN
4	LAN
5	RELAY OUTPUT
6	INPUTS
7	OPEN COLLECTOR OUT

ADEBUS ESP
16 relay output expansion
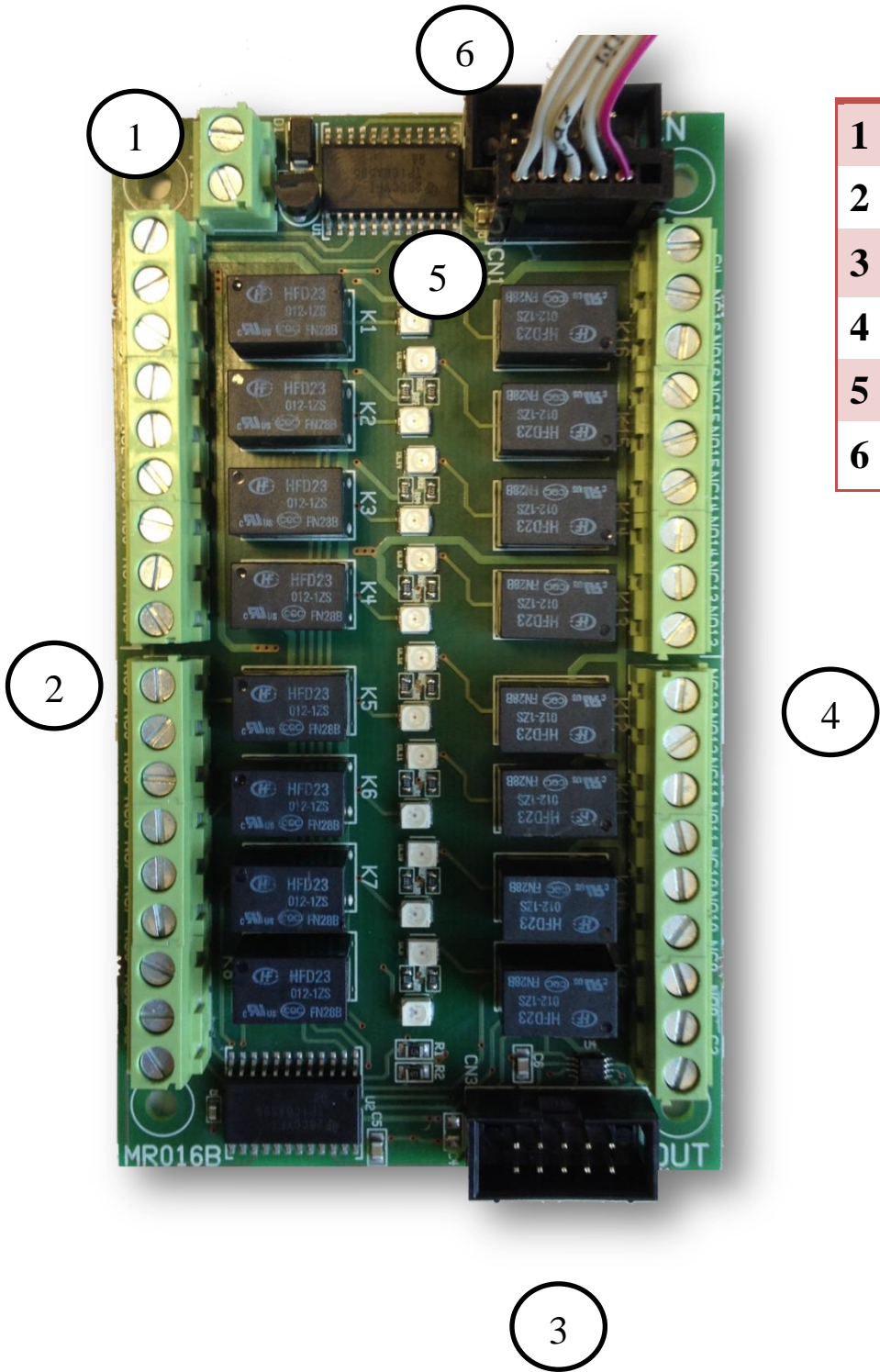
Componenti

1	0-12VDC IN
2	RELAY 1-8 OUT
3	CONNECTION TO THE FOLLOWING EXP.
4	RELAY 9-16 OUT
5	CONNECTION TO CA230
6	CONNECTION TO PREVIOUS EXP. CARD

1. Supply connections must be made between the card ALPO1B and the card CA230:
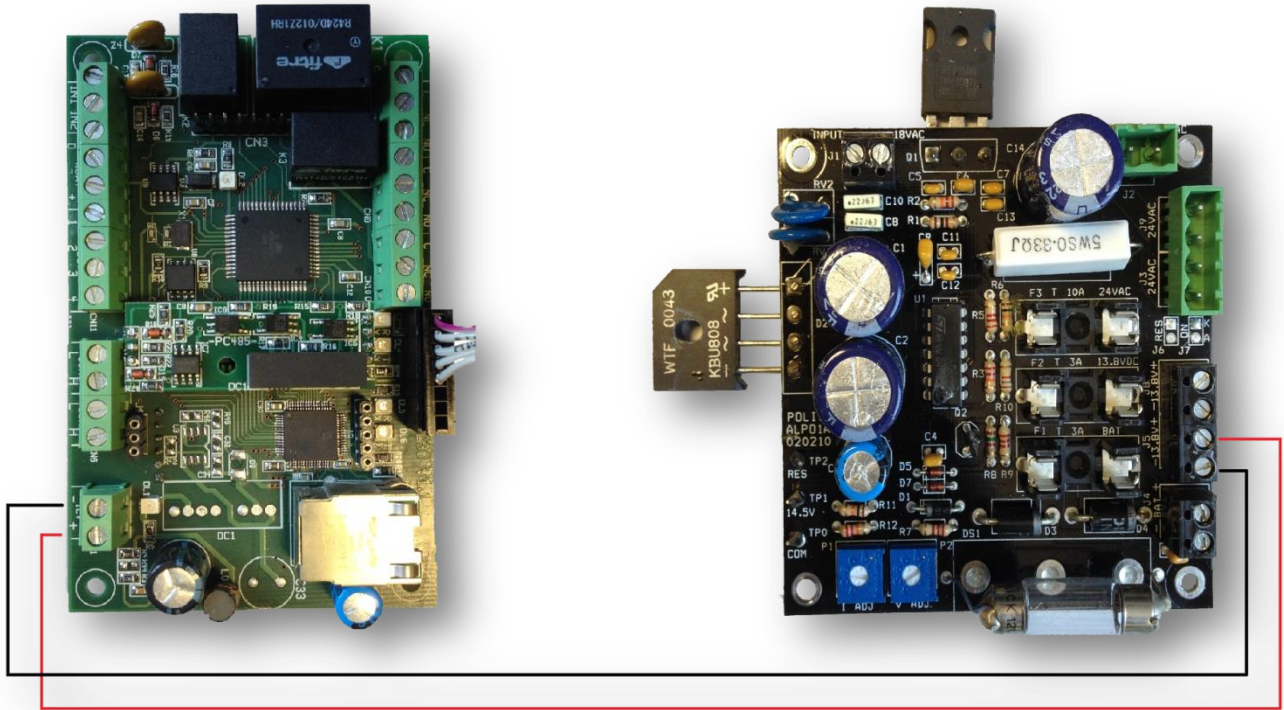
2. Supply connections must be made between the card ALPO1B and the Expansions card (if present):
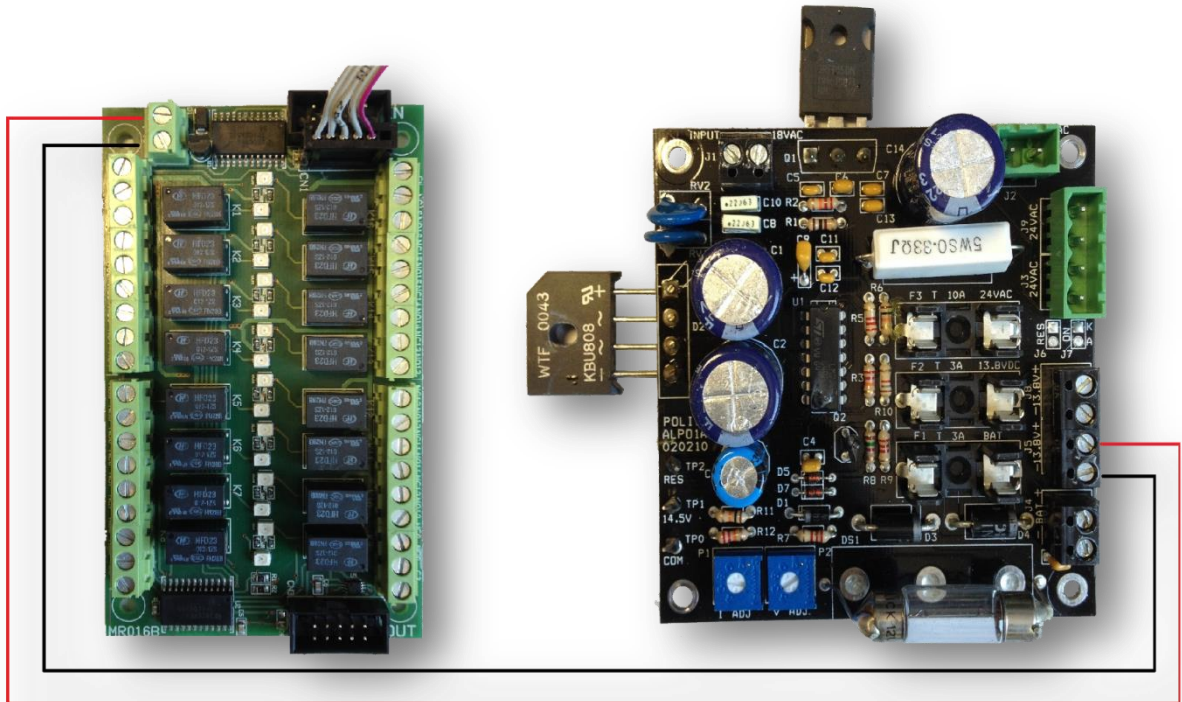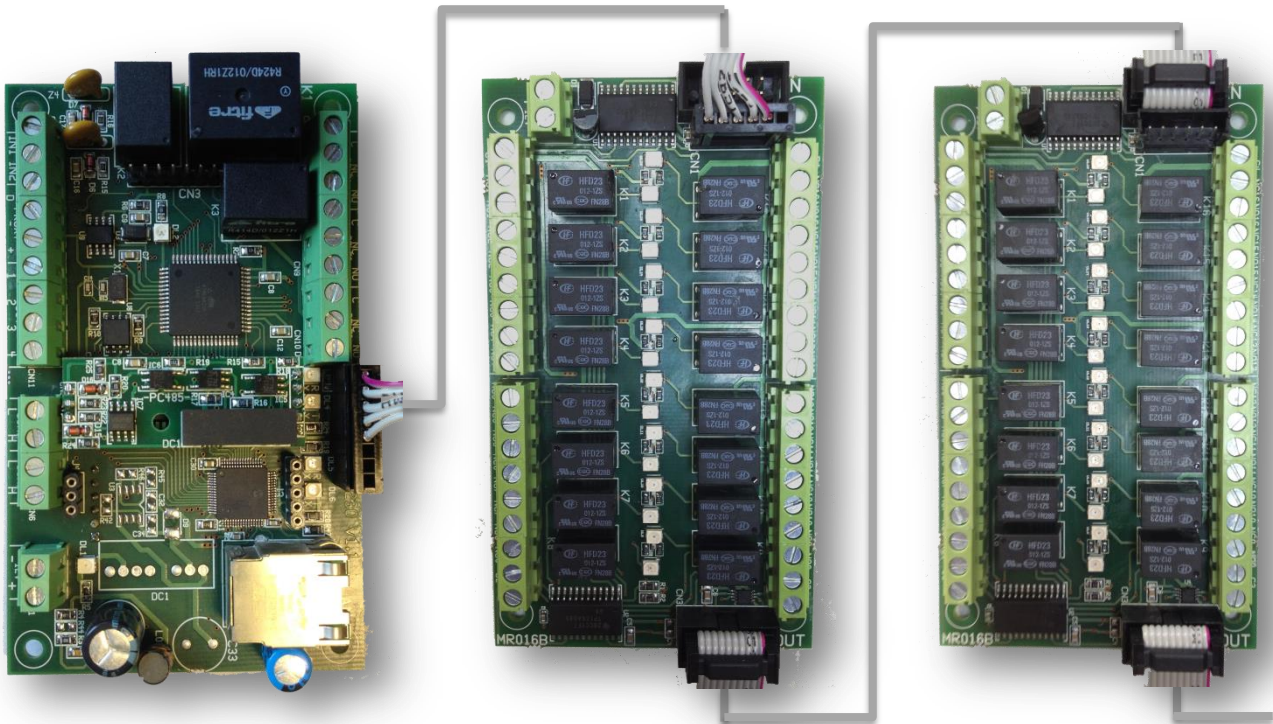
4. Connect the negative of all the barriers, using the twisted wires of the BUS cable Blue / White (1), and connect them to the negative of the "COM0" or "COM1" through a clamp (not included), starting from the last barrier.

5. Starting from the last barrier connected in common barriers through the cable wire BUS White / Orange (2) at the "B" of MES9C and connect to the "L" (COM0) of the card CA230.

6. Starting from the last barrier connected in common barriers through the cable wire BUS Orange / White (3) output "B" of MES9C and connect to the "H" (COM0) of the card CA230.

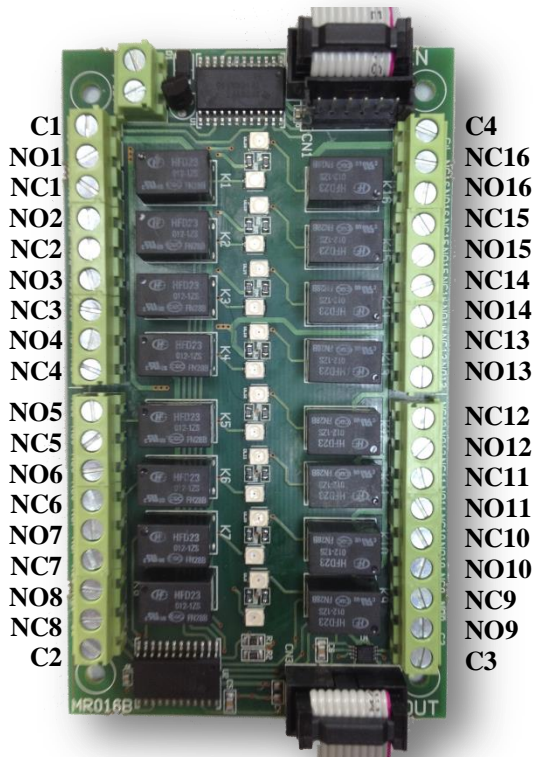7. Connect the shield (4) the common barriers and card CA230.
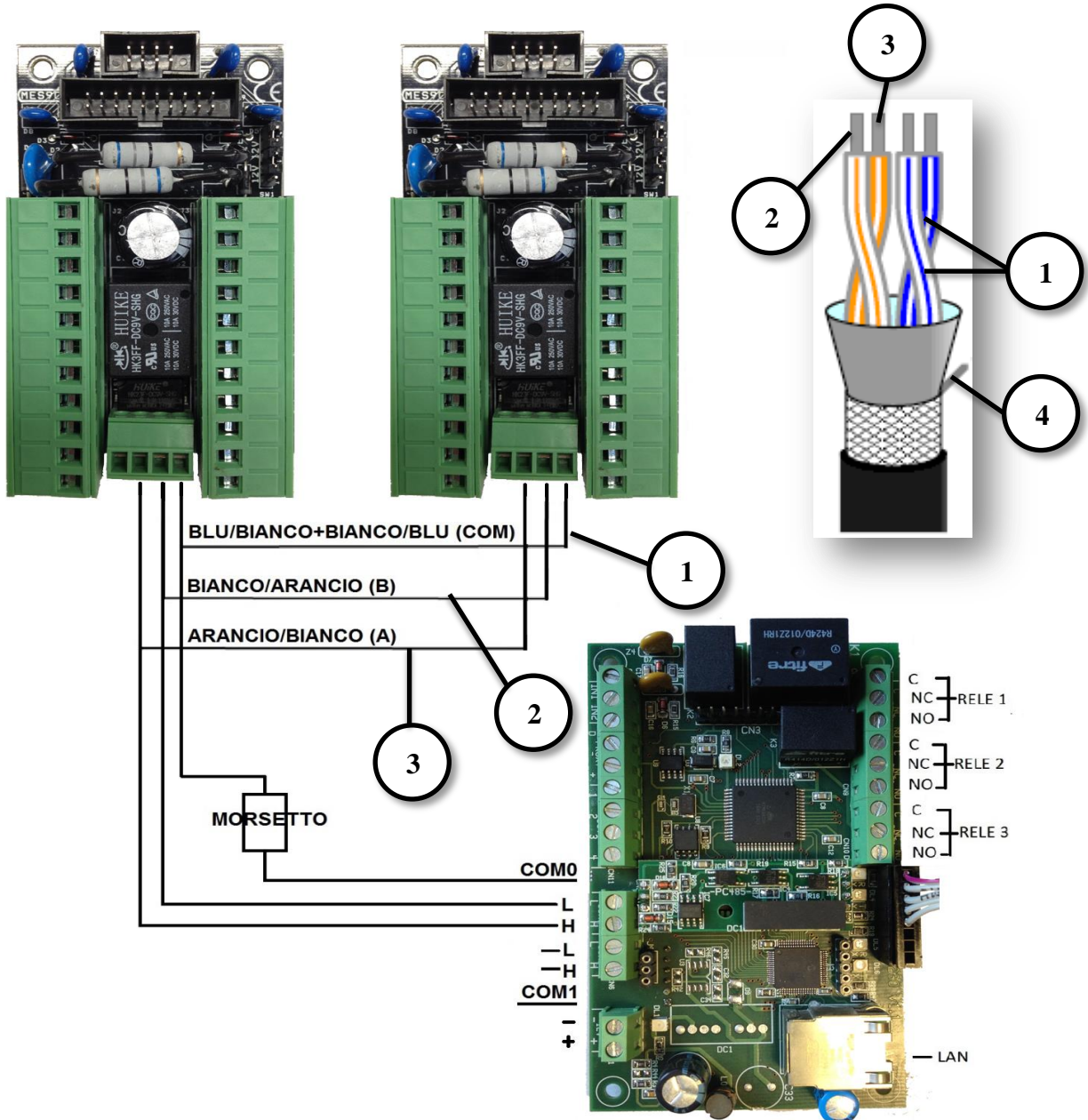
N.B.: Two-pair shielded twisted cable for RS485 0.50 mm (eg Belden cod. 31074A)

![POLITEC logo]

Make sure the connection of relay expansion boards with ADEBUS through Flat cables.

Output relay connections

C1	C4
NO1	NC16
NC1	NO16
NO2	NC15
NC2	NO15
NO3	NC14
NC3	NO14
NO4	NC13
NC4	NO13
NO5	NC12
NC5	NO12
NO6	NC11
NC6	NO11
NO7	NC10
NC7	NO10
NO8	NC9
NC8	NO9
C2	C3

The operating condition of the contacts marked on the board (NC, NO) refers to the relay at rest, if the relays are energized condition of operation is reversed

NB: The connections of the relay outputs are divided into 4 groups for each expansion board, and common are the following:

C1 = common first 4 relay

C2 = common second 4 relay

C3 = common tird 4 relay

C4 = common fourt 4 relay

4. ADEBUS CARD (CA230) FIRST CONNECTION THROUGH IP 192.168.1.222

Connect the Ethernet cable the PC to the connector lan of the card ca230.
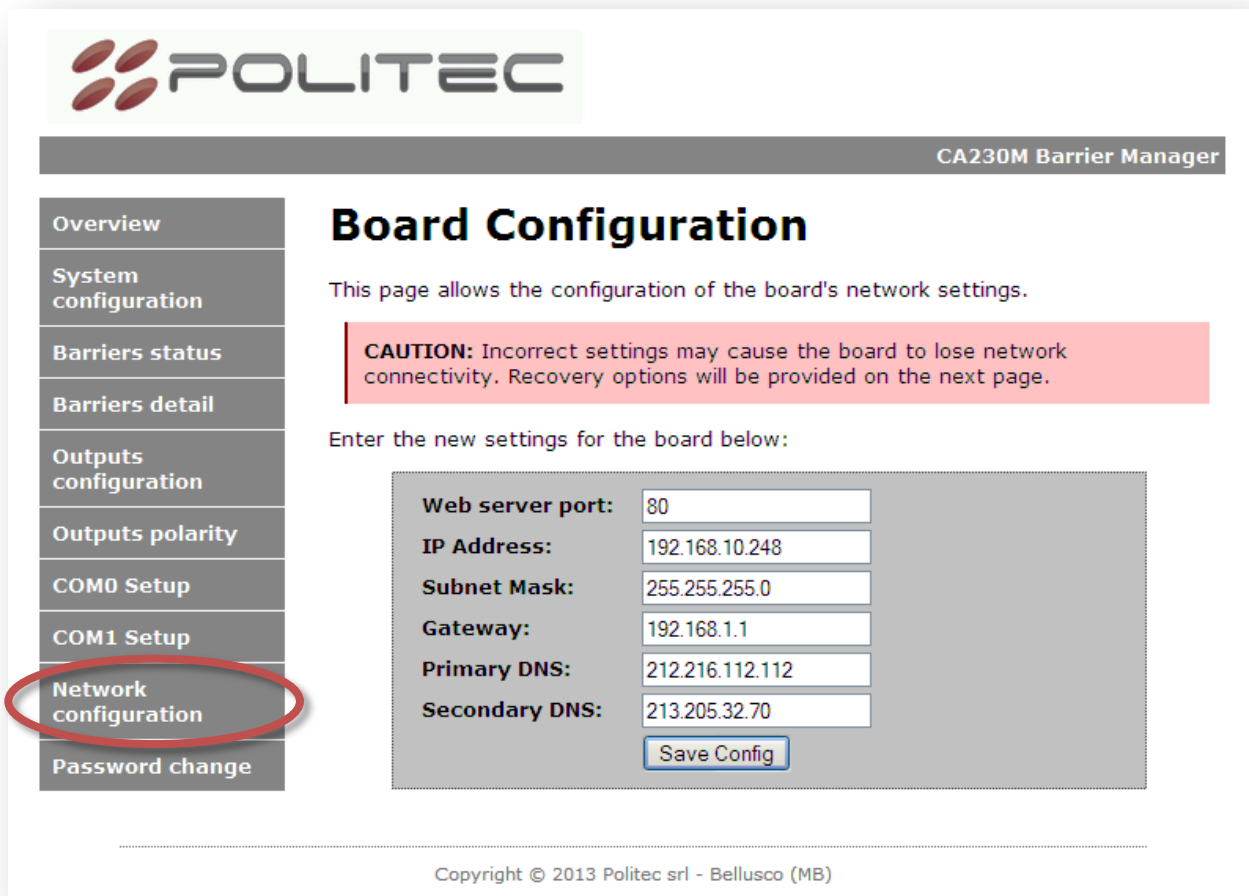
N.B.: for the first login:

 username: admin,
 password: admin.

Overview

Outputs	Relay enabled on Adebus card (on-board 3 relay + 4 open collector to the positive) and the expansion cards (Ext. Module 1, the first card with 16 relays)
Inputs	Indicates the status of the 2 inputs Adebus (open, close ...)
Time	when connected to the internet indicates the current time

- Enter the new IP address.
- The default is 192.168.1.222
- Change the other settings, depending on the local network or internet connection ...

Modify the system password for remote access via the browser.

N.B.: You can restore the default settings (IP = 192.168.1.222) by shorting pin 3 to pin 4 of connector for programming the board CA230. Wait a couple of seconds, turn off and remove the short. The next time the system will have the default configuration.

5. ADEBUSEXPLORER INSTALLATION

Install the supplied program AdebusExplorer using the setup.exe file
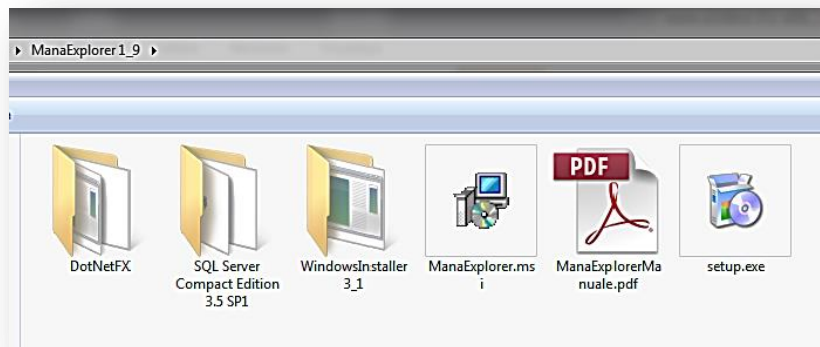
6. ADEBUSEXPLORER

AdebusExplorer is a system of supervision and configuration for the barriers MANA, PARVIS and SANDOR plus SMA and works together with hardware cards ADEBUS, prepared with the appropriate firmware, reacheable via a TCP / IP connection.

The software supports up to a maximum of 32 columns and can be used in three different languages (English, French, Hungarian).

# PC – ADEBUS CONNECTION WITH NETWORK CABLE (direct connection)

- Network Connections (Windows 7);
- Click with the left mouse button and click Local Area Connection (LAN)
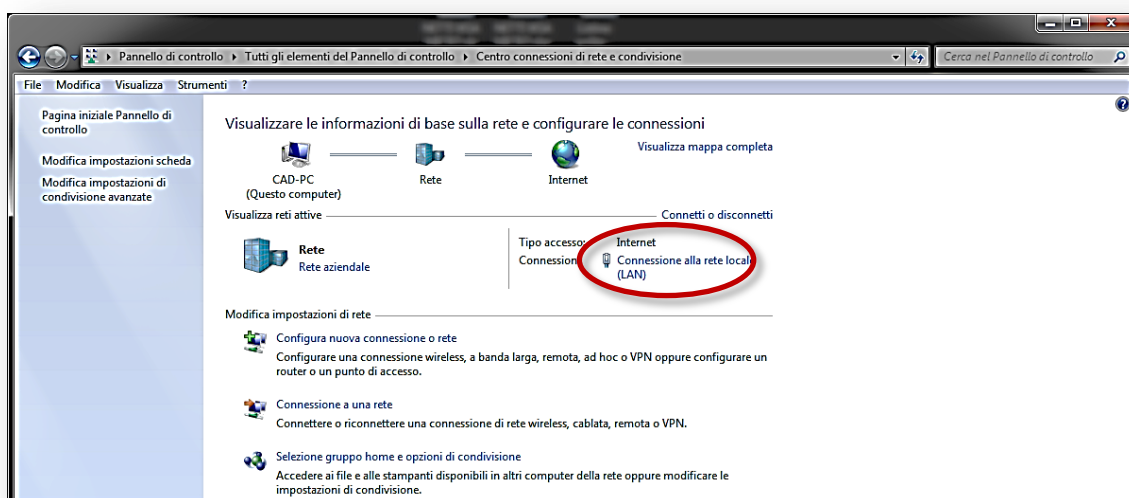
- With the left mouse button click and choose properties. Opened up the window with the left mouse button select Internet Protocol and click Properties.
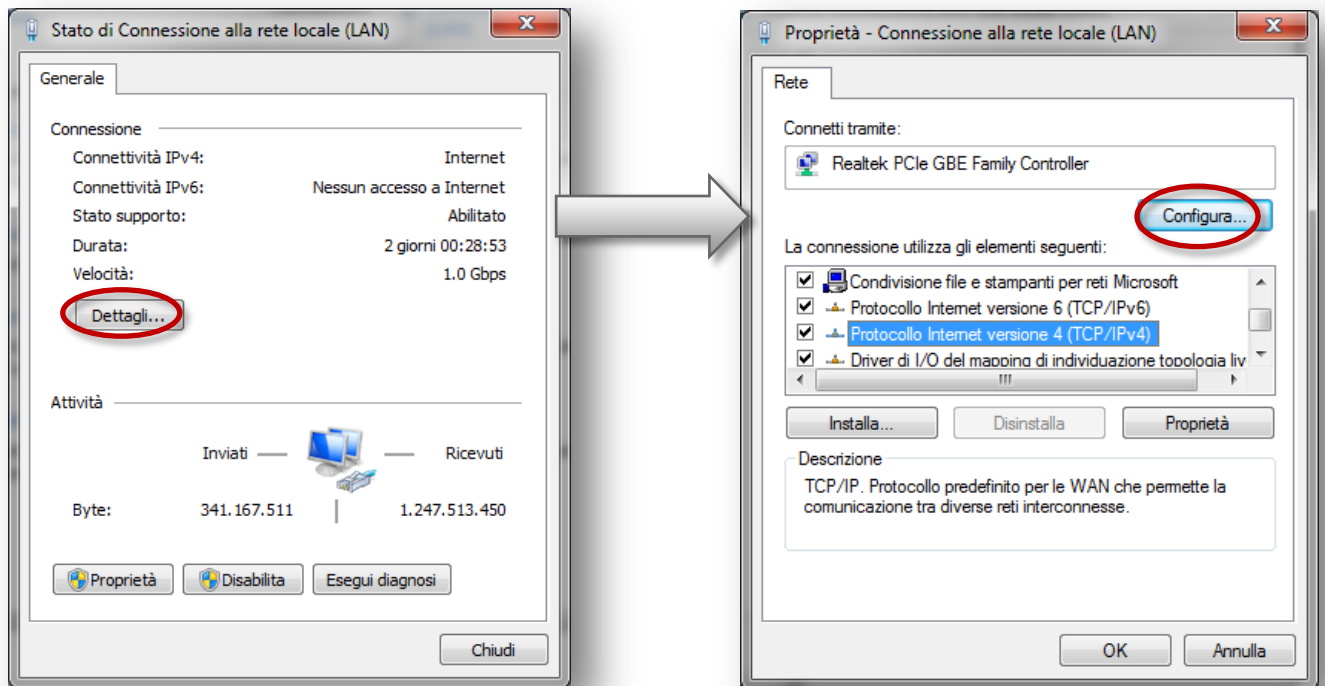
- Choose, if not already selected, use a different IP address than the card CA230 (default is 192.168.1.222) such as the address 192.168.1.223 Subnet Mask and click so that it appears as follows: 255.255.255.0. Save with OK.
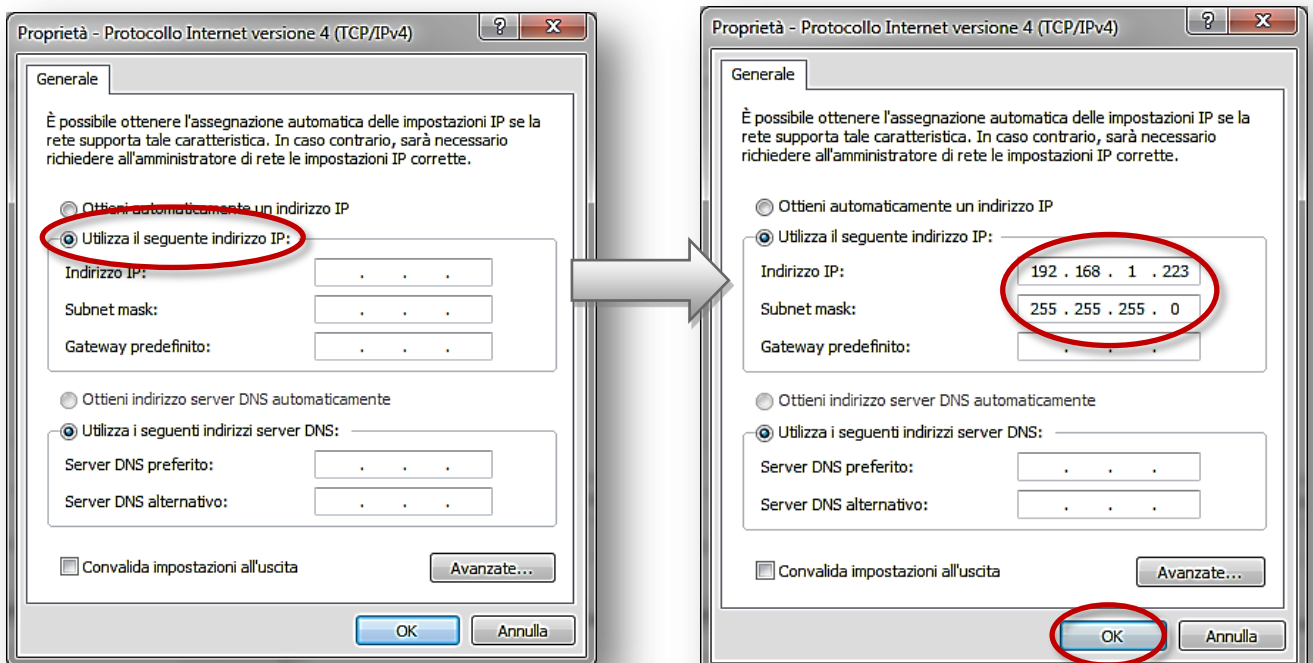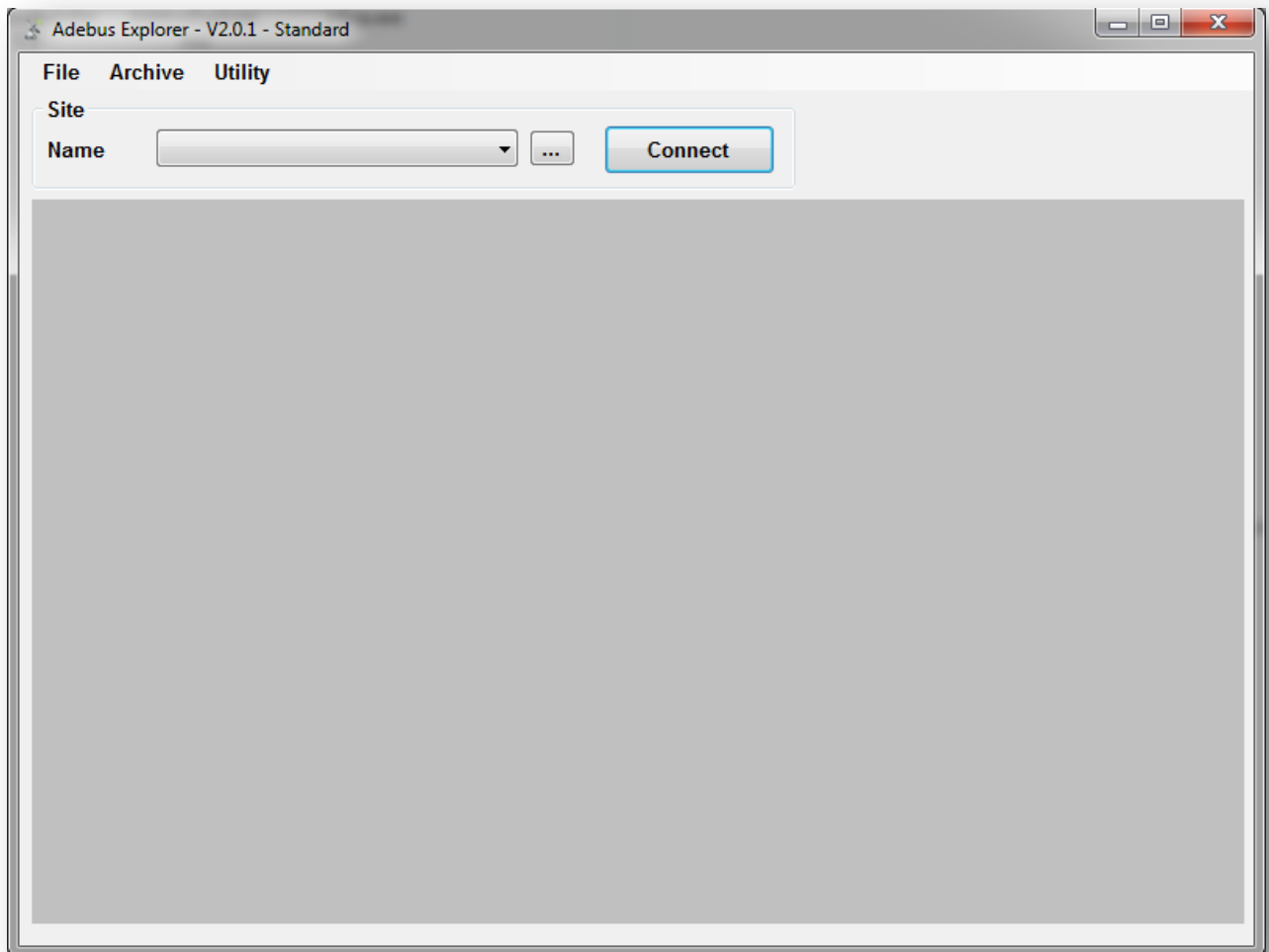
CONFIGURATION

The software AdebusExplorer requires a PC running Windows XP or later.

Maschera principale

All' accensione il programma presenta le funzioni disponibili, il cui utilizzo è illustrato qui di seguito. Procedere secondo l'ordine illustrato in seguito.

Working path

Allows you to change the working folder of the program where the database is created events ManaDB.sdf downloaded. When you first start itself as the default folder "My Documents" and select the option to create subfolders using the Create New Folder button. With the Ok button to confirm your selection with the Cancel button, the system uses the "Documents" folder as a Working path.
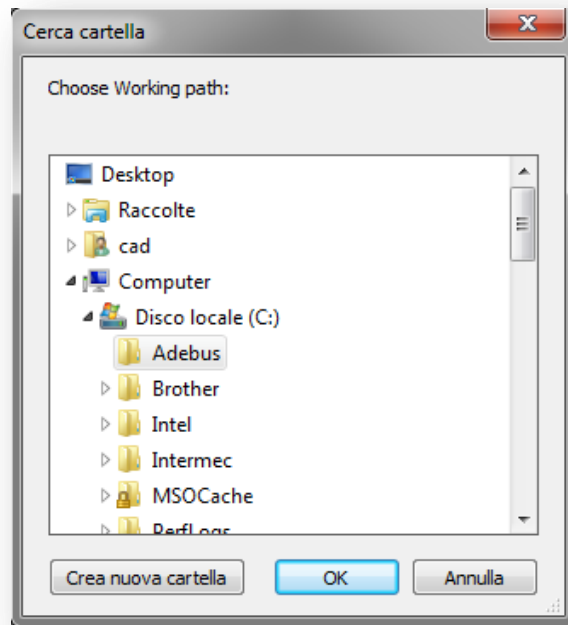
The correct procedure to change an existing Working path involves the following steps:

Step	Description
1	Close **AdebusExplorer.**
2	Using Windows Explorer to move the entire folder corresponding to the Working path, and all the files it contains, to the new location.
3	Launch **AdebusExplorer**.
4	Indicete the new **Working path**.
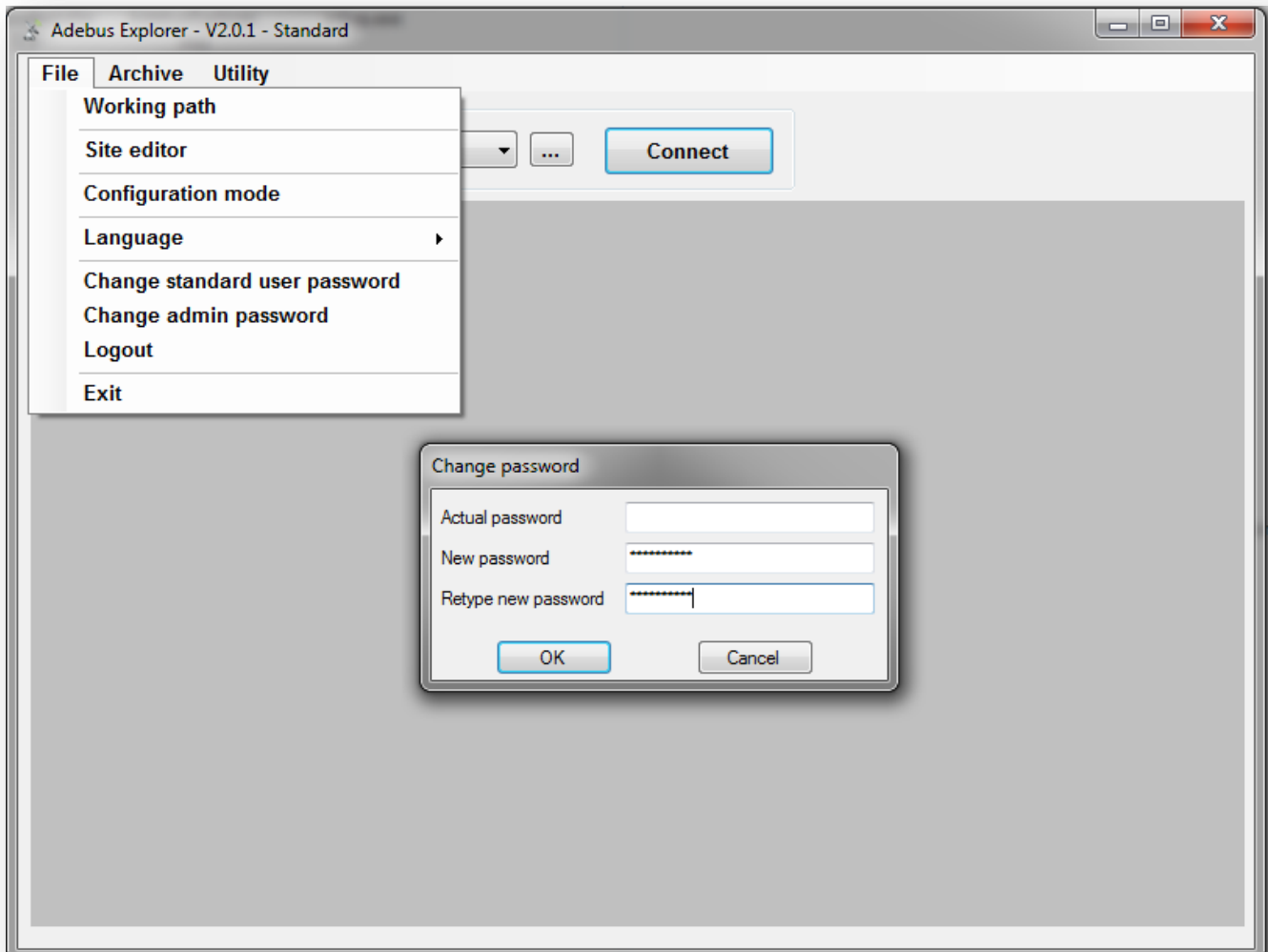
|	
Admin	For the first time enter the desired password freeing up the section "Actual password"
	The Admin has permission to change the settings of the individual columns (as explained below) as well as view the status of each
Standard	For the first time enter the desired password freeing up the section "Actual password"
	The standard user can only view the status of each column.

Displays the list of configured CA230 cards, each card represents a different site:
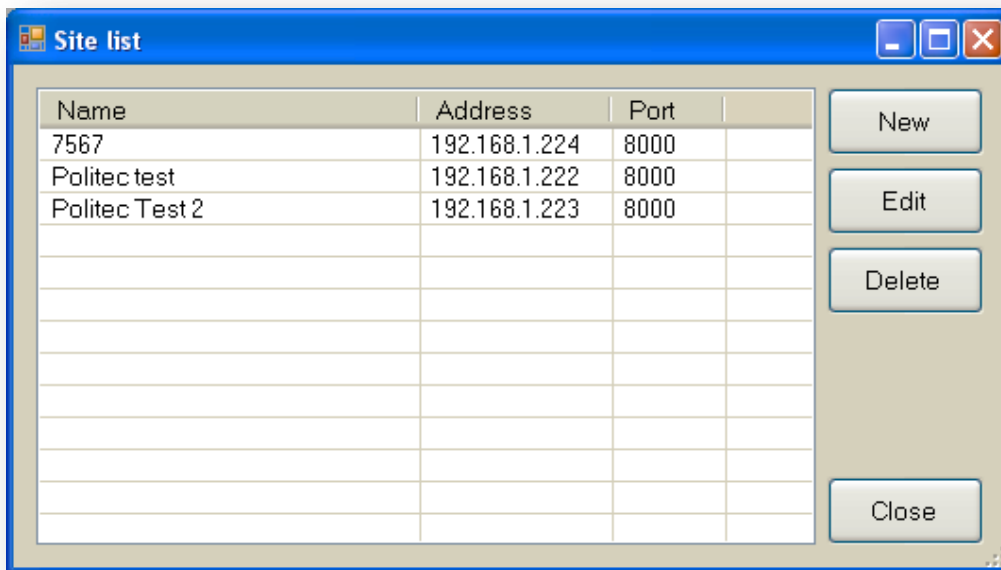
The New button allows you to add a new site:
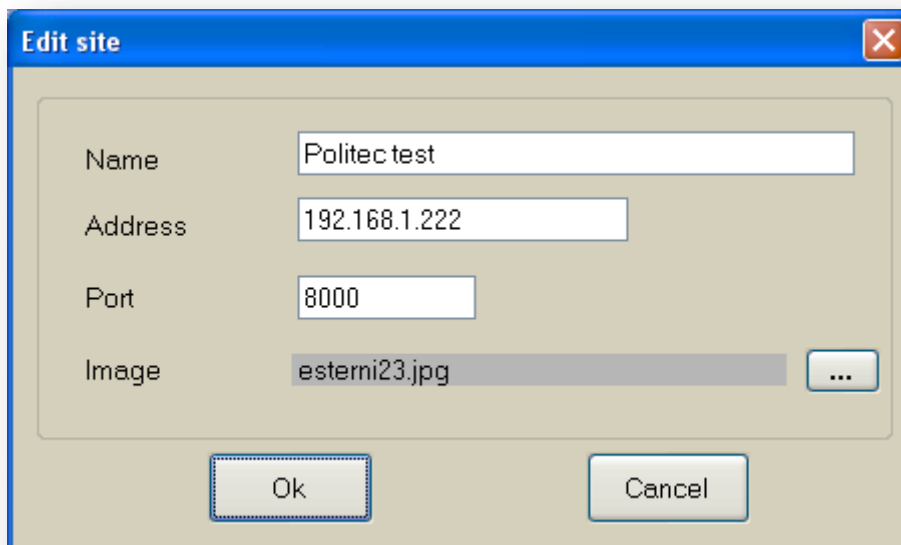
Parameter	Description	Default
Name	Descriptive name to associate with the site	
Address	IP address of the CA230, format: aaa.bbb.ccc.ddd	192.168.1.222
Port	Communication Port CA230 Card	8000
Image	Picture for use as a graphical map	

Configuration mode

Enable the graphical configuration of barriers.

The Configuration menu mode is used only if the software is not connected to any site, otherwise the menu is disabled.

To graphically configure a site, you must first select it from the drop box located inside the Site, and then click the File menu-> Configuration mode.

The activation of the configuration mode is indicated by a special red lettering at the top / right of the main screen.

To add a barrier just place the mouse cursor at a point on the map and click with the right mouse button. From the popup menu select Add barrier.
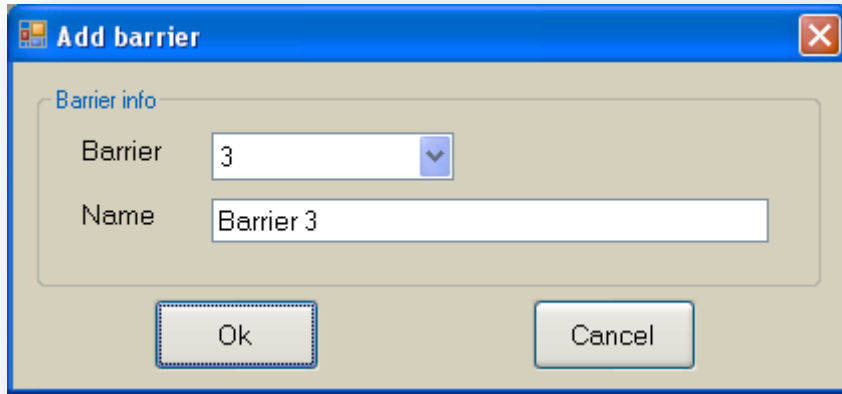
Parameter	Description	Default
Barrier	Address of the barrier. The software supports a maximum of 32 barriers. The selection box displays only addresses the barriers have not yet been configured.	
Name	Description of the barrier. The entered text is displayed on the map, just below the design of the barrier. Optional field.	

The OK button confirms the addition of the barrier and returns to the main form.

Placing the mouse cursor over the drawing of a barrier and holding the button left you can move the barrier inside the map.

With the right mouse button displays a menu to rename or delete the previously configured barrier.

To exit the configuration menu again and select File-> Configuration mode.

Address setup

Once you have entered the barriers on the plan, connect to the site to address the individual columns connected to the card via the Utility menu CA230-> Address setup.

The addressing command can be used only if the board CA230 is connected via a local area network.
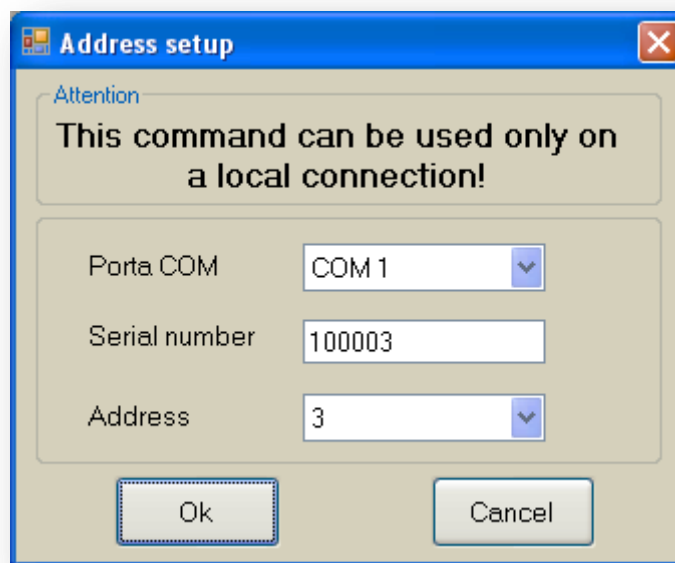
Parameter	Description	Default
Porta COM	COM port of the card which is physically connected to CA230 barrier. Each card provides two serial ports: COM 0, COM 1.	COM 0
Serial	Serial number of the barrier	
Address	Address to be set on the barrier.	1

N.B.: addressing should be performed before setting up barriers via the web interface.

N.B.: the serial number of the barrier is present on the label on the motherboard (MES9012) and on the basis of the profile itself.

When connecting to a site is active, the barriers set up take on different colors depending on the state:

Status	Color
Stand-by	White
Pre-alarm	Yellow
Alarm	Red
Tamper	Sky-blue
Offline	Grey with black "X"

For all the barriers in a state different from offline, you can access the detail form: Place the mouse cursor over the image of the barrier and click with the left mouse button.
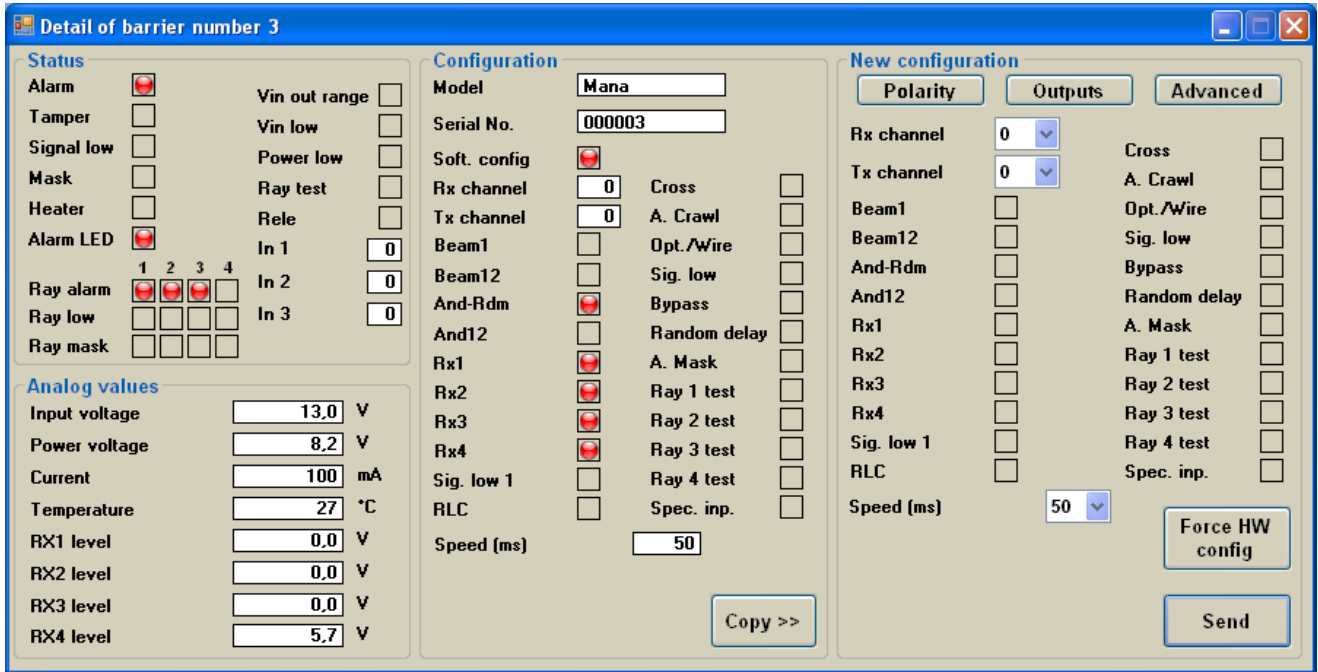
Es. barrier in:

- *Status: alarm with 1, 2 and 3 beams interrupted;*
- *Configuration: 4 active beams in AND mode configured via software.*

Section	Description	Enable
Status	Real time status	read-only
Analog values	Analogue values in real time	read-only
Configuration	Actual configuratio.	read-only
New configuration	New conf.	writing

N.B.: for details of settings, refer to "Appendix B" on p. 33.

New configuration

In this section there are new configuration parameters that will be inserted into the barrier concerned editable only by the Admin.

The Force HW Config button resets the hardware configuration set with the DIP switches on the board of the barrier.

The Copy button copies the current configuration of the barrier in the New Configuration and selecting the desired options you can set up the barrier.
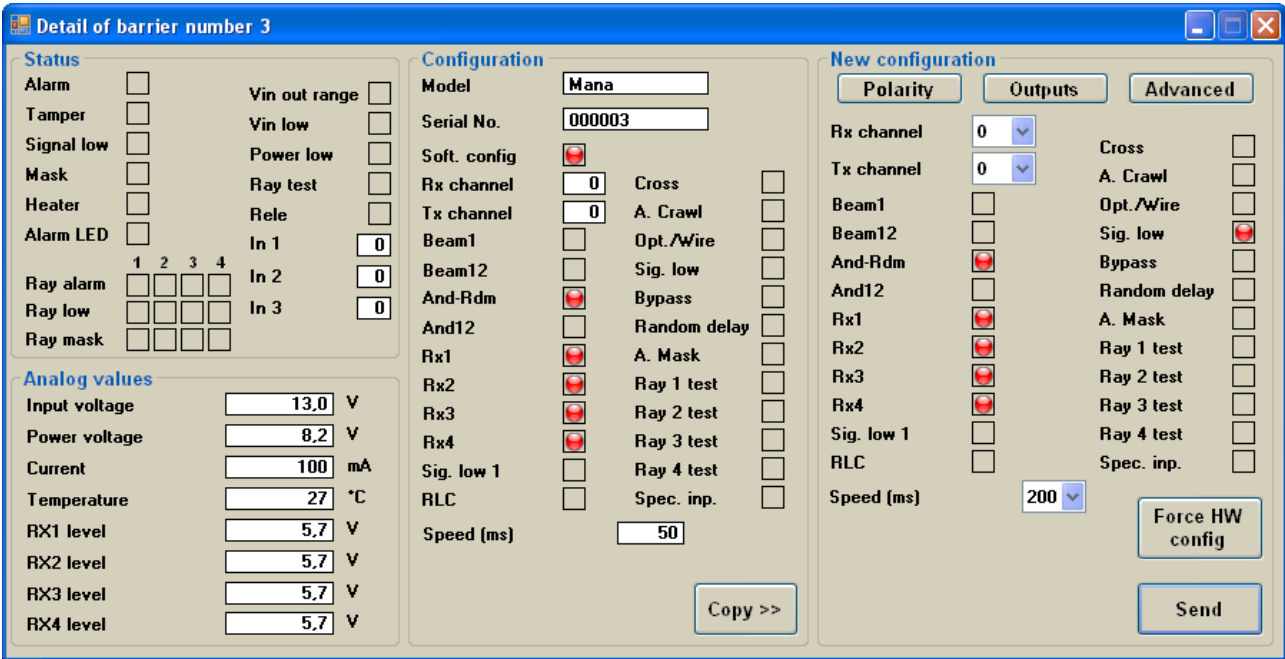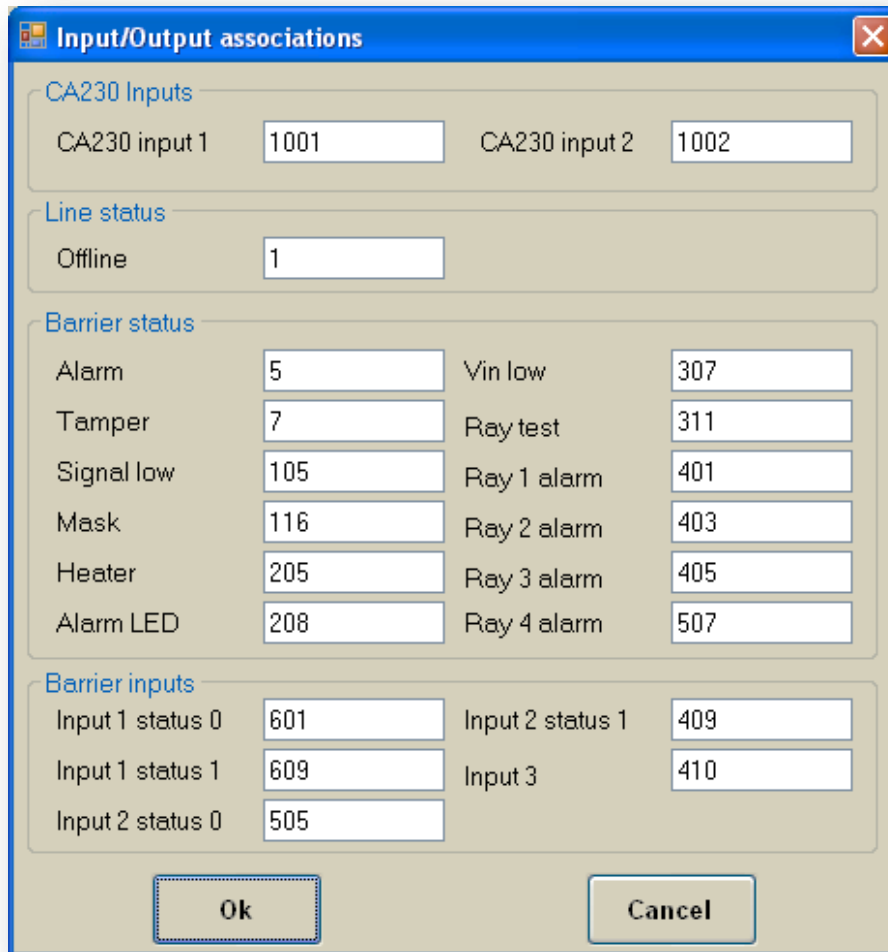
Es.: *in addition to the initial configuration has been added to the function of disqualification and the response time has been increased.*

The Send button sends the selected configuration to the barrier in the New Configuration.
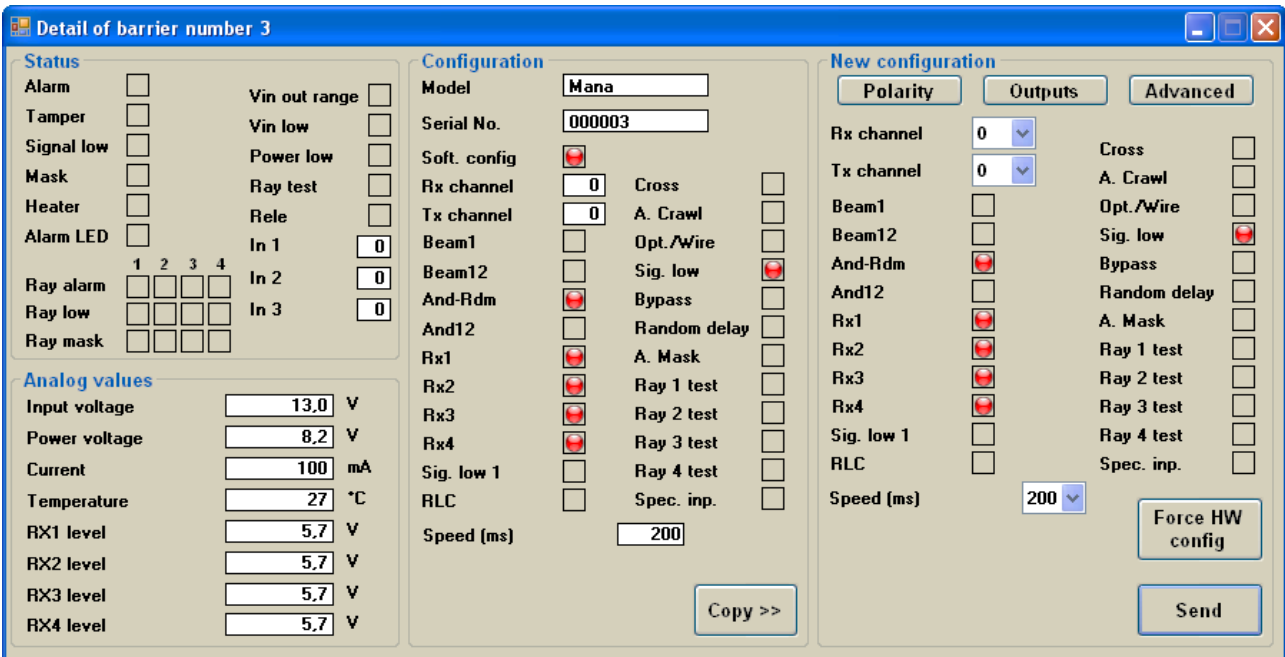
The Advanced button is dedicated to a reserved section not accessible.
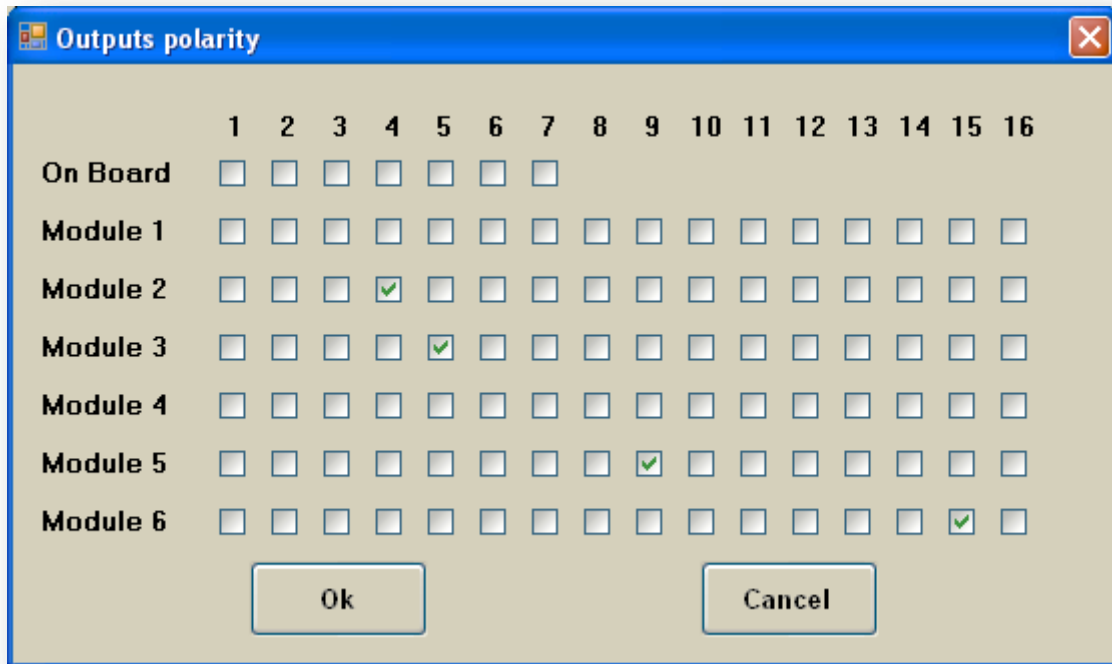
Through the button Outputs can be associated the inputs and outputs shown in the figure to the relay and open collector outputs in the system Adebus.

NOTE: the output numbers must be indicated in the following format:

OUTPUT N.	DESCRIPTION
1 … 7	Master Output
101 … 116	Exp card 1 output.
201 … 216	Exp card 2 output.
301 … 316	Exp card 3 output.
401 … 416	Exp card 4 output.
501 … 516	Exp card 5 output.
601 … 616	Exp card 6 output.
1001 … 1032	Barriers output (1001 = barrier 1, …, 1032 = barrier 32).
1099	All barriers outputs

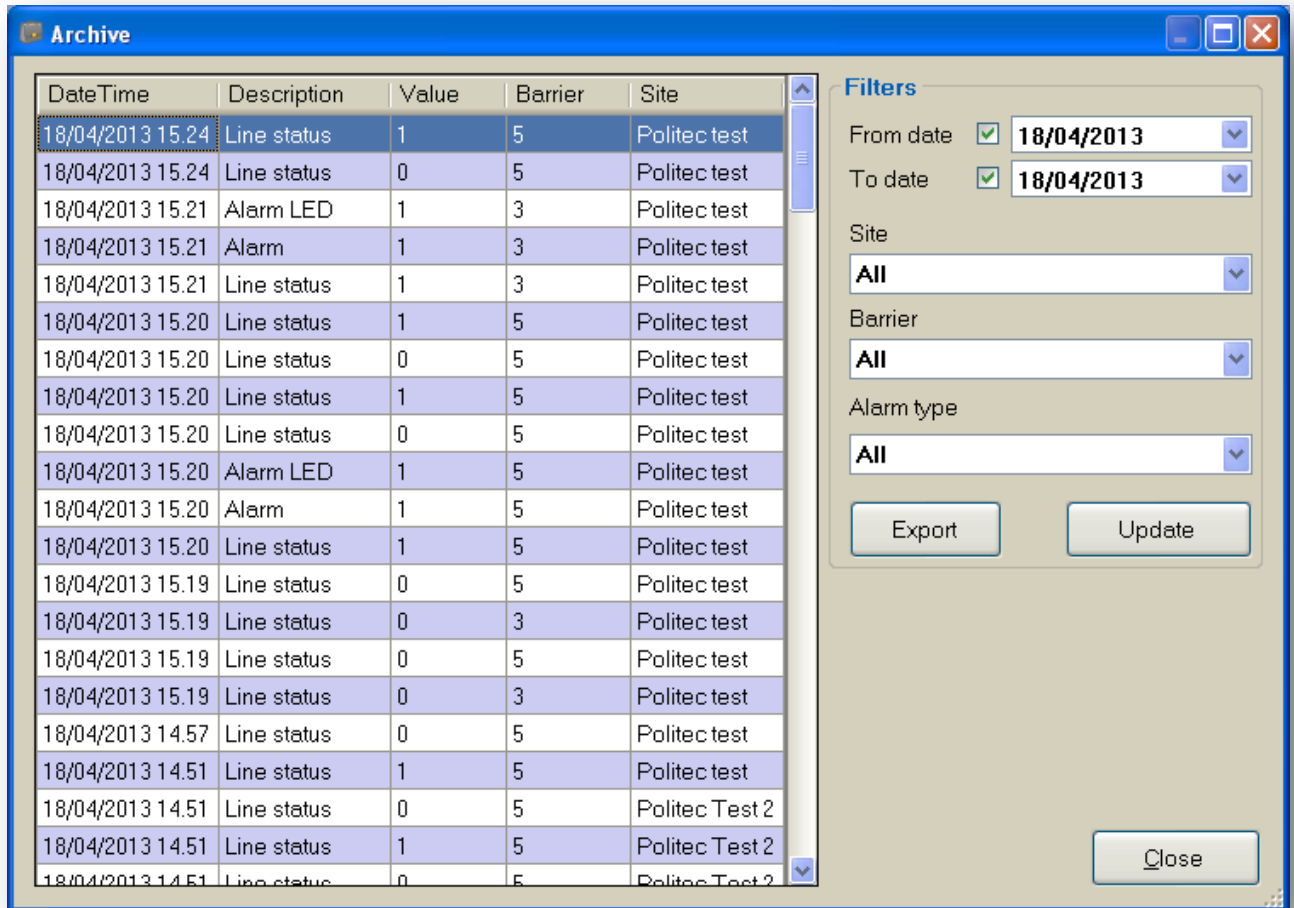The Polarity button allows you to reverse states of rest of each output relay system Adebus, from NO to NC and vice versa.

The Archive menu displays the history of the events recorded on the card CA230.
The recording of events can be enabled or disabled via the web interface: (See "Appendix A," p. 30).
The board CA230 keeps a maximum of 20,000 events by overwriting the oldest in the event of exhaustion of the available space. For a larger number of events you need to display the database by opening the file in ManaDB.sdf workbook AdebusExplorer through an appropriate program to view this type of file.

Parameter	Descrizition	Default
DateTime	Date and time of event	
Description	Event description.	
Value	Input status	
Barrier	Number of barrier related.	
Site	Site description	

The visualization of events can be filtered by date, site, type of alarm and barrier. The Update button applies the filter to the view. The Export button allows you to export events to a CSV file (comma-separated values).

N.B. Event logging is the default continues, to manage the startup controlled such registration, see "Appendix A" p. 30.

7. SYSTEM CONFIGURATION

When the configuration has been performed in the program AdebusExplorer, connect via browser to the previously statedaddress to activate the addresses barriers.
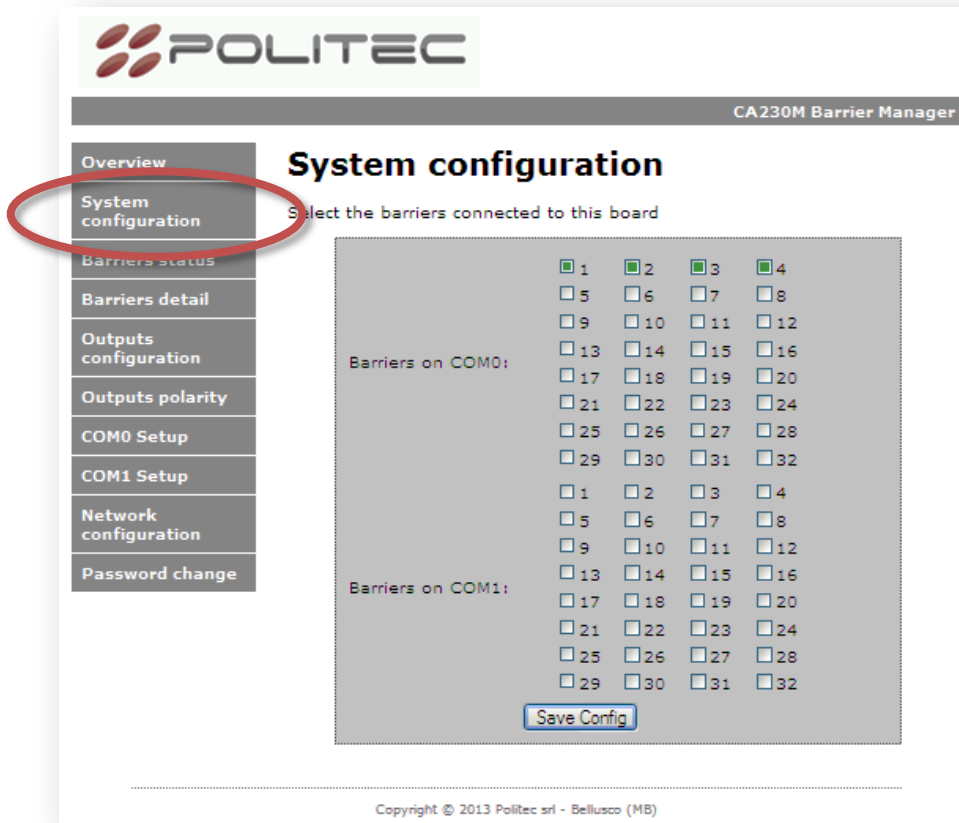
Es. 4 barriers on COM0
After all the devices are being addressed with the program AdebusExplorer, select the corresponding addresses to devices on RS485, distinguishing those that are installed on COM0 or COM1.
Remember to save the settings with Save Config button.
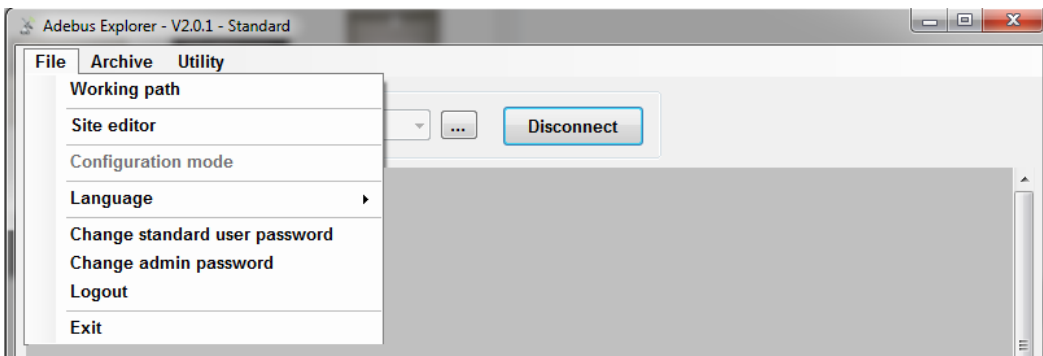
8. USCITA DAL PROGRAMMA

Before you exit the program, log out and disconnect.

N.B Do not perform the procedure could cause malfunctioning of the system Adebus.

Appendix A

Some of the procedures performed on the program AdebusExplorer can also run on the browser.

Barrier status

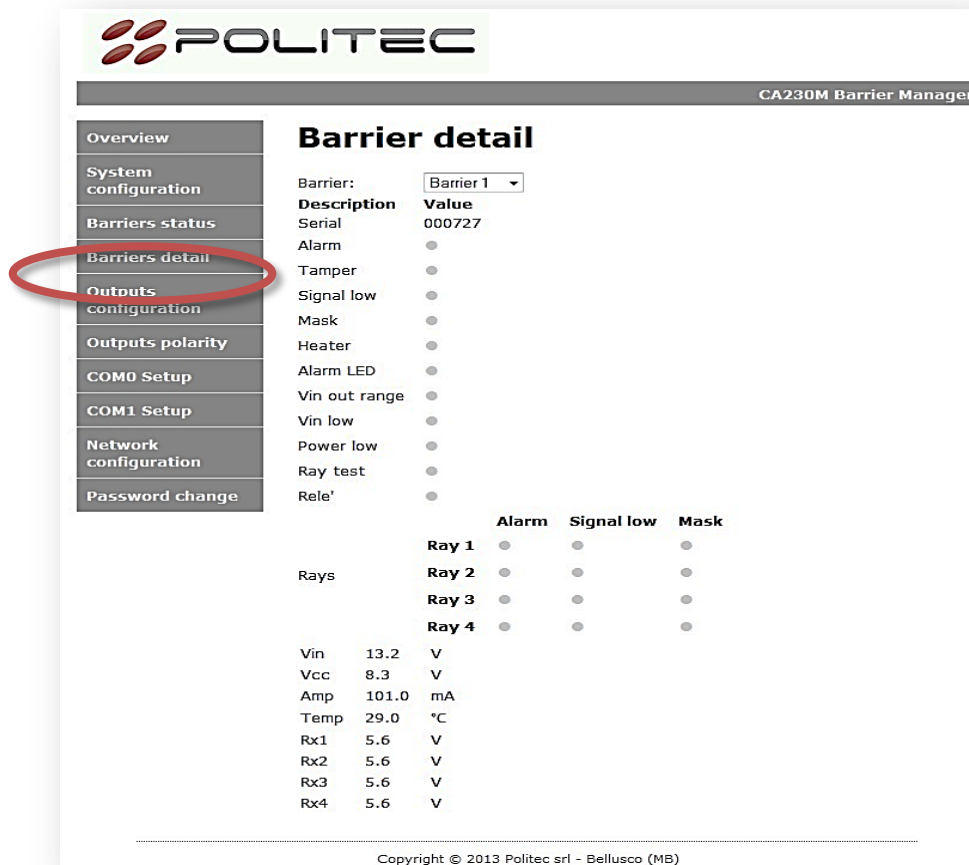The list will show all recognized devices that have been installed and properly addressed.

Address	Barrier address
Status	Online or Offline
GoodCom	Number of good communications
BadCom	Number of wrong communications

Through this section you can check the details of the status of each barrier. In particular, in addition to the serial number (SERIAL) will highlight the main states of the single barrier and its optics.

Alarm	Alarm
Tamper	Tamper status
Signal low	Disqualification status
Mask	Antimask status
Heater	Heaters status
Alarm LED	LED ALARM on Mother board
Vin out range	Supply out of range (not 10-30Vdc)
Vin low	Low supply (lower than 12.4V,in this case the supply is done by battery)
Power low	Low stabilized tension in the barrier (<8V).
Ray Test	Indicatesi f the barrier is in alignment test
Relè	Alarm relay status. The function can be modified with RLC command
Rays	Each optical RX status
Vin	Supply voltage IN
Vcc	Tension present on barrier
Amp	Power consumption from single barrier
Temp	Temperature
Rx1 Rx2 Rx3 Rx4	Voltage PEAK value of the signal being received (does not match the value measured by the multimeter on a single optical RX)

In the menu option configuration Master Outputs 1 Input enabled storage, if selected, activates the recording only if the input 1 of the card CA230 is balanced closed (1 k). In the event that the Master option input 1 enabled storage is not checked, the events are stored continuously.
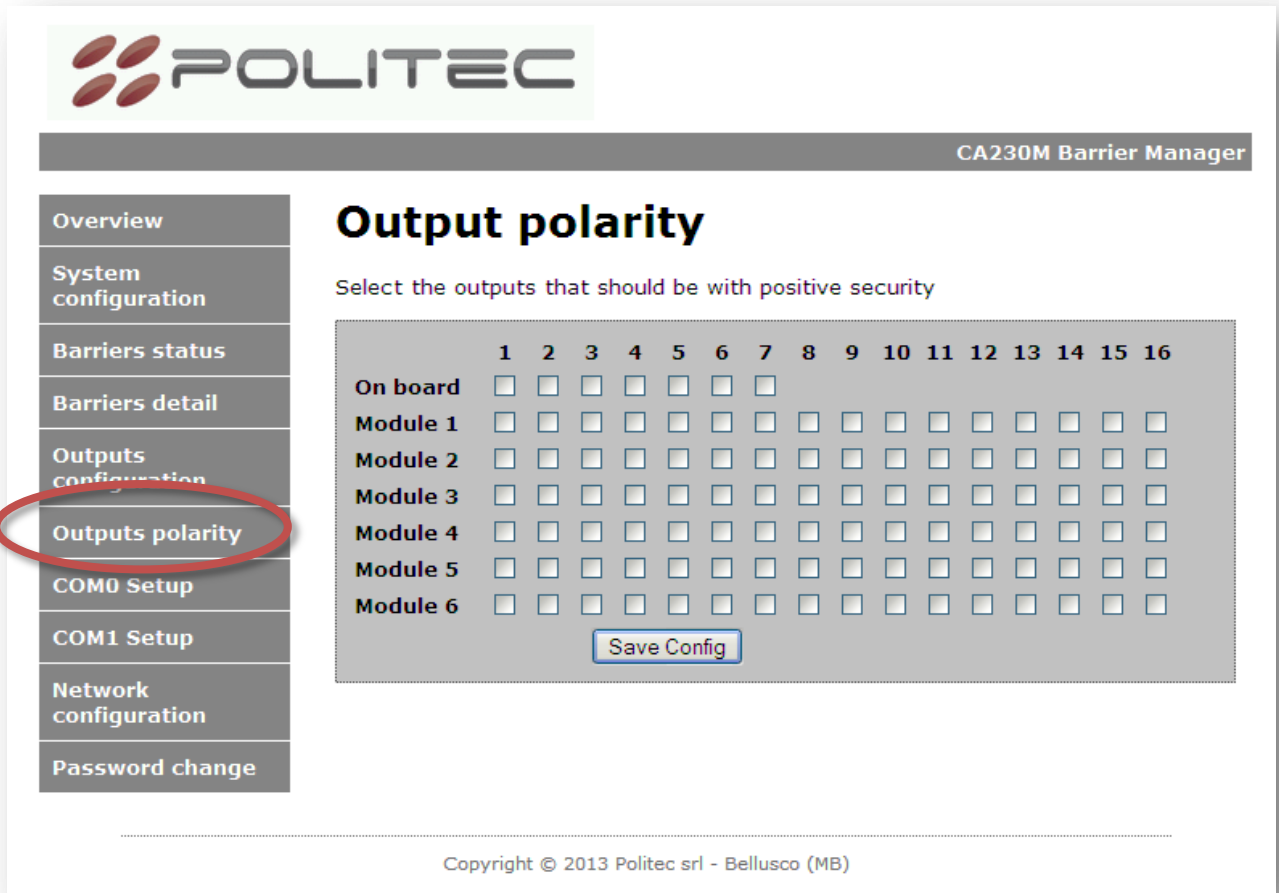
Master Input 1 o 2: You can combine any of these inputs to the relay card CA230.

Barrier: The events below are from that device / barrier.

For each of them can be combined with a relay.

Save the settings for each barrier with the Save Config button.

For each relay can reverse the function. When you check the corresponding relay is activated in conditions of non-event.
Save with Save Config.

POLITEC

CA230M Barrier Manager

COM0 Configuration

Enter the new settings for COM0:

Speed (baud):	9600
Data bit:	8
Parity:	None
Stop bits:	1

Save Config

Overview
System configuration
Barriers status
Barriers detail
Outputs configuration
Outputs polarity
COM0 Setup
COM1 Setup
Network configuration
Password change

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Are parameters of operation of the serial. Do not change for no reason, otherwise it will affect the operation

APPENDIX B

The following are the details of the states and settings of individual barriers exist for the configuration inside the AdebusExplorer.

Status

ALARM	Alarm status of the barrier
TAMPER	Tamper status of the column
SIGNAL LOW	Disqualification status
MASK	Antimask status
HEATHER	Heaters status
ALARM LED	LED ALARM on Mother board
VIN OUT RANGE	Supply out of range (not 10-30Vdc)
VIN LOW	Low supply (lower than 12.4V,in this case the supply is done by battery)
POWER LOW	Low stabilized tension in the barrier (<8V).
BEAM TEST	Indicatesi f the barrier is in alignment test
RELÈ	Alarm relay status. The function can be modified with RLC command
IN 1	Status of the Special Input 1 (Input terminal of BEAMS MES9C on the base of a single column). It is a balanced input to 15kΩ. In case of normal operation, its value is equal to 2. When opened, its value is equal to 0. If be balanced 30kΩ its value is 1. For more details, please refer to the manual of the barrier MANA IR
IN 2	Status of the Special Input 2 (Input AND MES9C the terminal block on the base of single column). It is a balanced input to 15kΩ. In case of normal operation, its value is equal to 2. When opened, its value is equal to 0. If be balanced 30kΩ its value is 1. For more details, please refer to the manual of the barrier MANA IR
IN 3	Status of the Special Input 3 (Input terminal of G MES9C based on the single column). It is normally open, and its value is equal to 0. If the event is shorted to ground, and its value is 1. For more details, please refer to the manual of the barrier MANA IR
BEAM ALARM	Alarm beam status
BEAM LOW	Beams in disqualification status
BEAM MASK	Beams masked

Analog values

INPUT VOLTAGE	Voltage input on the column
POWER VOLTAGE	Stabilized voltage into the column
CURRENT	Power consumption of the column
TEMPERATURE	Temperature
RX1, RX2, RX3, RX4 LEVEL	Voltage PEAK value of the signal being received (does not match the value measured by the multimeter on a single optical RX)

Configuration

MODEL	Model of products
SERIAL NO	Serial number of the mother board
SOFT. CONFIG	If activated, the configuration of the column is controlled by software. It therefore takes precedence over the hardware configuration set via dip switches on the motherboard of the column
RX CHANNELL	Not used
TX CHANNELL	Not used
BEAM1	Esclusion beam 1
BEAM12	Esclusion beam 1 & 2
AND RND	Function AND (2 optical must be interrupted to give alarm)
AND12	AND function for the beam 1 & 2
RX1, RX2, RX3, RX4	Single optical status
SIGN LOW1	The barrier enters in disqualification with at least one of the optical RX that receives a low signal in case of fog. If it is only the first optical signal to detect a low, but not enough for the alarm, this is inhibited only by maintaining the normal operation of the barrier
RLC	Allows you to configure the alarm relay in this column so that it is closed (or open) as a function of an event at your own discretion
CROSS	Crossing function is enabled for the barrier which works with crossed beams. For details, see the manual of the barrier MANA
A.CRAWL	Anti crawling function is enabled for which only the first optical RX works with a trip time equal to 2 seconds. It has priority over other functions such as AND or and12 RND. In particular, the system still has to be in alarm regardless of the state of the other optical receivers
OPT./WIRE	Not used
SIGN LOW	Disqualification
BYPASS	Inhibition of the barrier for 1 minute
RANDOM DELAY	The system presents time to time a random delay alarm variable from 0,05 to 1 sec
ANTIMASK	Allows to be advise if there is an attempt to blind the barrier

RAY TEST 1, 2, 3, 4	It allows you to activate optics transmitter at a time. This function can be used for verification of alignment on a single optical receiver
SPEC. INP	Allows use of special inputs on the terminal board of the barrier MES9C. In particular, it is possible for example to insert a sensor attached on the Special Input 1 (input terminal of the BEAM), one of the Special Input 2 (input) and one on the Special Input 3 (Input Gin). For more details, see the manual of the barrier MANA
SPEED	Is the delay time in milliseconds of the barrier. By default it is set to 50ms