

Monitoring control panel Installation manual & cabling

V 2.3.0



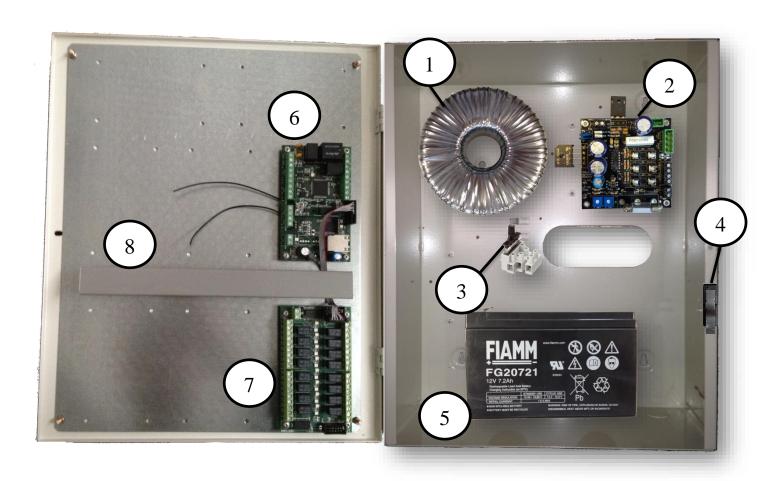


INDEX

1	ADEBUS COMPONENTS	Pag. 3
2	BOARDS DESCRIPTION	Pag. 4
	ALPO1B	S
	Supply board	Pag. 4
	ADEBUS SC	D 7
	ADEBUS CA230 MotherBoard	Pag. 5
	ADEBUS ESP	D
	16 relay output expansion	Pag. 6
3	START OPERATING	Pag. 7
	Output relay connections	Pag. 9
,	ADEBUS BOARD (CA230) FIRST CONNECTION	
4	THROUGH IP 192.168.1.222	Pag. 10
	Overview	Pag. 10
	I/O Status	Pag. 11
	Network configuration	Pag. 12
	Password change	Pag. 13
5	ADEBUSEXPLORER INSTALLATION	Pag. 14
6	ADEBUSEXPLORER	Pag. 14
	PC - ADEBUS CONNECTION WITH NETWORK CABLE	g
	(direct connection)	Pag. 14
	CONFIGURATION	Pag. 16
	Homepage	Pag. 16
	Working path	Pag. 17
	Password Management	Pag. 18
	Side editor	Pag. 19
	Configuration mode	Pag. 20
	Address setup	Pag. 22
	Column detail	Pag. 23
	New configuration	Pag. 24
	Archive	Pag. 28
7	SYSTEM CONFIGURATION	Pag. 29
8	SECTIONING CONFIGURATION	Pag. 30
9	EXIT FROM THE PROGRAM	Pag. 32
	APPENDIX A	Pag. 33
	Column status	Pag. 33
	Column detail	Pag. 34
	Output configuration	Pag. 35
	Output polarity	Pag. 36
	COM0 o COM1	Pag. 37
	APPENDIX B	Pag. 38
	Status	Pag. 38
	Analog values	Pag. 39
	Configuration	Pag. 39



1. ADEBUS COMPONENTS

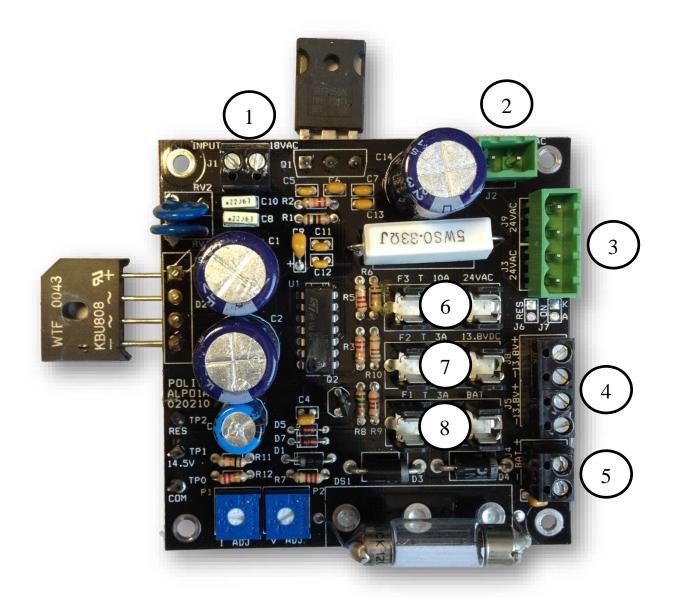


	CODE	DESCRIPTION
1	TRASF LAR22S	Trasformer 18/24 Vac
2	ALPO1B	Supply board
3	MORS 3 CONN. Fuse	
4	TAMPER	
5	BATTERY (Non inclusa)	Battery location up to 17Ah
6	ADEBUS SC	CA230 board
7	ADEBUS ESP	Expansion 16 relay output
8	Cable	e passage



2. BOARDS DESCRIPTION

ALPO1B Supply board

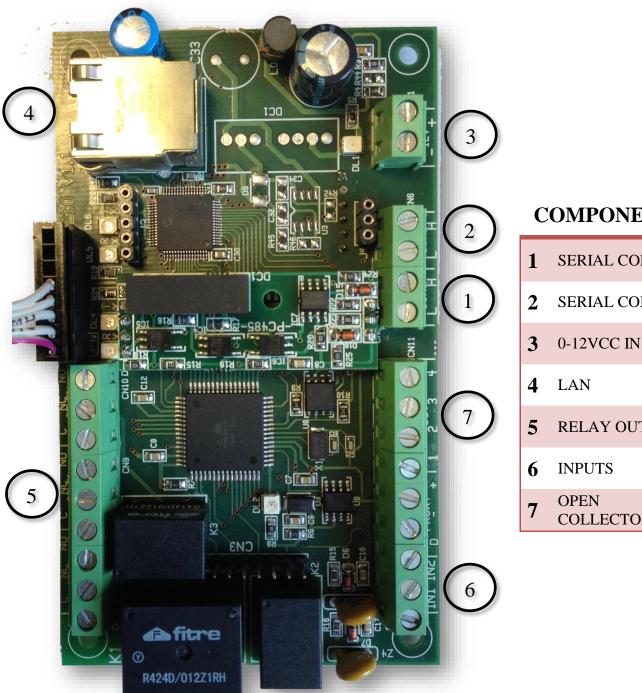


COMPONENTS

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)



ADEBUS SC ADEBUS CA230 Motherboard

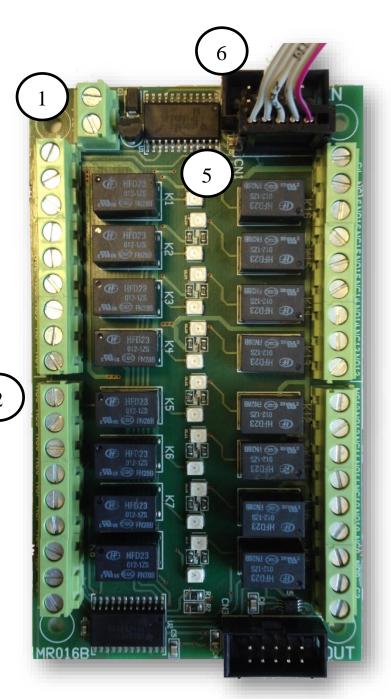


COMPONENTS

- SERIAL COM0 IN
- SERIAL COM1 IN
- **RELAY OUTPUT**
- **COLLECTOR OUT**



ADEBUS ESP 16 relay output expansion



COMPONENTS

- **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. BOARD

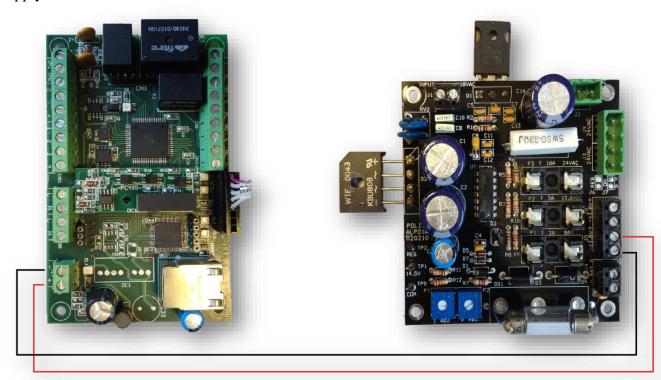
 $\left(4\right)$

3

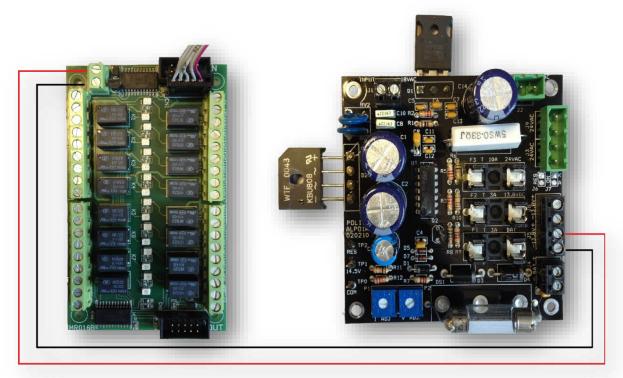


3. START OPERATING

1. Supply connections must be made between the board ALPO1B and the board CA230:

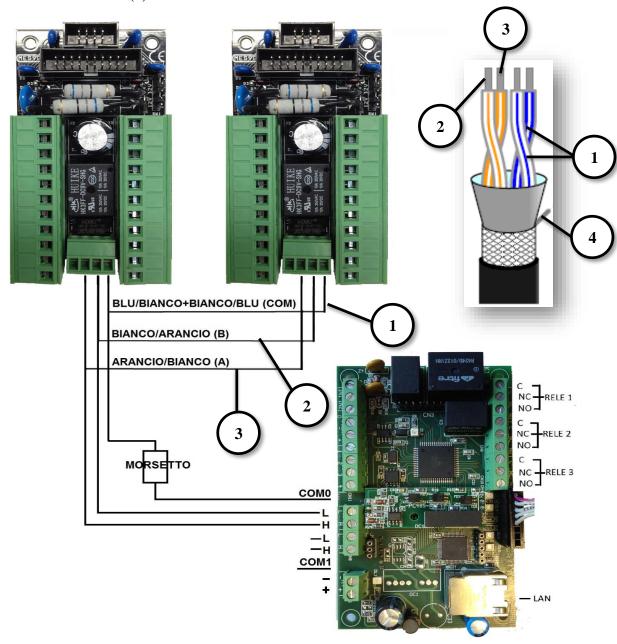


2. Supply connections must be made between the board ALPO1B and the Expansions board (if present):





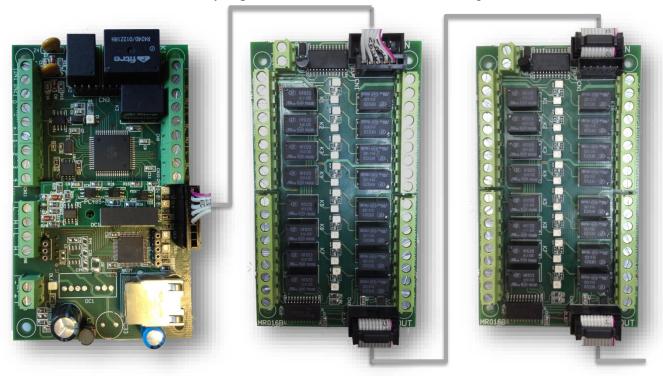
- 4. Connect the negative of all the barriers, using the twisted wires of the BUS cable Blue / White (1), and connect them to the negative of the "COM0" or "COM1" through a clamp (not included), starting from the last barrier.
- 5. Starting from the last barrier connected in common barriers through the cable wire BUS White / Orange (2) at the "B" of MES9C and connect to the "L" (COM0) of the board 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 board CA230.
- 7. Connect the shield (4) the common barriers and board CA230.



N.B.: Two-pair shielded twisted cable for RS485 0.50 mm (eg Belden cod. 3107A)



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



Output relay connections



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



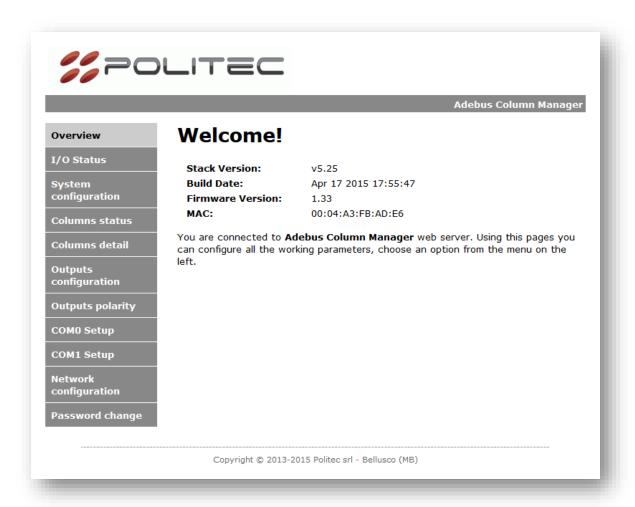
4. ADEBUS BOARD (CA230) FIRST CONNECTION THROUGH IP 192.168.1.222

Connect the Ethernet cable the PC to the connector lan of the board ca230.

N.B.: for the first login:

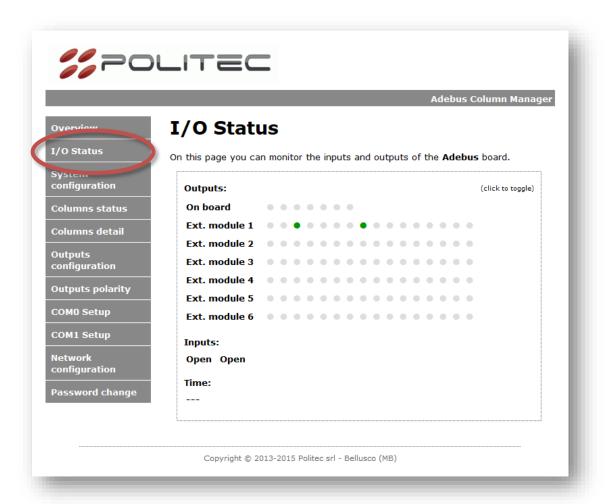
username: admin, password: admin.

Overview





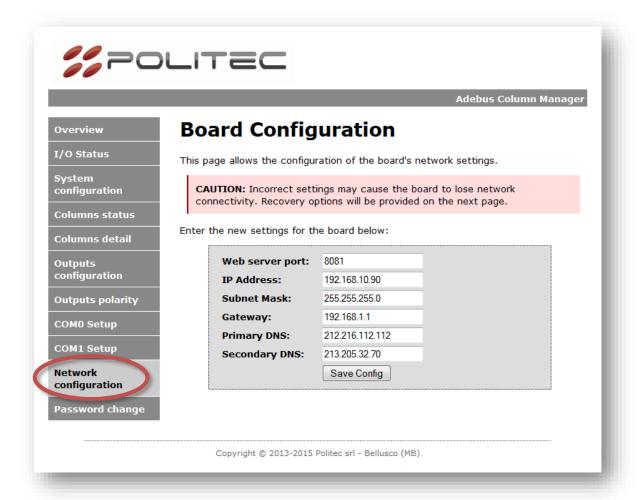
I/O Status



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



Network configuration



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



Password change



Modify the system password for remote access via the browser.

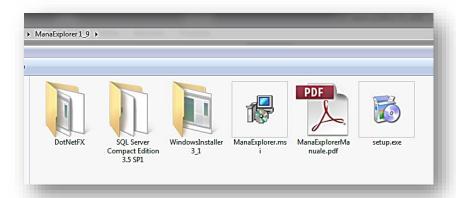


N.B.: You can restore the default settings (IP = 192.168.1.222) by shorting pin 3 to pin 4 of connector for programming the board CA230. Turn OFF, after 10 seconds turn ON and wait a couple of seconds, turn off again and remove the short. The next time the system will have the default configuration.



5. ADEBUS EXPLORER INSTALLATION

Copy the AdebusExplorer folder on your PC and install the supplied the program using the setup.exe file



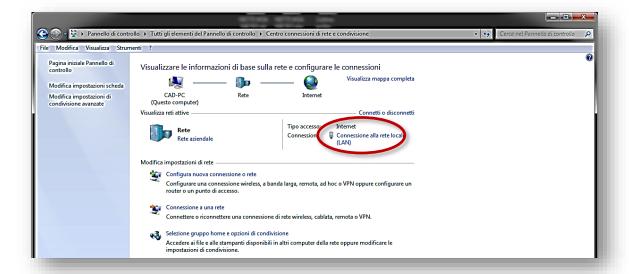
6. ADEBUS EXPLORER

AdebusExplorer is a system of supervision and configuration for the barriers MANA, PARVIS and SANDOR plus SMA and works together with hardware boards ADEBUS, prepared with the appropriate firmware, reachable 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).

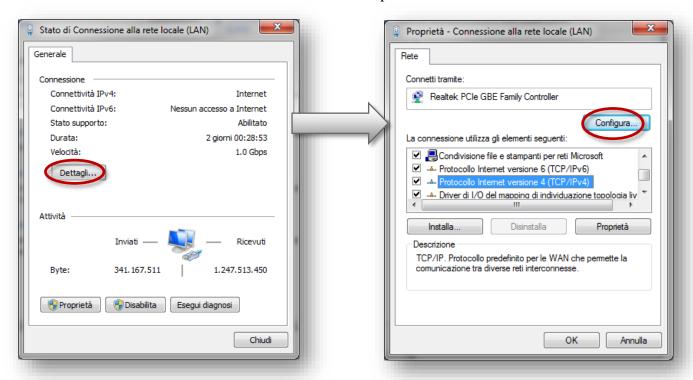
PC – ADEBUS CONNECTION WITH NETWORK CABLE (direct connection)

- Network Connections (Windows 7);
- Click with the left mouse button and click Local Area Connection (LAN)

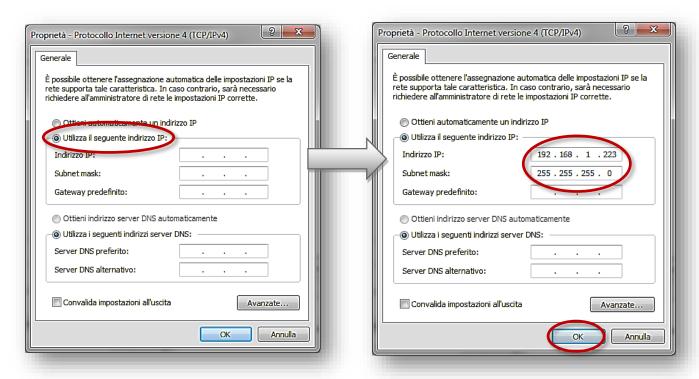




• With the left mouse button click and choose properties. Opened up the window with the left mouse button select Internet Protocol and click Properties.



• Choose, if not already selected, use a different IP address than the board 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.



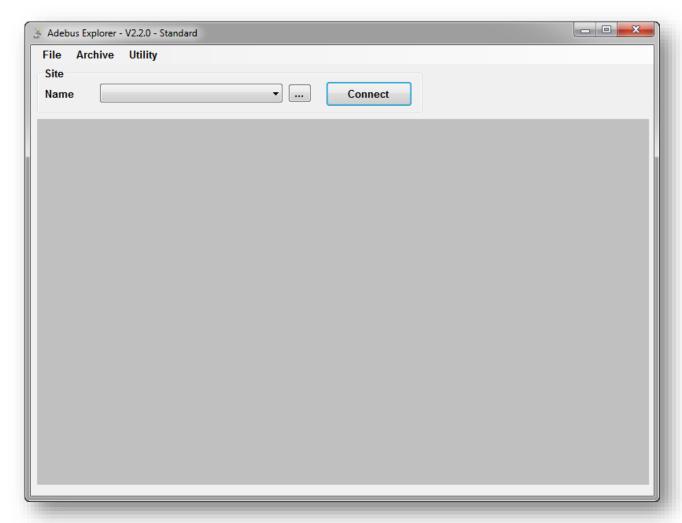


CONFIGURATION

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

Homepage

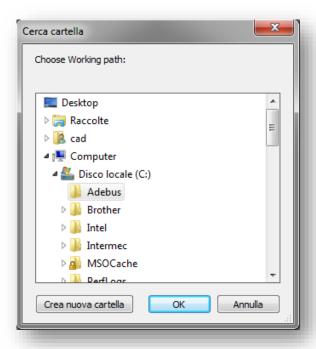
At the first start follow the instructions below in order





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.

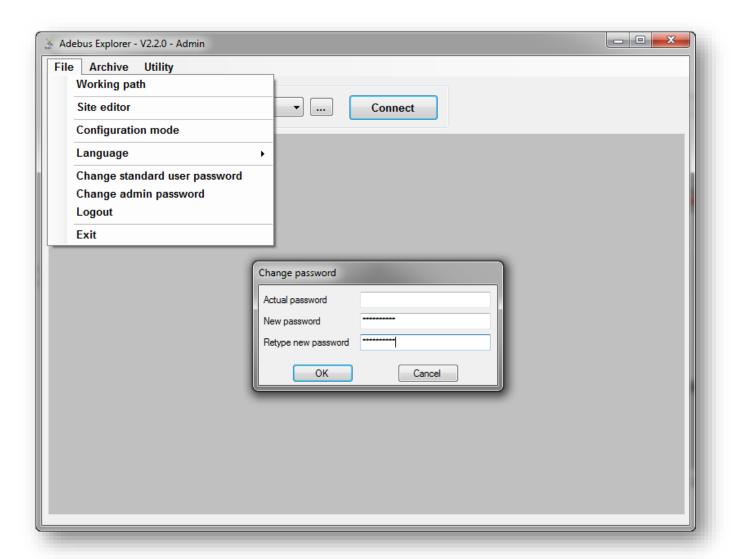


The correct procedure to change an existing Working path involves the following steps:

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.	



Password Management

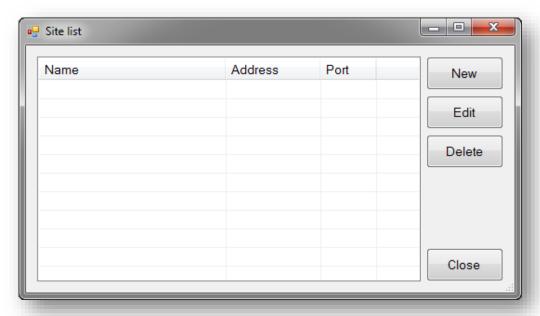


Admin	For the first time enter the desired password freeing up the section "Actual password"
Aumm	The Admin has permission to change the settings of the individual columns (as explained below) as well as view the status of each
Standard	For the first time enter the desired password freeing up the section "Actual password" The standard user can only view the status of each column.

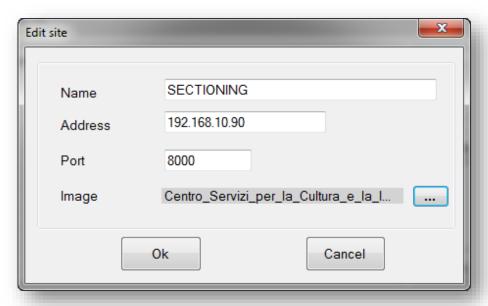


Site editor

Displays the list of configured CA230 boards, each board 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 Board	8000
Image	Picture for use as a graphical map	



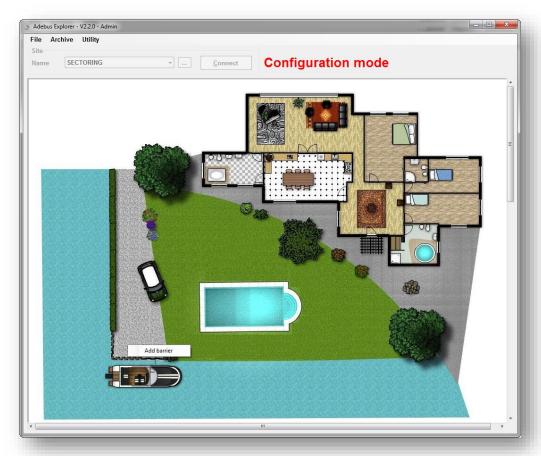
Configuration mode

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.



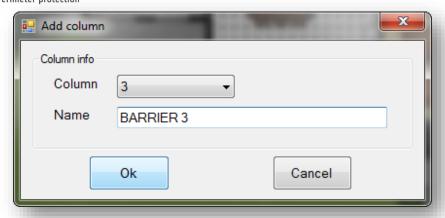
To add a barrier just place the mouse cursor at a point on the map and click with the right mouse button. From the popup menu select Add barrier.

It is possible to add arrows from the Transmitter barrier to the Receiver barrier with left click on the mouse. From the popup menu select TX and RX. In that way when there is an update event on the archive the arrow starts to blink.

If activated there is a popup signal that shows the last events recorded on the archive.

N.B. Event logging is the default continues, to manage the startup controlled such registration, see "Appendix A" p. 35.





Parameter

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 board 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 board which is physically connected to CA230 barrier. Each board 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.



Column detail

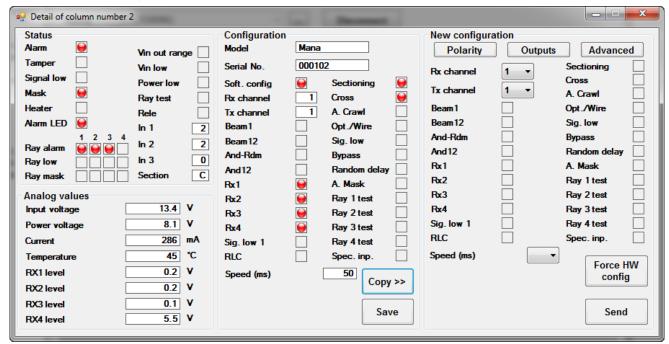
When connecting to a site is active, the barriers set up take on different colors depending on the state:



Status	Color
Stand-by	White
Low voltage	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 CROSS and SECTIONING mode configured via software.

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

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

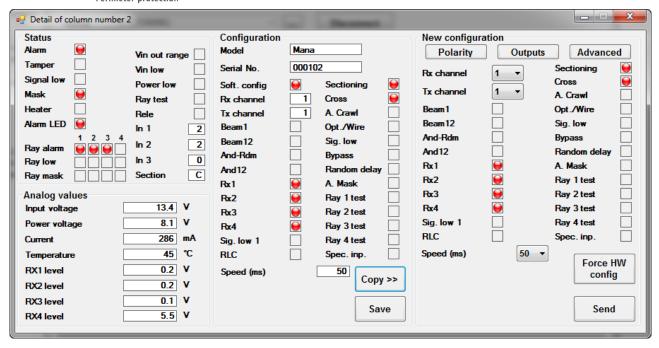
New configuration

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.

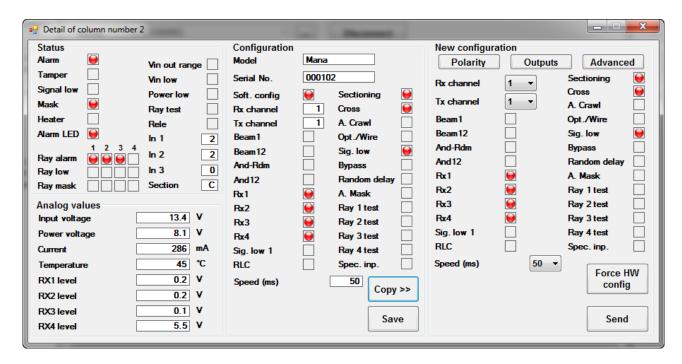
The Copy button copies the current configuration of the barrier in the New Configuration and selecting the desired options you can set up the barrier.





Es.: in addition to the initial configuration has been added to the function of disqualification and the response time has been increased.

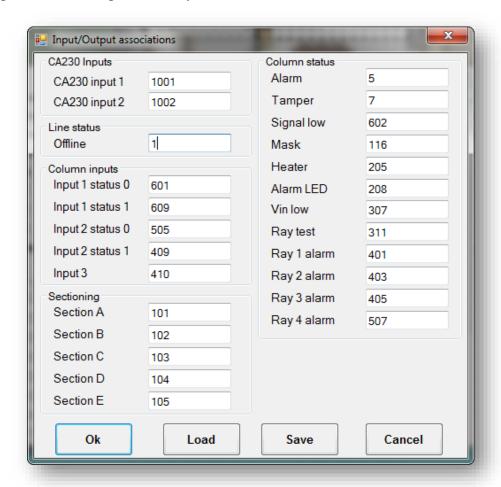
The Send button sends the selected configuration to the barrier in the New Configuration.



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.



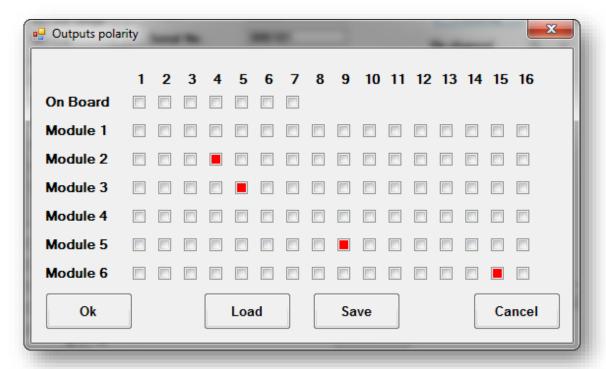
NOTE: the output numbers must be indicated in the following format:

OUTPUT N. DESCRIPTION

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



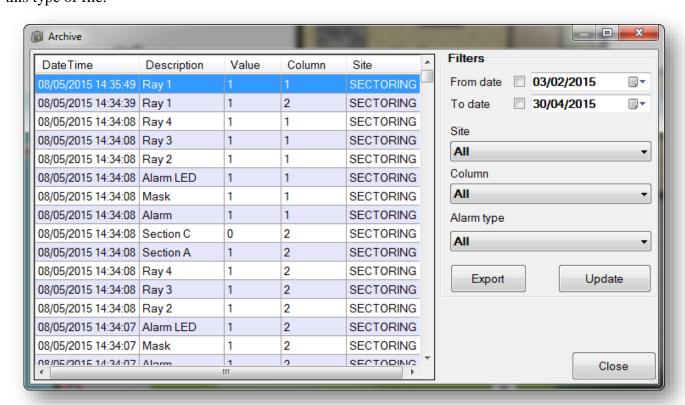
The Polarity button allows you to reverse states of rest of each output relay system Adebus, from NO to NC and vice versa.





Archive

The Archive menu displays the history of the events recorded on the board 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	Descriziption
DateTime	Date and time of event
Description	Event description.
Value	Input status
Column	Number of column related.
Site	Site description

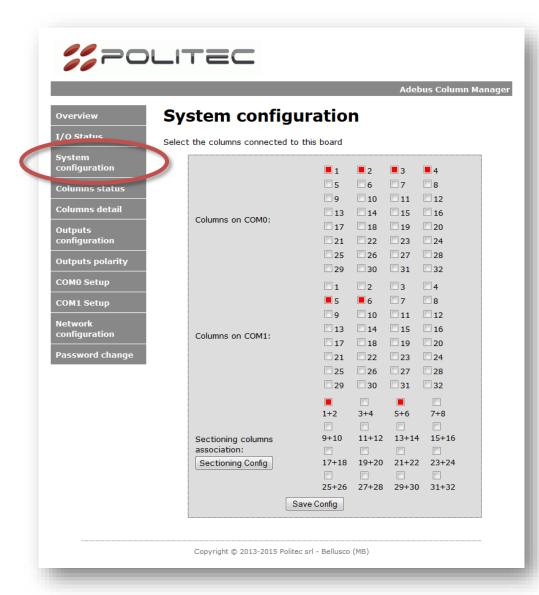
The visualization of events can be filtered by date, site, type of alarm and barrier. The Update button applies the filter to the view. The Export button allows you to export events to a CSV file (comma-separated values).

N.B. Event logging is the default continues, to manage the startup controlled such registration, see "Appendix A" p. 35.



7. SYSTEM CONFIGURATION

When the configuration has been performed in the program AdebusExplorer, connect via browser to the previously stated address to activate the addresses barriers.



Ex.: 4 columns on COM0, 2 columns on COM1.
Association of columns 1-2 and 5-6 for sectioning function.

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.

In case of Sectioning function is activated you must associate the couple of columns that create the infrared barrier divided in zones.

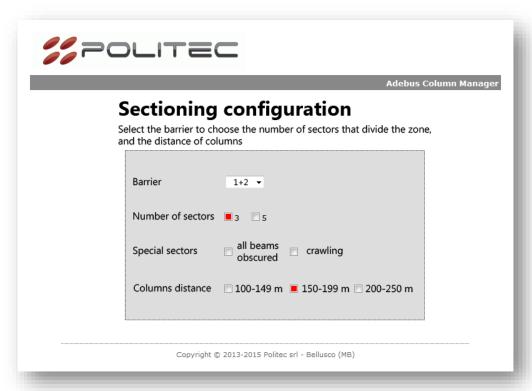
To configure this function select the dedicated button.

N.B.: in case of replacing or adding a column, you must clear ALL columns through system configuration, enter the address of the new column and reselect all columns.



8. SECTIONING CONFIGURATION

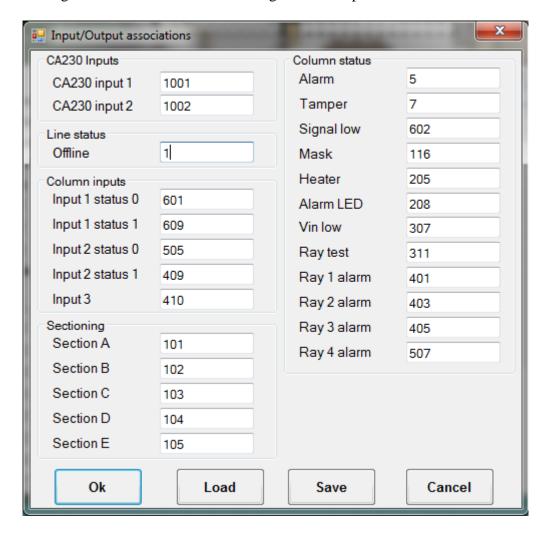
Through the bottom "Sectioning configuration" in the browser page "System configuration" you can select the number of sectors for each barrier.



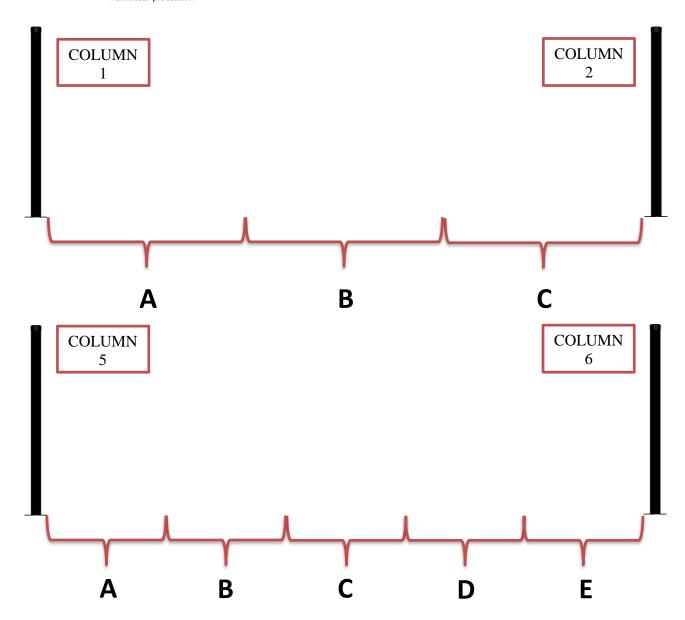
Barrier	Select the couple of columns that create the barrier	
Number of sectors	How many sectors is the zone divided	
Special sectors	All beams obscured	if selected there is a sector information if all beams of a column are obscured
	Crawling	if selected there is a sector information if happens a crawling passage
Columns distance	You must select the distance between the barrier columns	



In order to associate the relay outputs to each sectors, access to the outputs of the first column of the barrier and configure the sections concerned using Adebus Explorer.



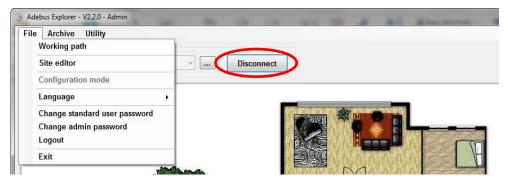




Example: sectioning column association 1+2 and 5+6, 3 sectors and 5 sectors respectively. In this case the relay associations are in outputs of column 1 and column 5.

9. EXIT FROM THE PROGRAM

Before you exit the program, log out and disconnect.



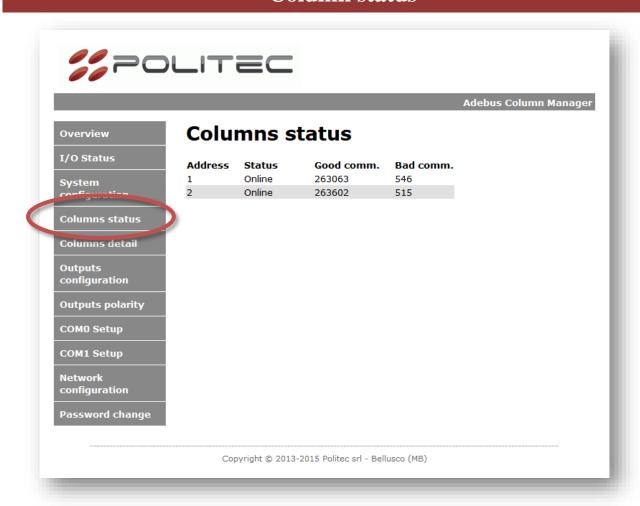
N.B Do not perform the procedure could cause malfunctioning of the system Adebus.



Appendix A

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

Column status

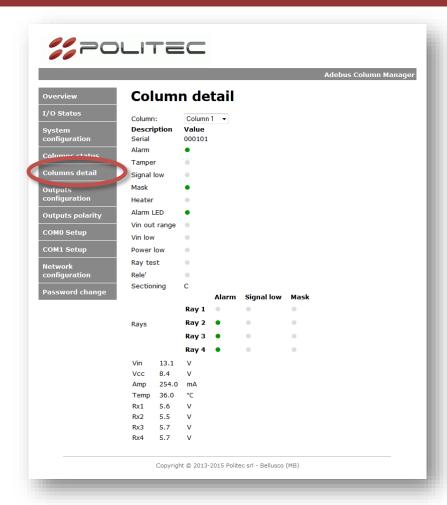


The list will show all recognized devices that have been installed and properly addressed.

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



Column detail

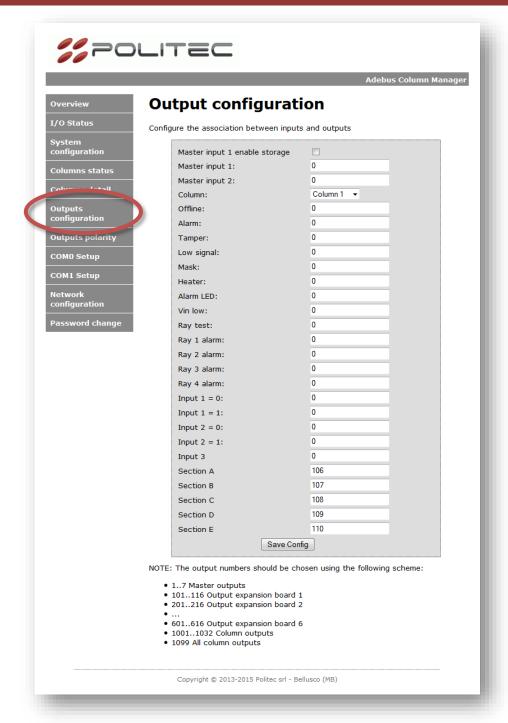


Through this section you can check the details of the status of each barrier. In particular, in addition to the serial number (SERIAL) will highlight the main states of the single barrier and its optics.

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	Indicates if the barrier is in alignment test
Relè	Alarm relay status. The function can be modified with RLC command
Sectioning	Indicates the last sector crossed
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	Voltage PEAK value of the signal being received (does not match the value
Rx4	measured by the multimeter on a single optical RX)



Output configuration



In the menu option configuration Master Outputs 1 Input enabled storage, if selected, activates the recording only if the input 1 of the board 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 board CA230.

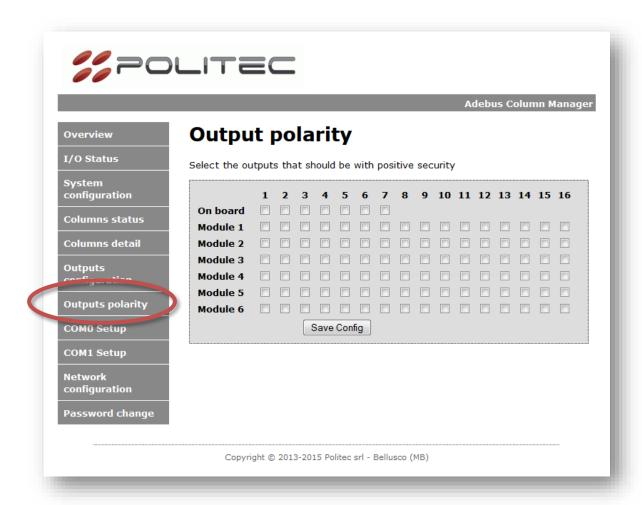
Barrier: The events below are from that device / barrier.

For each of them can be combined with a relay.

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



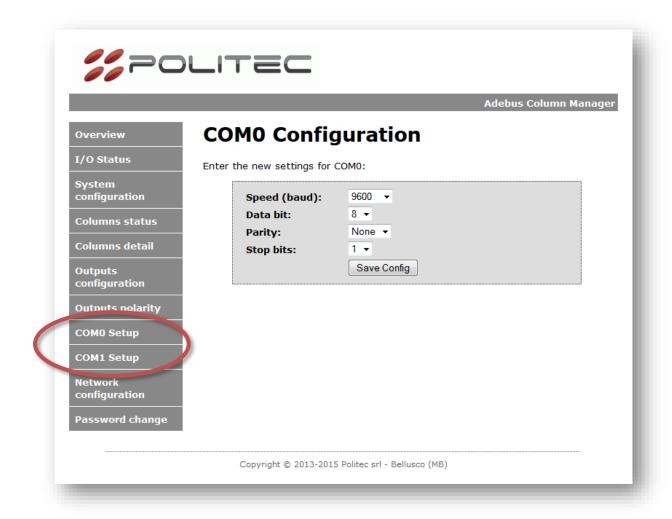
Output polarity



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



COM0 o COM1



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 $15k\Omega$. In case of normal operation, its value is equal to 2. When opened, its value is equal to 0. If be balanced $30k\Omega$ 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 $15k\Omega$. In case of normal operation, its value is equal to 2. When opened, its value is equal to 0. If be balanced $30k\Omega$ 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	
SECTION	If enabled function SECTIONING, provides information about the last sector crossed 1 Nearest column sector 2 Medium column sector 3 Farthest column sector 4 Crawling sector 5 All obscured sector	
BEAM ALARM		
	•	
IN 3	to 0. If be balanced 30kΩ its value is 1. For more details, please refer to the manual of the barrier MANA IR 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 If enabled function SECTIONING, provides information about the last sector crossed 1 Nearest column sector 2 Medium column sector 3 Farthest column sector	



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	Column model	
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	Must be 1 for normal operation	
TX CHANNELL	Must be 1 for normal operation	
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	
SECTIONING	Enable sectioning function.	
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 and 12 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



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