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CLEBER

RFSW-03

User Manual

System: RFSW-03 RF Switch Board
Release: 1.0
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3 Safety regulations.

The personnel engaged with the installation, the use and the maintenance of the equipment has to be familiar with the theory and practice of first aid.

3.1 Treatment of electrical shocks.

When the victim loses his consciousness*:*

Put into practice the following first aid principles.

- Position the victim lying down on his back on a rigid surface.
- Open the respiratory airways lifting up the neck and pushing down the front (Fig. 1).
- If necessary, open the mouth to check the respiration.
- In case the victim doesn't breath, start immediately the artificial respiration (figure 2): bend the head, close the nostrils, attach the mouth to the victim one's and do 4 quick mouth-to-mouth respirations

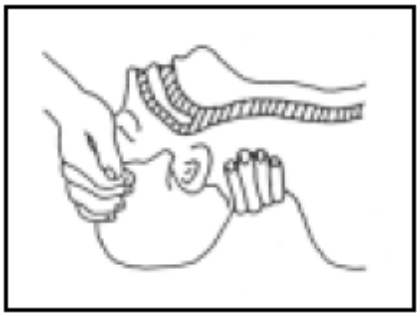


FIGURE 1: RESUSCITATION DETAIL – 1.

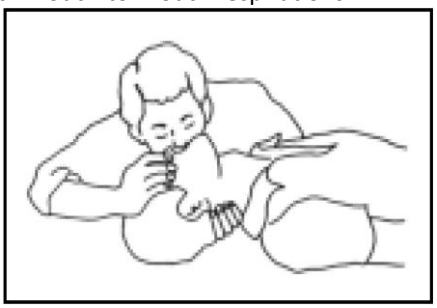


FIGURE 2: RESUSCITATION DETAIL – 2.

- Check the pulsation (Figure 3); in case of absence of pulsation, start immediately the cardiac massage (Figure 4) pressing the breastbone in the middle of the thorax (Figure 5).

FIGURE 3: RESUSCITATION DETAIL – 3.

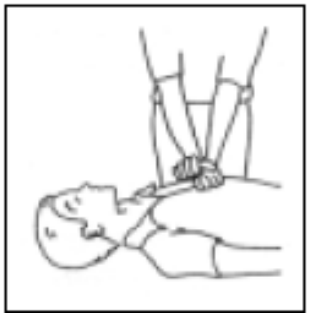


FIGURE 4: RESUSCITATION DETAIL – 4.

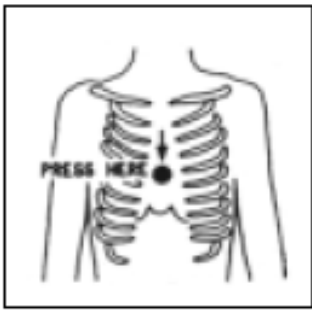


FIGURE 5: RESUSCITATION DETAIL – 5.

- When there is only one rescuer, he has to maintain a rhythm of 15 compressions alternated with 2 quick respirations.
- In case there are two rescuers, the rhythm should be one respiration each 5 compressions.
- Do not interrupt the cardiac massage during the artificial breathing
- Call a doctor as soon as possible

When the victim is conscious

- Cover up the victim with a blanket.
- Try to calm down the victim.
- Unbutton the cloche and lay down the victim.
- Call a doctor as soon as possible.

3.2 Treatment of electrical burns.

Large burns and cuts of the skin

- Cover up the interested area with a clean sheet or cloth.
- Do not open the blisters; remove the fabric and the parts of the clothes attached to the skin; apply a suitable ointment.
- Treat the victim according to the type of accident.
- Take the victim to the hospital as soon as possible.
- When the arms and legs are affected keep them raised.

When there is no doctor available within an hour and the victim is conscious and does not retch, give a liquid solution containing salt and sodium bicarbonate: 1 teaspoon of salt and half a teaspoon of sodium bicarbonate for each 250 ml of water.
Have the victim sip half a glass of the solution for four times and for 15 minutes.
Stop when retching.
Do not give any alcoholics
Less serious burns

- Apply cold (not frozen) gauzes using a clean as possible cloth.
- Do not open the blisters; remove the fabric and the parts of the clothes attached to the skin; apply a suitable ointment.
- When necessary, put on clean and dry clothes.
- Treat the victim according to the type of accident.
- Take the victim to the hospital as soon as possible.
- When the arms and legs are affected keep them raised.

4 General description.

5 Technical Specifications.

5.1 System General Specifications.

TABLE 1: GENERAL SPECIFICATIONS

Operative Temperature Range	-10°C ÷ 55°C
Management	CLEBER: Front panel (Display TFT touchscreen) SNMP Web browser Head: Front panel (Display TFT touchscreen)
Firmware upgrade	USB, WEB, FTP
Power supply	Version 1: AC 90-260 V~ 50/60 Hz IEC 320 Swappable Version 2: AC 90-260 V~ 50/60 Hz IEC 320 and DC 22 ÷ 65 V 2 pins socket Swappable Version 3: AC 90-260 V~ 50/60 Hz IEC 320 and DC 10 ÷ 36 V 2 pins socket Swappable Version 4: Dual redundant AC 90-260 V~ 50/60 Hz IEC 320 Hot swappable Version 5: Dual redundant DC 10 ÷ 36 V 2 pins socket Hot swappable Version 6: Dual redundant DC 22 ÷ 65 V 2 pins socket Hot swappable
Max power consumption	150 W
Max dissipation	160 W

5.2 Mechanical Specifications.

TABLE 2: CLEBER MECHANICAL SPECIFICATIONS

Rack	Standard 19” 1U
Width	482.5 mm
Height	43.65 mm
Depth	380.65 mm (without connectors) 357.80 mm (without connectors and front hangers)
Weight	< 7 Kg

6 Installation.

- Unpack the equipment and check first of all check if there are any damages due to the transport.
- The box should contain:

- The CLEBER
- 1 or two AC supply cable (depending on number and type of power supplies purchased)
- 1 or two DC supply cable, equipment adapted connector on one side, free wires at other end (depending on number and type of power supplies purchased)
- An envelope containing:
  - Reserved web and display passwords
  - USB pen with Token for display access and user manual

- Install the equipment in a rack cabinet. A one-unit space is requested. Verify that there is enough space between other functioning equipment generating high temperatures and that there are no obstructions in the ventilation. (The functioning is guaranteed in a temperature range from -10 ºC ÷ +55 ºC).
- The equipment must be correctly grounded, to guarantee a secure functioning.
- Connect to the correct power tension reading the information on the manual or on the label attached to each equipment, containing the serial number.
- Connect the network cable to the plug on the rear of the equipment or connect the battery cable to the related connector. The last used configuration will be loaded.
- Connect the flange(s) on the rear panel (or N connectors, depending on frequencies) of the equipment to the waveguide/cable for the connection to the branching system and the antenna.
- Setup the equipment according to the needs consulting the user manual.

7 Mechanics.

7.1.1 Front Panel.

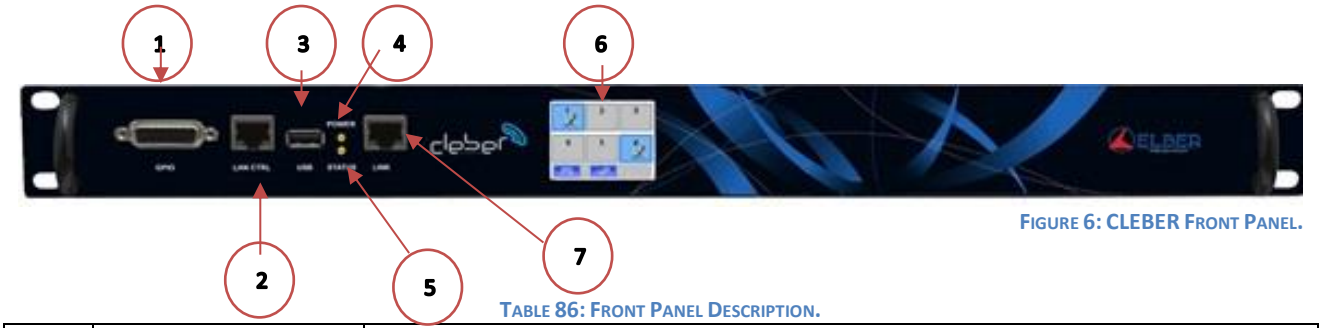
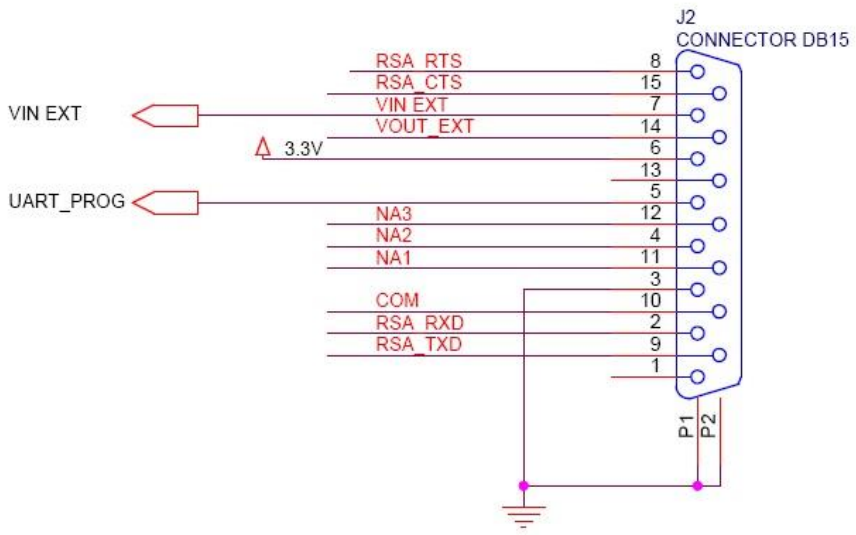


FIGURE 6: CLEBER FRONT PANEL.

TABLE 86: FRONT PANEL DESCRIPTION.

Tag	Description	Function
1	DB15 Connector	

Pin	Function
1	Not connected

		2	Debug serial Rx Pin
		3	Ground
		4	Relay 2, Normally open contact
		5	Reset pin for In-System-Programming modality
		6	+3.3V
		7	0-5V controlled voltage for analogue remote control; programmable upon customer request.
		8	Debug serial RTS Pin
		9	Debug serial Tx Pin
		10	Relay 1-2-3 Common Contact
		11	Relay 1, Normally open contact
		12	Relay 3, Normally open contact
		13	Not connected
		14	0-5V controlled voltage for analogue remote control; programmable upon customer request.
		15	Debug serial CTS Pin
2	RJ-45 Connector	Port Ethernet 10/100 for Management	
3	USB Connector	USB pen drive connection for firmware upgrade and token connection (read/write accede to TFT).	
4	Led green	Power supply on	
5	Three colours led	Green: ok Yellow: warning Red: alarm	
6	Display TFT touchscreen	User Interface	
7	Connector RJ-45	Fast Ethernet Port for Debug and equipment extensions	

7.1.2 Rear Panel.

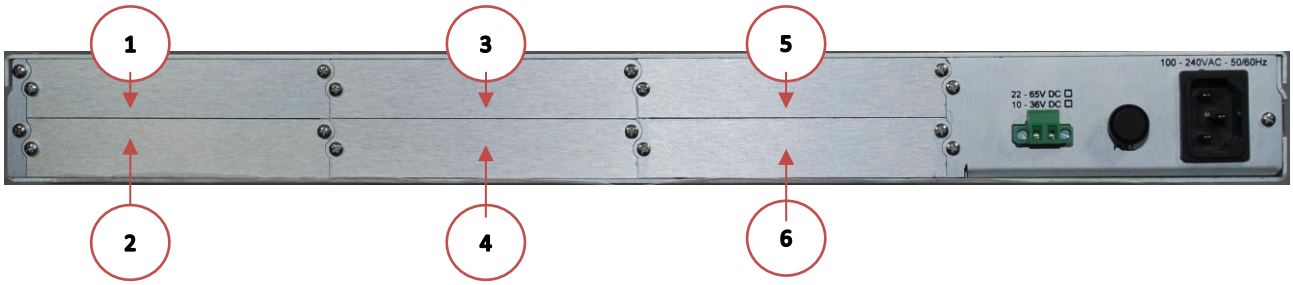


FIGURE 7: REAR PANEL CLEBER (NO SLOTS INSTALLED).

TABLE 3: REAR PANEL - EMPTY

Item	Description	Function
1	Blind Panel	Slot number 3
2	Blind Panel	Slot number 4
3	Blind Panel	Slot number 2
4	Blind Panel	Slot number 5
5	Blind Panel	Slot number 1
6	Blind Panel	Slot number 6

7.1.2.1.1 PSU.

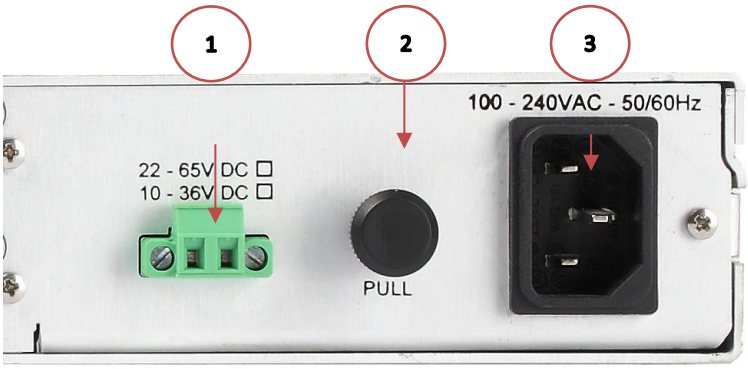


FIGURE 8: POWER SUPPLY BACK PANEL (AC+DC VERSION).

TABLE 91: PSU CONNECTORS DESCRIPTION

Tag	Description	Function
1		DC input (check input range flagged) before connection. Polarity independent
2	PULL	Hanging knob for swapping.
3	100-240VAC - 50/60Hz	IEC 320 socket for AC input.

8 Universal chassis.

8.1 User interface.

The user interface consists of a general alarm led and a graphical TFT display with **TOUCH SCREEN** function (for more comfortable use, a stick is available in a compartment located in the front panel, see Figure 6).
According to equipment configuration (i.e. optional boards installed) related menu are shown.
In order to have a read/write privilege and thus modify the configuration of the equipment, it's required the connection of a USB pen with the right token to the USB port in the front panel; on the other end, it's required to digit a numeric password while trying to modify one parameter (the password is tied to the customer's name and it's notified at delivery).

8.1.1 Main menu.

At equipment switch on, after embedded software boot, display shows the main menu, according to the configuration, as can be seen in figure below. This menu shows the equipment block diagram, for an easy and intuitive access to modules parameters according to their function; on every active area, one or more circles symbolizing alarm led are shown, eventually red or green depending on the status of the related block.

FIGURE 9: GENERAL MAIN MENU.

Active areas:

- 1
- 2
- 3
- 4
- 5
- 6
- PS 

- uP 

8.1.2 Menu uProcessor (uP).

8.1.2.1 MicroProcessor submenu.

The submenu let a fast access to the elements to be controlled; icons meaning, concerning different sections, is intuitive.

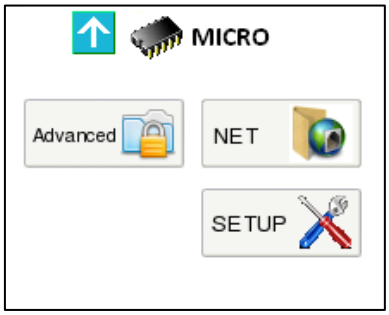


FIGURE 10: MICROPROCESSOR SUBMENU.

8.1.2.2 Menu Setup - System Time.

This menu let the user set right time and date, used by the system for alarm logging. Information about system time is preserved by the battery of the *Real Time Clock*.

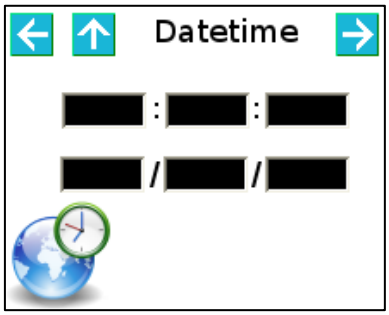


FIGURE 11: SYSTEM TIME SETTING MENU.

Active areas:

- Directional arrow “UP”  to go back to main menu.
- Directional arrows “LEFT”  and “RIGHT”  to browse microprocessor menu.
- Every text box which opens a virtual keypad to enter information.

FIGURE 12: VIRTUAL KEYPAD.

8.1.2.3 Menu Setup - Touch Screen Calibration.

This menu let the user calibrate the Touch Screen function. It’s recommended to use the stick provided with the equipment to touch the red cross, three times as required by the system, after **Calibrate** button pushing.

FIGURE 13: TOUCH SCREEN CALIBRATION MENU.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrows “LEFT” and “RIGHT” to browse microprocessor menu.

8.1.2.4 Menu Setup - Reset.

This menu let the user reset each microcontroller and FPGA of the equipment.

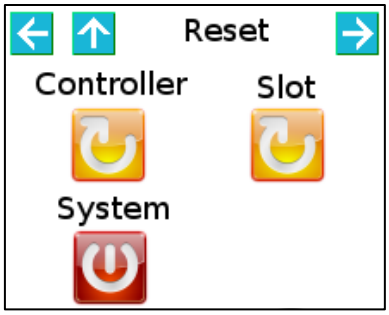


FIGURE 14: RESET MENU.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrows “LEFT” and “RIGHT” to browse microprocessor menu.
- Reset icons.

SLOT reset will eventually restart modem and data interface; CONTROLLER reset just reboot system supervisor, SYSTEM reset is the complete reset of the equipment.

8.1.2.5 Menu Net - Network parameters.

This menu let the user modify management port network parameters; in detail, it is possible to set IP address, Subnet Mask and Gateway IP. MAC Address is read-only.

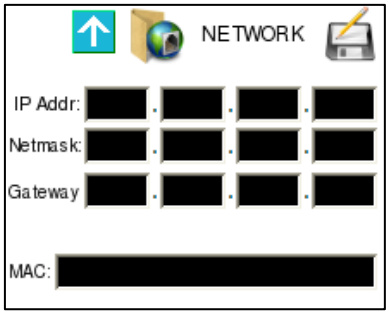


FIGURE 15: NETWORK PARAMETERS MENU.

Active areas:

- Directional arrow “UP” to go back to main menu.

- Directional arrows “LEFT” and “RIGHT” to browse microprocessor menu.
- Every text box, which opens the virtual keypad to insert characters.

8.1.2.6 Menu Misc - General information 1/2.

This menu shows general purpose information, such as:

- Model
- Serial Number
- Part Number

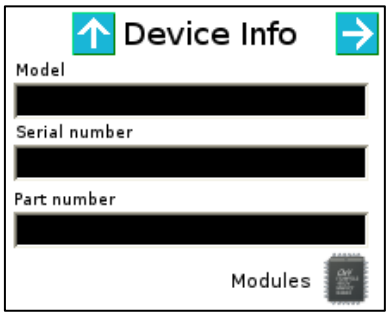


FIGURE 16: GENERAL INFO MENU 1/2.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrow “RIGHT” to browse microprocessor menu.
- Modules icon.

8.1.2.7 Menu Misc - General information 2/2.

This menu shows general purpose information, such as:

- Customer name (two rows)
- Installation site (Loc.)

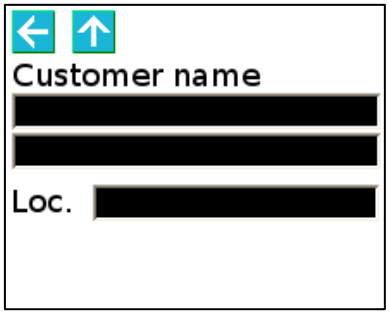


FIGURE 17: GENERAL INFO MENU 2/2.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrows “LEFT” and “RIGHT” to browse microprocessor menu.

8.1.2.8 Menu Misc - Modules.

8.1.2.8.1 Menu Misc - Modules - Controller.

This menu shows controller general purpose information such as:

- Model
- Version
- Revision

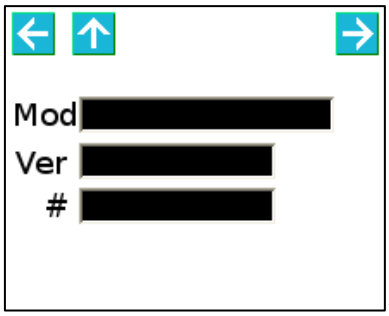


FIGURE 18: GENERAL PURPOSE INFORMATION CONTROLLER.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrows “LEFT” and “RIGHT” to browse microprocessor menu.

8.1.2.8.2 Menu Misc - Modules - Tx.

This menu shows transmitter general purpose information such as:

- Model
- Version
- Revision

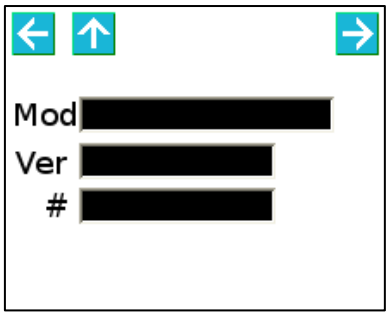


FIGURE 19: GENERAL PURPOSE INFORMATION TX.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrows “LEFT” and “RIGHT” to browse microprocessor menu.

8.1.3 Menu Power Supply (PS).

The Power Supply menu allows verifying whether both power supply modules are fed, what type of feeding they are receiving and whether the secondary voltages are correct (+5V and +6V).

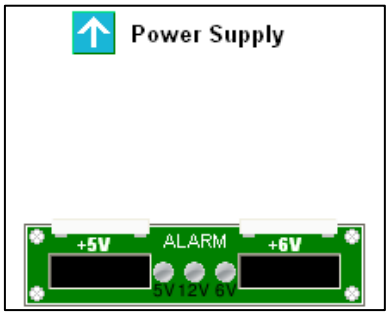


FIGURE 20: POWER SUPPLY MENU.

Active areas:

- Directional arrow “UP”  to go back to main menu.

There is as well a general alarm indicator in case one of the voltage values is not being respected.
The upper zone of the menu is dynamically filled by the icon of the corresponding power supply module, which can be in alternating or continuous current. It is hence possible to see the different combinations reported in the following figures.

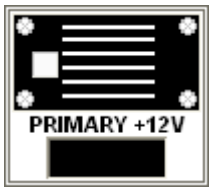


FIGURE 21: ICON POWER SUPPLY WITH CONTINUOUS CURRENT, PRIMARY POSITION.

FIGURE 22: ICON POWER SUPPLY WITH CONTINUOUS CURRENT, SECONDARY POSITION.

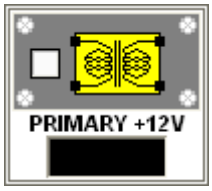


FIGURE 23: ICON POWER SUPPLY WITH ALTERNATING CURRENT, PRIMARY POSITION.

FIGURE 24: ICON POWER SUPPLY WITH ALTERNATING CURRENT, SECONDARY POSITION.

8.2 WEB Interface.

CLEBER is equipped with a WEB interface for an easier and intuitive monitoring and equipment configuration. The connection to Web server can be achieved through RJ-45 connector in the front panel; with a very common *Web browser* (like Internet Explorer, Mozilla Firefox, Google Chrome, Opera, Safari…) it is possible to check equipment status and verify performances even remotely simply writing in the address bar the IP address of the equipment. In order to check the IP address, please refer to par. 8.1.2.5.
Important Note: Default IP address is 192.168.10.150.

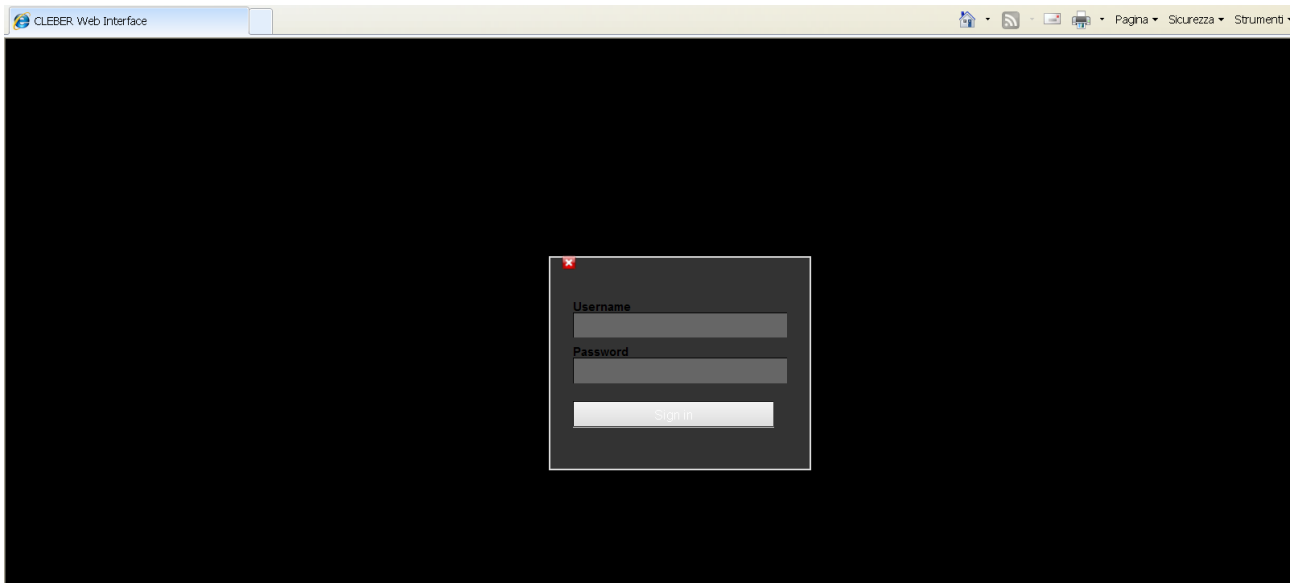


FIGURE 25: WEB INTERFACE LOGIN PAGE

Figure 25 shows the login page of the Web interface, which let the user accede to after successful insertion of username and password. Default passwords are tied to the customer name and they are generated automatically during testing sessions; credentials are delivered with the goods with the documentation.
Three access levels are available:

1. User, with username **user** (read-only access to)
2. Power user, with username **puser** (read/write access to)
3. Administrator, with username **admin** (read/write and special functions access to)

Passwords can be modified, depending on the credentials, by the customer in related section (see par. 8.2.2.4).

8.2.1 Status.

Once the login process has been validated, the general status page opens; it let the user immediately check alarmed parts; the page is divided into 2 parts:

- The upper part reports Controller general information and power supply's
- The lower part, divided into up to 6 different modules according to the number of optional boards installed, is explained in 9.3.

8.2.2 Tab Controller.

Tab web concerning Controller is composed by five frames:

1. Customer.
2. Network.
3. Traps Manager.
4. Tools.
5. Password Management.

8.2.2.1 Controller – Customer.

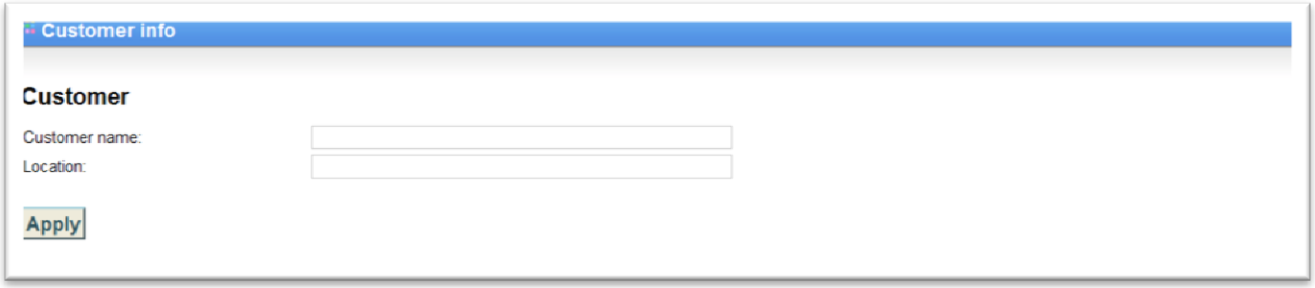


FIGURE 26: WEB CONTROLLER FORM – CUSTOMER INFO.

TABLE 4: EQUIPMENT INFORMATION FOR CUSTOMERS.

Customer name	Customer name.
Location	Installation site.

8.2.2.2 Controller – Network.

This frame let check and modify network parameters of the user interface.
Ip Address, Netmask and Gateway Address can be modified by the user writing in the dedicated text box while Mac Address is read-only. Moreover, it's possible to configure a DNS, a NTP server IP address, the Time Zone and the Country where the equipment is installed.

TABLE 5: EQUIPMENT INFORMATION FOR CUSTOMERS.

DHCP	Enable DHCP protocol to get network configuration automatically (if supported by user network; please contact your network administrator for further details).
IP Address	Equipment IP Address
Netmask	Equipment IP Subnet Mask
Gateway	Gateway IP Address
MAC address	Equipment MAC Address (read only)
Domain Name Server	DNS IP Address
NTP Server	NTP Server IP Address
Time Zone	Selection of Time Zone for Time synchronization
Country	Selection of Country for Time synchronization

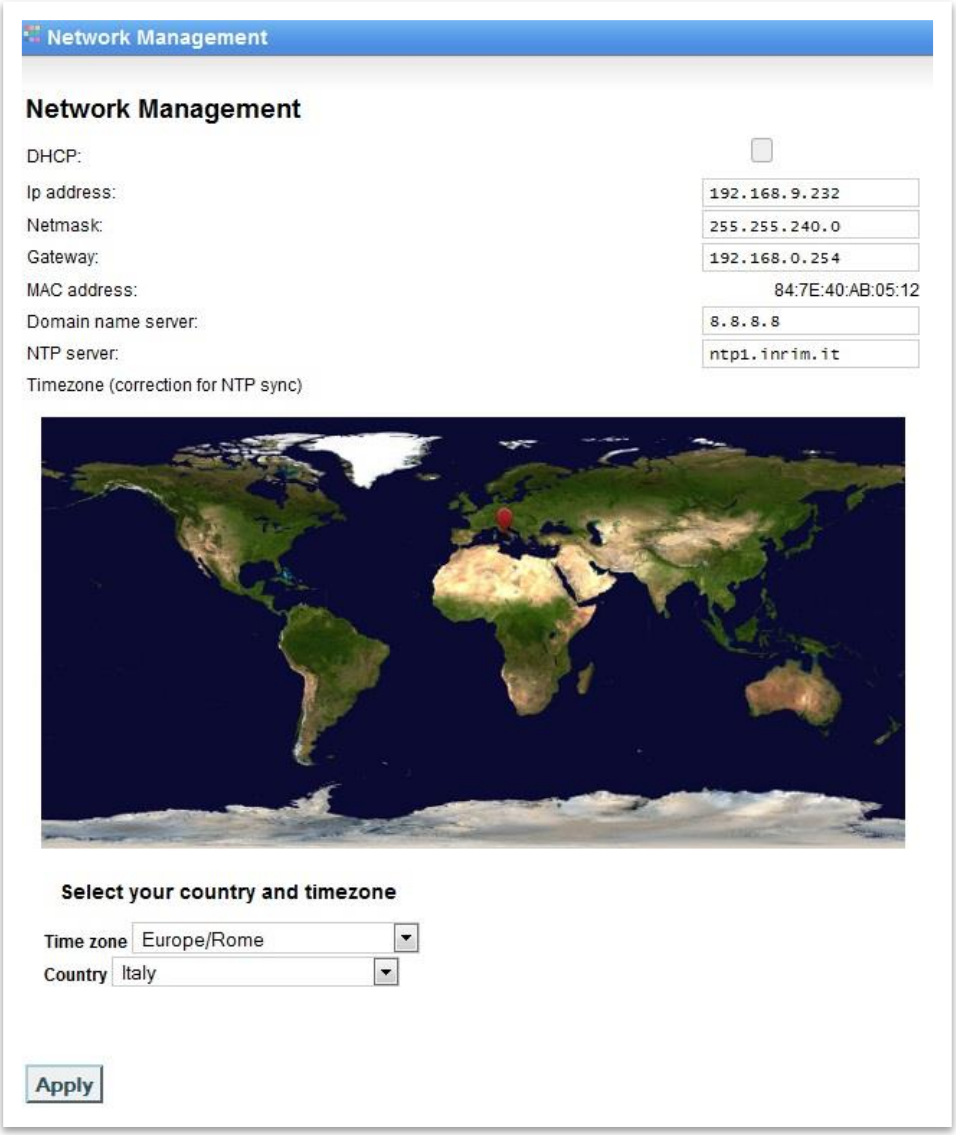


FIGURE 27: WEB CONTROLLER FORM – NETWORK PARAMETERS MENU.

8.2.2.3 Controller – Traps Manager.

This frame let the user accede to SNMP traps management; for every possible alarm it allows to enable or disable the traps sending. Moreover, it is possible to set their destination address and configure a destination mail address (if supported by customer's network).

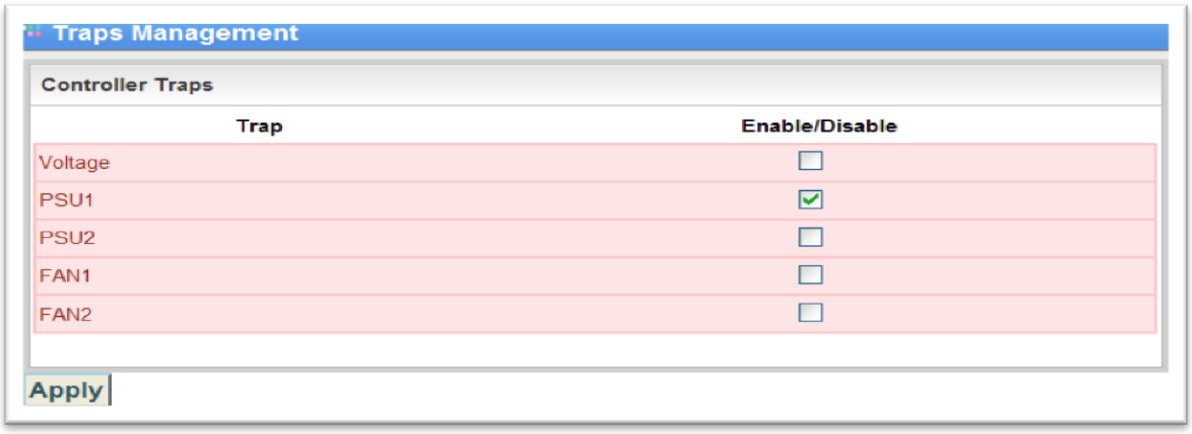


FIGURE 28: WEB CONTROLLER FORM –TRAPS MANAGEMENT.

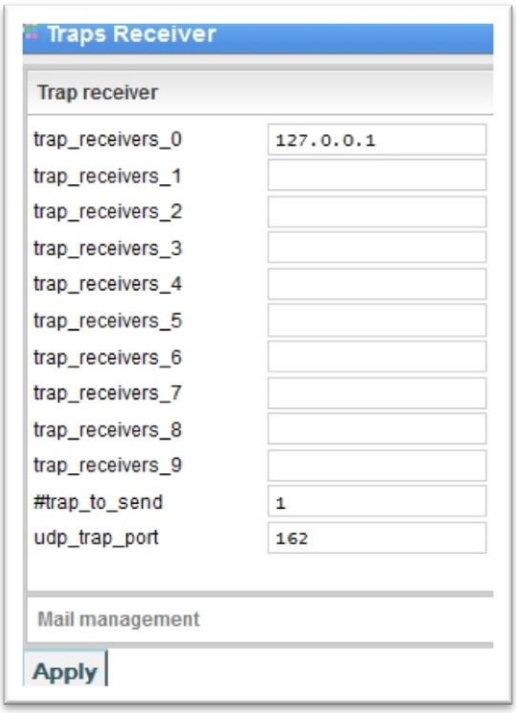


FIGURE 29: WEB CONTROLLER FORM – SNMP TRAPS RECEIVERS.

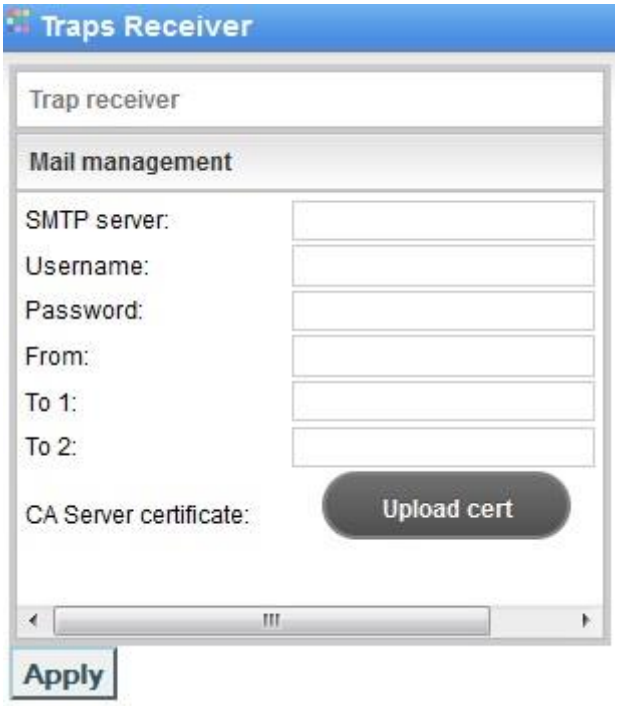


FIGURE 30: WEB CONTROLLER FORM – MAIL MANAGEMENT.

TABLE 6: MAIL MANAGEMENT

SMTP Server	Setting of SMTP server
Username	Setting of Username
Password	Setting of Password
From	Setting Source Name
To 1	Setting Destination address
To 2	Setting Destination address
CA Server certificate	Upload CA certificate for security

This information depends on customer's network. If you have not this information, please contact your network administrator.

8.2.2.4 Controller – Tools.

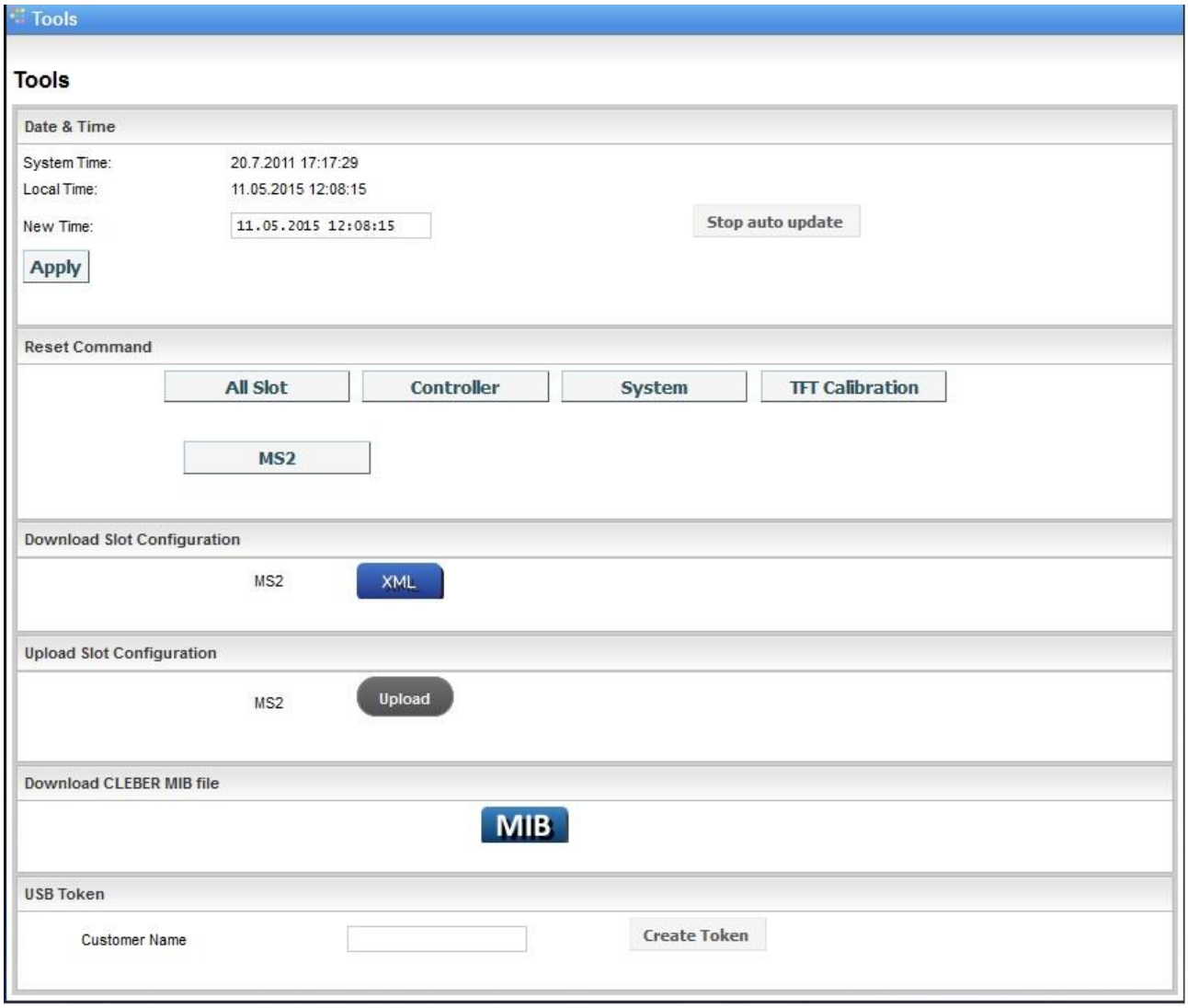


FIGURE 31: WEB CONTROLLER FORM – GENERAL INFO AND TOOLS.

TABLE 7: DATE AND TIME

System Time	It shows System Time
Local Time	It shows local time (if taken from NTP server)
New Time	Text box to modify local time.
Stop auto update	Button; let the user disable "auto-updating" of Local Time.

TABLE 8: RESET COMMAND

All Slot	Let the user reset all boards in the control unit
Controller	Let the user reset just the user-interface microprocessor
System	Let the user reset both microprocessor and optional boards
TFT Calibration	Let the user launch the TFT calibration procedure
RFSW-03	Let the user reset RFSW-03 board

TABLE 9: DOWNLOAD SLOT CONFIGURATION

RFSW-03	Let the user save actual configuration for RFSW-03 board

TABLE 10: UPLOAD SLOT CONFIGURATION

RFSW-03	Let the user upload a stored configuration for RFSW-03 board

TABLE 11: DOWNLOAD MIB FILE

Download CLEBER MIB file	By clicking on MIB icon MIB user can download the MIB file for the CLEBER

	platform.

TABLE 12: CREATE TOKEN

Customer Name	Indicate exact Customer Name (see 8.2.2.1); Token is generated on the basis of the Customer Name.
Create Token	Push this button to generate the Token file. Token is to be installed on a USB Pen-Drive and connected to front panel USB connector to grant read/write rights while using the TFT.

8.2.2.5 Controller – Password management.

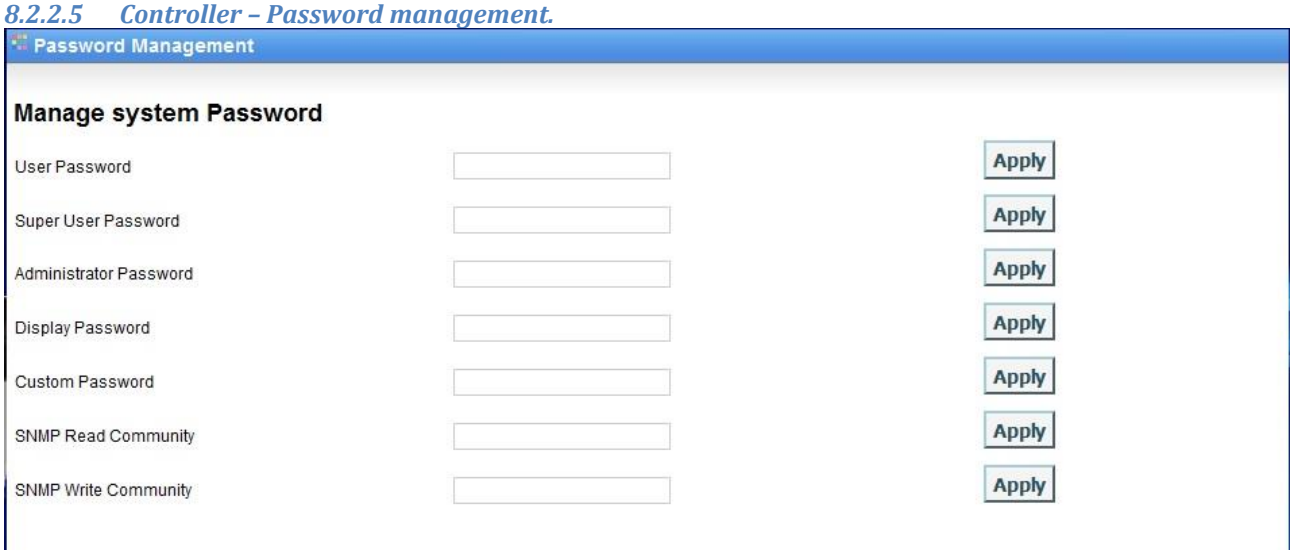


FIGURE 32: WEB CONTROLLER FORM –PASSWORD MANAGEMENT.

This form let modify the passwords for web interface, TFT and the SNMP communities.
Passwords should be composed of at least six characters and cannot overcome fifteen characters.
The password level that can be modified is subject to the rights of the user. The user “User” cannot change passwords.
User “Super-User” can change its own and the “User” ones. The “Administrator” can change any password.

8.2.3 Tab Slot.

The Tab “Slot” let the user monitor and configure every single board composing the system; user is asked to select the board he may want to check, like the number 2 in the example below.

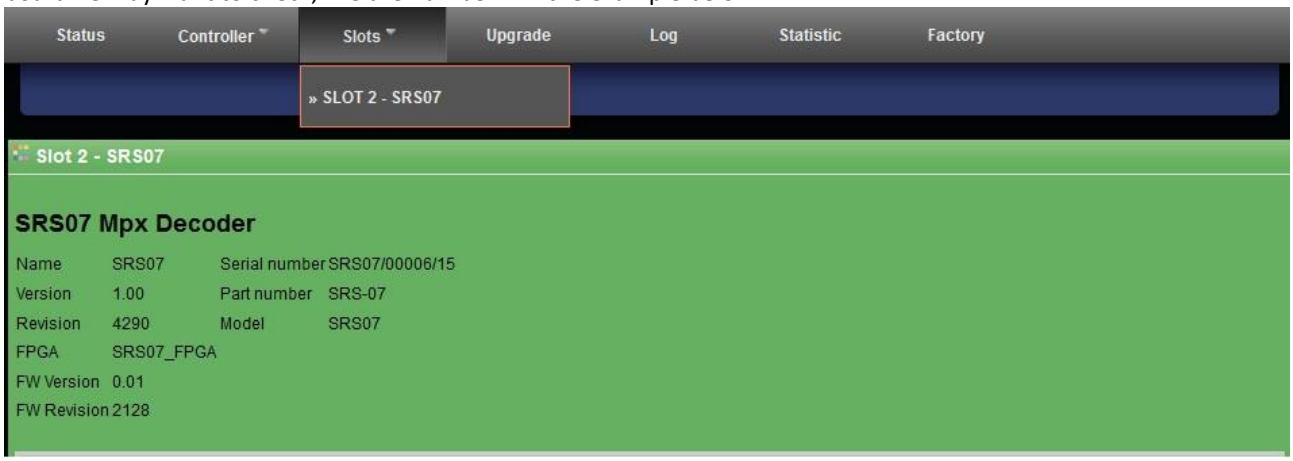


FIGURE 33: WEB SLOT FORM – PLUG IN BOARD SELECTION.

See 9.3 for detailed description.

8.2.4 Tab Upgrade.

Web tab regarding upgrade is composed by 1 frame:

- Machine upgrade

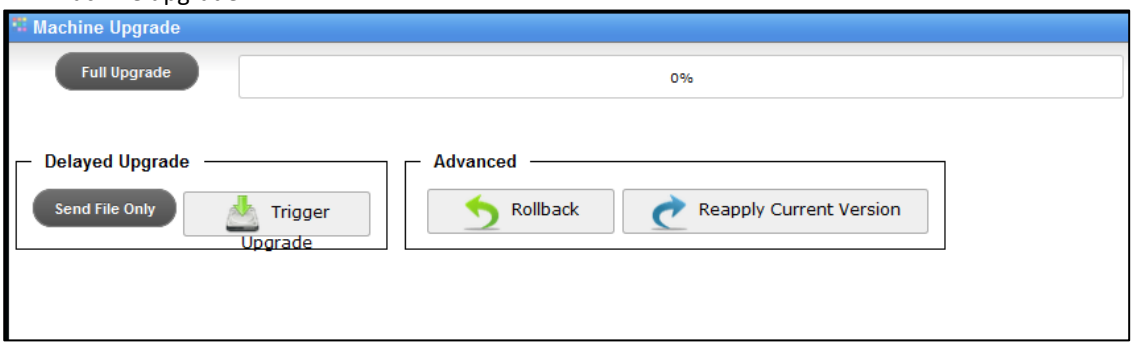


FIGURE 34: WEB UPGRADE FORM - FIRMWARE UPDATE.

Three upgrade modalities are possible:

1. Full upgrade
2. Delayed Upgrade
3. Advanced

Clicking on *Full Upgrade* button, user is asked to select the upgrade file, to be browsed in its personal device memory; choosing this modality, the upgrade will be performed immediately.

Clicking on *Send File Only* button, the user will just upload the file to internal flash, but can decide when to apply it clicking on *Trigger Update*.

The Advanced menu let the user rollback to previous version or reapplies the existing file, in case of suspicious malfunctioning.

8.2.5 Tab Log.

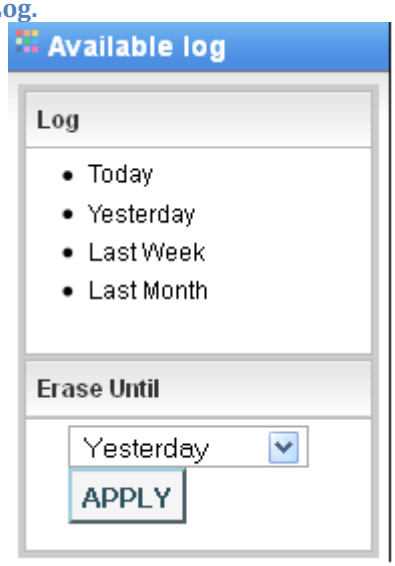


FIGURE 35 : WEB LOG FORM – AVAILABLE LOG.

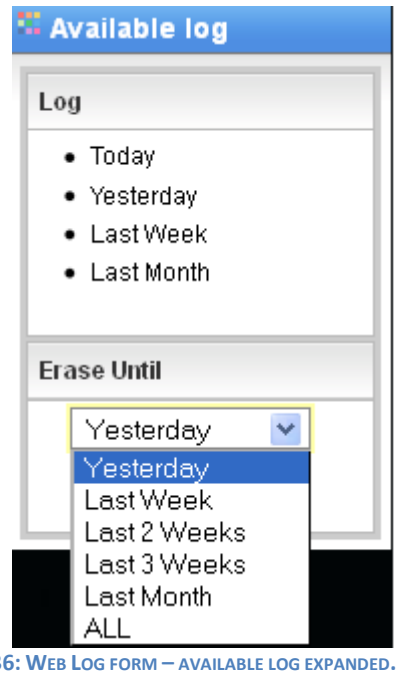


FIGURE 36: WEB LOG FORM – AVAILABLE LOG EXPANDED.

The equipment offers an operation log service that can be checked in this tab of the web interface.
In left part of the web page, the form concerning available logs is present, grouped by:

- Daily report
- Last day
- Last week
- Last month

In order to avoid huge memory usage, it is recommended to delete old records using **Erase until** form and selecting desired interval (Figure 36).
In central part of the page, log messages are reported, organized in a table that can be ordered, filtered and resized in terms of number of rows per page.
Records belong to 4 different categories are shown with different colours for user facility:

1. Messages
2. Configurations
3. Alarms
4. Warnings

Every record has a time, a description and an origin; an alarm event is described in appendix with OCCURRED tag, while the alarm condition recovery is a Message with appendix RECOVERED. Records can be ordered in every column and filtered.
Log can be saved with many different formats for further elaborations and storage; files formats available are:

- .xls
- .xml
- .csv
- .tsv
- .html
- .json

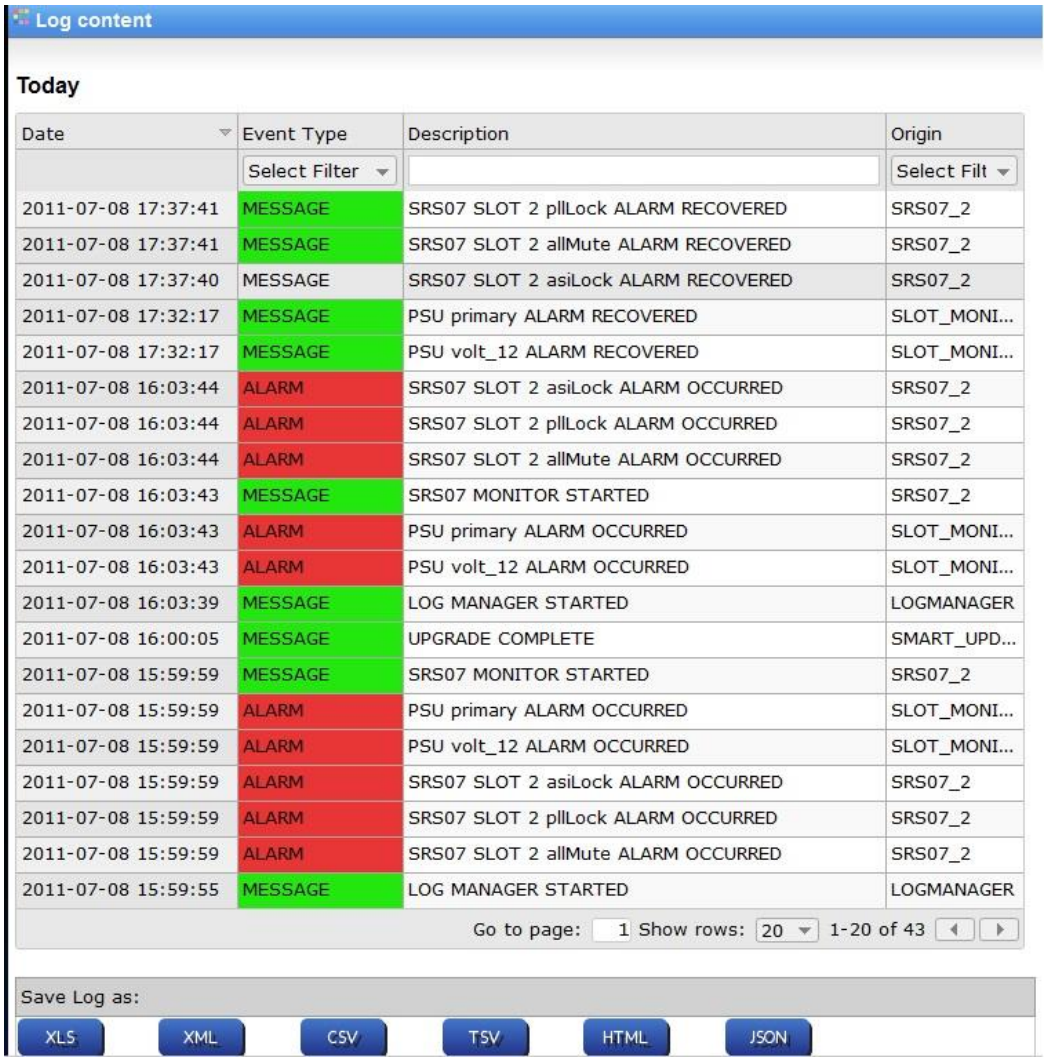


FIGURE 37: WEB LOG FORM – LOG.

8.2.6 Tab Statistic.

The equipment UI offers a software engine to record measurements and gives some statistical analysis to the user, with the possibility to export collected data in different file formats such as XLS and XML.
User is asked to select the variable in the tile menu, shown in Figure 38, user can choose between following measurements:

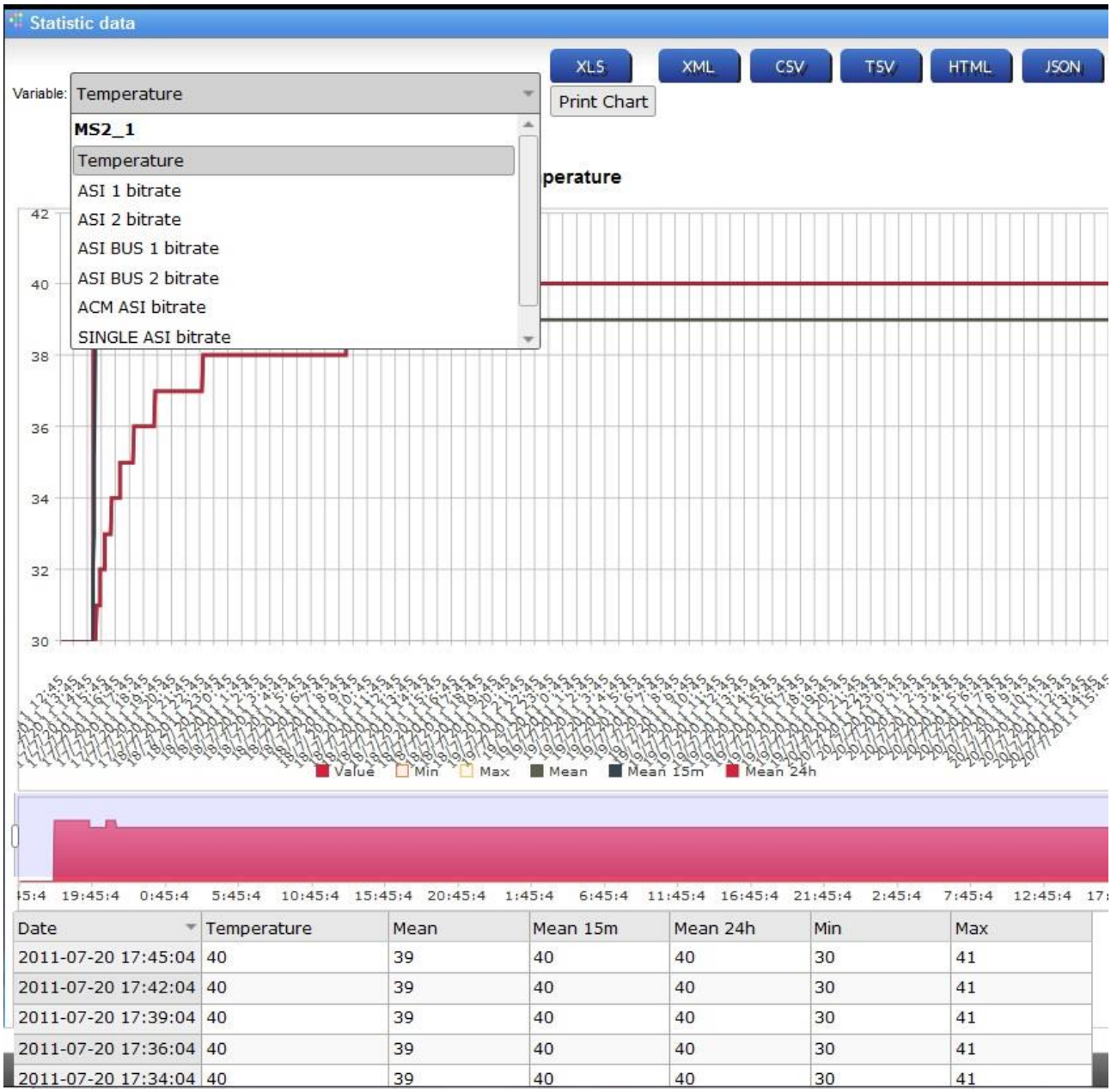
1) Temperature

After measurements selection, the chart shows the instantaneous values and the statistical data over a period that can be adjusted using the red bar below the chart.
Values available are:

1) Instantaneous value
2) Mean value
3) Mean value over 15 minutes
4) Mean value over 24 hours
5) Minimum value
6) Maximum value.

All data are reported in the table below the red bar and can also be exported in following formats for offline analysis:

1) XLS
2) XML
3) CSV
4) TSV
5) HTML
6) JSON



Date	Temperature	Mean	Mean 15m	Mean 24h	Min	Max
2011-07-20 17:45:04	40	39	40	40	30	41
2011-07-20 17:42:04	40	39	40	40	30	41
2011-07-20 17:39:04	40	39	40	40	30	41
2011-07-20 17:36:04	40	39	40	40	30	41
2011-07-20 17:34:04	40	39	40	40	30	41

FIGURE 38: WEB STATISTIC FORM.

9 RFSW-03.

RFSW-03 is the code identifying the RF Switch board, able switch between two RF signal inputs. Two models are available, depending on signal frequencies at I/O; RFSW-03B is for high frequencies up to 18 GHz; RFSW-03C is for FM band (88-108 MHz) even if it works correctly up to 1 GHz. See next paragraphs for relay characteristics.

9.1 Technical Specifications RFSW-03.

TABLE 13: RFSW-03 TECHNICAL SPECIFICATIONS

GENERAL			
RFSW-03B (" RF Switch")			
Frequency Range [GHz]	VSWR (max)	Insertion Loss [dB] (max)	Isolation [dB] (min)
DC-6	1.3	0.3	70
6-12	1.4	0.4	60
12-18	1.5	0.5	60
RFSW-03C (" FM Switch")			
Frequency Range [MHz]	ROS (min)	Insertion Loss [dB] (max)	Isolation [dB] (min)
88-108	20dB	0.45	35
INPUT INTERFACES			
Back panel:		2 RF inputs on SMA(F) - 50 ohms	
		1 RF output on N(f) – 50 ohms	
		2 Relay contacts on DB9(m)	
Electrical			
Power Consumption:		5W	

9.2 TFT.

FIGURE 39: GENERAL MAIN MENU.

RFSW-03 occupies two slots of Cleber platform, so the icon in the main menu can comprehend:

1. Slot 1-6
2. Slot 2-5
3. Slot 3-4

Clicking on the icon 

, user can manage RFSW-03 plug-in board, the RF Switch through the menu shown in the rest of this subchapter.

FIGURE 29: RFSW-03 GENERAL MENU.

- Directional arrow "UP" to go back to main menu.
- 

to go to Figure Index.Menu Config.
- 

to go to RF Switch Info Menu.

Clicking on the icon, user is redirected to

9.2.1 Menu Config.

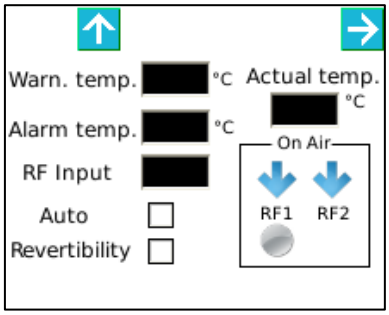


FIGURE 40: RFSW-03 CONFIG

Active areas:

- Directional arrow "UP" to go back to main menu.
- Directional arrows "RIGHT" to browse RF Switch config menu.
- Other areas described in Table 14

TABLE 14: RFSW-03 CONFIG PARAMETERS MENU

Tag	Type	Action
Warn. Temp.	Text box	Let the user set the Warning temperature threshold
Alarm Temp.	Text box	Let the user set the Alarm temperature threshold
Actual temp.	Read only	Indication of detected temperature on the board
RF Input	Text box	Let the user select the input signal (Not Auto modality) or the priority (just in Reversibility ON modality); see following parameters
Auto	☑☐ Checkbox	Let the user set the switching criteria in Automatic modality; in this modality, switching is performed on the basis of relay contacts' readings. If this checkbox is unchecked, the modality is manual and the signal at output is the RF input selected in previous text box.
Reversibility	☑☐ Checkbox	Let the user set the reversibility functions. It only works in Automatic modality. If priority input is in alarm condition, the relay switches on the backup. If priority input becomes available, a second switch is performed. If reversibility is unchecked, once an input signal gets the line, it gets also the priority.
On Air	Read only	Indication of input signal enabled at output (with related alarm condition

		shown with led icon).

9.2.2 Menu Info.

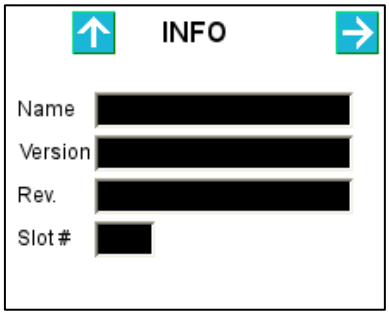


FIGURE 48: RFSW-03 INFO MENU.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrow “RIGHT” to browse RF Switch info menu.

TABLE 15: RFSW-03 INFO MENU

Tag	Type	Description
Name	Text Box	Indication of the name of the board.
Version	Text Box	Indication of software version for on-board microcontroller.
Rev.	Text Box	Indication of software version revision for on-board microcontroller
Slot#	Text Box	Indication of slot number.

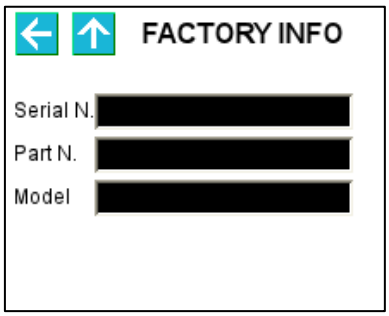


FIGURE 49: RFSW-03 FACTORY INFO MENU.

Active areas:

- Directional arrow “UP” to go back to main menu.
- Directional arrow “LEFT” to browse RF Switch info menu.

TABLE 16: RFSW-03 FACTORY INFO MENU

Tag	Type	Description
Serial N.	Text Box	Indication of Serial Number of the board.
Part N.	Text Box	Indication of Part Number of the board.
Model	Text Box	Indication of Model of the board.

9.3 Web Interface.

FIGURE 41: WEB SLOT FORM - RFSW-03 GENERAL INFO.

TABLE 17: RFSW-03 GENERAL INFO

Tag	Description
Name	Board Name
Version	Firmware version
Revision	Firmware version revision
Serial Number	As per name
Part Number	As per name
Model	As per name

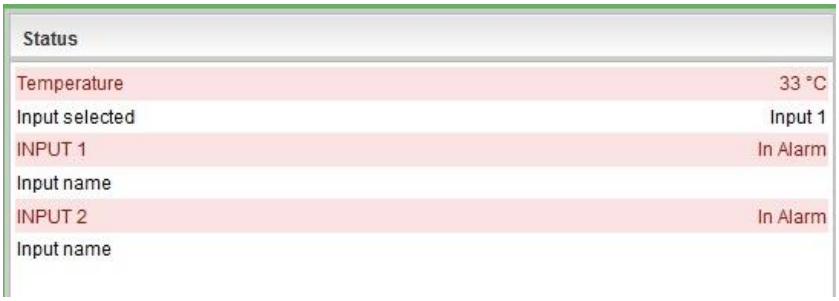


FIGURE 42: WEB SLOT FORM - RFSW-03 GENERAL STATUS.

TABLE 18: RFSW-03 STATUS PARAMETERS

Tag	Description
Temperature	Temperature measurement in °C (green if ok)
Input selected	Indication of on-line signal
INPUT 1	Indication of Alarm at input 1 (relay contact's reading) (green if ok)
Input name	Indication of related input name, if assigned
INPUT 2	Indication of Alarm at input 2 (relay contact's reading) (green if ok)

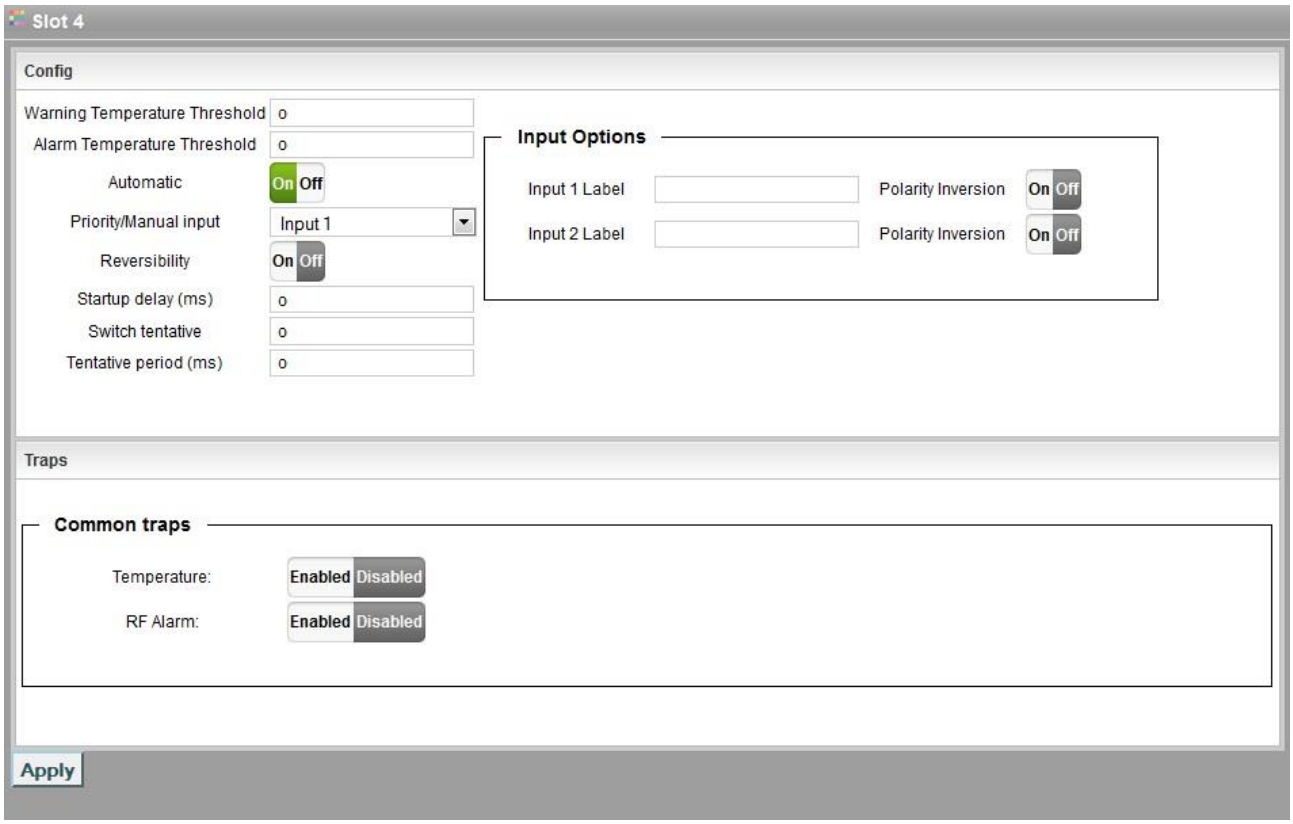


FIGURE 43: WEB SLOT FORM - RFSW-03 CONFIG PARAMETERS.

TABLE 19: RFSW-03 CONFIG PARAMETERS

Tag	Description
Warning Temperature Threshold	It let the user set the Warning Temperature threshold.
Alarm Temperature Threshold	It let the user set the Alarm Temperature threshold.
Automatic	Let the user set the switch in automatic or manual modality.
Priority/Manual input	Let the user set the inputs priority. In case of switch set in modality non automatic (manual) it identifies the signal forced in output.
Reversibility	Let the user enable the reversibility.
Start-up delay (ms)	Let the user set an initial time (in ms) before applying the switching criteria
Switch tentative	Let the user set the number of commutation between the two inputs before deciding that every input has a problem
Tentative period	Let the user set the period between each commutation tentative
Input 1 Label	Let the user assign a label to identify the input 1 signal
Input 2 Label	Let the user assign a label to identify the input 2 signal
Polarity Inversion	Let the user set the polarity inversion for relay contacts' readings
Temperature trap	Let the user enable/disable the trap generation in case of temperature alarm
RF alarm trap	Let the user enable/disable the trap generation in case of RF alarm

9.4 Rear Panel.

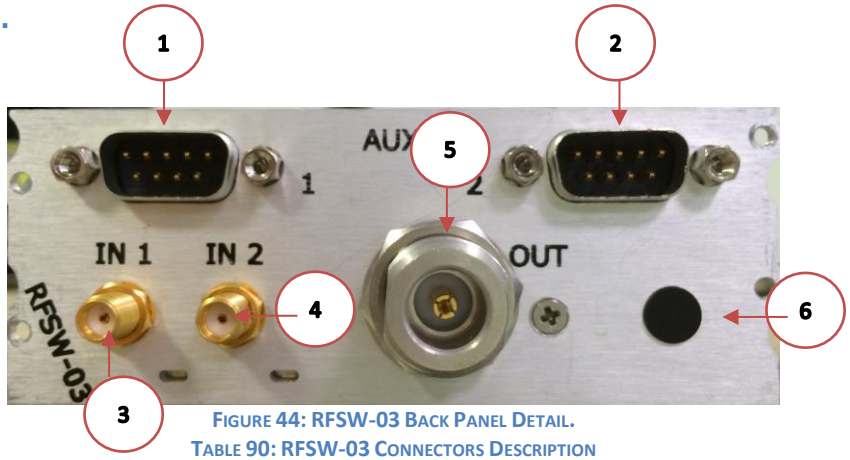


FIGURE 44: RFSW-03 BACK PANEL DETAIL.

TABLE 90: RFSW-03 CONNECTORS DESCRIPTION

Tag	Description	Function
1	AUX 1	DB9(m); relay contacts from main unit
2	AUX 2	DB9(m); relay contacts from backup unit
3	IN 1	SMA(f) 50 Ohm; RF input main
4	IN 2	SMA(f) 50 Ohm; RF input backup
5	OUT	N(f) 50 Ohm
6	Mon	SMA(f) 50 Ohm; Output monitor, available only with RFSW-03C (FM switch)

9.4.1 Pinout AUX connectors.

TABLE 20: PINOUT AUX CONNECTORS

Pin	Function
1	Analog input (future Use)
2	Coil Control
3	Not used
4	Alarm contact
5	Not used
6	GND
7	Not used
8	GND
9	GND