KORTEX QUATTRO IOT-2 Relay User Manual V1.5

1 Product Overview

1.1 Overview

Support Ethernet, WiFi, RS485, CAN

10/100Mbps ethernet, Auto-MDIX, DHCP Ip, Static IP

WiFi 802.11 b/g/n, MAX 150Mbps

Digital input, can be Local Button control (SelfLock/Jogging/Delay) Support RELAY On/OFF/Jogging/Delay.

Support HTTP GET CGI, UDP, TCP Server, TCP Client

Support Modbus-RTU/ASCII/TCP/UDP/WIFI

Support Modbus-RTU Over TCP/UDP/WIFI

Support Modbus-ASCII Over TCP/UDP/WIFI

Support WEB control Support MQTT,
CoAP

Support NTP, Task timer

1.2 Technical Parameters

Function	Interface	RJ45/ RS485/CAN/WIFI
	Baud rate	100M/115200bps/125kbps/150Mbps
	Protocol	TCP server/client, UDP HTTP GET CGI, Modbus-RTU/ASCII/TCP/UDP/WIFI Modbus-RTU Over TCP/UDP/WIFI Modbus-ASCII Over TCP/UDP/WIFI MQTT CoAP
	Others	NTP IP Watchdog Task timer
	Relay Power	AC 250V/16A, DC 30V/16A
Output	Contacts	Normally Close (NC) Normally Open (NO)
	Delay	1~65535 seconds
	Momentary	Pull in 0.5 seconds, automatically release
	Storage temperature	-40°C to +70°C
Temperature and Humidity	Operating temperature	-20°C to +70°C
	Relative humidity (During operation)	25°C @ ≤95%, no condensation
Power	Power Specifications	12/24VDC (recommended) 12/24VAC
	Current	0 Channel: 65mA/12V 1 Channel: 0.17A/12V 2 Channels: 0.26A/12V (recommend 1A/12V) 3 Deep Sleep: 28mA/12V
	Power consumption	2 channels: 3,12W

2 Image and Size

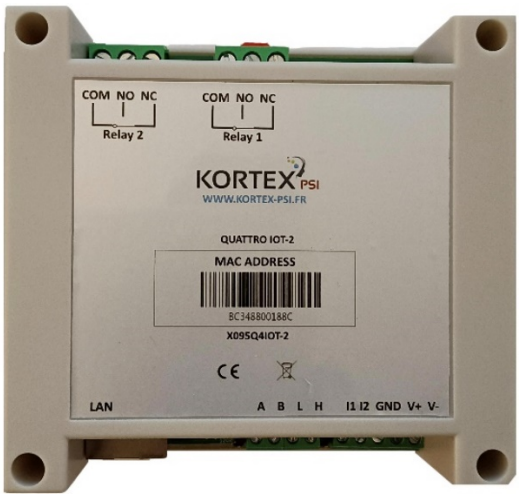
2.1 Hardware version >=V3.x.x

Hole size: 3.5mm

2CH relay board
Size of relay board: 94 x 89mm
Distance of hole: 85 x 80mm

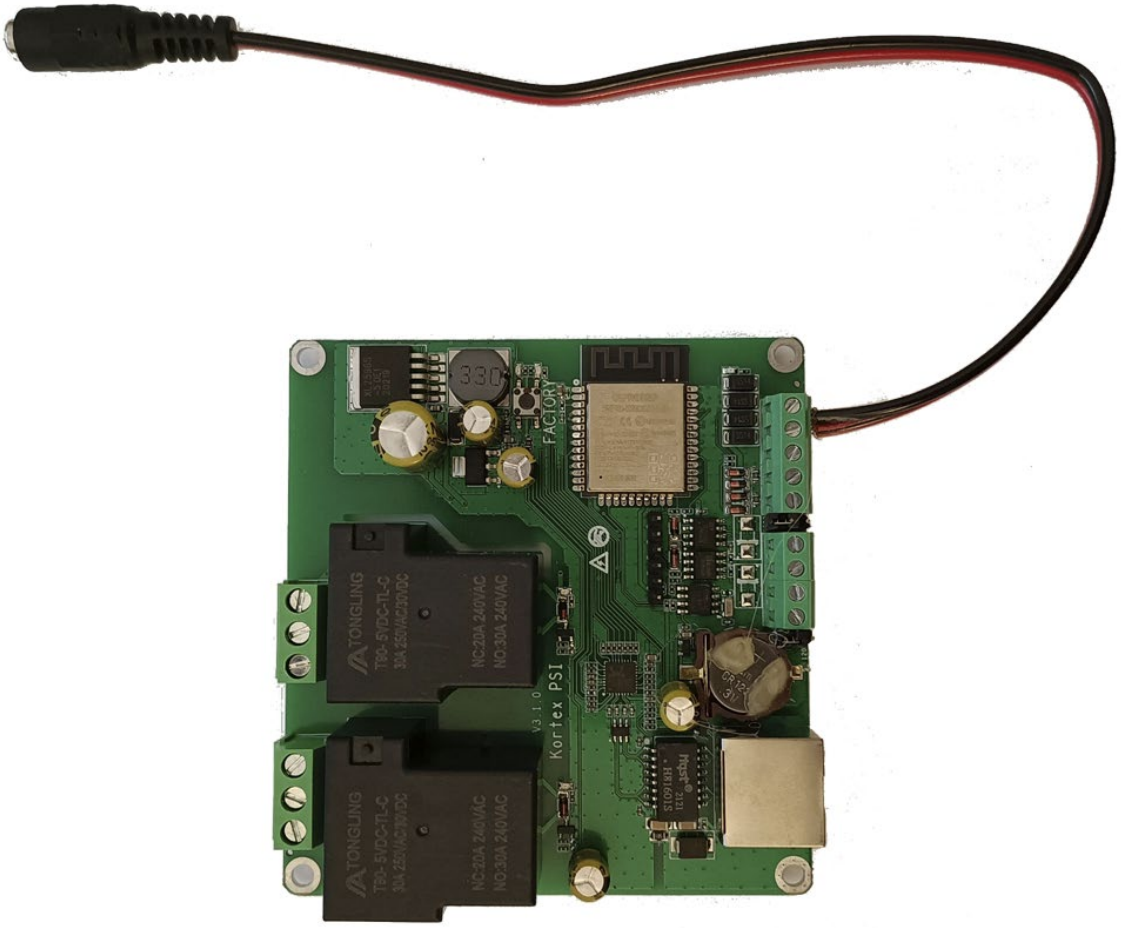
2.2 Case

The 2CH Case is ABS material, Standard DIN35 rail installation.



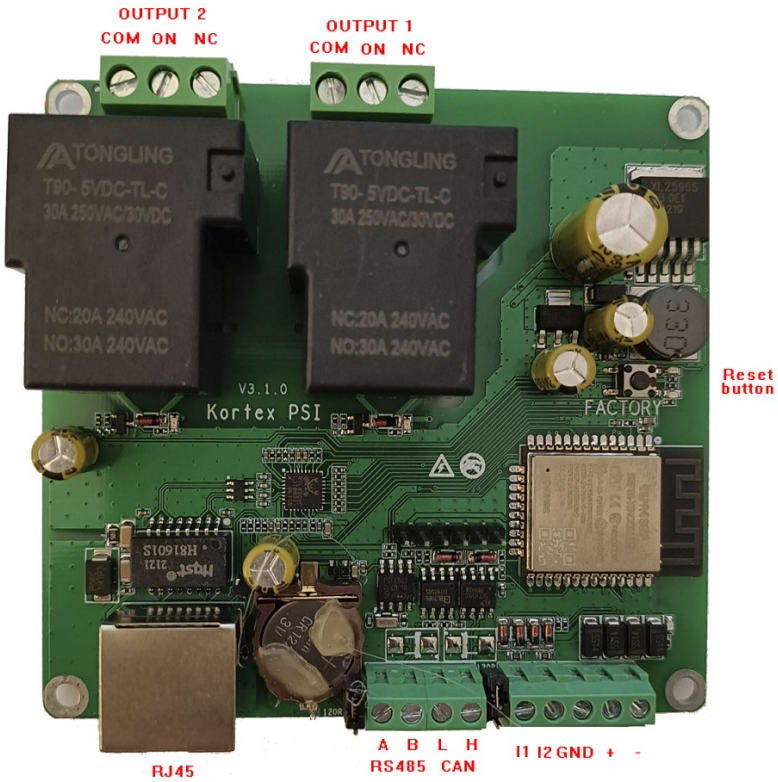
3 Interface Description

3.1 Power Supply



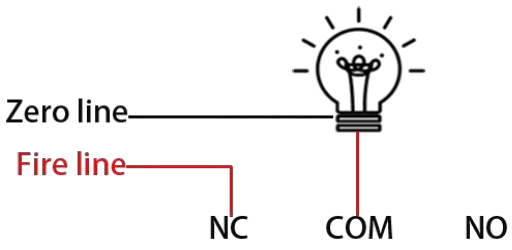
3.2 Function

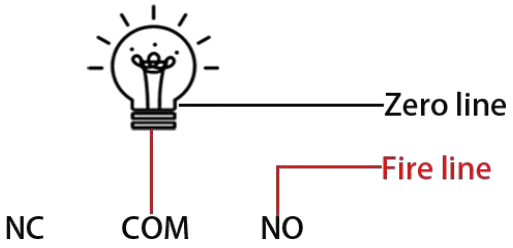
A B L H, that is means you can use RS485 and CAN.
When you use RS485, connect A and B and to use CAN, connect H and L.



3.3 Relay Contact

Connect Example: Normal Close & Normal Open





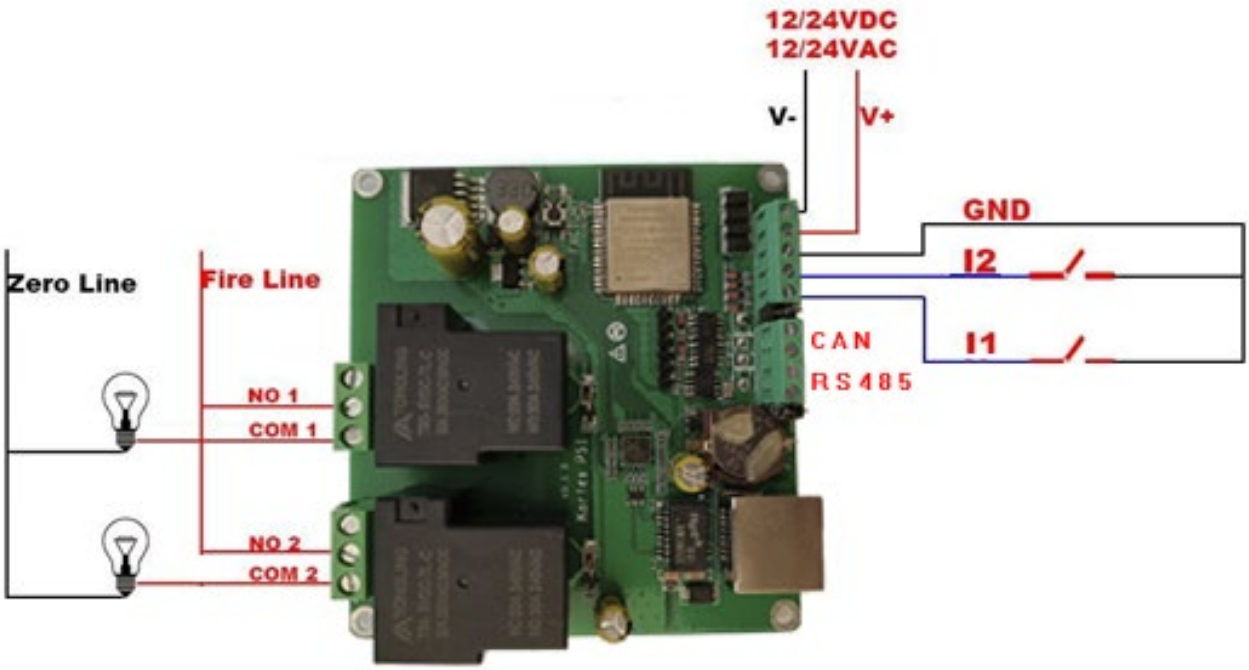
3.4 Reset to Factory

3.4.1 Hardware Version >=V3.x.x

1 Power on relay board, wait 10 second.
2 Press “FACTORY” button (left light will ON).
3 Wait 5 second (right light will ON).
4 Release “FACTORY” button.
5 Relay board will reset all parameter to factory.

3.5 Input Output and Power wiring diagram

	LOW	HIGH
Hardware Version >= V3.1.0	0V	3.3V~24V

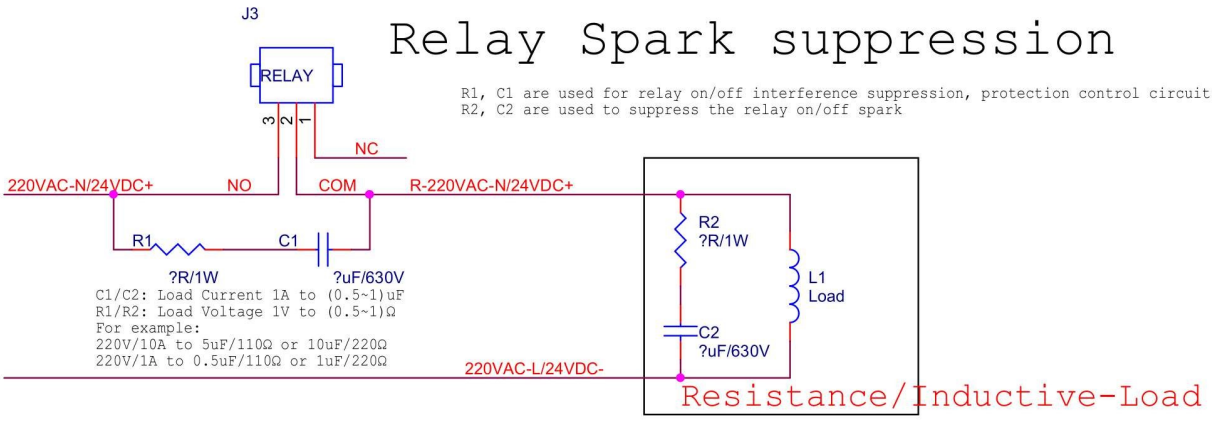


3.6 Add Spark killer and contractor

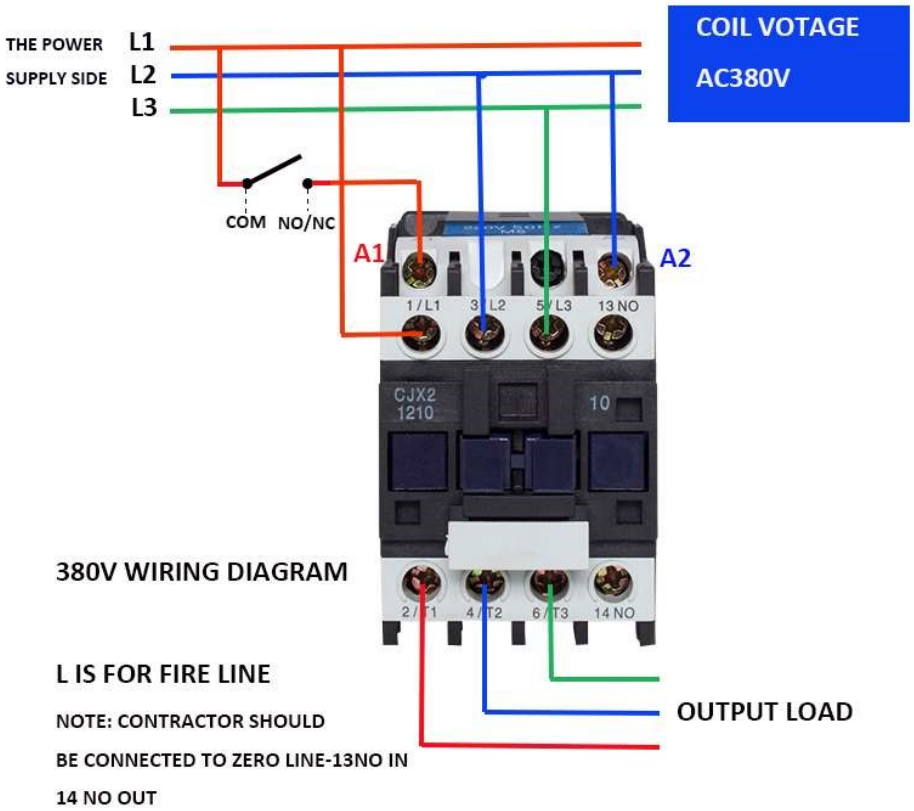
R1, C1 are used for relay on/off interference suppression, protection control circuit

R2, C2 are used to suppress the Load spark and noise when relay ON/OFF

Most of time the Load comes with the best R2+C2, so we don't need care R2 and C2



Our max current is 16A, if the current of your device is too big, suggest add a contractor.

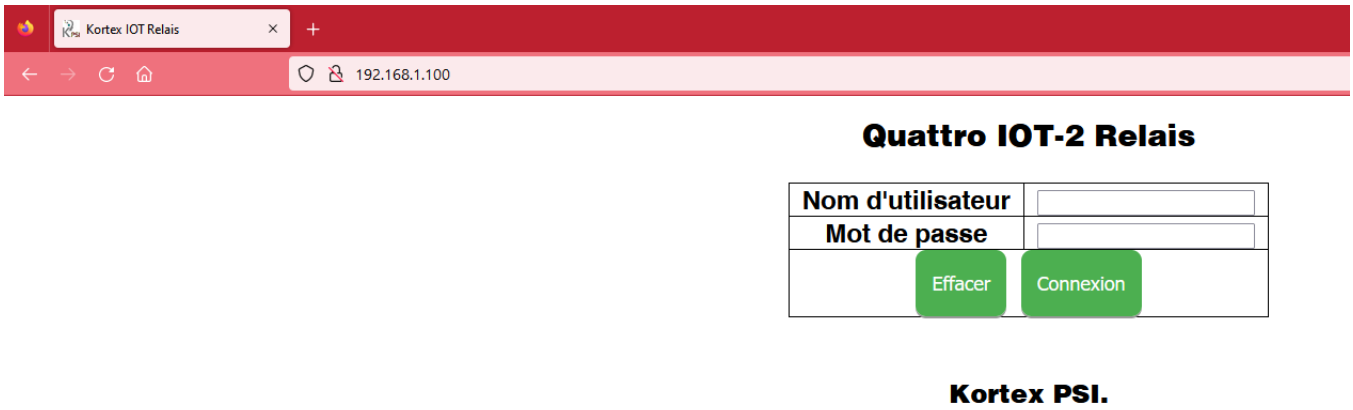


4 Ethernet Web Page

IE is not supported, please use Firefox and Chrome.

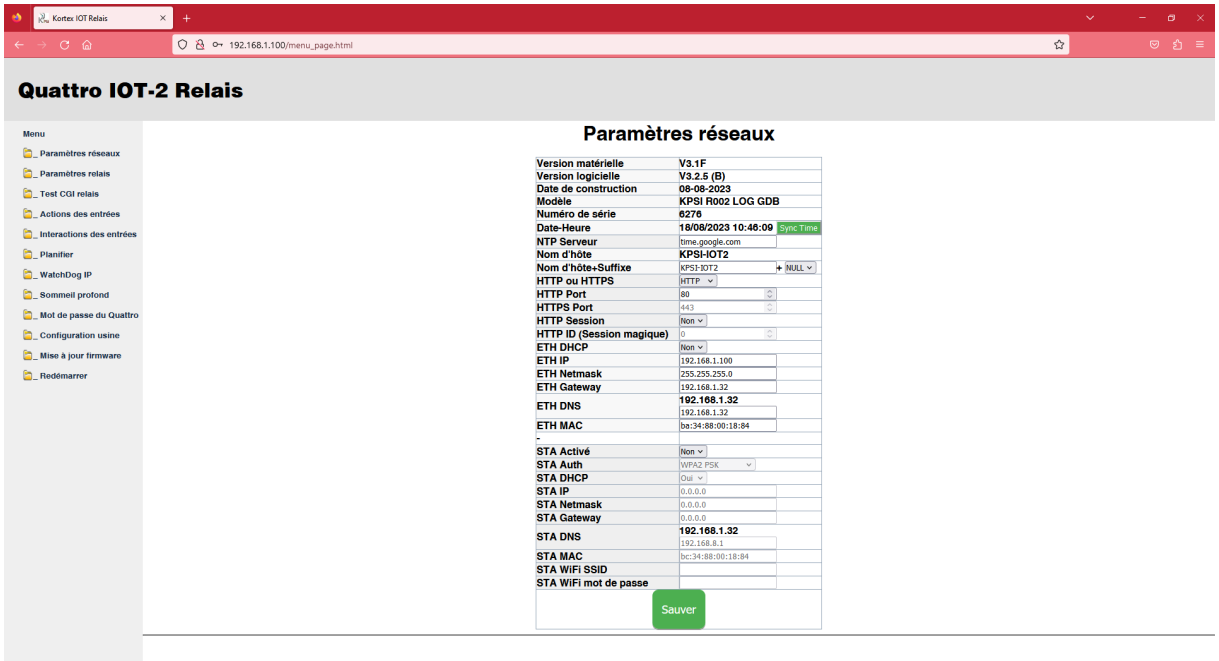
4.1 Login

Default IP: **192.168.8.3** Username: **admin** and Password: **quattro75002.**



4.2 Setting Network

Set network information, NTP Server on Relay setting page after click “Save” button, device will reboot.



Parameters:

Hardware Version: Relay board hardware version.

Software Version: Relay board firmware version.

Build Date: Date of build.

Model: KPSI R002 LOG GDB is Kortex 2CH IOT RELAY-2

Serial Number: Relay board Serial Number.

Date Time: current date and time (Need internet because of NTP).

NTP Server: NTP server get time from, suggest use pool.ntp.org

Host Name: KPSI-IOT2

Host Name + Suffix: KPSI-IOT2 + (Null, Mac, NS).

HTTP or HTTPS: choose HTTP or HTTPS.

HTTP Port: default 80.

HTTPS Port: default 443.

HTTP Session: Yes or No.

HTTP ID (Magic Session): Id number.

ETH DHCP: Ethernet IP DHCP or Static.

ETH IP: Ethernet current IP Address.

ETH Netmask: Ethernet current Netmask.

ETH Gateway: Ethernet current Gateway.

ETH DNS: Ethernet current DNS Server.

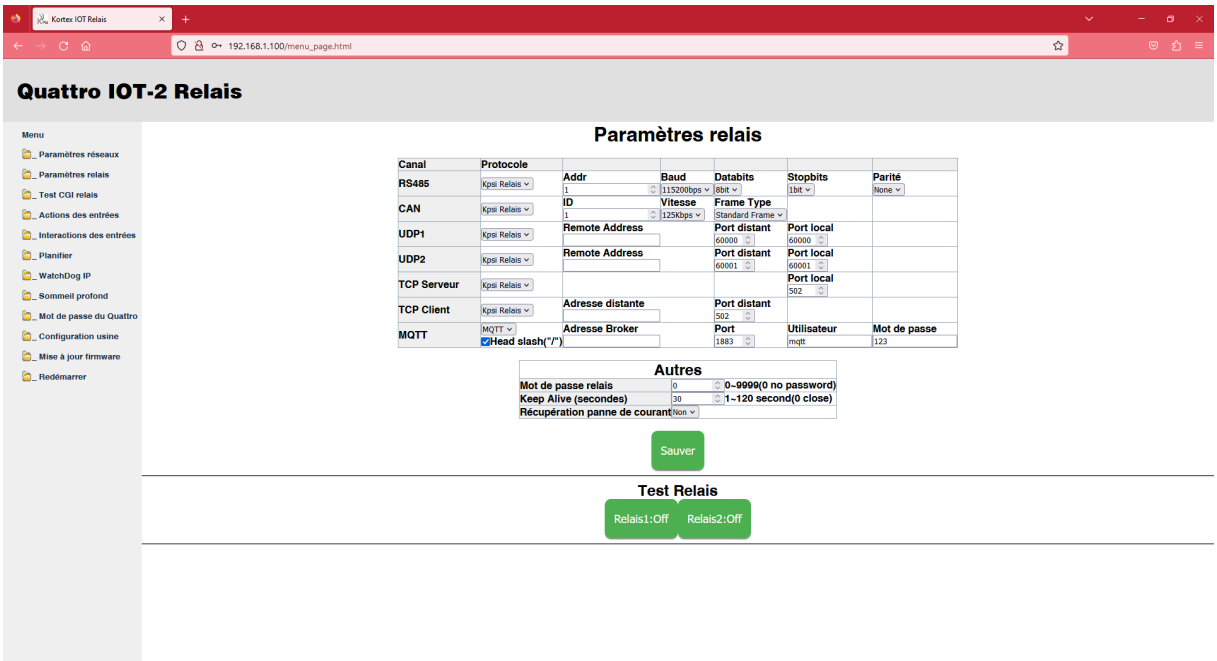
ETH MAC: Ethernet current MAC address.

STA Enable: To enable STA (station client mode to connect to an Internet box).

STA Auth: WEP, WPA2/3 PSK.
STA DHCP: Enable or Disable DHCP Yes or No.
STA IP: Relay board get IP from your Router.
STA Netmask: WIFI Netmask.
STA Gateway: WIFI Gateway.
STA DNS: WIFI DNS Server.
STA MAC: WIFI MAC address.
STA WiFi SSID: Your Router WiFi Name, Relay board will access to your router.
STA WiFi password: Your Router WiFi Password, Relay board will access to your router.

4.3 Relay Parameters

Set control interface parameter of relay board on the Relay parameters page and test relay
After click “Save” button, device will reboot Protocol refers to programming manual_en.pdf.



Channel Parameter:

RS485: RS485 protocol, addr, baudrate, databits, stopbits, parity config Protocol: Kpsi Relais Baudrate:1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps, 38400 bps, 57600, 115200 bps.

CAN: CAN protocol, ID, Speed config Protocol: Kpsi Relais.

ETH-UDP1: Ethernet UDP1 protocol, Remote Server Address, Remote Server Port, Local Port config Protocol: Kpsi Relais

ETH-UDP2: Ethernet UDP2 protocol, Remote Server Address,Remote Server Port,Local Port config Protocol: Kpsi Relais

ETH-TCP Server: Ethernet TCP Server protocol, Local Port config Protocol: Kpsi Relais

ETH-TCP Client: Ethernet TCP Client protocol, Remote Server Address, Remote Server Port config Protocol: Kpsi Relais.

ETH-MQTT: Ethernet MQTT protocol, Broker Address, Broker Port, Broker Username, Broker Password config Protocol: MQTT (without tls)

Other Parameter:

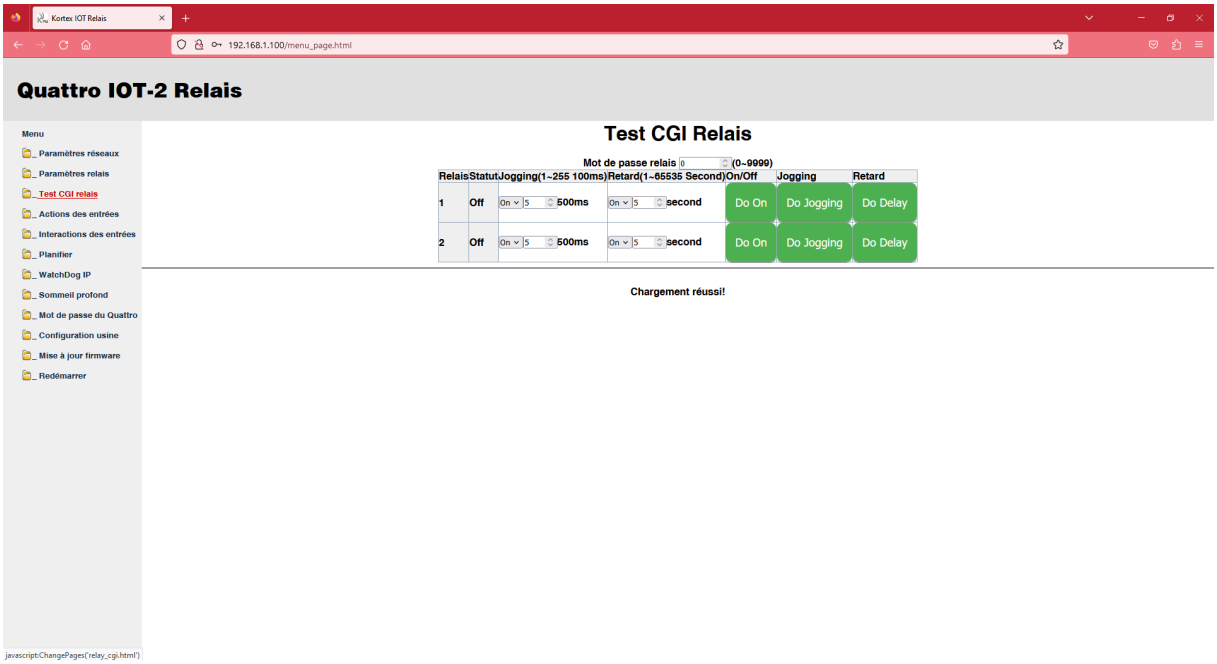
Relay Password: use for checking control is valid, only correct password control relay board.

Keep Alive Second: send relay status to server with every “Keep Alive Second”, only protocol Kpsi Relais have Keep Alive Second **Jogging Time:** Jogging time, default is 500ms, 1=100ms what is Jogging: ON then delay 500ms OFF, or OFF then delay 500ms ON.

Power Failure Recovery Relay: relay status will restore after re-power.

4.4 Relay CGI Test

Relay CGI test

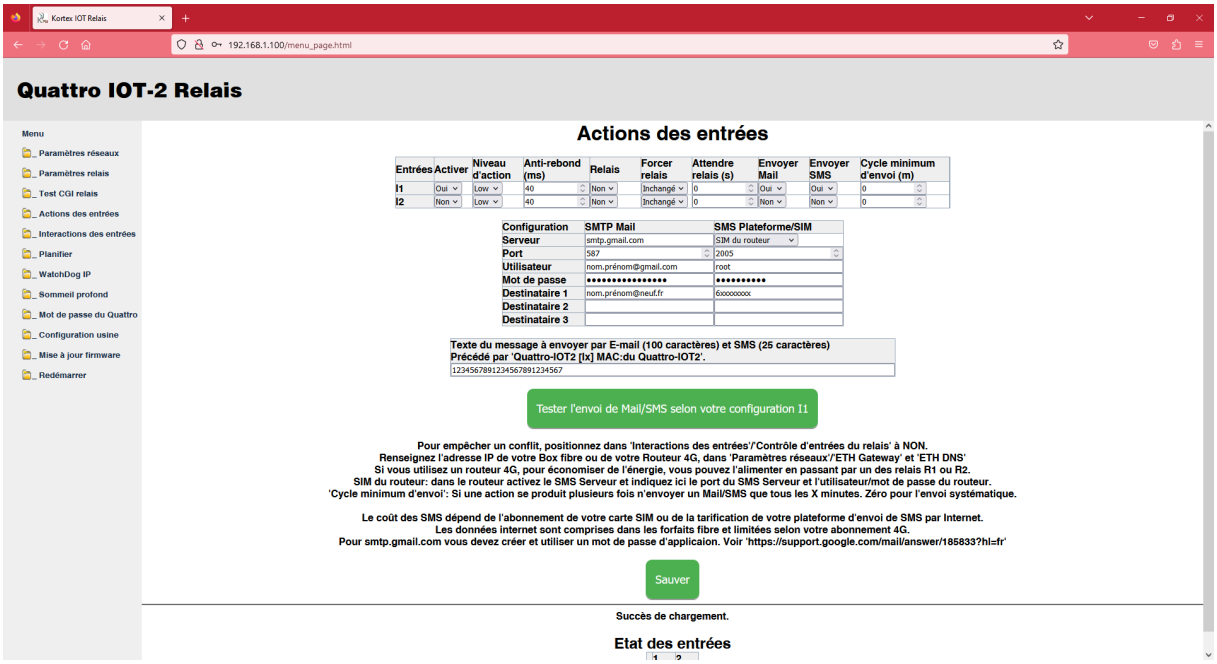


4.5 Input Link Relay

Select R1~R2, means you add the relay to link with Input, Click the green button R1~R2 means delete relay.

4.6 Input action

Select I1~I2, means you add the Input to action, Click the green button to test or save.



To prevent a conflict, set 'Input interactions'/'Relay input control' to NO.

Enter the IP address of your Fiber Box or your 4G Router, in 'Network Parameters'/'ETH Gateway' and 'ETH DNS'.

If you are using a 4G router, to save energy, you can power it through one of the R1 or R2 relays.

Router SIM: in the router activate the SMS Server and indicate here the port of the SMS Server and the username/password of the router.

'Minimum sending cycle': If an action occurs several times, only send a Mail/SMS every X minute. Zero for systematic sending.

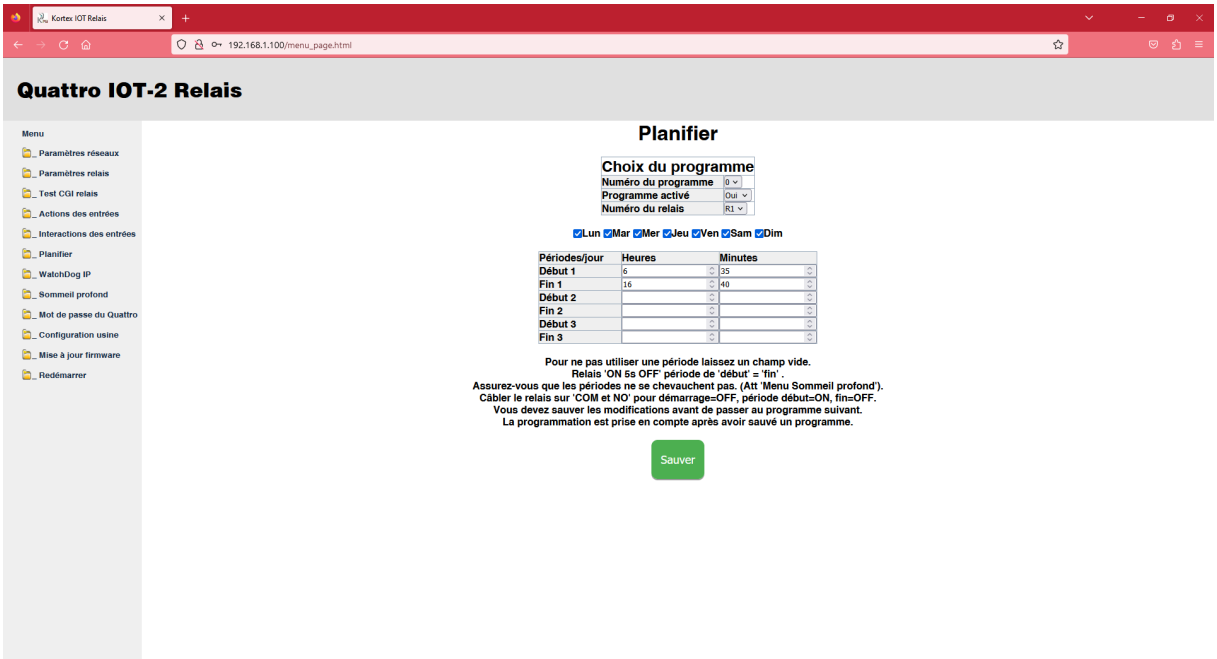
The cost of SMS depends on your SIM card subscription or the pricing of your platform for sending SMS over the Internet.

Internet data is included in the fiber packages and limited according to your 4G subscription.

For smtp.gmail.com you must create and use an application password. See 'https://support.google.com/mail/answer/185833?hl=fr'.

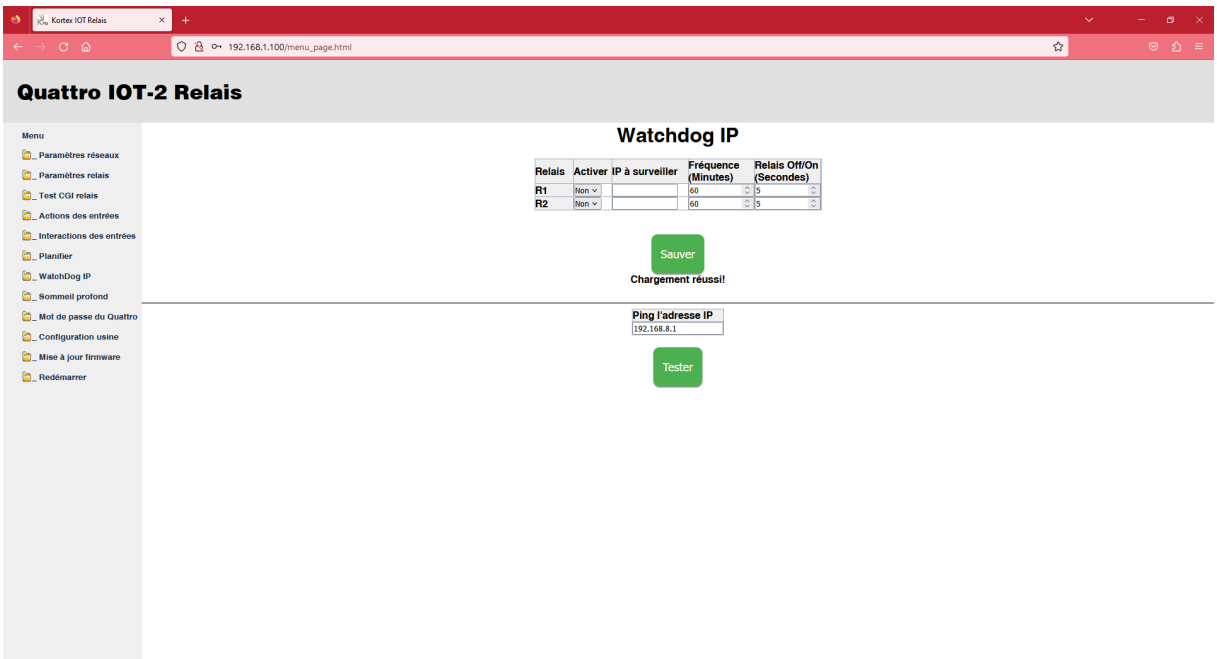
4.7 Plan

Plan program relay task by Day. To not use a period, leave a blank field. Relay 'ON 5s OFF' if period of 'start' = 'end'. Make sure the periods do not overlap. Wire the relay to 'COM and NO' for start=OFF, period start=ON, end=OFF. You must save changes before proceeding to the next program. Programming is taken into account after saving a program.



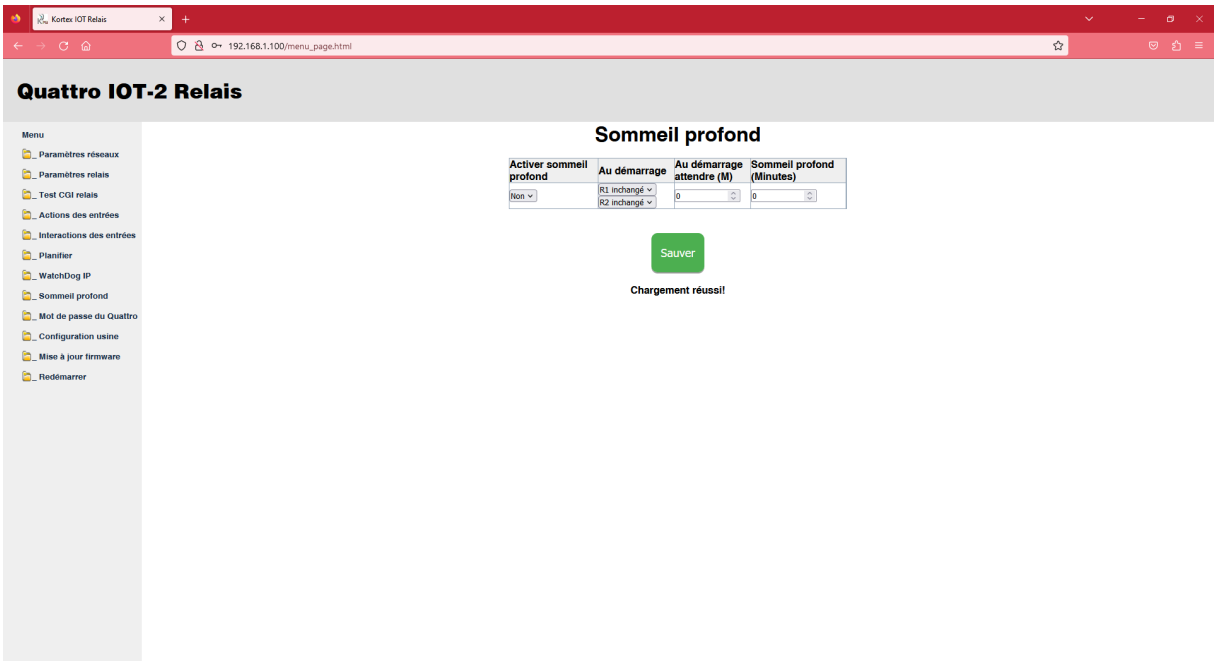
4.8 Watchdog IP

When Enable IP Watchdog function, R1 or R2 relay ON, when the “Watch IP” offline depending the ping interval in Minutes. Relay R1 or R2 will be OFF/ON during value in seconds.



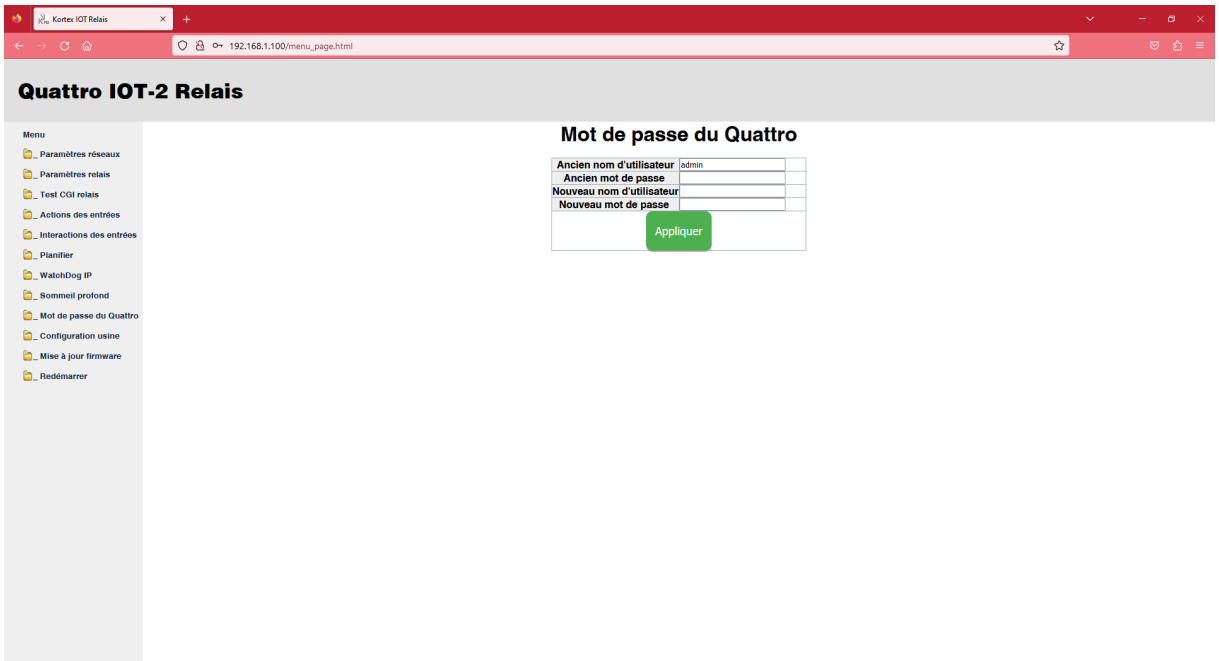
4.9 Deep Sleep

Allow you to go on an idle mode during a period of time in order to reduce the consumption.
The idle mode begins at the time you define after the boot.



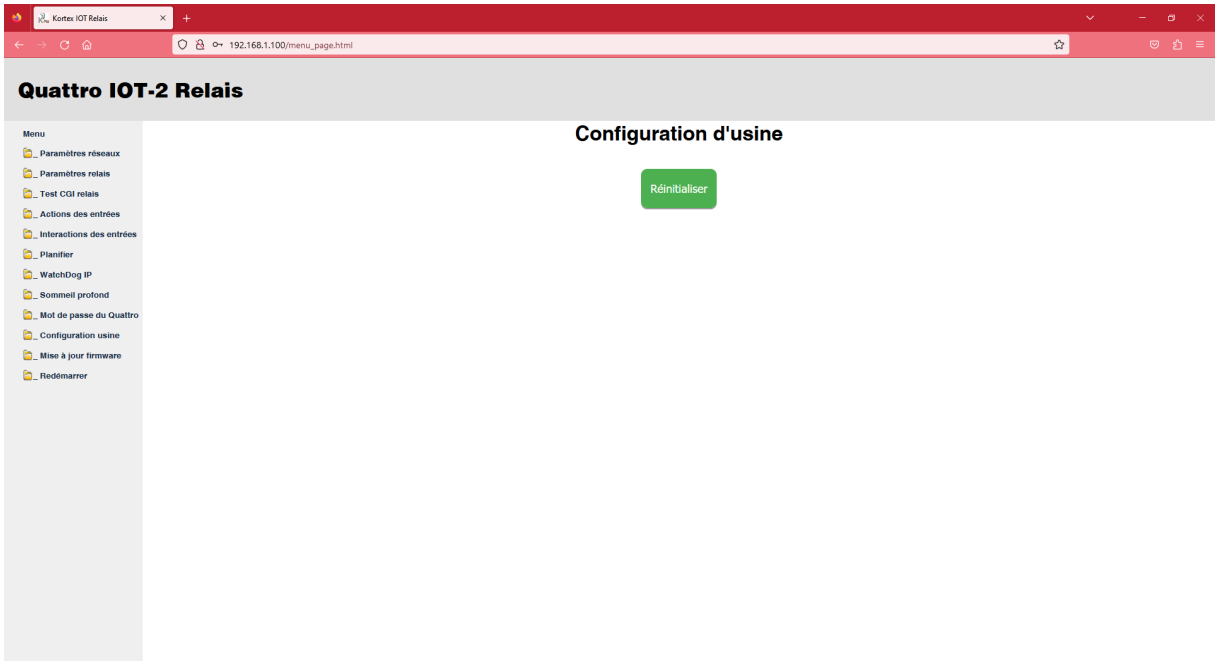
4.10 Reset User

Allow you to change the login and password.



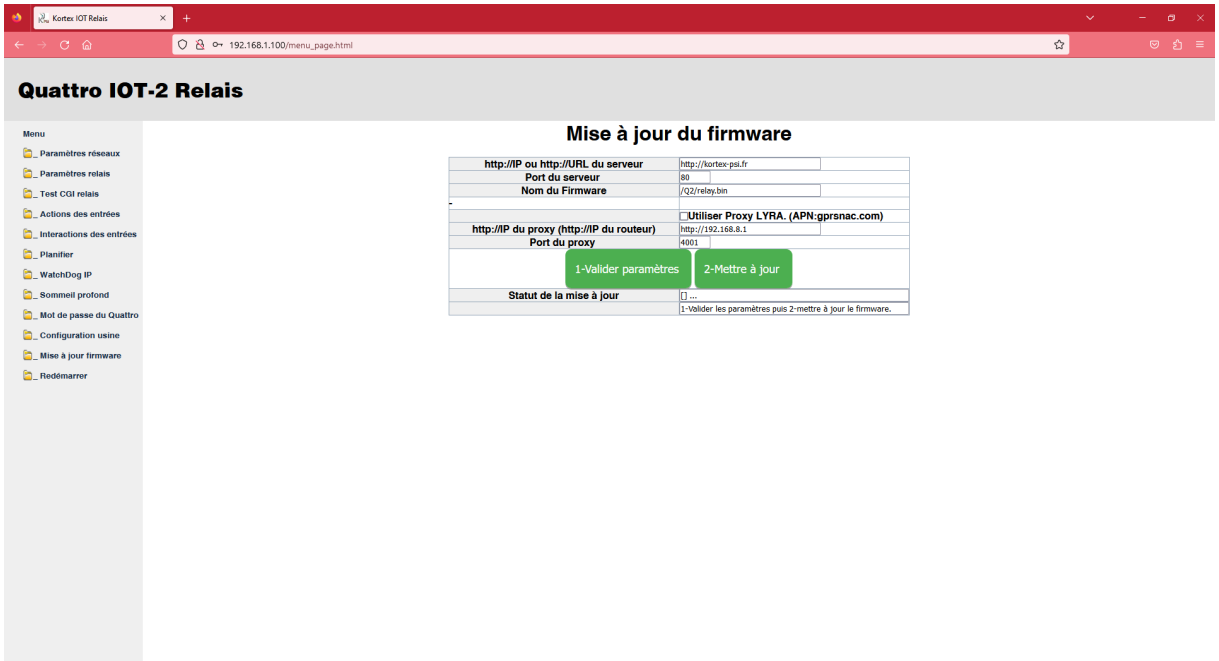
4.11 To Factory

Allow you to do a factory setting.



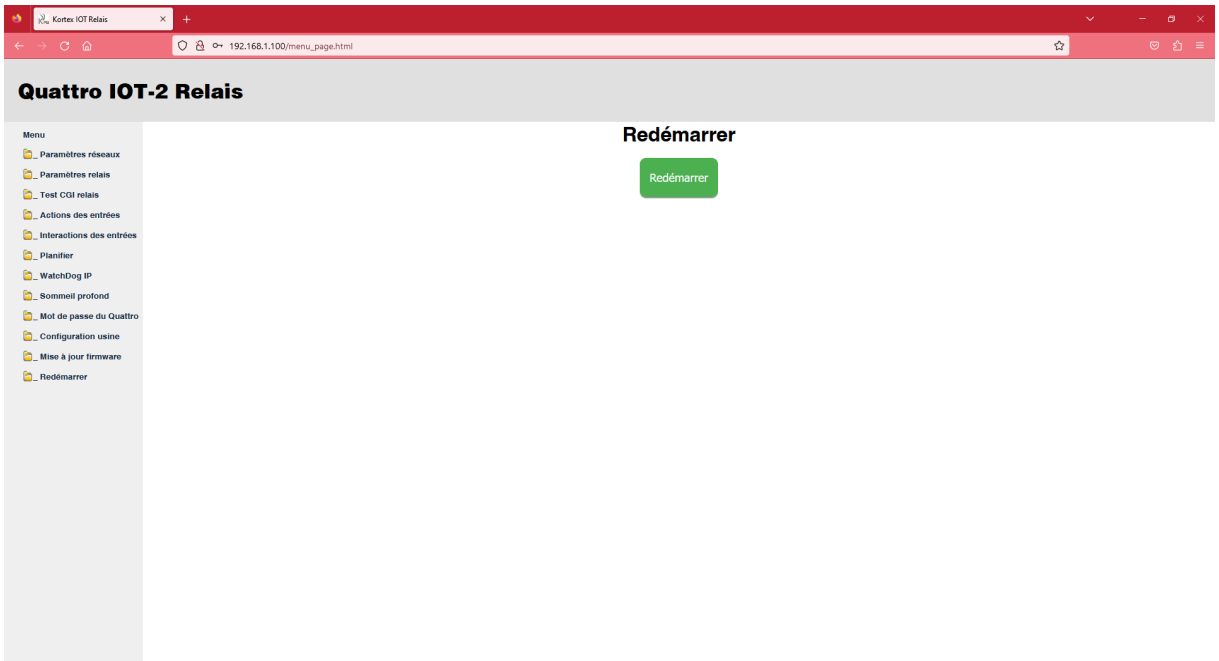
4.12 Firmware Upgrade

The firmware is located on Internet Kortex Servers.



4.13 Reboot

Allow you to reboot the device.



CONTACTS

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Sales Support

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Technical Support

0 820 6 9 0 0 4 2 Service 0,12 € / min + prix appel

Technical support can be accessed at the following email address: technique@kortex-psi.fr.

Documentation

KORTEX PSI strives to constantly improve the understanding and proper use of its product documentation. Constructive feedback from users is significant for KORTEX PSI. Please send your comments and suggestions regarding the documentation to: technique@kortex-psi.fr.