

1. Introduction

SS10680 devices provide an integrated web server integrato to allow the user to configure the device parameters (MQTT, Ethernet, Modbus, ...).

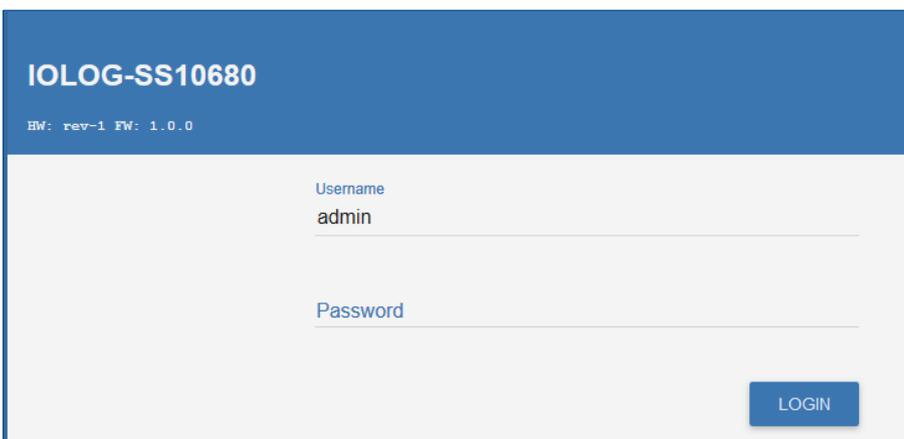
2. SS10680 web page access

To access the web page it is necessary to type in the address bar of the browser the device IP address.

Warning: make sure that the IP address of the device belongs to the same subnet as the PC in use!

If you do not know the IP address of the device, refer to the Recovery section.

After entering the IP address in the browser's address bar (default: 192.168.1.100), the following "Login" screen will appear:



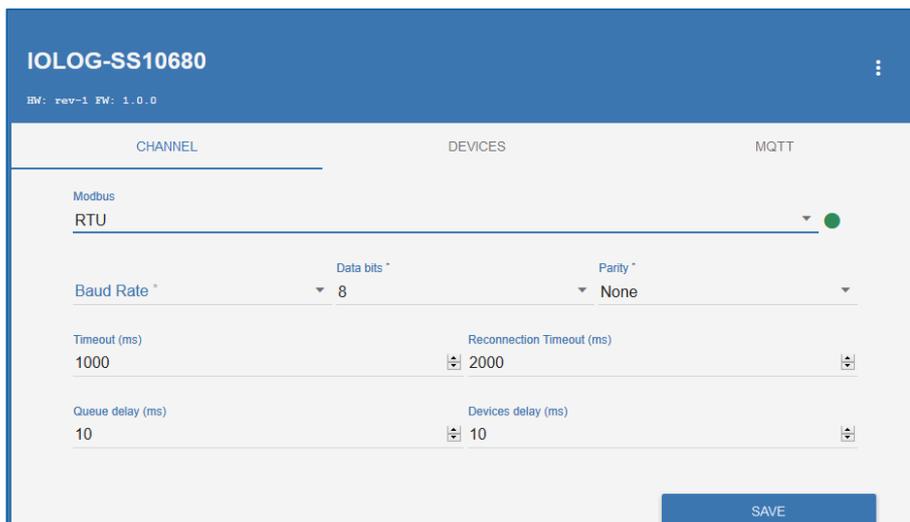
To login, enter the following default access data:

- **Username:** admin
- **Password:** password

After the first login, you will be prompted to change the password.

The access data can be changed later in the "Change Password" section.

After entering the login credentials and clicking on the "Login" button, the SS10680 home page will appear:



The web server consists of 4 sections:

- **CHANNEL** : it allows to change the parameters of the Modbus protocol;

- **DEVICES**: it allows to define the devices to be interrogated and the sampling mode of their variables;

- **MQTT**: it allows to change the parameters of MQTT protocol;

- **!** it allows you to configure the network interface, import or export the configuration, change passwords, change language, change date / time, update the firmware or log out.

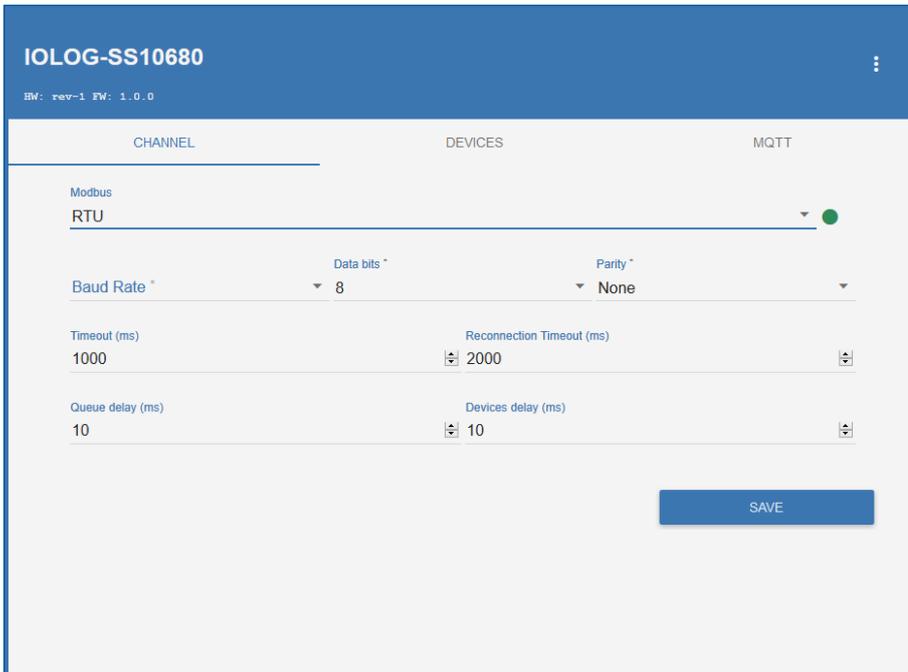
Use "Logout" to exit the web server.

3. Description of the configuration sections

CHANNEL

It allows to define the configuration parameters of the Master Modbus protocol (RTU or TCP) through which to communicate with the field devices.

Modbus RTU



Baud Rate: set communication speed.

Data bits: set data bits.

Parity: set parity.

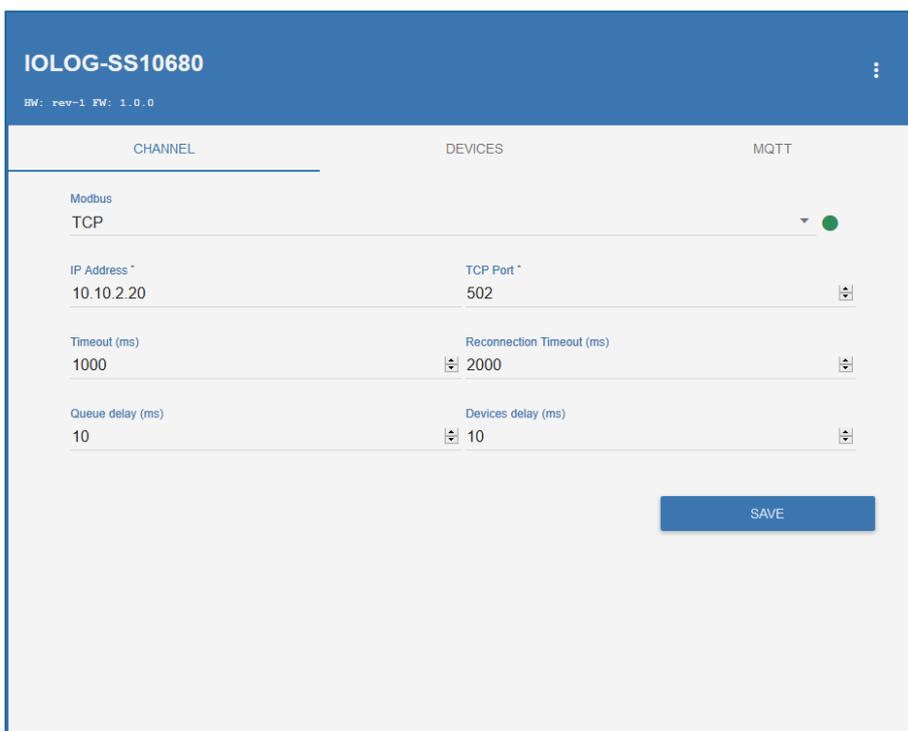
Timeout: set the max time (in ms) within which a valid response must be received from the device.

Reconnection Timeout: set the waiting time (in ms) for a new attempt.

Queue delay: set the waiting time between two requests.

Devices delay: set the waiting time between the interrogation of two devices.

Modbus TCP



IP address: set the device IP address.

TCP port: set the protocol communication TCP port (default 502).

Timeout: set the max time (in ms) within which a valid response must be received from the device.

Reconnection Timeout: set the waiting time (in ms) for a new attempt.

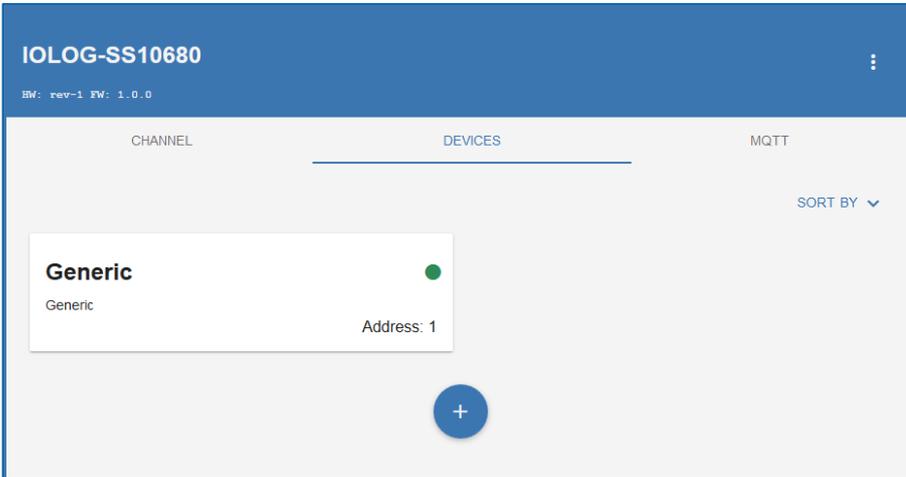
Queue delay: set the waiting time between two requests.

Devices delay: set the waiting time between the interrogation of two devices.

Led indicates the status of the communication (● not defined, ● in alarm, ● regular).
By pressing the "SAVE" button, the set parameters will be saved in memory.

DEVICES

It allows to define the devices to be interrogated and the sampling mode of their variables. It is possible to connect devices from the internal library (IOLOG SS3000 SS8000 and SS10000) or to build generic devices.



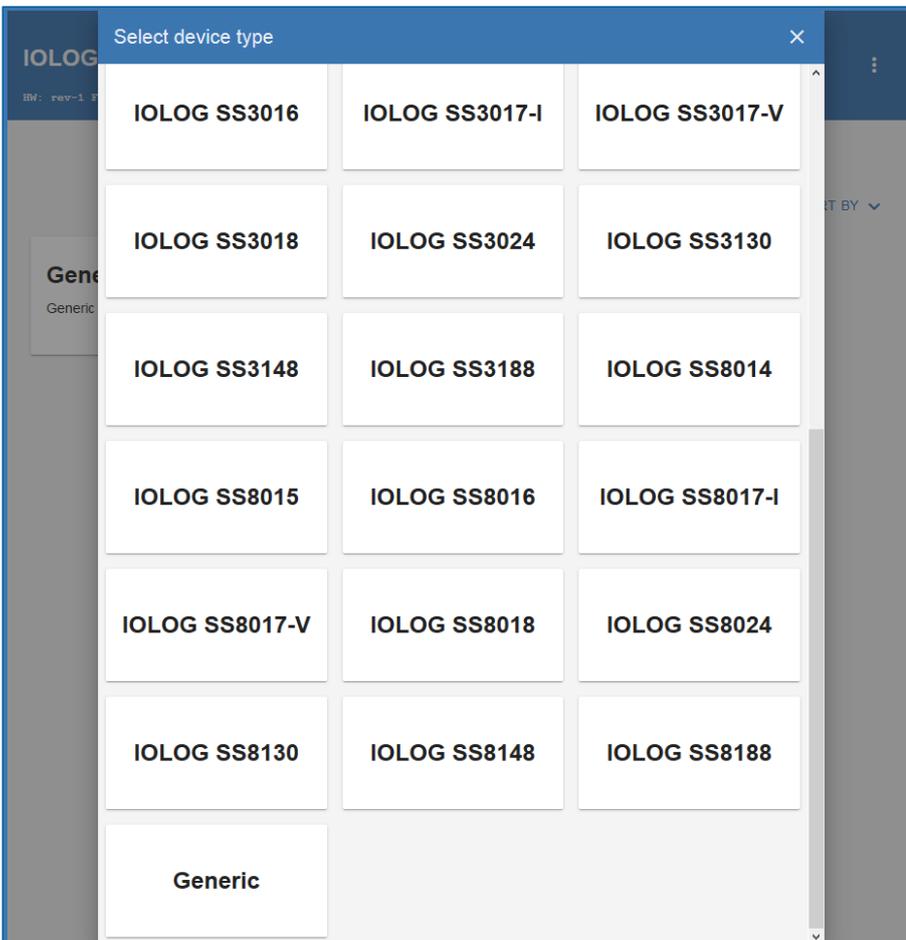
LIST OF DEVICES

- SS3014** : 4 AI PT100
- SS3015-I** : 4 AI 4-20 Ma
- SS3015-V** : 4 AI 0-10 V
- SS3017-I** : 8 AI 4-20 mA
- SS3017-V** : 8 AI 0-10 V
- SS3016** : 4 AI TC
- SS3018** : 4 AI TC
- SS3024** : 4 AO
- SS3130** : 4 DI, 4 DO
- SS3148** : 12 DI
- SS3188** : 8 DI, 8 DO

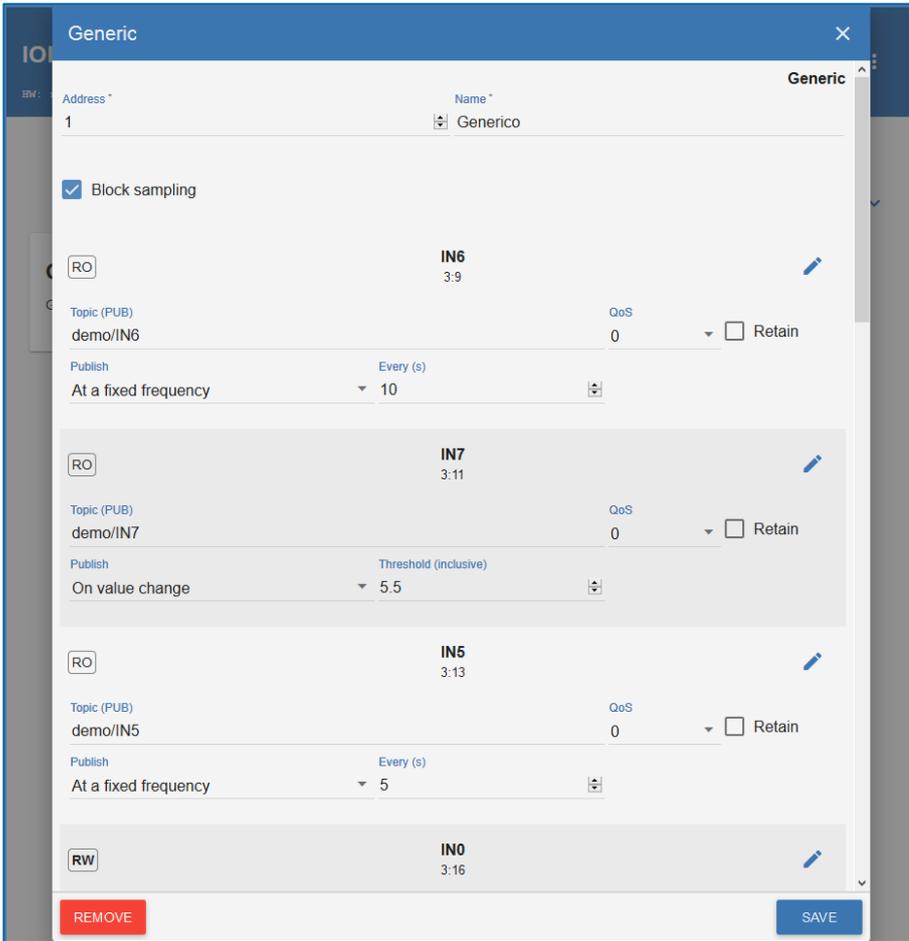
- SS8014** : 4 AI PT100
- SS8015** : 4 AO
- SS8017-I** : 8 AI 4-20 mA
- SS8017-V** : 8 AI 0-10 V
- SS8016** : 4 AI TC
- SS8018** : 4 AI TC
- SS8024** : 4 AO
- SS8130** : 8 DI, 4 DO
- SS8148** : 16 DI
- SS8188** : 8 DI, 8 DO

- SS10014** : 4 AI PT100
- SS10015** : 4 AO
- SS10017-I** : 8 AI 4-20 mA
- SS8017-V** : 8 AI 0-10 V
- SS10016** : 4 AI TC
- SS10018** : 4 AI TC
- SS10130** : 8 DI, 4 DO
- SS10148** : 16 DI
- SS10188** : 8 DI, 8 DO

- Generic**



Led indicates the status of the communication (● not defined, ● in alarm, ● regular).



For each device you can specify:

Address: set the device Modbus address.

Name: set the device name.

Block sampling: defines whether a Modbus query must be made for each variable or whether to request the variables, if they are contiguous, in block.

For each defined variable it is possible to specify:

Topic: subject of the message.

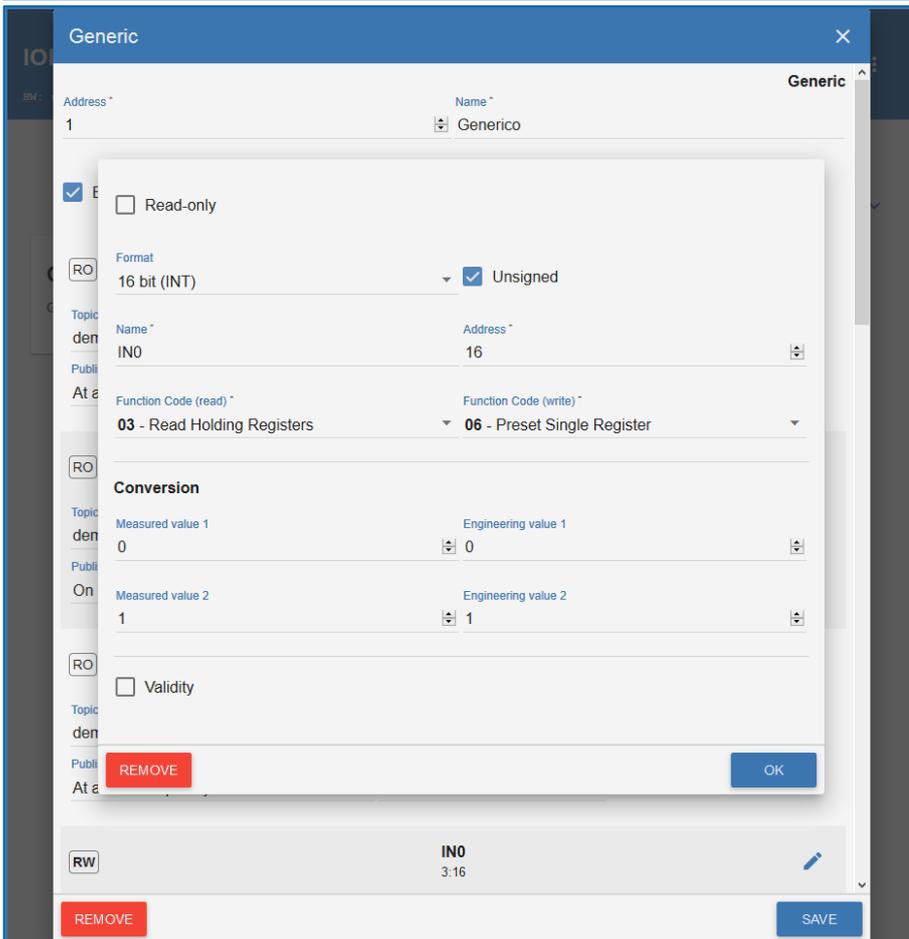
QoS: quality of service:

- 0 – does not include confirmation of receipt;
- 1 – guarantees the delivery of the message at least once to a receiver;
- 2 – guarantees the delivery of the message one and only once to a receiver.

Retain: the variable is maintained by the MQTT Broker available for Client requests always.

Publish: publication on variation or fixed frequency.

For library devices, the list of variables is predefined, while for generic devices, variables can be added.



For each variable created, it is possible to define:

Read-only: defines if the variable is read only (RO) or can be written (RW);

Format: format of the variable with or without sign;

Name: variable name;

Address: variable Modbus address;

Function Code (read): specifies the code of the Modbus read function;

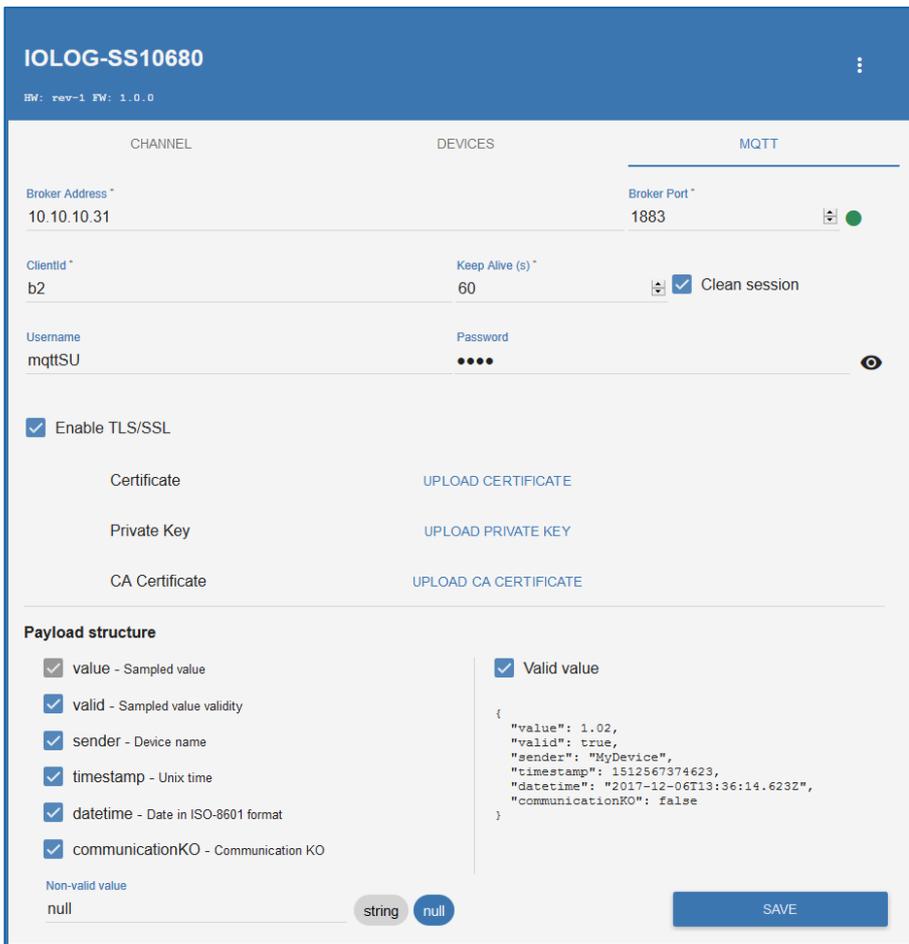
Function Code (write): specifies the code of the Modbus write function (RW only);

Conversion: allows to perform a linear conversion between two points of the read variable;

Validity: allows you to add a secondary variable that contains data about the validity of the main variable.

MQTT

It allows to define the configuration parameters of the MQTT protocol through which to publish the messages on a BROKER (messaging server).



IOLOG-SS10680
FW: rev-1 FW: 1.0.0

MQTT

Broker Address *
10.10.10.31

Broker Port *
1883

ClientId *
b2

Keep Alive (s) *
60

Clean session

Username
mqttSU

Password
••••

Enable TLS/SSL

Certificate
Private Key
CA Certificate

UPLOAD CERTIFICATE
UPLOAD PRIVATE KEY
UPLOAD CA CERTIFICATE

Payload structure

value - Sampled value
 valid - Sampled value validity
 sender - Device name
 timestamp - Unix time
 datetime - Date in ISO-8601 format
 communicationKO - Communication KO

Valid value

```
{
  "value": 1.02,
  "valid": true,
  "sender": "MyDevice",
  "timestamp": 1512567374623,
  "datetime": "2017-12-06T13:36:14.623Z",
  "communicationKO": false
}
```

Non-valid value
null

string null

SAVE

Broker Address: set the broker's address.

Broker Port: set the broker's TCP port.

ClientId: set the Client identifier.

Keep Alive: frequency of sending the Keep Alive message to the broker.

Clean session: if enabled, it requires the renewal of subscriptions to the topics by the Client at every connection with the broker.

Username: username for access to the broker.

Password: password for access to the broker.

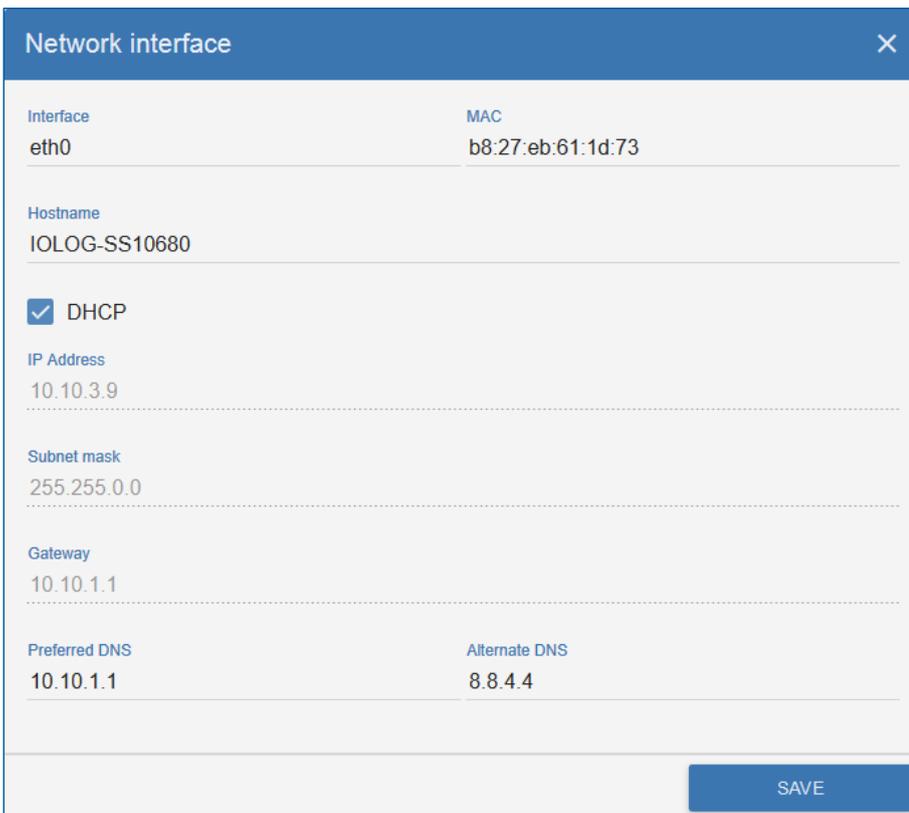
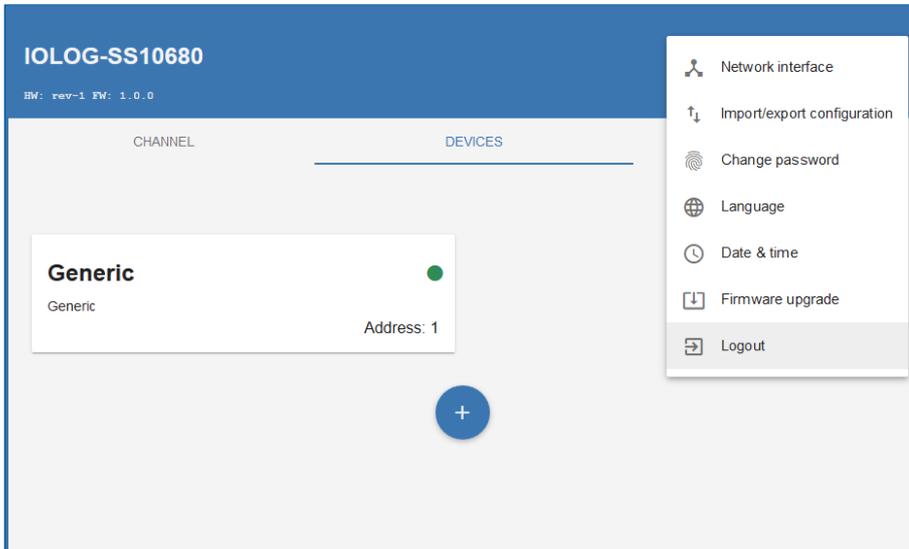
EnableTLS/SSL: set the encryption TLS / SSL standard for the transmitted data. Allows you to upload:

- Certificate,
- Private Key,
- CA Certificate

Payload structure: allows you to customize the payload structure. It also provides a preview of the message in case of valid and invalid value.

Led indicates the communication status (● not defined, ● connecting, ● alarm, ● regular).
By pressing the "SAVE" button, the set parameters will be saved in memory.

By clicking on the three points at the top right, you can access a service menu that allows you to configure the network interface, import or export the configuration, change password, change language, change date/time, update firmware or logout.



Through the network interface menu item you can access:

Interface: interface name (not editable).

MAC: mac address (not editable).

Hostname: device hostname.

DHCP: allows the device to automatically receive the IP configuration necessary to establish a connection.

IP Address: set the device IP address (DHCP not active)

Subnet mask: set the device Subnet mask (DHCP not active).

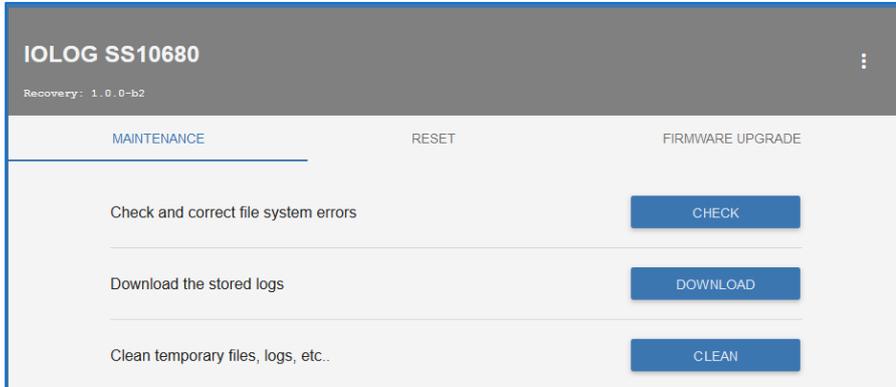
Preferred DNS: set the primary DNS (DHCP not active)

Alternate DNS : set alternative DNS (DHCP not active)

4. Description of the Recovery sections

The SS10680 devices are equipped with a mechanical front button. If you start the device by pressing and holding this button, you can access the recovery functions. Through recovery it is possible to access the device maintenance, restore the default parameters and update the firmware.

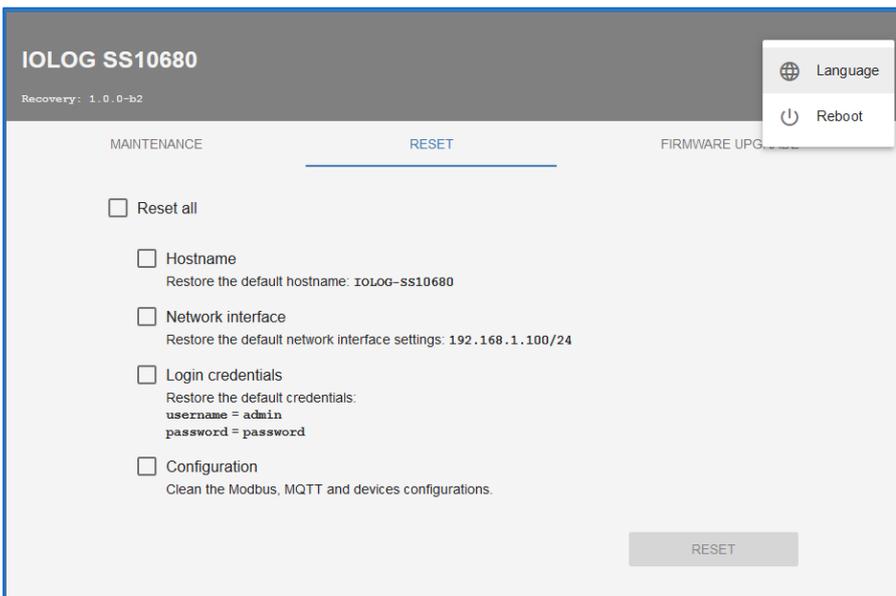
Maintenance



From this page it is possible to:

- Check and correct the file system errors;
- Download store logs;
- Clean temporary files, logs, etc.

RESET



From this page it is possible to:

- Reset all defaults;
- Reset hostname;
- Reset IP address;
- Reset login credentials;
- Reset Modbus, MQTT and devices configurations.

By clicking on the three points at the top right, you can access a service menu that allows you to change the language and reboot the device.