

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:

IOLOG-SS10680		
	Username admin	
	Password	
	LOGIN	

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:

OLOG-SS10680			
CHANNEL		DEVICES	MQTT
Modbus			
RTU			<u> </u>
	Data bits *	Parity*	
Baud Rate *	• 8	 None 	*
Timeout (ms)		Reconnection Timeout (ms)	
1000		2000	-
Queue delay (ms)		Devices delay (ms)	
10			÷
			SAVE

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;

- i 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.



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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

IOLOG-SS10680			:
HW: rev-1 FW: 1.0.0			
CHANNEL		DEVICES	MQTT
Modbus RTU			· •
Baud Rate *	Data bits *	Parity* ▼ None	*
Timeout (ms) 1000		Reconnection Timeout (ms)	<u>*</u>
Queue delay (ms) 10		Devices delay (ms)	.
			SAVE

Baud Rate: set communication speed.

Data bits: set data bits.

Partity: 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

CHANNEL	DEVICES	MQTT
Modbus		
TCP		· · · ·
IP Address *	TCP Port *	
10.10.2.20	502	Ł
Timeout (ms)	Reconnection Timeout (ms)	
1000	2000	E
Queue delay (ms)	Devices delay (ms)	
10	⇒ 10	ł
		SAVE
	-	

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.



IOLOG	Select device type		×	
HW: rev-1 F	IOLOG SS3016	IOLOG SS3017-I	IOLOG SS3017-V	^ ·
Gene	IOLOG SS3018	IOLOG SS3024	IOLOG SS3130	(T BY 🗸
Generic	IOLOG SS3148	IOLOG SS3188	IOLOG SS8014	
	IOLOG SS8015	IOLOG SS8016	IOLOG SS8017-I	
	IOLOG SS8017-V	IOLOG SS8018	IOLOG SS8024	
	IOLOG SS8130	IOLOG SS8148	IOLOG SS8188	
	Generic			×

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 AITC
SS3018 : 4 AITC
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 (onot defined, in alarm, oregular).



den IN0

Publi At a

RO

Tor

den

Publi On

RO

То

den

Pub

At a

RW

0

1

Eunction Code (read)*

Conversion

Measured value 1

Measured value 2

Validity

03 - Read Holding Registers

101	Generic			×
HW: 1	Address* 1	Name≛ Generico		Generic ^
	✓ Block sampling			Ý
(RO	IN6 3:9		1
6	Topic (PUB) demo/IN6		QoS 0	in
	At a fixed frequency	Every (s) 10	★	- 1
	RO	IN7 3:11		1
	Topic (PUB) demo/IN7		QoS 0	in
	Publish On value change	Threshold (inclusive) 5.5	*	
	RO	IN5 3:13		1
	Topic (PUB) demo/IN5		Qos 0	in
	Publish At a fixed frequency	Every (s) 5	÷	- 1
	RW	INO 3:16		/
	REMOVE			SAVE
101	Generic			×
HW: 1	Address* 1	Name* Generico		Generic
	E Read-only			
	RO Format			
6	Topic 16 bit (INT)	VINSIGNED		

16

÷ 0

÷ 1

IN0

3:16

Function Code (write)*

Engineering value 1

Engineering value 2

• 06 - Preset Single Register

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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:

- $0-does not include confirmation of receipt; <math display="inline">1-guarantees the delivery of the message % \label{eq:constraint}$
- 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.

Pubblish: 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;

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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				÷
CHANNEL	DEVI	CES		MQTT
Broker Address * 10.10.10.31			Broker Port* 1883	€ ●
Clientid * b2	Ке 60	eep Alive (s)* D	🗧 🗹 Clea	an session
Username mqttSU	Pa • •	issword •••		O
C Enable TLS/SSL				
Certificate	UPLOA	D CERTIFICATE		
Private Key	UPLOA	D PRIVATE KEY		
CA Certificate	UPLOAD	CA CERTIFICATE		
Payload structure				
value - Sampled value		Valid value		
Valid - Sampled value validity		{		
sender - Device name		"value": 1.02, "valid": true,		
Vinix time time		"timestamp": 1 "datetime": "2	.512567374623, 2017-12-06T13:3	6:14.623Z",
datetime - Date in ISO-8601 format		"communication	KO": false	
CommunicationKO - Communication KO				
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.

IOLOG-SS10680		X Network interface
CHANNEL	DEVICES	 ↑↓ Import/export configuration Change password
Generic	•	Language Date & time
Generic	Address: 1	Firmware upgrade Logout
	+	

Network interface	×
Interface eth0	MAC b8:27:eb:61:1d:73
Hostname IOLOG-SS10680	
✓ DHCP	
IP Address	
10.10.3.9	
Subnet mask	
255.255.0.0	
Gateway	
10.10.1.1	
Preferred DNS	Alternate DNS
10.10.1.1	8.8.4.4
	SAVE

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)



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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;
- Dowload 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.