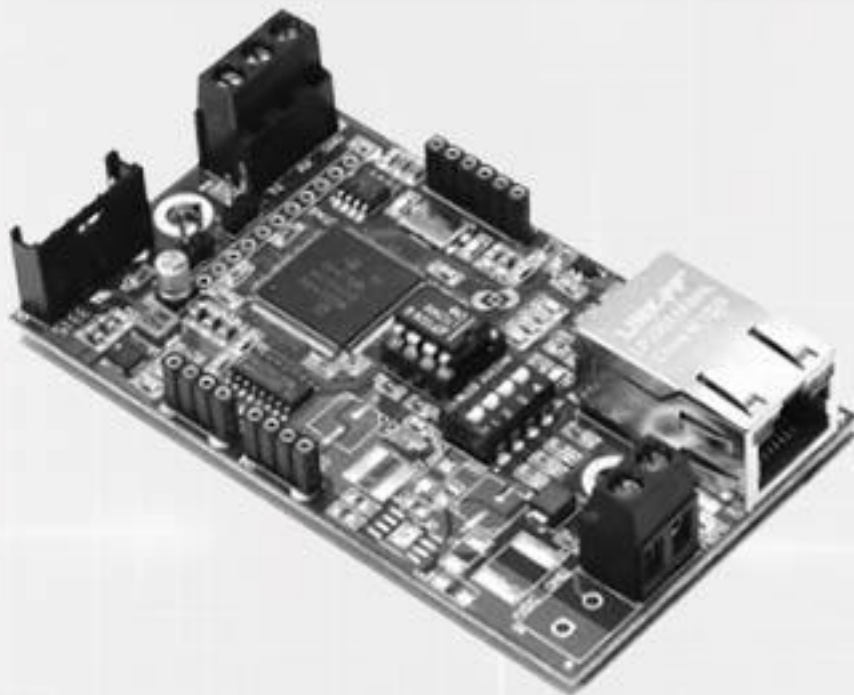


# ETHERNET · WIFI

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Operative manual - 03.00





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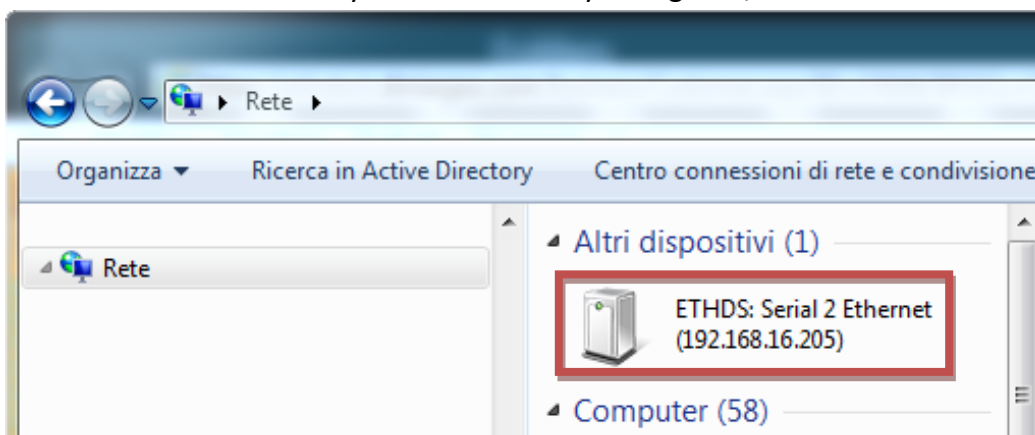
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# 1 Access to the configuration page

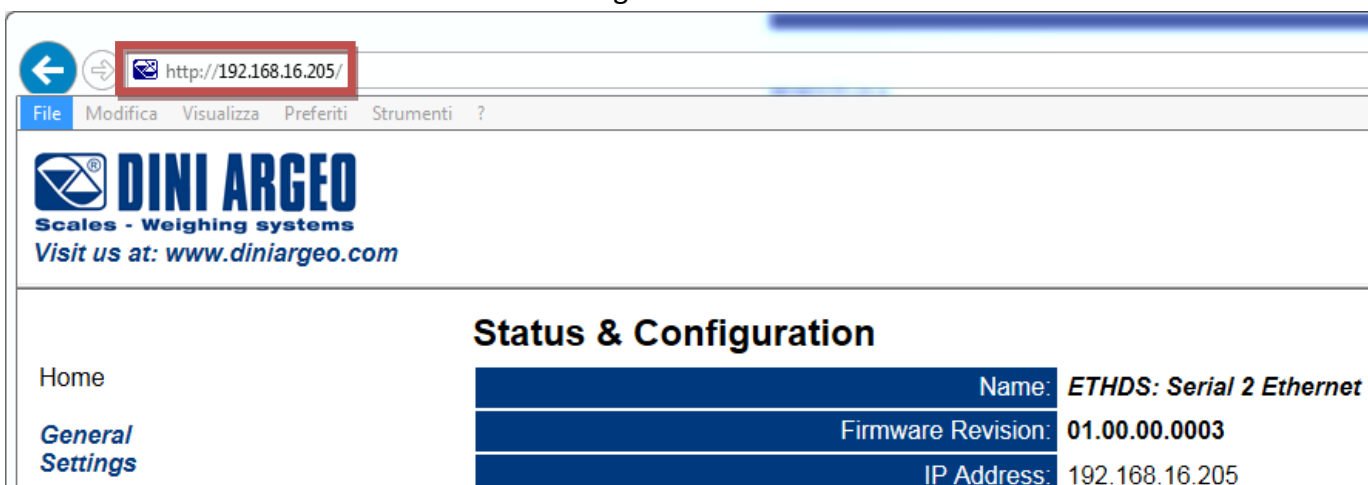
The installation of the module must be performed by a qualified networks expert.

The default IP address of the Ethernet module is **192.168.16.205**

If the network card of your PC is correctly configured, the window “network” will display this:





Or on the IP address **192.168.16.205** through browser

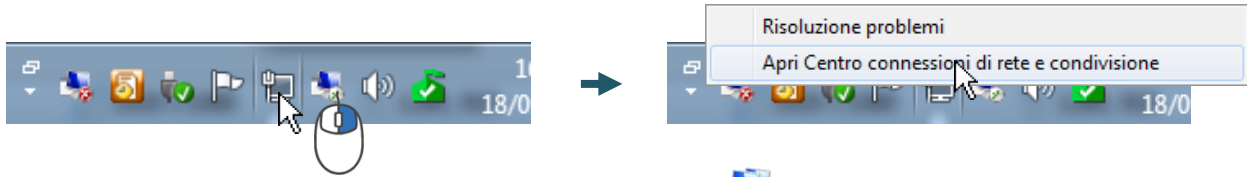



THE ACCESS ON THE CONFIGURATION PAGE IS ALLOWED **ONLY WITH A DIRECT CONNECTION ON THE ETHERNET PORT**

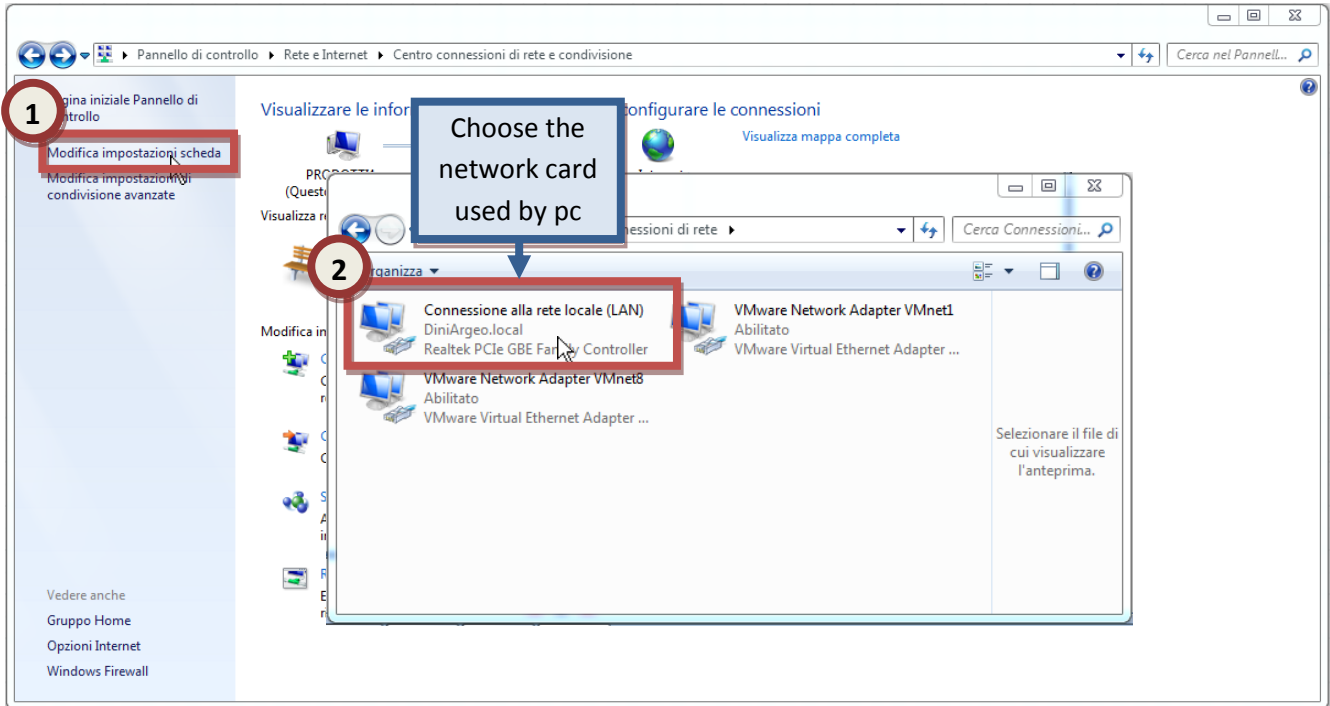
If the module is out of reach, it is necessary to configure the network card of the PC, at the IP address: **192.168.16.xxx**, where **xxx** is an free IP, **different from 205**.

To modify your IP address follow this procedure:



1. Go on  **Networks connection center** and click with the right button of your mouse on 

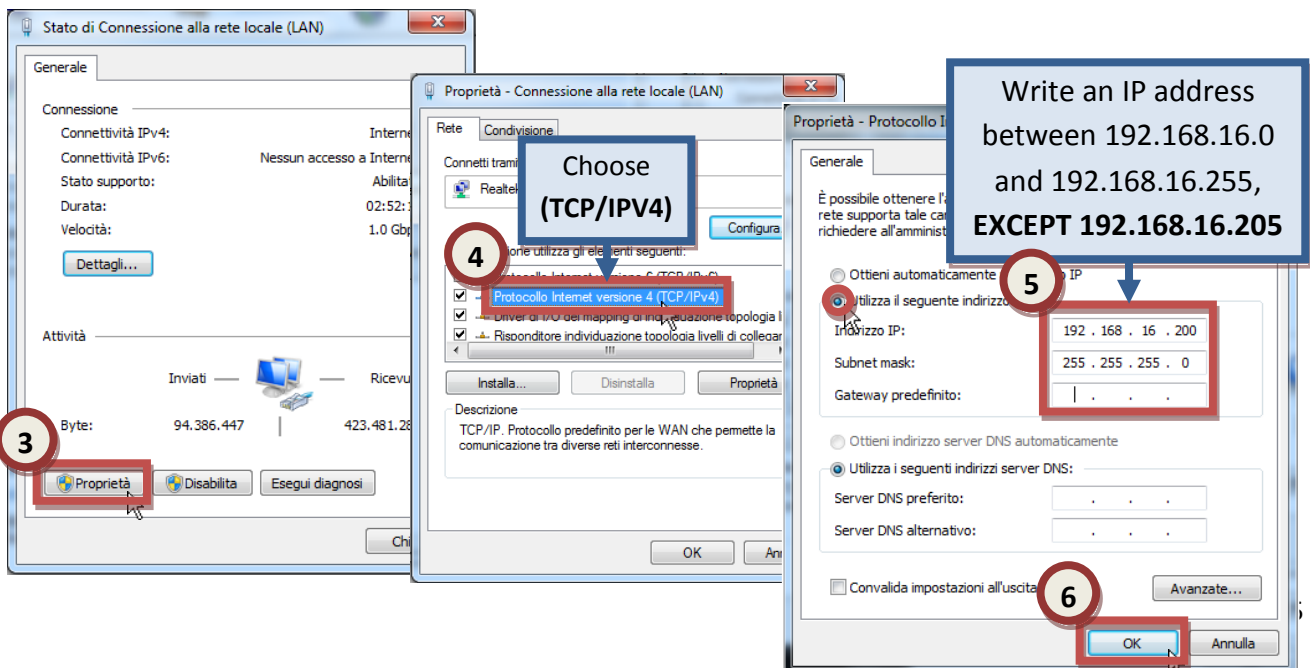


2. Modify the network card configuration and choose the  **Network card used by pc**



On the pop-up window choose:

3. Open network card  **Propriety**
4. Select  **Internet protocol version 4(TCP/IPv4)**
5. Write an IP address between 192.168.16.0 and 192.168.16.255, **EXCEPT 192.168.16.205**
6. The **Subnet mask** is usually 255.255.255.0 and the **Gateway** is empty





ETHD: Serial 2 Ethernet  
(192.168.16.205)

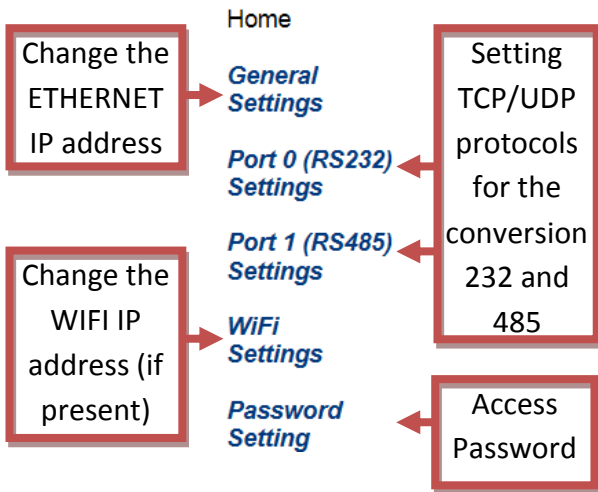
Double click on the icon on “Network” window, or by typing the IP address in the address bar of the browser <http://192.168.16.205> you can access the configuration page.

The page is arranged in 5 menus:



## Status & Configuration

Name:	<b>ETHD: Serial 2 Ethernet</b>
Firmware Revision:	
IP Address:	192.168.16.205
MAC Address:	
Serial Port 1 Option Switch:	2-wire
Operating Mode:	<b>Serial To Ethernet</b>





# 2 IP address modification

## 2.1 Ethernet

In the menu **General Settings** is possible change the IP address, subnet mask and gateway of Ethernet

Home

**General Settings**

**Port 0 (RS232) Settings**

**Port 1 (RS485) Settings**

**WiFi Settings**

**Password Setting**

### IP Address Selection

Address Type:	<input type="checkbox"/> DHCP/AutoIP <input checked="" type="checkbox"/> Static IP			
Static IP Address:	<input type="text" value="192"/>	<input type="text" value="168"/>	<input type="text" value="16"/>	<input type="text" value="208"/>
Subnet Mask:	<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="0"/>
Default Gateway:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>



## 2.2 WIFI (opzional)

In the menu **WiFi Settings** it is possible change the IP address, subnet mask and gateway of WIFI, SSID and type of protection WIFI, once the connection is established by WIFI, the parameters

IP Address: 0.0.0.0

MAC Address: 00:00:00:00:00:00 will be automatically filled in

Home

**General Settings**

**Port 0 (RS232) Settings**

**Port 1 (RS485) Settings**

**WiFi Settings**

**Password Setting**

Network Settings	
WiFi Function:	Disabled ▾
SSID:	DiniNet
Network Mode:	Infrastructure ▾
Ad Hoc Mode:	Joiner ▾
Security Settings	
Security Type:	Open ▾
Security Key:	
IP Settings	
Address Type:	DHCP/AutoIP Static IP
Static IP Address:	192 . 168 . 16 . 207
Subnet Mask:	255 . 255 . 255 . 0

Enabled ▾

Open  
WPA/PSK  
WPA2/AES  
WEP

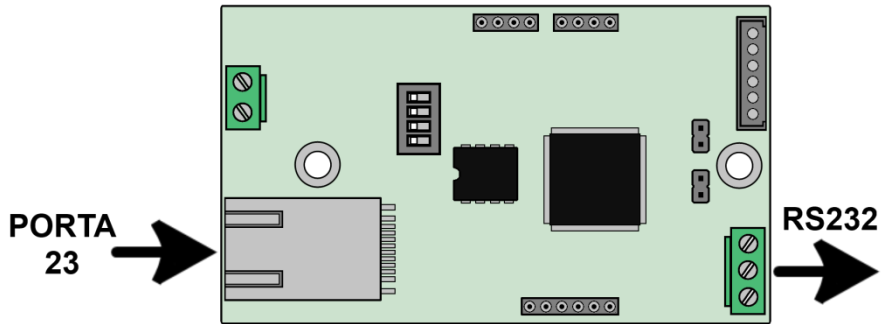
Select the encryption type and enter the Password



THE SSID DISTINGUISHES BETWEEN UPPERCASE AND LOWERCASE LETTERS

# 3 232-LAN/WLAN Configuration

The data transmitted via Ethernet or WIFI on port 23 (TCP) 3001 (UDP) will be redirected to the 232 serial port



Home

## General Settings

### Port 0 (RS232) Settings

Current Physical I/F: LAN Protocol: TCP

Updated LAN TCP

LAN → 232-Ethernet  
WLAN → 232-WIFI

UDP → 3001 port  
TCP → 23 port

Save

Make these settings permanent.

### Port 1 (RS485) Settings

## WiFi Settings

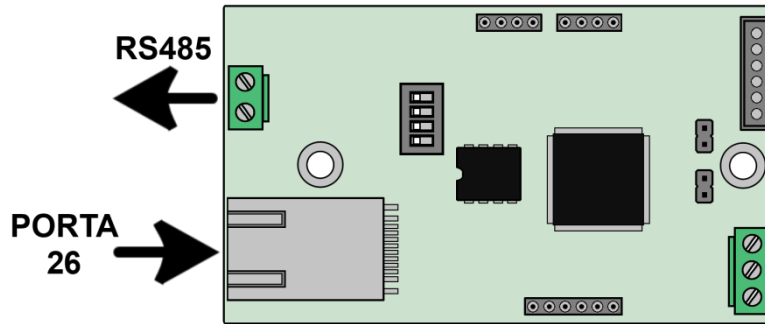
## Password Setting



**WiFi Settings**  
 TO USE THE WIFI, SET "ENABLED" IN **WiFi Settings** ON THE MENU WiFi Function  
 AND IN Physical I/F "WLAN" IN **Port 0 (RS232) Settings** AND **Port 1 (RS485) Settings**

# 4 485-LAN/WLAN Configuration

The data transmitted via Ethernet or WIFI on port 26 (TCP) 3002 (UDP) will be redirected to the serial port 485



Home

General Settings

Port 0 (RS232) Settings

Port 1 (RS485) Settings

WiFi Settings

Password Setting

Current

Physical I/F: LAN

Protocol: TCP

Save

Updated

LAN

TCP

LAN  
WLAN

UDP  
TCP

LAN → 485-Ethernet  
WLAN → 485-WIFI

UDP → 3002 port  
TCP → 26 port

Make these settings permanent.

# 5 TCP/UDP Port configuration

For each port it is possible to change the communication parameters for both TCP and UDP ports

Home

General Settings

- Port 0 (RS232) Settings
- Port 1 (RS485) Settings

WiFi Settings

Password Setting

UDP		Current	Updated
Local UDP Port Number:	3001		<input type="text" value="3001"/>
Remote UDP Port Number:	3001		<input type="text" value="3001"/>
UDP Trigger Char:	10 decimal ASCII code	<input type="text" value="10"/>	<input type="text" value="10"/> char (0 for no trigger char)
UDP Trigger Idle Timeout:	100 milliseconds	<input type="text" value="100"/>	<input type="text" value="100"/> milliseconds (0 for no timeout)
UDP Remote IP Address:	0.0.0.0		<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>

Make these settings permanent.

UDP Remote IP Address, indicates the UDP destination of IP data address

If 0.0.0.0 is set, it sends data to the last IP connected  
255.255.255.255 it sends broadcast data  
XXX.XXX.XXX.XXX it sends data to the IP set

TCP		Current	Updated
Local TCP Port Number:	23		<input type="text" value="23"/>
TCP Timeout:	0 seconds	<input type="text" value="0"/>	<input type="text" value="0"/> seconds (0 for no timeout)
Modbus Mode:	RTU		<input type="text" value="RTU"/> ▾

Make these settings permanent.

# 6 Serial port configuration

For each port, you can change the parameters of serial communication

Home

**General Settings**

- Port 0 (RS232) Settings**
- Port 1 (RS485) Settings**

**WiFi Settings**

**Password Setting**

## Serial Settings

Current

Updated

<b>Baud Rate:</b>	9600 bits/second	9600 <input type="text"/> bits/S
<b>Data Size:</b>	8 bits/character	8 <input type="text"/> bits/character
<b>Parity:</b>	None	None <input type="text"/>
<b>Stop Bits:</b>	1 bit(s)	1 <input type="text"/> bit(s)
<b>Flow Control:</b>	None	None <input type="text"/>

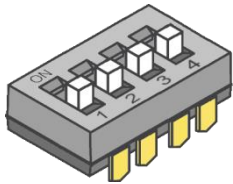
Save

Make these settings permanent.

# 7 Change the functioning mode



The module has 4 functioning modes, selectable changing the dip-switches on the card. Every time you change the functioning mode, the module makes a RESET, setting all default parameters and the IP address to 192.168.16.205



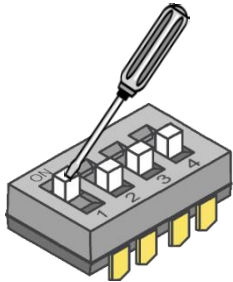
**ON** -  
**OFF** 1-2-3

**Converting Serial Ethernet or WIFI**

Convert an ETHERNET or WIFI signal to 232/485.

	<b>232</b>	<b>485</b>
TCP	Port 23	Port 26
UDP	Port 3001	Port 3002

It sets the serial to 9600 n-8-1



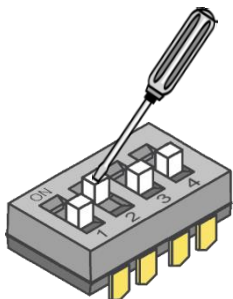
**ON** 1  
**OFF** 2-3

**Network between instrument**

Allows to connect multiple indicators to each other, sharing archives and remote scale (only for AF03)  
The 485 serial port is set to Ethernet

	<b>TCP</b>	<b>UDP</b>
485	26	3002

It sets the serial to 115200 n-8-1



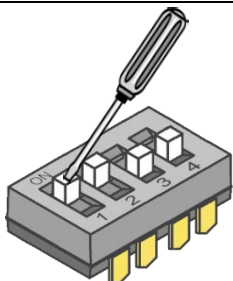
**ON** 2  
**OFF** 1-3

**Modbus TCP**

Converts Modbus to Modbus TCP ports between Ethernet/WIFI and 232/485

	<b>232</b>	<b>485</b>
TCP	Porta 502	Porta 503

It sets the serial to 9600 n-8-2

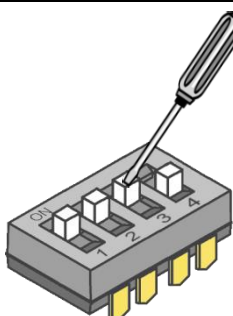


**ON** 1-2  
**OFF** 3

**232-485 Conversion**

Transforms a 232 signal to 485 and vice versa  
ETHERNET/WIFI disabled

It sets the serial to 9600 n-8-1



**ON** 1-2-3  
**OFF** -

**Configuration from Browser**

*General*  
Go on *Settings* and select the desired functioning mode

**Operating Mode:**

Serial To Ethernet
Serial Bridge
Port0: SNet Adapter - Port1: Serial To Ethernet
Modbus TCP

## 8 Security password

Is possible to protect the configuration of the module.

If both boxes are left blank, you disable the password protection.

### Password Setting

Password:

Re-enter:

Then, to access the home page, you must enter the correct password, and click **Enter**:

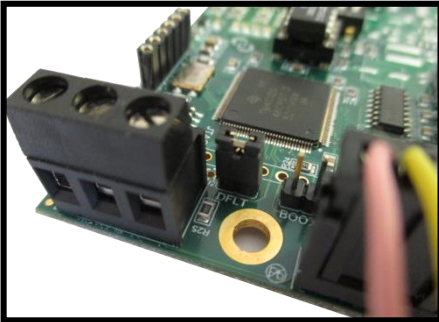
Enter Password:

If the password has been forgotten, in order to access the configuration page you will need to perform a default module.

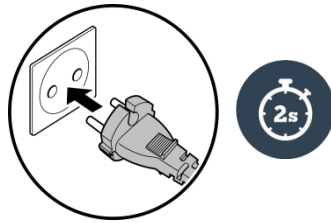
# 9 Default and reset of the module

You can make the default of the module, setting at factory settings in three different ways:

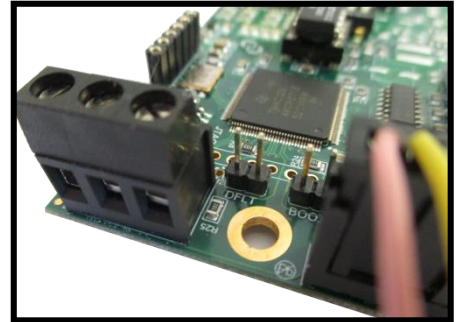
## Closing the DFLT jumper



Closing the DFLT jumper

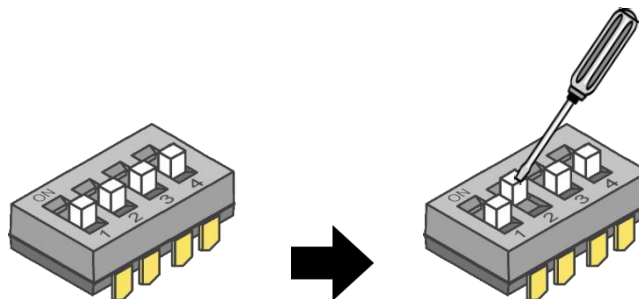


Power supply the module via the indicator and wait



When the two LEDs flash on the board, remove the jumper

## Change functioning mode



Every change of the functioning mode the module will follow a default at the next restart.

## Via web page

Home

**General Settings**

Port 0 (RS232) Settings

Port 1 (RS485) Settings

WiFi Settings

Password Setting

In the menu **General Settings** click on "Restore Defaults and Reboot"

### Restore Factory Defaults

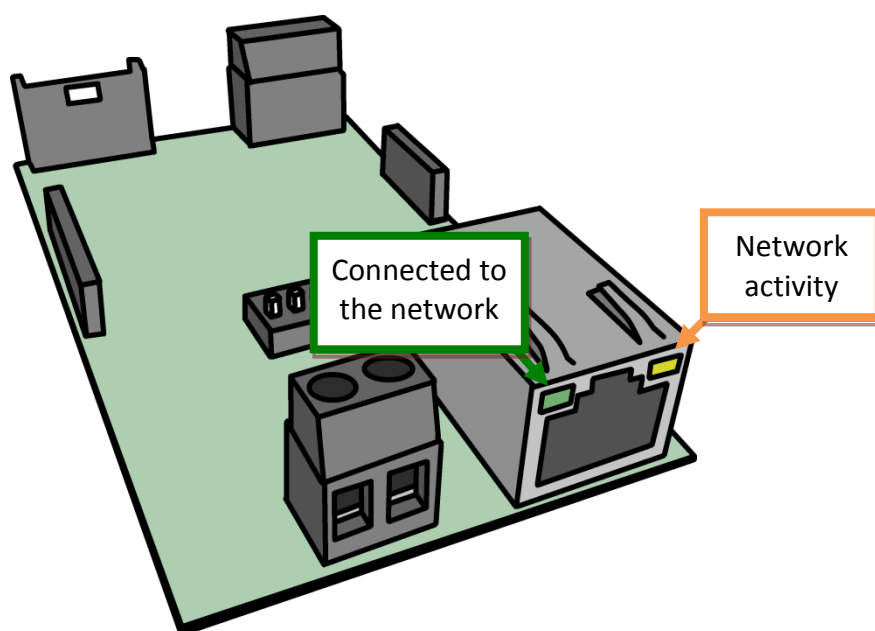
Restore all options to their factory default:

Restore Defaults and Reboot



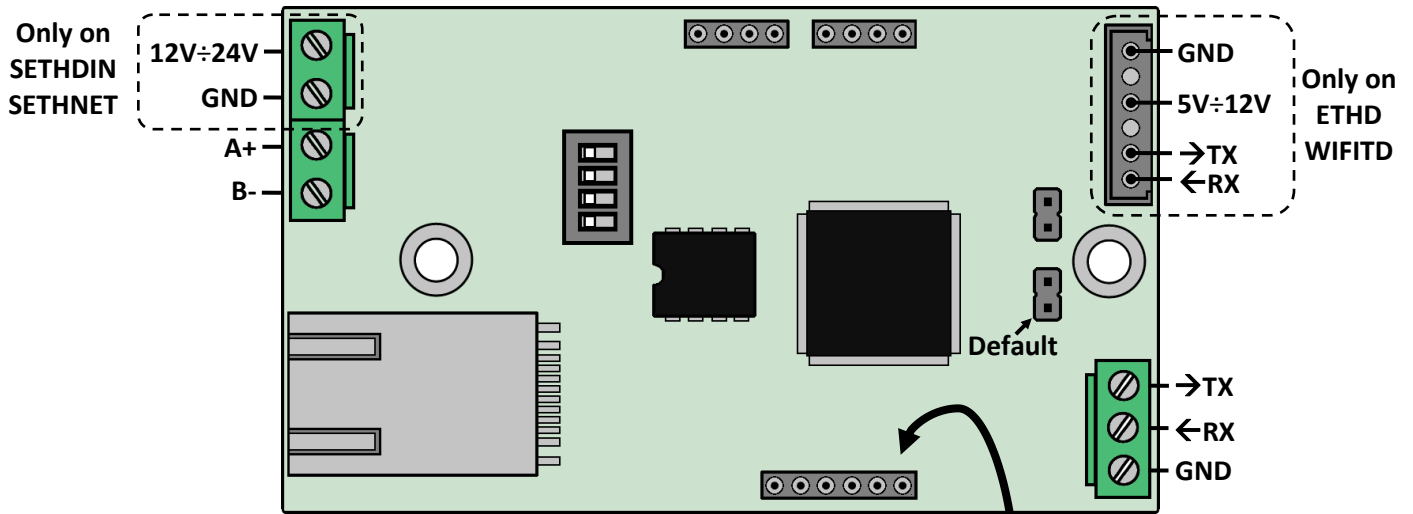
# 10 Technical specifications and connection

Supply voltage	+ 5 Vdc ÷ 12Vdc (AMP) + 12 Vdc ÷ +24Vdc (TERMINAL)
Max power usage	200 mA, 5W at 24Vdc.
Operating temperature	-20°C + 85°C
Protocols	TCP, UDP, DHCP, HTTP, ICMP, uPnP, ARP, Telnet
WEB interface	10/100 Base-T.
Communication Rate	10/100Mbps.



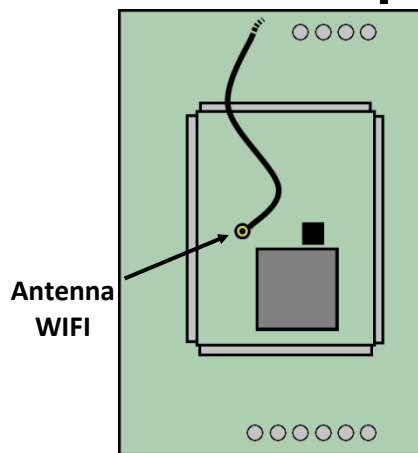
\*Pictures may be different depending the model

## 10.1 ETHD connectors

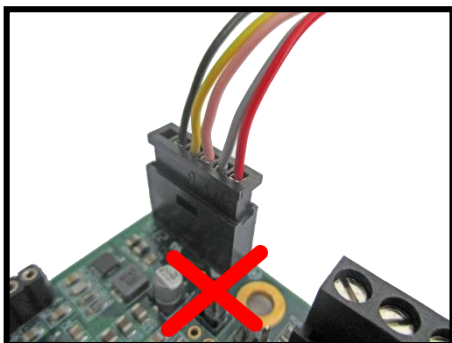


## 10.2 WIFI module

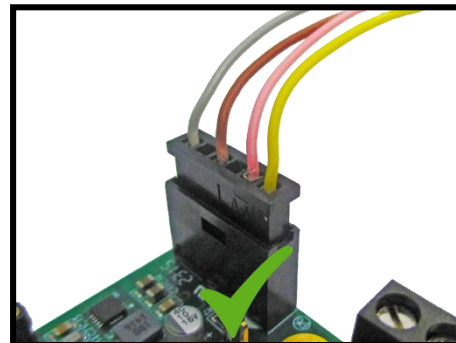
WIFI module, if present, It is positioned on the ETHD connectors



**THE AMP OF THE OLD ETH ARE NOT COMPATIBLE WITH THE ETHD**

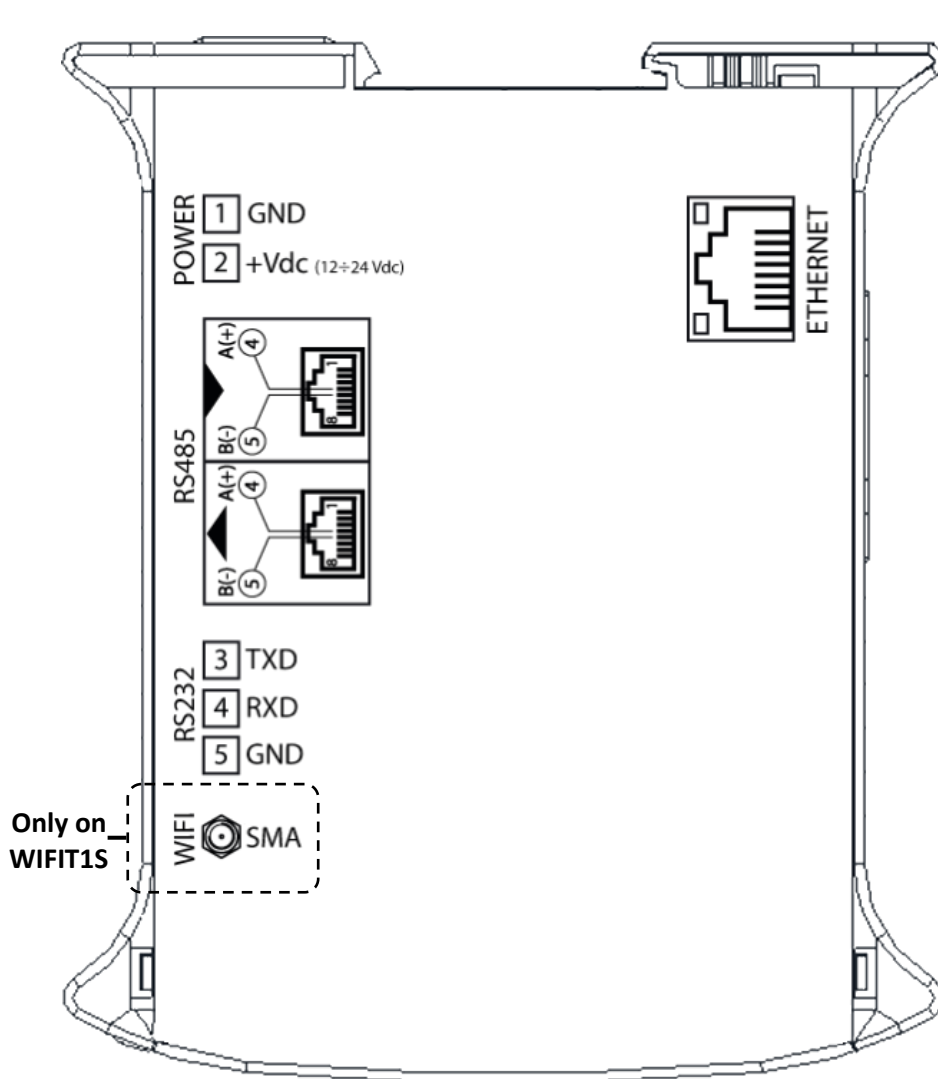


ETH



WIFITD

### 10.3 ETH1S/WIFIT1S connectors

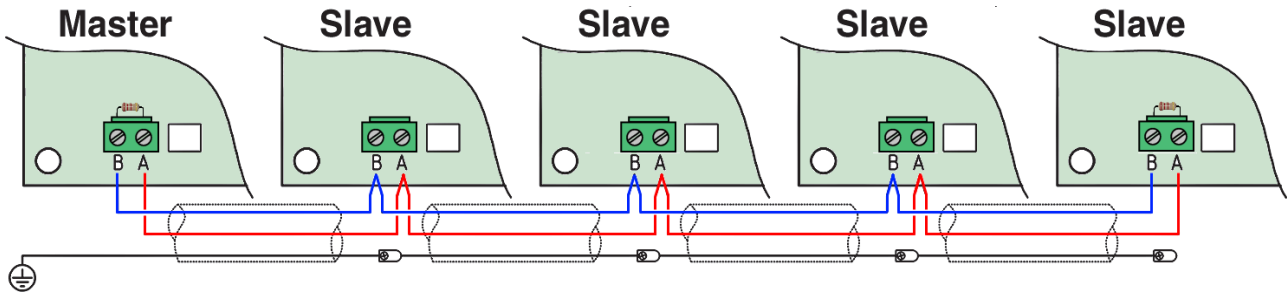


The connectors are on the side, on the narrow profile

## 10.4 RS485 connections

On the same RS485 port you can connect up to 32 devices in parallel, as an indicator, digital load cells, conversion cards, DGX or 485/232 converters.

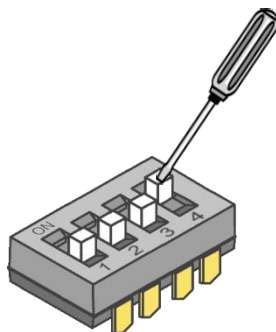
The connection is made using a twisted pair cable connecting the devices to each other A+ with A+ and B- with B- while the 485 shield is connected to ground.



By passing 485 cables near power cables it may introduce noise on the data lines interfering with the correct communication

## 10.5 Terminator resistance

By connecting more devices between them it is necessary to insert a terminator resistance generally of  $120\Omega$  between A+ and B- at the beginning and end of the chain.



The module has already this built in resistance, activating the switch 4 on the board. By enabling this switch, the module will not perform any default.