

## Modems Configuration Page

Accessed via **Maintenance > Modems configuration** page

The screenshot shows a web browser window with the URL <https://10.195.43.246/>. The page is titled "Advanced menu Modems". The breadcrumb navigation is "Home / Maintenance / Advanced menu / Modems". The main content area shows a configuration form for "modem1 3G Slot #1". The form includes a "Network type" dropdown menu set to "AUTO", a "Pin" section with a toggle switch set to "Enabled", and a "Pin:" input field with four dots. A "Save" button is located to the right of the form. The footer of the page reads "Easergy T300 - © 2015 Schneider-Electric".

This page is used to configure the application parameters required for the modem connections.

The proposed configuration depends on the type of modem installed on the HU250 module ports (port 1 or port 2).

## Easergy HU250 3G modem box (EMS59152)



3G modem requires a **SIM card** to be able to connect to the mobile network.

In order to have better security on the 2G/3G network, it is recommended to require from the operator a private **APN** via a **VPN network**.

### Frequency bands

- Five Bands UMTS/HSPA+ (WCDMA/FDD) (850/800, 900, 1900 and 2100 MHz)
- Quad-Band GSM (850/900/1800/1900 MHz)

## Modem parameter setting

Access via **Maintenance > Modems** page

modem1 3G Slot #1 Save

Network type  
AUTO

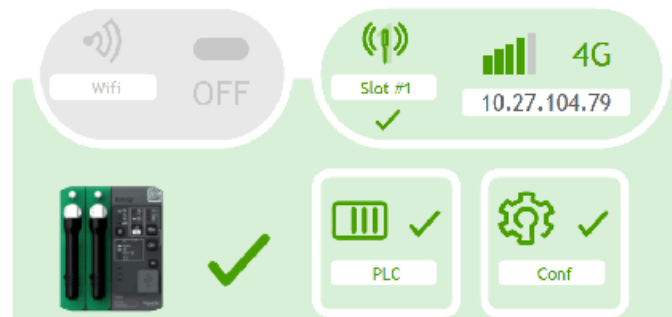
Pin  
Disabled  Enabled

Pin:  
.....

Parameter	Default value	Description
<b>Network type</b>	AUTO	Choices for defining the IP network type: <ul style="list-style-type: none"><li>AUTO: automatic detection of the mobile network type</li><li>GPRS: 2G network</li><li>3G: 3G network</li></ul>
<b>Pin</b>	Enabled	Option to use the PIN code. Depends if the SIM card needs a PIN code to operate.
<b>Pin code</b>	-	4-digit PIN code for the SIM card. This parameter should only be entered if the Pin parameter is enabled.  After 3 validations of the settings on this page or 3 modem initializations with an incorrect PIN code, the SIM card is blocked.  If this happens, the only solution is to call the network operator to unlock it.

## Operating Conditions for Mobile Access

For mobile communication to be able to function between the T300 and the SCADA system, there are some conditions that must be fulfilled by the network operator:



### 1. The T300 must have a static IP address assigned by the operator:

In fact, the mobile connection **will not function** if the T300 has a **dynamic** IP address, since the SCADA system will not be able to determine the new IP addresses allocated to the T300 by the operator when they are reassigned.

It would therefore not be possible to initialize protocol communication from the SCADA system, nor would it be possible to connect to the T300 embedded Web server remotely over Ethernet.

The only way to determine the T300 IP address would be to connect locally (on site) to the T300 embedded Web server, **which is not particularly feasible** as this would involve traveling to the site of each T300 each time the IP address is reassigned.

Once the T300 connected to the mobile network, the IP address assigned to the T300 is displayed in the Monitoring & Control/System page. **This is the address that must be used** by the SCADA system to connect to the T300 over Ethernet or via the protocol.

If connection to the mobile network is not established, "NA" is displayed instead of the IP address.

- 3G/4G connection not established - IP address not available



## 2. The IP ports used by the T300 must be opened by the operator

A certain number of ports are used for the T300 application. The list of default ports used can be viewed in the Easergy Builder **Workspace** page (**Environment variables** tab):

- SSH port: 22
- HTTPS port: 443

The screenshot displays the configuration interface for the T300 application. At the top, the 'Connection' section shows the IP address set to 192.168.2.254, a Transfer Timeout of 50000 ms, and an SSH port of 22. Below this, the 'Environment variables' tab is selected, showing two rows of configuration: 'SSHD\_PORT' with a value of 22, and 'EWS\_SERVER\_PORT' with a value of 443. The interface includes standard navigation icons and tabs for 'Network', 'Environment variables', 'Dialup Modems', and 'PPP'.

All the ports used by the application must be open at mobile operator level for the functions associated with these ports to be operational.

If this is not the case, it is still possible to configure different port numbers in Easergy Builder to be consistent with the port numbers available at the operator end.

Refer to the Easergy Builder Configuration Tool User Manual for more information on how to access and configure these ports.

## 2G/3G/4G Modem Connection Status

It is possible to check the connection status of the 2G/3G/4G modem by the flashing of the LED on the front of the modem:

- **LED flashing every second (500 ms ON / 500 ms OFF):** the modem is searching for a network, or no SIM card detected, or no PIN code entered.
- **LED flashing every second (10 ms ON / 900 ms OFF):** the modem is calling or communicating.
- **LED flashing every 2 seconds (10 ms ON / 1900 ms OFF):** the modem is transferring data.
- **LED flashing every 4 seconds (10 ms ON / 3900 ms OFF):** the modem is connected to the mobile network but there are no calls or data exchanges.