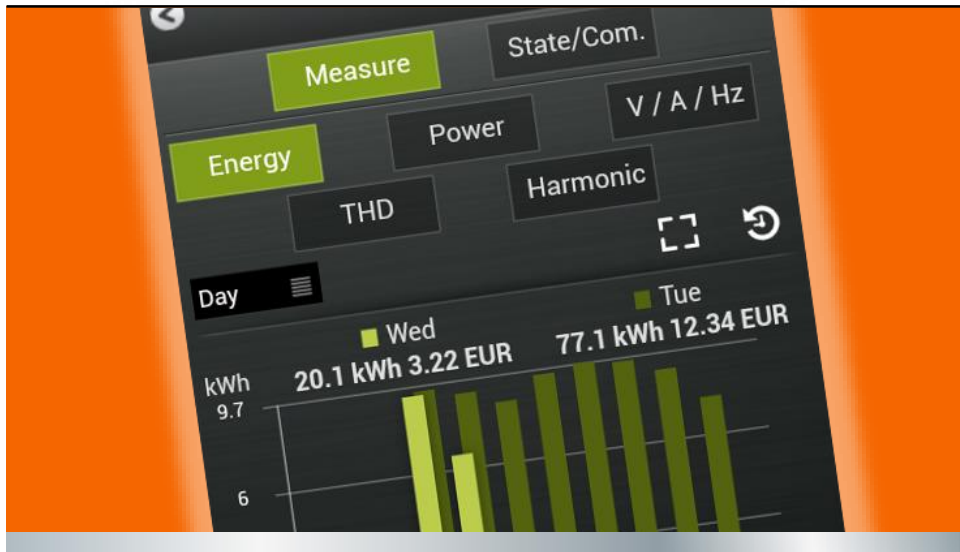


Energy Web Server

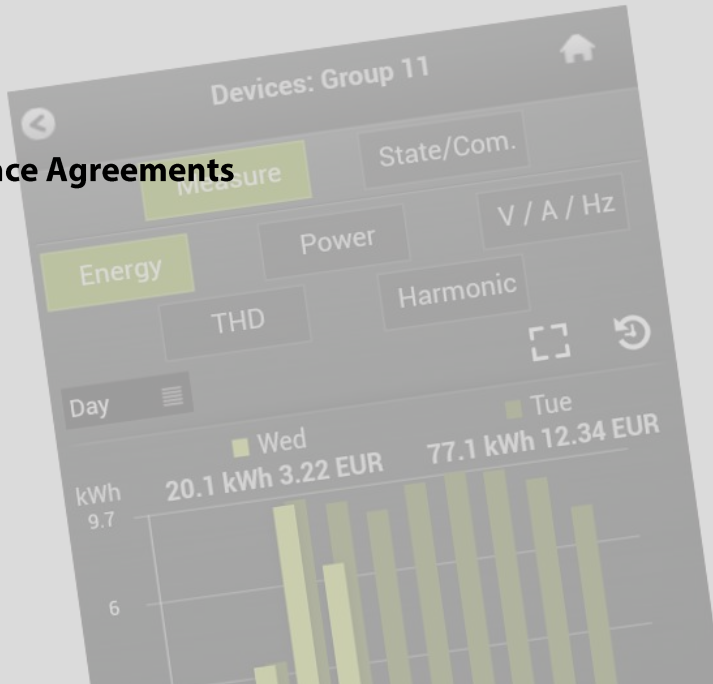
User guide





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Licence Agreements



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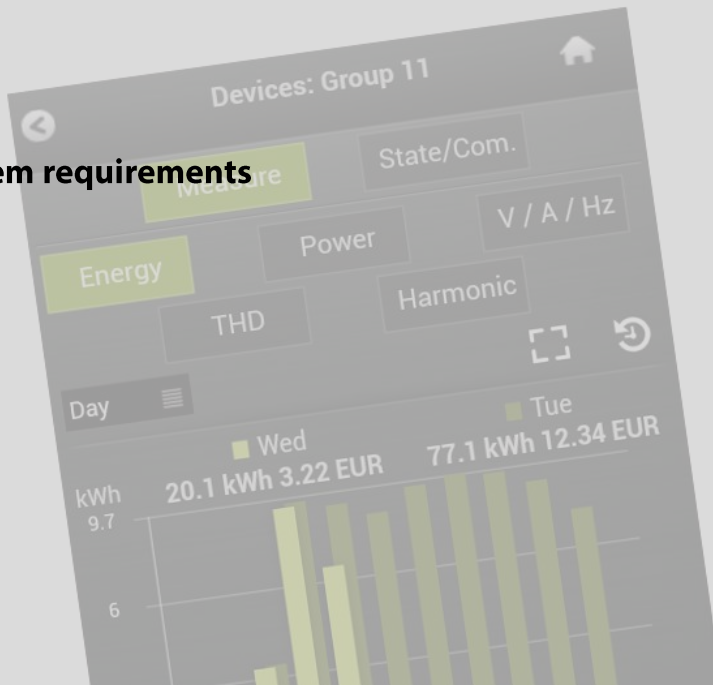
7. GOVERNING LAW

This Agreement will be governed by Italian Law.

In the event of issues relating to the construction, validity and/or execution of this agreement the Parties undertake to find an amicable settlement.

Failing such a settlement, the disputes shall be submitted to the exclusive jurisdiction of the Court of Milan.

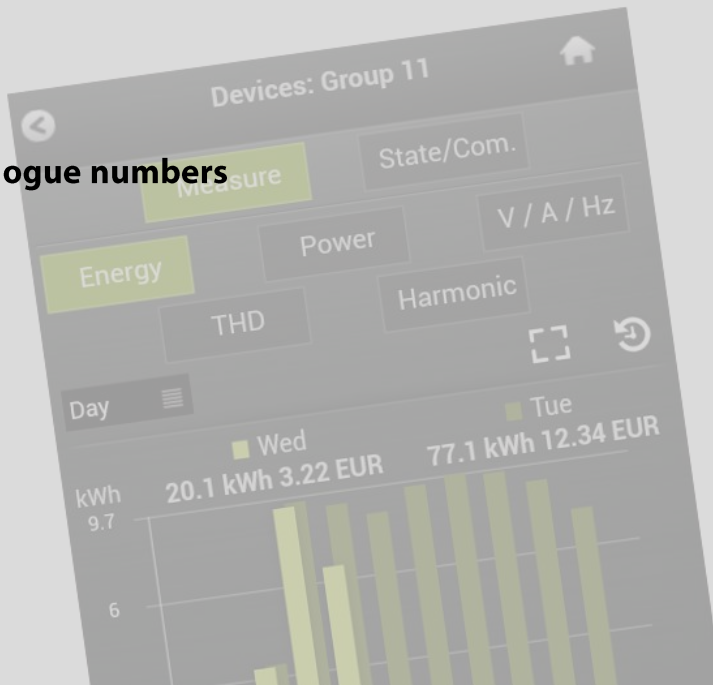
System requirements



Display possible on: (Device, Operating system, Web Browser)

- iPhone:
 - 5 and following, iOS 10 and following, Safari

Catalogue numbers



PM1WS255: "Energy Web Server 255"

- Management up to 255* devices

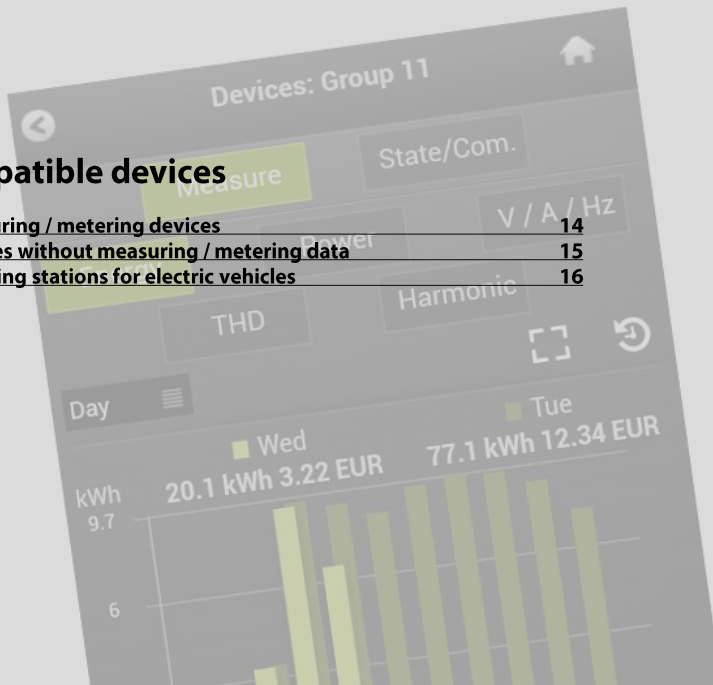
Note: 32 for each Gateway max. 32 Modbus addresses or 32 pulse counters

* Recommended value 128

Software version 3.9.0

Compatible devices

4.1	Measuring / metering devices	14
4.2	Devices without measuring / metering data	15
4.3	Charging stations for electric vehicles	16



4.1 Measuring / metering devices

– Range **BTDIN**

- Multifunction measuring devices:
 - Modular - Cat.Nos **F3N200, F4N200**
 - Standard - Cat.Nos **F3N300, F4N300**
 - Top - Cat.Nos **F3N400, F3N500, F4N400**
- Energy counters RS485 :
 - Single-phase direct connection (MID) – Cat.No **F21DM63, F21DM63N**
 - Three-phase direct connection (MID) – Cat.Nos **F41DM63, F41DM63N, F41DM125**
 - Three-phase connection with CT (MID) – Cat.No **F41TMA, F41TMAN**
- Energy counters pulse output (with the Concentrator Cat.Nos **F80BI***, **F4CON12*** or **F4CON***):
 - Single-phase direct connection – Cat.Nos **F20D32** (Standard), **F20DM63** (MID) , **F20DM63N** (MID)
 - Three-phase direct connection (MID) – Cat.Nos **F40DM63, F40DM63N**
- RCD add-on module with integrated counting - Cat.Nos **G47XM63, G47XM125** and with integrated measuring- Cat.Nos **G47XCM63, G47XCM125**
 - via the communication module Cat.No **M7COM**

– Range **EMS BTDIN**

- Multifunction measuring devices:
 - Single-phase connection via Closed Rogowski coil(s) - Cat.Nos **F80BM3M63** and **F80BMM63**
 - Three-phase connection via Closed Rogowski coil(s) - Cat.Nos **F80BMT63** and **F80BMT125**
 - Single-phase or Three-phase (configurable) connection with CT - Cat.No **F80BMT**
 - Three-phase connection via Open Flexible Rogowski coils - Cat.Nos **F80BMR630, F80BMR1600, F80BMR3200** and **F80BMR6300**
- State and Control modules:
 - Signalling Auxiliary Contact (CA + SD) - Cat.Nos **F80BCR**
 - Universal State Module - Cat.Nos **F80BVS**
 - State & Control Module for Latching relays and Contactors - Cat.Nos **F80BCS**
 - Universal Control Module - Cat.Nos **F80BC**
- via Modbus RS485/EMS BTDIN interface - Cat.No **F80BIM1**

– Range **MEGATIKER**

- **M2 250 electronic, M4 630 electronic, M5 1600 electronic only** versions with **integrated measurement unit**
 - via the communication module Cat.No **M7COM**

– Range **MEGABREAK** with protection unit – touchscreen (Cat.Nos **MP6SH/TH**)

- via the communication module Cat.No **M8COM**

- Gas counters
 - Any device with pulse output via the Concentrator Cat.Nos **F80BI***, **F4CON12*** or **F4CON***
- Water counters
 - Any device with pulse output via the Concentrator Cat.Nos **F80BI***, **F4CON12*** or **F4CON***

* **Note:** Pulse Concentrator must be properly programmed to be compatible with the type of counter (Refer to the pulse concentrator's user manual)

- “Generic” Measurement/Counting Devices with Modbus RS485 output
 - Any “other manufacturers” meter or counter with Modbus RS485 output, **limited only to positive active energy**

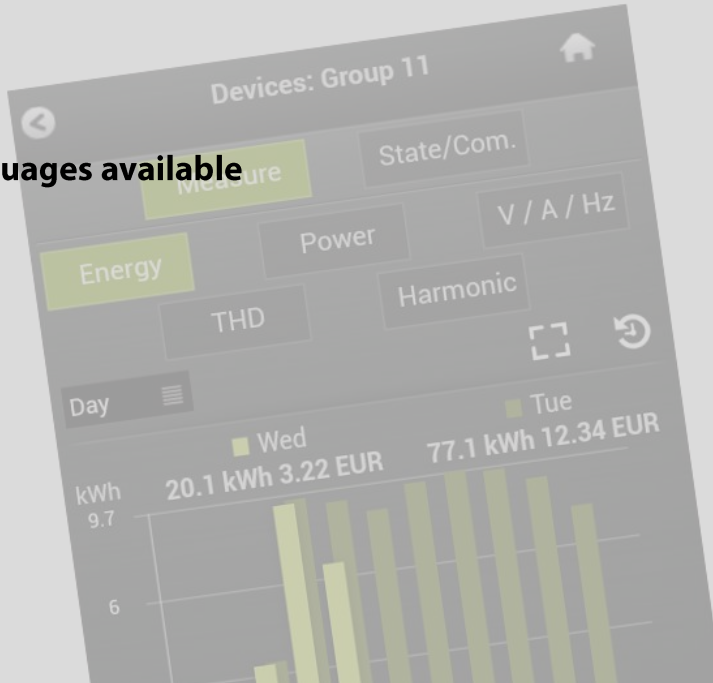
4.2 Devices without measuring / metering data

- Range **MEGATIKER**
 - **M2 250 electronic, electronic with integrated RCD and thermal-magnetic with integrated RCD**
 - **M4 630 electronic**
 - **M5 1600 electronic**
 - via the communication module Cat.No **M7COM**
- Range **MEGABREAK** with protection unit – LCD screen (Cat.Nos **MP6BA/SA/TA**)
 - via the communication module Cat.No **M8COM**
- Range **RS485 power supervision system** devices
 - Signalling and control interface - Cat.No **M7TIC/IO**
 - Module programmable output - Cat.No **M7TICPROG**

4.3 Charging stations for electric vehicles

- Range **Green'Up™ "Premium" (New range)**
 - Single-phase stations - Mode 3 (Cat.Nos **0 590 00/01**)
 - Single-phase stations - Modes 2 and 3 (Cat.Nos **0 590 30/35/41/42/43/44**)
 - Three-phase stations - Mode 3 (Cat.Nos **0 590 02**)
 - Three-phase stations - Modes 2 and 3 (Cat.Nos **0 590 48/49**)
 - via the communication kit Cat.No **0 590 56** (1 Modbus address for a single side station, 2 Modbus addresses for a double side station)
- Range **Green'Up™ (Old range)**
 - "One-side" Stations, single-phase without RFiD (Cat.Nos **0 590 31/33/37/76/91/93**)
 - "Two-sides" Stations, single-phase without RFiD (Cat.Nos **0 590 32/34/38/77/78**)
 - "One-side" Stations, single-phase with RFiD (Cat.Nos **0 590 61/63**)
 - "Two-sides" Stations, single-phase with RFiD (Cat.Nos **0 590 40/57/58**)
 - "One-side" Stations, three-phase without RFiD (Cat.Nos **0 590 45/94/95**)
 - "Two-sides" Stations, three-phase without RFiD (Cat.Nos **0 590 96/97**)
 - "One-side" Stations, three-phase with RFiD (Cat.Nos **0 590 46/64/65**)
 - "Two-sides" Stations, three-phase with RFiD (Cat.Nos **0 590 47/66/67**)

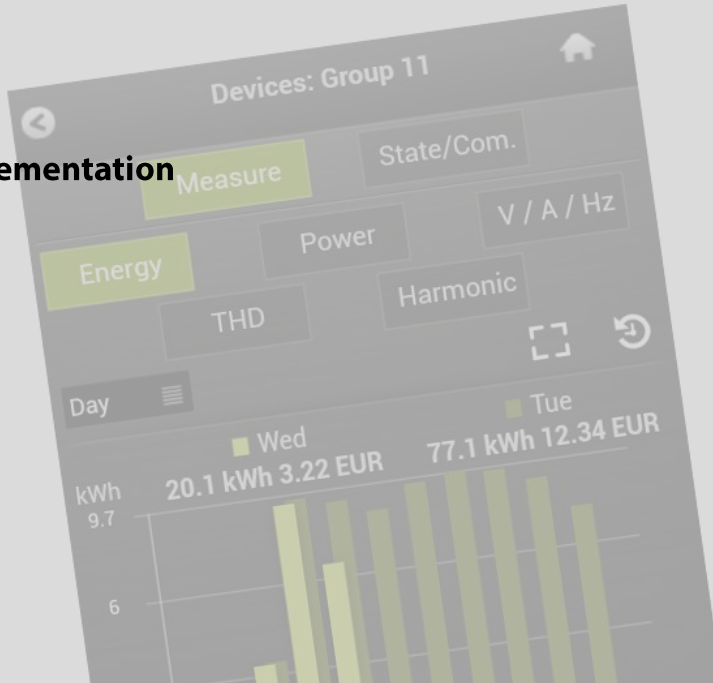
Languages available



- **Languages:**

- 中国
- Deutsch
- English
- Español
- Français
- Français (Belgique)
- Ελληνικά
- Italiano
- Nederlands (België)
- Nederlands
- Polski
- Portuguese
- Русский

Implementation



ATTENTION!

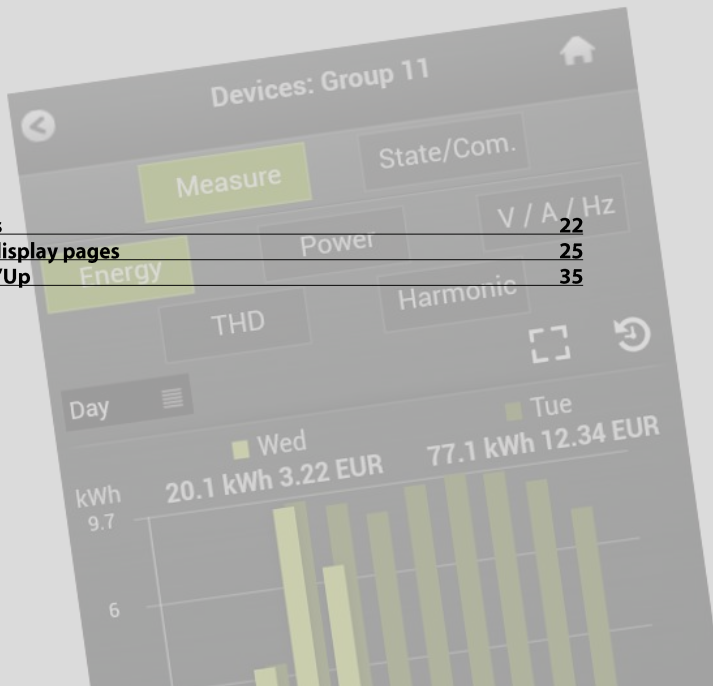
The procedures for configuring the Web Server (Web Server configuration) and the System (System configuration) are only possible by accessing the Web server by a computer.

(refer to the "User manual")

By working locally on Smart-phones are available all display pages of devices and of consumptions.

Use

7.1	Access	22
7.2	Data display pages	25
7.3	Green'Up	35



7.1 Access

The access to the Web Server's data is protected by identification codes (PIN and PUK codes).

Three types of "default" users are configured:

- "administrator"
- "installer"
- "user"

The home page ("home") will be different depending on the type of user that access to the device.

7.1.1 Access rights

- "administrator"

Access to the pages:

- My panel board
- Consumptions: data & diagrm.

Default access PIN code:

99999 (5 characters)

Default access PUK code:

00000 9999 00000 (14 characters)

- "greenUp"

Access to the pages:

- My panel board
- Consumptions: data & diagrm.
- Green'Up

Default access PIN code:

88888 (5 characters)

Default access PUK code:

00000 8888 00000 (14 characters)

- "installer"

Access to the pages:

- My panel board
- Consumptions: data & diagrm.

Default access PIN code:

55555 (5 characters)

Default access PUK code:

00000 5555 00000 (14 characters)

- "user"

Access to the pages:

- Consumptions: data & diagrm.

Default access PIN code:

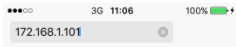
11111 (5 characters)

Default access PUK code:

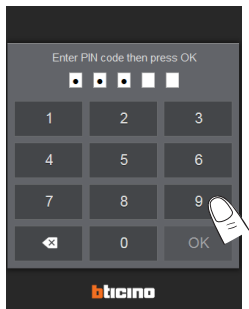
00000 1111 00000 (14 characters)

7.1.2 Login procedure

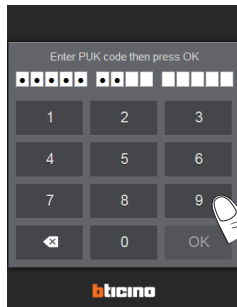
Connect to the Web Server from your smart-phone by typing in the web browser the **IP address** set in the configuration procedure (refer to the “User manual” § 7.5)



Web Server's login page appears



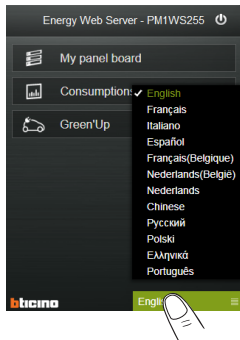
Type the access PIN code **88888** (default PIN) then press on “OK”.



Type the access PUK code **00000 8888 00000** (default PUK) then press on “OK”.

Web Server's home page appears


7.1.3 Changing of the display language

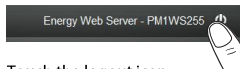


In the Web Server's Login page or in the Home page, touch on the list box in the lower part of the page to choose the proper language.

Note: this operation doesn't change the default language. To change the default language follow the procedure described in the User manual (§ 7.8.1)

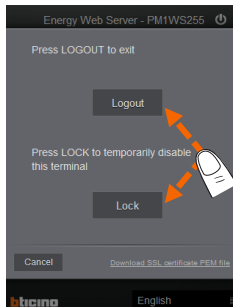
7.1.4 Logout procedure

The Logout icon  appears in the Web Server's home page.



Touch the logout icon.

A confirmation page appears.



Touch "Logout" or "Lock" to confirm the exit from the web server.

Note:

Logout → closing the session; reconnection with the PIN code.

Lock → temporary disabling of the application; reconnection with the codes PIN + PUK.

7.2 Data display pages

7.2.1 My panel board

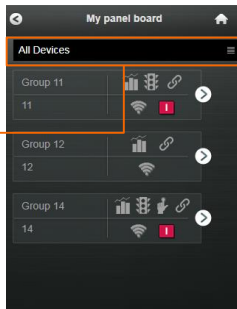
"Devices" page allows to view the consumption of each device added by the users.



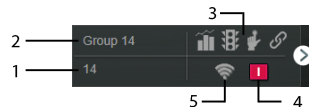
In the Web Server's home page press on "Devices"

Devices list's page appears. This page shows the devices added with their characteristics and status icons.

Possibility to choose a device per "Gateway", "Panel board" or "All devices".



• Description of the device selection button



1. Modbus Address (Modbus Address - Position for counters with pulse output or Modbus Address - Side for charging stations "two" sides or Modbus Address - Indication of the virtual device type for the Master/Slave function)
2. Name of the device
3. Symbols of the functions associated to the Device
 - Measure
 - State
 - Command
 - Link Functionality
4. This symbol appears only if the Device integrates the state function related to a protection device and shows the circuit-breaker state:
 - Open
 - Closed
 - Tripped
5. Device status
 - On
 - Off
 - Communication error
 - Charging station failure (for charging stations only). The detailed list of the errors is displayed in the Devices menu (see page 27)

The procedure to switch ON/OFF a device is described in the "User Manual" (§ 7.12.1).



In the Devices list's page press on a Device button.

Details page of the selected device appears.

The page is divided into two parts:

section **A** is the area where is possible to select two pages:

- Measure: display of the quantities measured by a device:

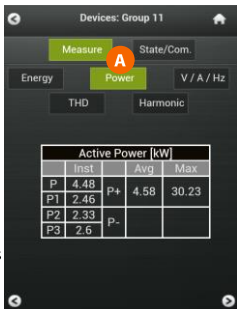
- Electricity measuring device: Energy, Power, Voltages/Currents /Frequency, THD (if available on the Device) and Harmonics (if available on the Device)

Note: for “generic” measurement/counting devices and “Virtual” devices created with the Master/Slave function, only the table with the value of positive active energy is available.

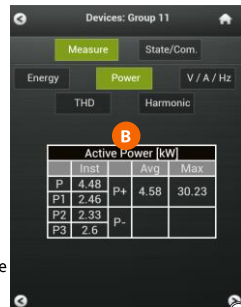
- Water Counters: Water consumptions

- Gas Counters: Gas consumptions

- State/Com.: page dedicate to EMS BT DIN devices; display of devices status, control buttons... for each EMS BT DIN device/group of devices



section **B** shows the values measured by the selected device.



Touch the two arrows in the lower part of the page to view the different tables for the selected quantity (e.g. for Power: Active, Reactive and Apparent power).

For Green'Up users, the details page is the following:



In the Devices list's page press on a Charging station's button.

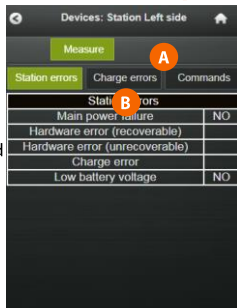
Details page of the selected station appears.

The page is divided into two parts:

section **A** is the area where it's possible to select which maintenance page of the selected charging station display:

- Station errors
- Charge errors
- Commands

section **B** shows the status of the charging station or of the charging process and offer the possibility to enable or disable the EV plug or Domestic plug.



For "Power Supervision System Devices", page "My panel board" it is structured as follows:

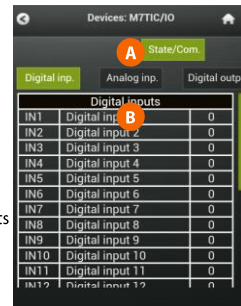


section **A** is the area where is possible to select :

- a page showing the status of digital and analogue inputs (for M7TIC/IO)

- a page showing the status and for command of the digital outputs (for M7TIC/IO and M7TICPROG)

section **B** shows inputs/outputs status and command buttons of outputs



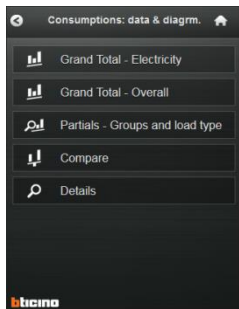
7.2.2 Consumptions: data & diagram.

"Consumptions" page allows to view the global or detailed consumptions of the devices added by the users.



In the Web Server's home page press on "Consumptions".

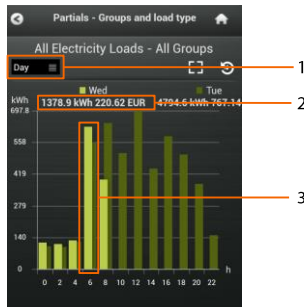
Consumptions page appears.



Are available 5 ways of displaying data:

- **Grand Total - Electricity** (Electrical Consumptions of the entire installation)
- **Grand Total - Overall** (Overall Consumption of the installation)
- **Partials** (Consumptions per Load and/or Measure group)
- **Compare** (Comparison of the Global Consumptions between two Devices)
- **Details** (Consumptions of a single Device)

For each page are available:



1. Histograms of the consumptions divided per:

- Day (per hours)
- Month (per days)
- Year (per months)

2. Values in:

- Wh (and multiples of Wh), dm^3 (and multiples of dm^3) of water, dm^3 (and multiples of dm^3) of gas and "Wh (and multiples of Wh) equivalent" of gas.
- Note:** displayed values (resolution, decimal values, etc.) depend only on the quantities read by the measuring instruments.
- EUR (or other configured currency)

3. Comparison between the actual and the previous value (ex. today/yesterday, etc.)

• Grand Total - Electricity



In the Consumptions menu page press on "Grand Total - Electricity".

Visualization of Total Energy (Ea+) Consumptions on histograms.

Press "Day", "Month" or "Year" to view consumptions on a different time period (Day (per hours) / Month (per days) / Year (per months)). Press "Data" to view the table with the values (in Wh and Currency) of global consumptions in different time periods.

Histograms divided per Load



Note: in this visualization, consumption data for "virtual" devices not excluded from Total are also taken into account.

• Grand Total - Overall



In the Consumptions menu page press on "Grand Total - Overall".

Visualization of Overall Consumptions of the system on tables and on a pie chart showing:

- consumptions subdivided per type:

Electricity (orange area)

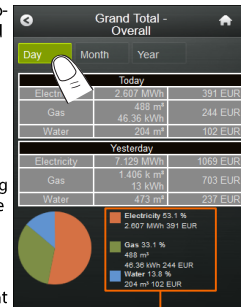
Gas (green area)

Water (blue area)

- consumptions valued according to the measurement unit and the currency set

Press "Day", "Month" or "Year" to view consumptions on a different time period (Day (per hours) / Month (per days) / Year (per months)).

The percentage shown in the pie chart is calculated based on the currency set



Note: in this visualization, consumption data for "virtual" devices not excluded from Total are also taken into account.

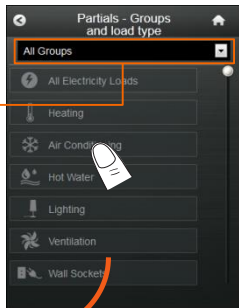
• Partials - Groups and Loads



In the Consumptions menu page press on "Partials - Groups and Load type".

Loads list's page appears.

This page shows "pre-defined" loads and loads added by the users;
Possibility to choose a load filtering the research per "Measure Group".



Pressing on a load button the partials consumptions page appears.

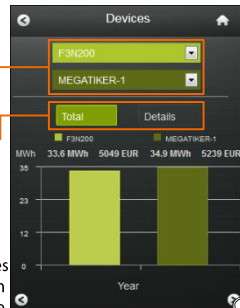
Press the drop-down menu to view histograms over a different time period (Day/Month/Year).

• Compare



In the Consumptions menu page press on "Compare".

Comparison page of Consumptions between two Devices.



Selection of two devices to be compared

Selection of Total or Detailed comparison between the two selected devices

Note: Selecting two non homogeneous Measuring Devices (ex Electricity and Gas), comparison is evaluated only according to the currency (EUR or other currency) and not according to the measurement units. It is not possible to compare kWh of energy and "Equivalent kWh" of gas.

Touch the two arrows in the lower part of the page to view the comparison histograms on a different time period (Day / Month / Year).

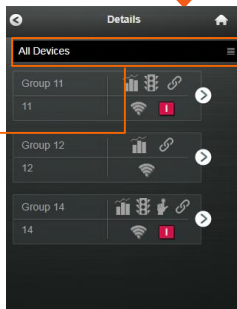
• Details



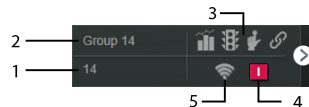
In the Consumptions menu page press on "Details".

Devices list's page appears.
This page shows the devices added by the users with their characteristics and status icons.

Possibility to choose a device per "Group", "Load" or "All devices".



• Description of the device selection button



1. Modbus Address (Modbus Address - Position for counters with pulse output or Modbus Address - Side for charging stations "two" sides or Modbus Address - Indication of the virtual device type for the Master/Slave function)
2. Name of the device
3. Symbols of the functions associated to the Device
 - Measure
 - State
 - Command
 - Link Functionality
4. This symbol appears only if the Device integrates the state function related to a protection device and shows the circuit-breaker state:
 - Open
 - Closed
 - Tripped
5. Device status
 - On
 - Off
 - Communication error

The procedure to switch ON/OFF a device is described in the "User Manual" (§ 7.12.1).



In the Devices list's page press on a Device button.

Details page of the selected device appears.

The page is divided into two parts:

section **A** is the area where is possible to select two pages:

- Measure: display of the quantities measured by a device:

- Electricity measuring device: Energy, Power, Voltages/Currents /Frequency, THD (if available on the Device) and Harmonics (if available on the Device)

Note: for "generic" measurement/counting devices and "Virtual" devices created with the Master/Slave function, only Energy histograms are available.

- Water Counters: Water consumptions

- Gas Counters: Gas consumptions

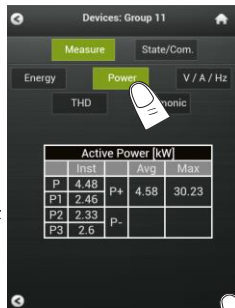
- State/Com.: page dedicate to EMS BT DIN devices; display of devices status, control buttons... for each EMS BT DIN device/group of devices

section **B** shows histograms of the consumptions, values measured by the selected device, status icons (if available).



Press the drop-down menu to view energy histograms over a different time period (Day/ Month/Year).

Press on one of the buttons to view the other measured electrical quantities.




Use two arrows in the lower part of the page to display the different tables for the selected electrical quantity (e.g. for the Power: Active, Reactive and Apparent power and Power factor).

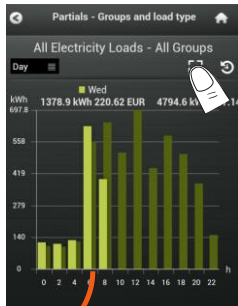
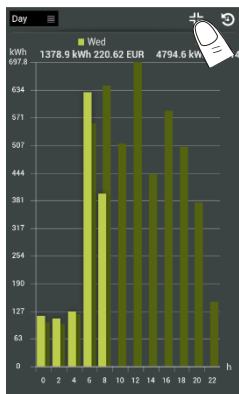
Energy Web Server

• Advanced histograms display


For consumptions histograms of the menus "Partial – Groups and Load types" and "Details", an advanced display mode is available.

- Full screen display

Pressing on the button , histograms can be enlarged to full screen on the device.




Note: image format and resolution will depend on the screen on which the data will be displayed (see example for a 4,5" screen).

To return to the standard format, press the button  at the top right.

- Detailed view and direct download of data



Pressing on the button , it is possible to browse the histograms in detailed mode by :

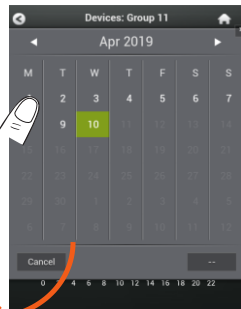
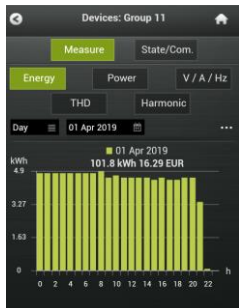
- Day (per hours)
- Month (per days)
- Year (per months)
- 10 years (per years)

Press the drop-down menu to select the histogram viewing period (Day, Month, Year, 10 years).





Example: display by "Day" and choice of a specific date in the selected period.



Pressing on the three points "...", another set of options is displayed.

Pressing on two arrows (◀ or ▶), it is possible to pass from one to another histogram in the selected period (e.g. today, yesterday, two days ago, ...).

Pressing on the button (⬇️), it is possible to download a ".csv" file named "datalogger.csv" with the data saved by the web server in the selected period.

Pressing on the button (↺️), it is possible to return to the standard view.

Note: it is still possible to put in full screen this type of histogram by pressing the button (⌕).



7.3 Green'Up

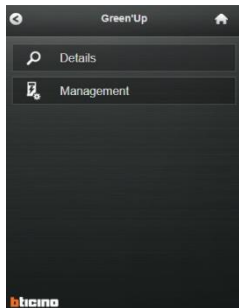
"Green'Up" page allows to manage the Charging Stations for electrical vehicles.



In the Web Server's home page press on "Green'Up".

Green'Up page appears.

This page allow you to view the Details and Manage several options for the Charging Stations added by the users.



• Details



In the Green'Up menu page press on "Details".

Devices list's page appears.

This page shows the charging stations added by the users with their characteristics and status icons.

Possibility to choose a station per "Group", or "All devices".





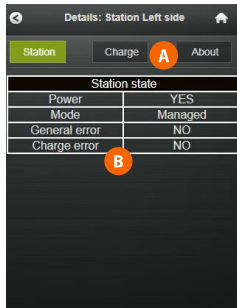
In the Devices list's page press on a Charging station's button.

Details page of the selected device appears.

The page is divided into two parts:

section **A** is the area where is possible to select the details of the selected station that will be displayed in the section **B** :

- Station: shows the state of the selected station (station powered-on, managed, in error, etc.)
- Charge: shows the state of the charging process (station available or busy, etc.)
- About: shows the information about the station and its characteristics (rated current, firmware and hardware version, etc.)



• Management



In the Green'Up menu page press on "Management".

Devices list's page appears.

This page shows the charging stations added by the users with their characteristics and status icons.

Possibility to choose a station per "Priority", "Group" or "All devices".





In the Devices list's page press on a Charging station's button.

Green'Up management page appears.

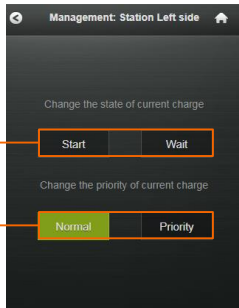
In the page is possible to manage:

–the state of the current charging process for the selected station or side of station:

Start / Wait

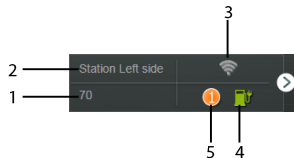
–the priority of the current charging process for the selected Station or side of station:

Normal / Priority



Note: these two settings affect only the current charging process. They don't change the default parameters of the stations! (refer to the "User manual" for set the default configuration of each Charging Stations added by the user)

• Description of the device selection button



1. Modbus address (Modbus address- Side for the "two-sided" charging stations of the old range)
2. Name of the Charging station
3. Device status:
 - On
 - Off
 - communication error
 - charging station failure. The detailed list of the errors is displayed in the Devices menu (see § 7.2.1)
4. State of the charging station:
 - charging station available and ready to start a charging process
 - charging in progress
 - charging station in wait mode
5. Priority of the charging station/side of the charging station
 - no symbol: Normal
 - Priority charging station

FAQ



ATTENTION!

Downloading and management of files .CSV and all other functions (management of the database, network types, terms of access and Backup/Restore procedure) are possible only by accessing the Web server by a computer (refer to the "User manual")



BTicino SpA

Viale Borri, 231

21100 Varese - Italy

www.bticino.com

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