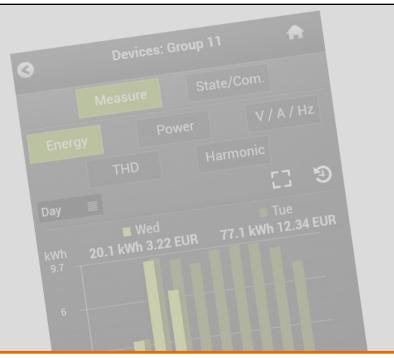


User guide







1 Licence Agreements	6
2 System requirements	10
3 Catalogue numbers	12
4 Compatible devices	14
4.1 Measuring / metering devices	14
4.2 Devices without measuring / metering data	15
4.3 Charging stations for electric vehicles	16
5 <u>Languages available</u>	18
6 Implementation	20
7 <u>Use</u>	22
7.1 Access	22
7.1.1 Access rights	22
7.1.2 Login procedure	23
7.1.3 Changing of the display language	24
7.1.4 Logout procedure	24
7.2 Data display pages	25
7.2.1 My panel board	25
7.2.2 Consumptions: data & diagrm.	27
7.3 Green'Up	35
8 FAQ	40







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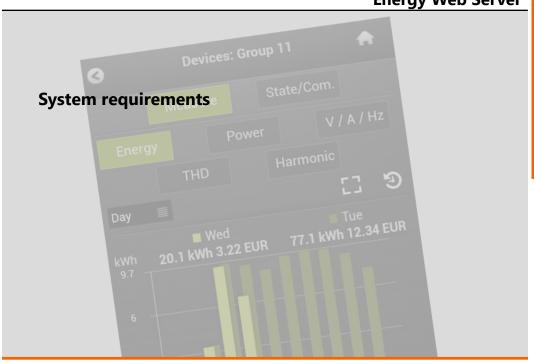
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This Agreement will be governed by Italian Law.

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.



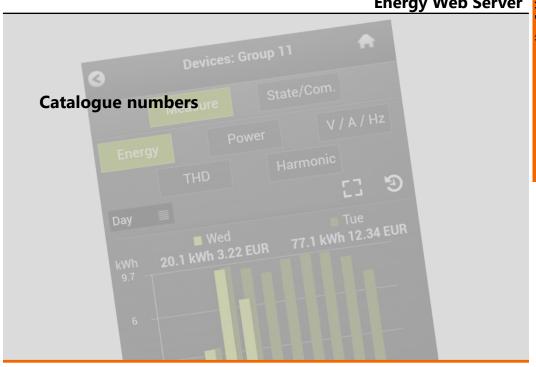






Display possible on: (Device, Operating system, Web Browser)

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





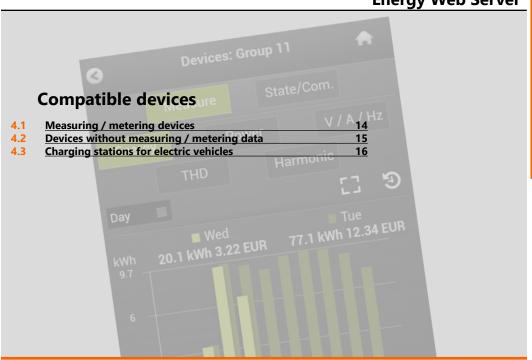
PM1WS255: "Energy Web Server 255"

Management up to 255* devices

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

* Recommended value 128

Software version 3.10.0





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

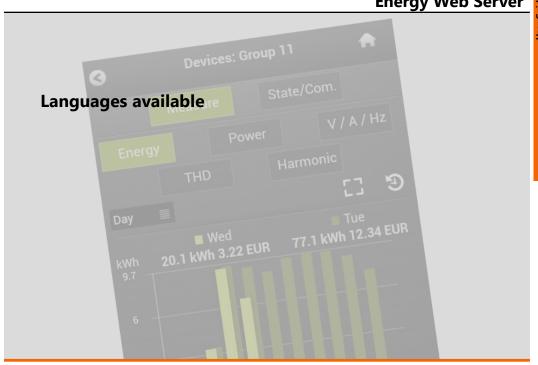
- 4.2 Devices without measuring / metering data
- Range MEGATIKER
 - M2 250 electronic, electronic with integrated RCD and thermal-magnetic with integrated RCD
 - M4 630 electronic
 - M5 1600 electronic
 - via the communication module Cat.No M7COM
- Range MEGABREAK with protection unit LCD screen (Cat.Nos 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™ " Premium with integrated DC protection" (New range)
 - Single-phase stations Mode 3 (Cat.Nos 0 580 00/01)
 - Single-phase stations Modes 2 and 3 (Cat.Nos 0 580 30/35/41/42/43/44)
 - Three-phase stations Mode 3 (Cat.Nos 0 580 02)
 - Three-phase stations Modes 2 and 3 (Cat.Nos 0 580 48/49)
 - Single-phase stations Mode 3 with RFiD (Cat.Nos 0 590 05/06)
 - Single-phase stations Modes 2 and 3 with RFiD (Cat.Nos 0 590 70/71)
 - Three-phase stations Mode 3 with RFiD (Cat.Nos 0 590 07)

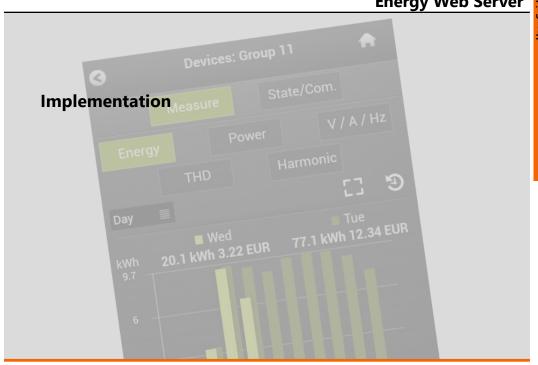
- Range Green'Up™ (Old range)
 - "One-side" Stations, single-phase without RFiD (Cat.Nos 0 590 31/33/37/76/91/93)
 - "Two-sides" Stations, single-phase without RFiD (Cat.Nos 0 590 32/34/38/77/78)
 - "One-side" Stations, single-phase with RFiD (Cat.Nos 0 590 61/63)
 - "Two-sides" Stations, single-phase 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:

- 中国
- Deutsch
- English
- Español
- Français
- Français (Belgique)
- ΕλληνικάItaliano
- Nederlands (Belgïe)
- Nederlands
- Polski
- Portuguese
- Русский





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.





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 configurated:

- "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:

Delault access FOR 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 **(b)** 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

reconnection with the PIN code.

 $\mathsf{Lock} \to \mathsf{temporary} \; \mathsf{disabling}$

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 irons

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



· Description of the device selection button



- 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).





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)



Devices: Group 11

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 BTDIN devices; display of devices status, control buttons... for each EMS BTDIN device/group of devices

section 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:



Devices: Station Left side

Charge e

Main pc

Hardware error (recoverable)

Hardware error (unrecoverable)

Charge error

Low battery voltage

n errors

NO

NO

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

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 shows inputs/outputs status and command buttons of outputs





7.2.2 Consumptions: data & diagrm.

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



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), dm³ (and multiples of dm³) of water, dm³ (and multiples of dm³) 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)

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

- -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)).



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.

Devices

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



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
- M Link Functionality
- 4. This symbol appears only if the Device integrates the state function related to a protection device and shows the circuitbreaker 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 BTDIN devices; display of devices status, control buttons... for each EMS BTDIN 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).

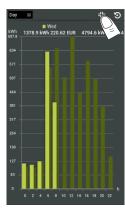


· Advanced histograms display

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.



Devices: Group 11 State/Com. Harmonic 01 Apr 2019 # 01 Apr 2019 101.8 kWh 16.29 EUR

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 Devices: Group 11

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 stationper "Group", or "All devices".







Details: Station Left side

Station state

В

Mode

General error

Charge error

*

About

YES

Managed

NO

NO

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 <u>the</u> state of the selected station (station poweredon, 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 stationper "Priority", "Group" or "All devices".





Management: Station Left side

Wait

Priority

Start

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 -the priority of the current -tharging 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



- Modbus address (Modbus address Side for the "two-sided" charging stations of the old range)
- 2. Name of the Charging station
- 3. Device status:
 - S Off
 - on com
 - communication error
- charging station failure. The detailed list of the errors 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
- Priority of the charging station/side of the charging station no symbol: Normal
 - Priority charging station







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 <u>a computer</u> (refer to the "User manual")



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