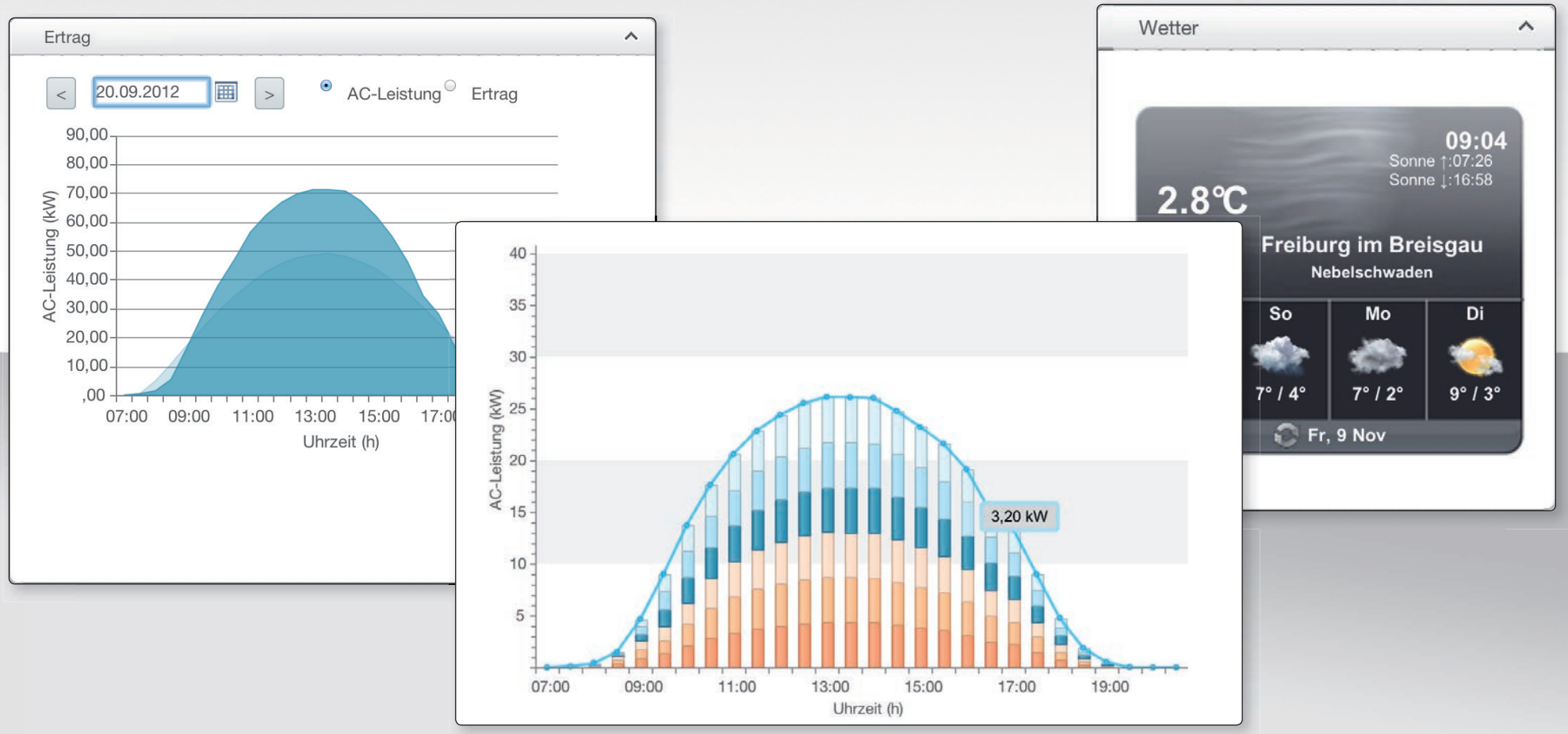

SOLIVIA Monitoring

User manual

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Manage customers (for engineers only) 33

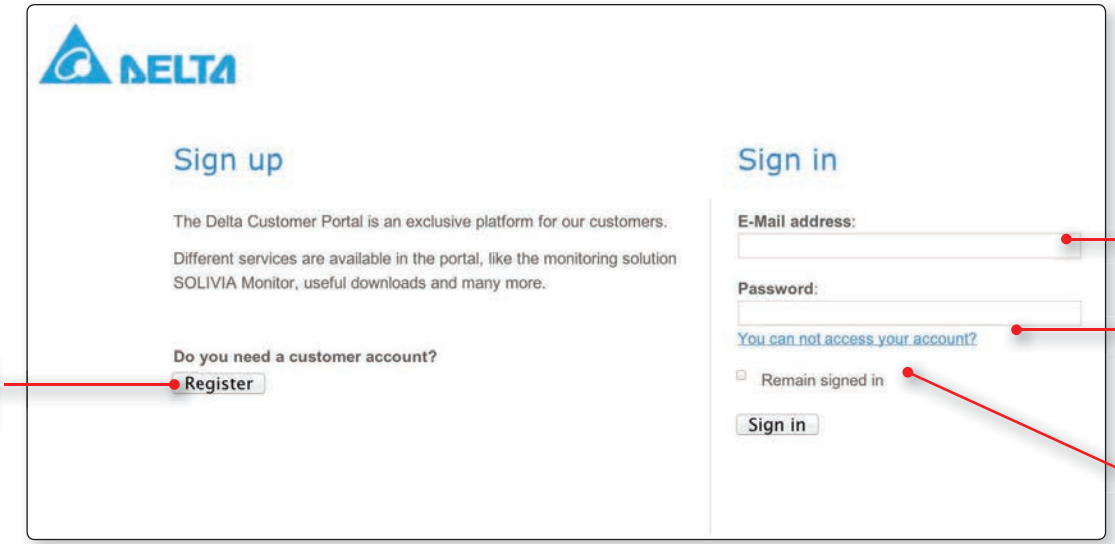
To use the SOLIVIA Monitoring Portal, you must register as a user with Delta.

If you already have a user account (e.g. via the PV Planner), you can use this login data and do not need to register again.

You can access SOLIVIA Monitoring via

http://monitoring.solar-inverter.com

(If you are reading this manual on a computer and are connected to the Internet, you can use this link to access the website directly.)

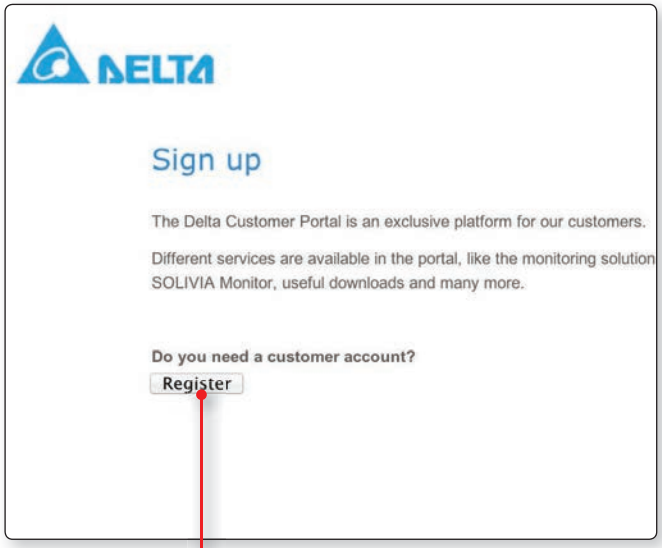


If you do not have a user account with Delta, you must register here.

If you already have a user account with Delta, you can log in here.

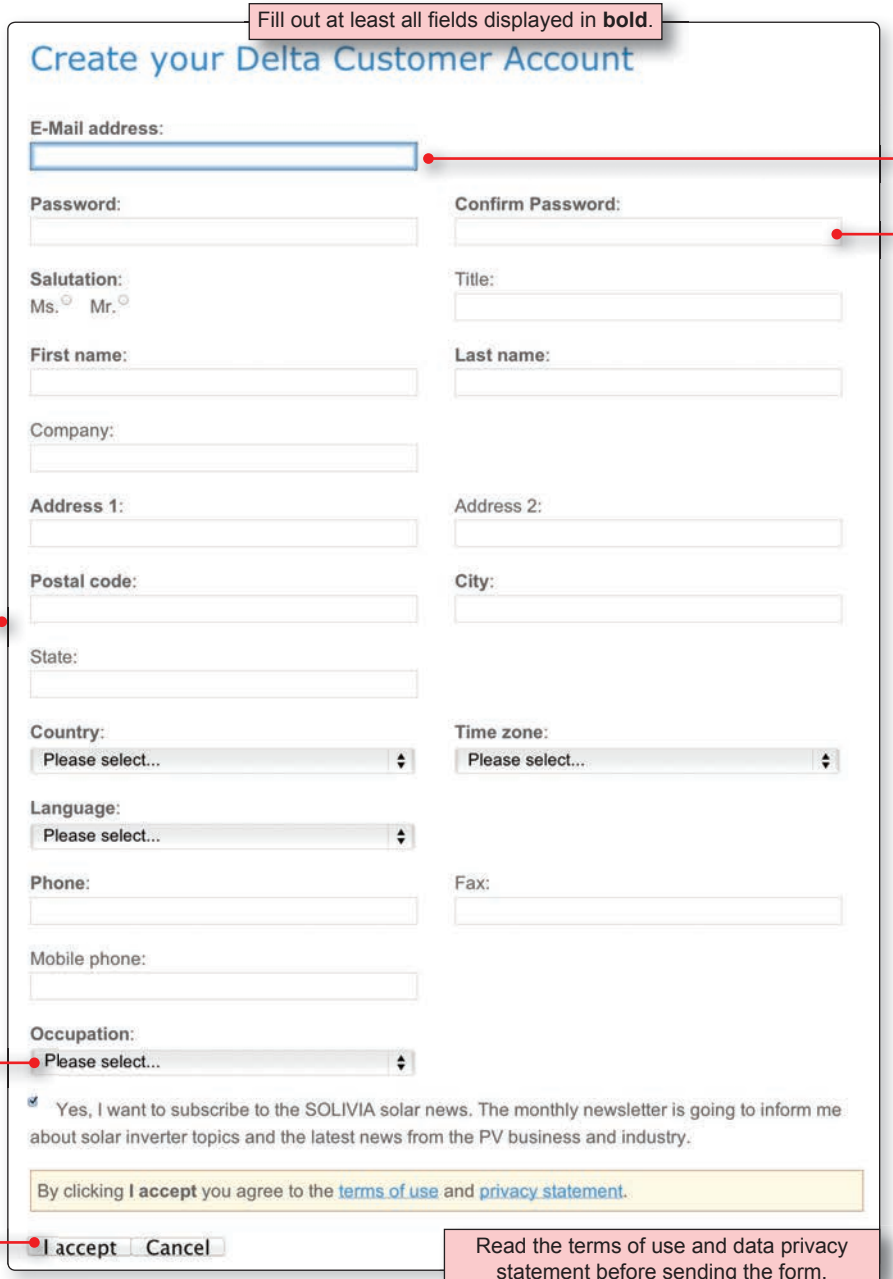
If you experience problems when logging in, you can access Help via this link.

Select this option if you wish to remain logged in even after you have closed the browser window.



Click on the **Register** button and fill out the form.

Fill out at least all fields displayed in **bold**.



Enter a valid e-mail address. After registration, an e-mail is sent to this e-mail address.

Pay attention to the tips that appear when entering your password.

Select this option if you do not wish to receive the newsletter.

To send the form, click on the **I accept** button.

Read the terms of use and data privacy statement before sending the form.

After sending the registration form, you will receive an e-mail much like the following:

Dear Mr./Ms. XY,

Thank you for registering with Delta.

Please click on the following link (within 30 days) to confirm your registration and activate your account:
https://login.solar-inverter.com/en-EN/Account/Confirm/409BC983D7E34608B74D196EB7492E6F

Click here to complete registration and activate your user account.

If you want to cancel your registration, please click on the link below:
https://login.solar-inverter.com/en-EN/Account/Disconfirm/409BC983D7E34608B74D196EB7492E6F

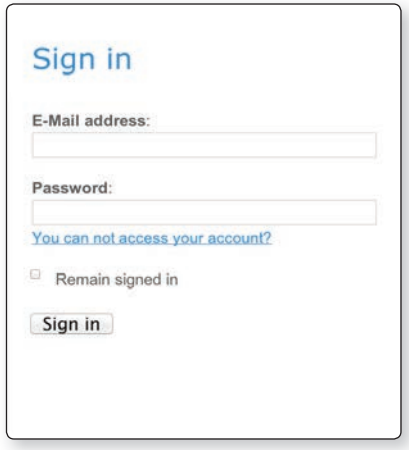
Click here if you want to undo your registration.

Your data will then be deleted from the database.

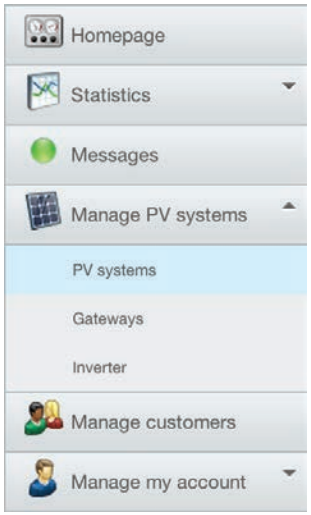
Note:
- If the links do not work, please copy them into the address bar of your browser.
- The links will become invalid after successful confirmation.

With kind regards,
Your SOLIVIA team at Delta

After completing registration, you can log in at http://monitoring.solar-inverter.com.



Set up a PV system | General information



In the *PV Systems* section, which you can access via the menu on the left of the SOLIVIA Monitoring Portal, you can create and manage your PV systems.

When creating a new PV system, you must ensure that you follow the correct sequence.

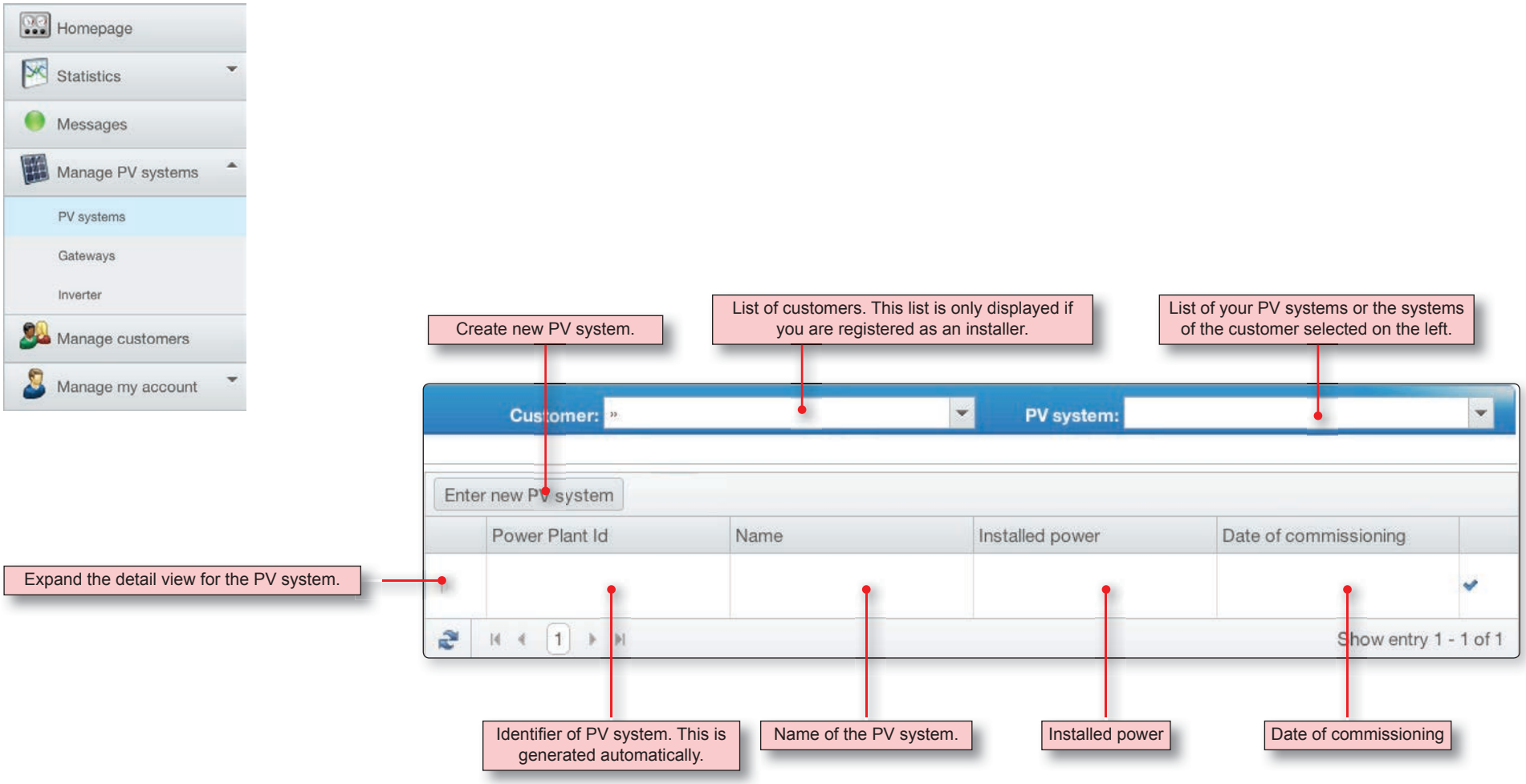
1. If the new PV system is for one of your customers and they are not yet registered in the SOLIVIA Monitoring Portal, you should first create a user account for the customer (*Manage customers* section).

   The Customer section is only displayed if you are registered as an ***installer*** in SOLIVIA Monitoring.
   ► Contact Delta Solar Support if you want to register as an installer.

2. Switch to the *Manage PV systems* section.
3. Create a new PV system and assign it to a customer, if necessary.
4. Create the data for the gateways used in the PV system.
5. Finally, enter the data for all solar power inverters that are installed in the PV system and connected to a gateway.

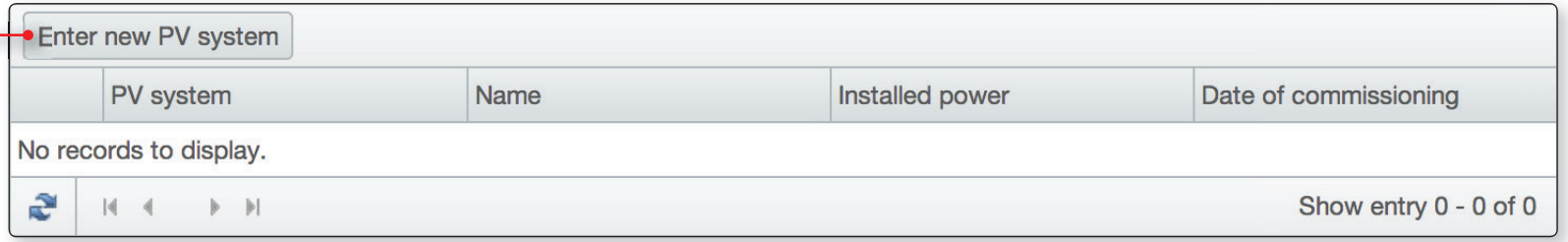
   The following pages describe the individual steps in detail.

Set up a PV system | Overview



Set up a PV system | Create a new PV system

Click on the **Create new PV system** button.

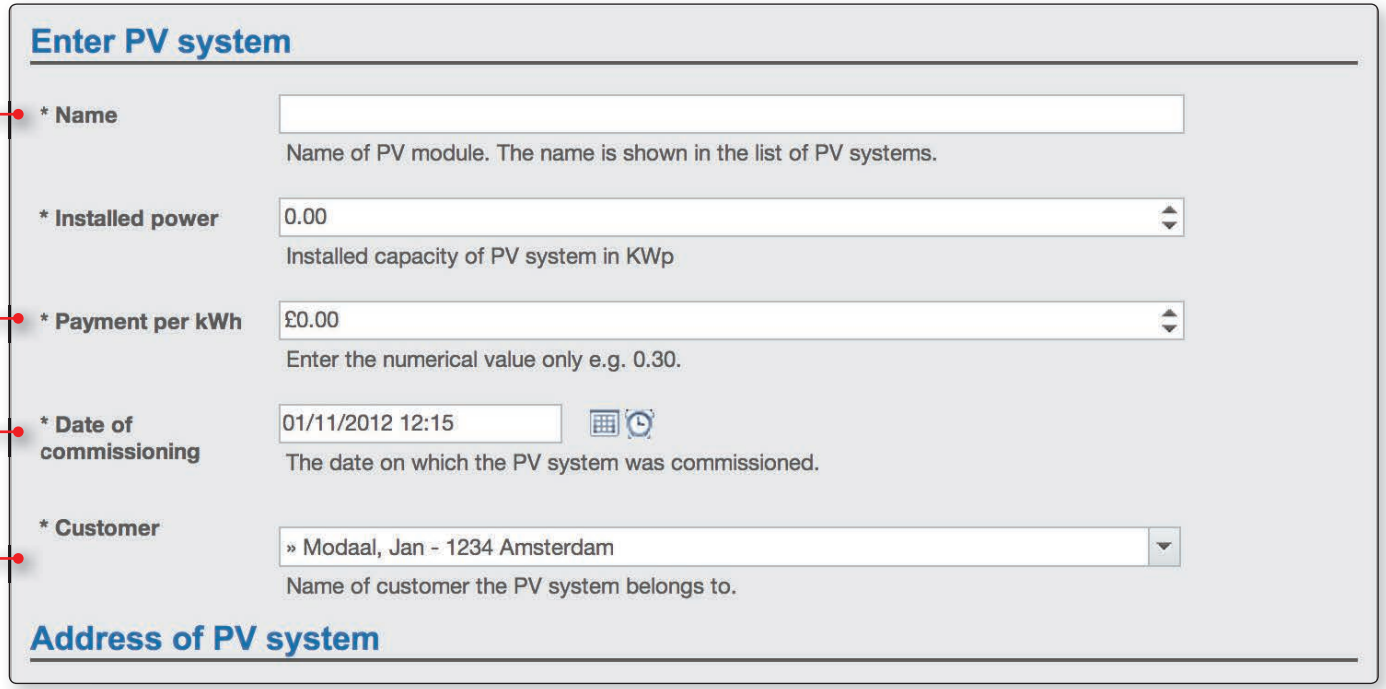


Fill out at least all the fields indicated with an asterisk (*).

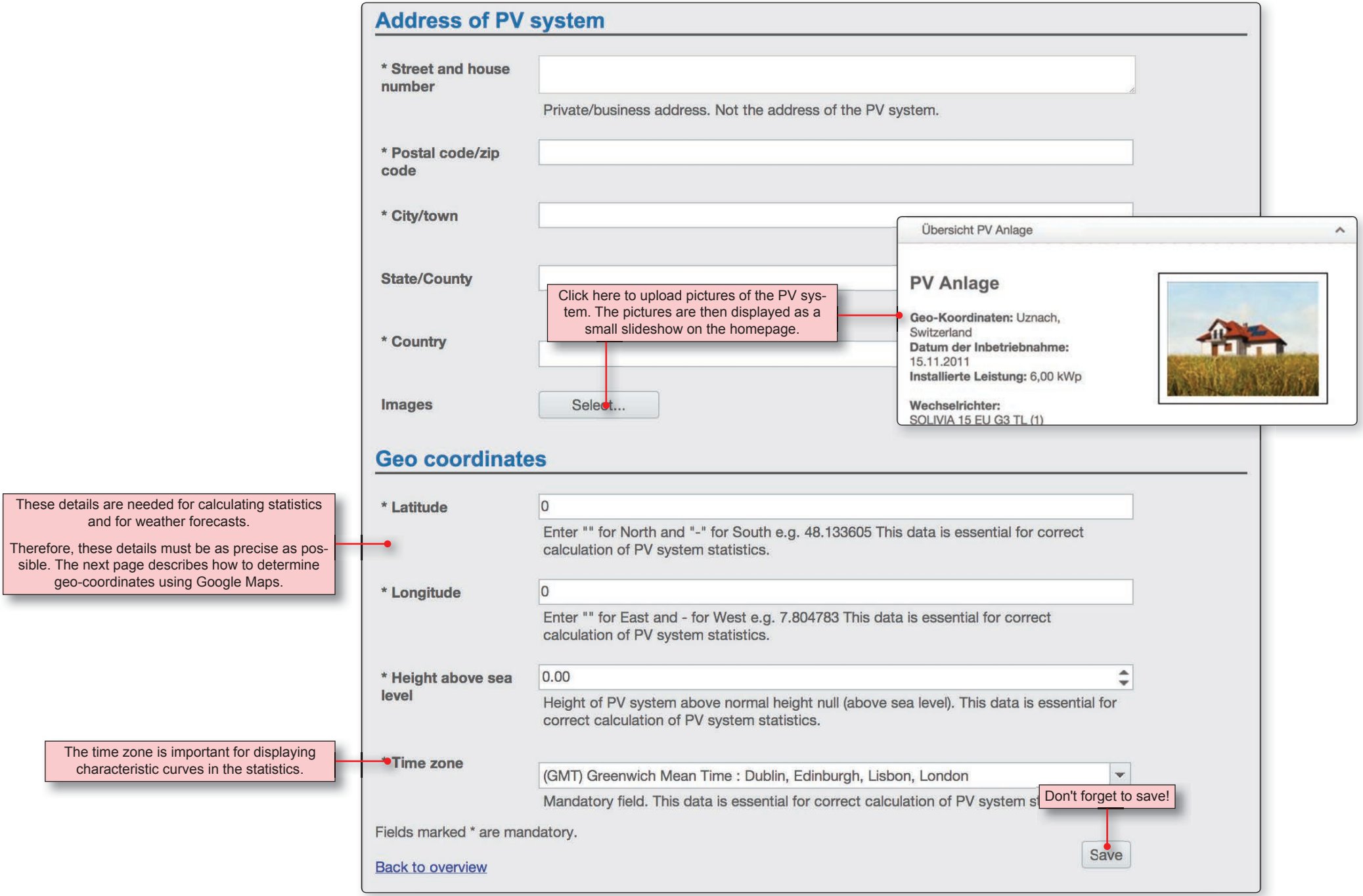
Enter only the numerical value. The currency is determined automatically.

You can enter the date directly in the field or select it by clicking on the two buttons with the mouse.

Make sure that you select the correct customer here. Otherwise, the customer will not be able to view his PV system in the portal later on.



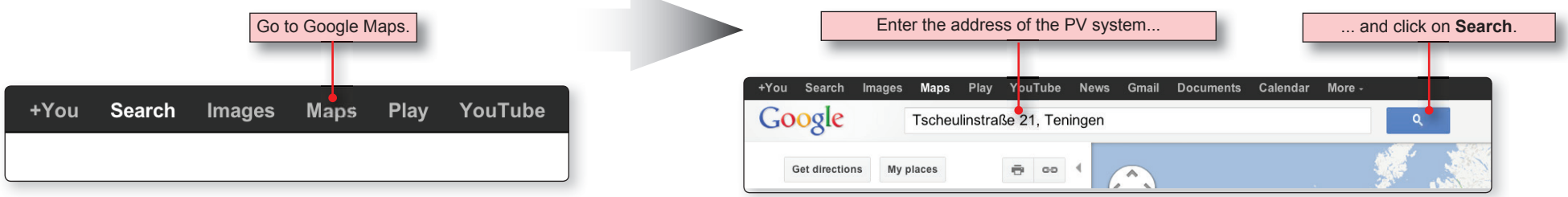
Set up a PV system | Create a new PV system

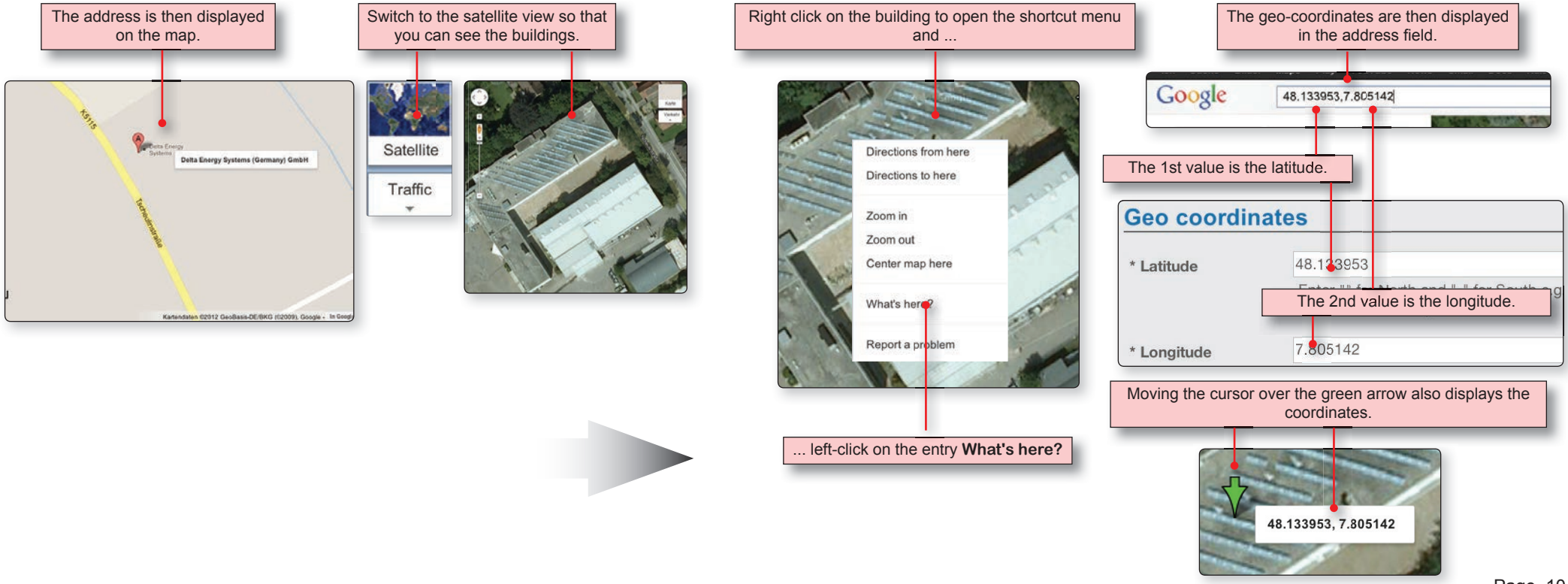


Set up a PV system | Determine geo-coordinates with Google Maps

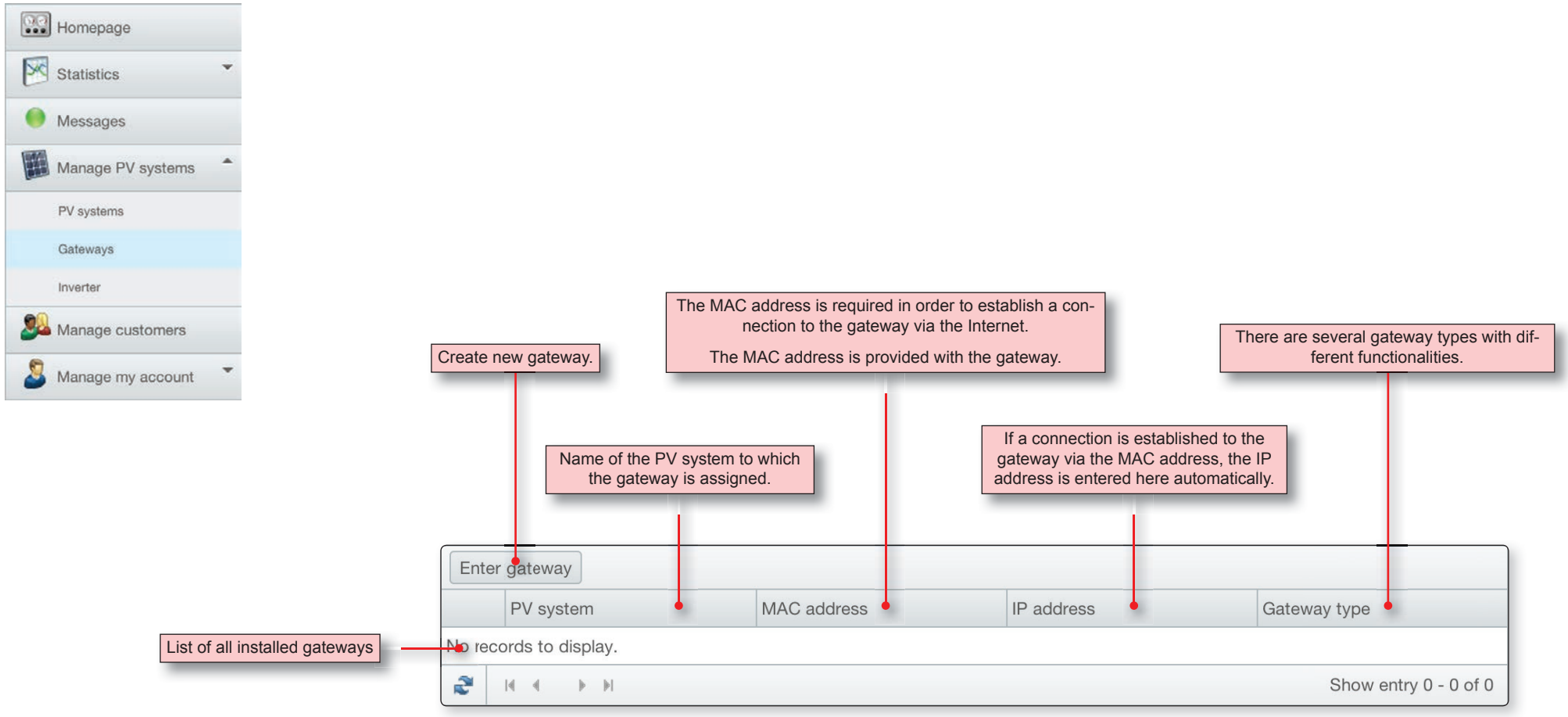
If you do not know the geo-coordinates (latitude and longitude) of the PV system, you can determine the geo-coordinates with Google Maps.

Open the Google website www.google.de





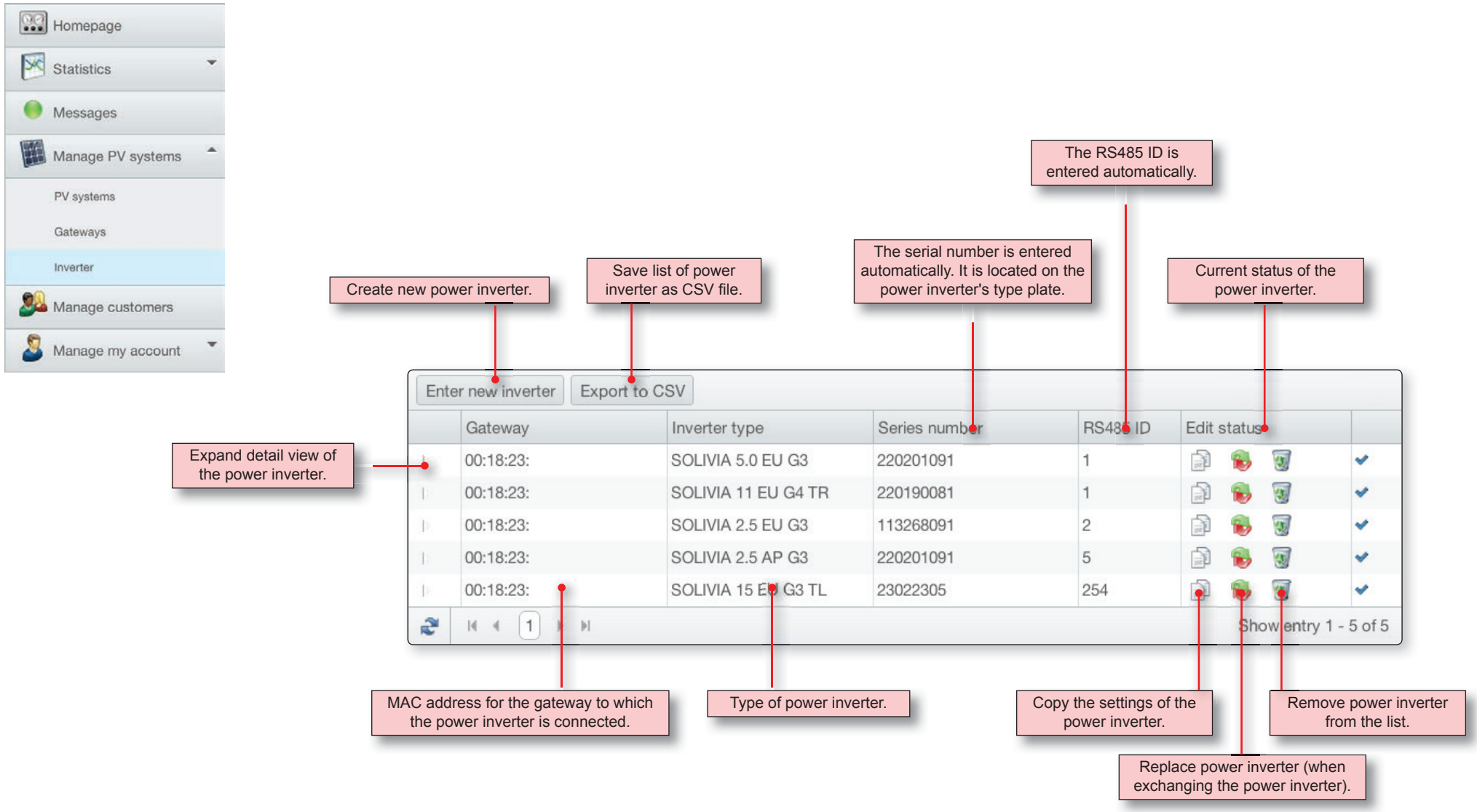
Set up a PV system | Gateways | Overview



Set up a PV system | Gateways | Create a new gateway

Before you can create a new gateway, at least one PV system must be created!
Otherwise, you will receive an error message!

Set up a PV system | Power inverter | Overview



Set up a PV system | Power inverter | Create power inverter

As soon as the gateway has been identified via the MAC address, the SOLIVIA Monitoring Portal automatically calls the connected power inverter.

If all power inverters are correctly connected with one another via the RS485 interface and a different RS485 ID is configured for every power inverter, then all power inverters are automatically recognized.

There is no need to create a power inverter manually!

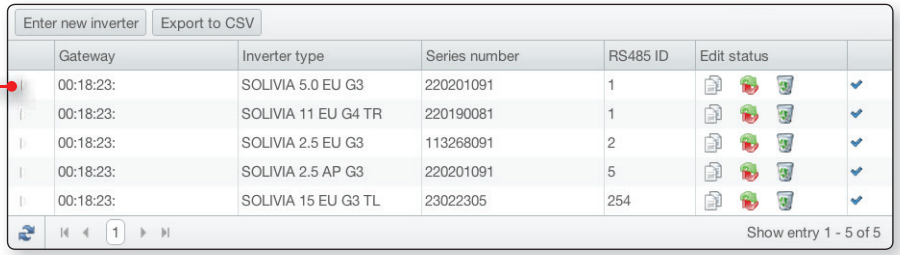
The identified power inverters are entered in the list.

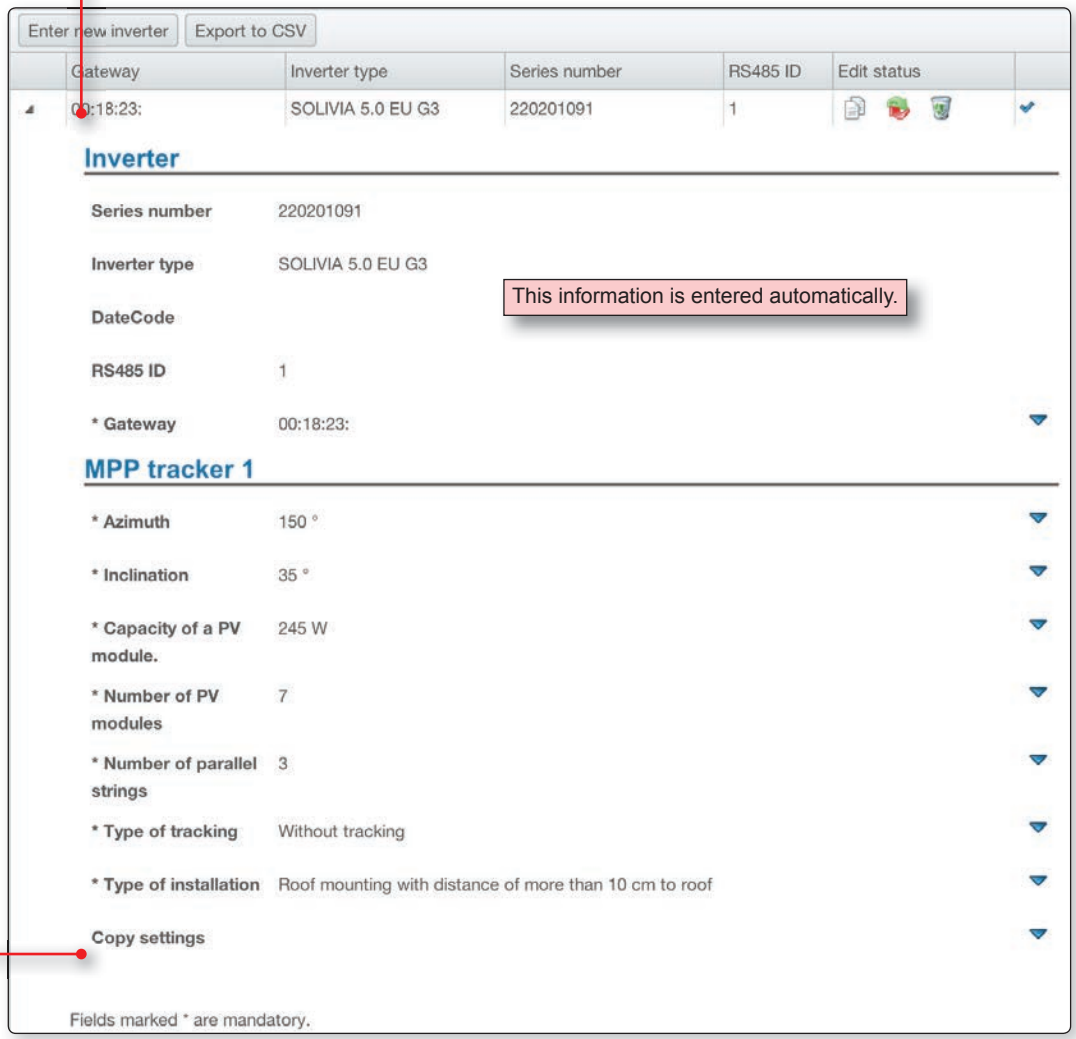
If not all power inverters of the PV system are displayed, check whether all power inverters are correctly connected with one another via the RS485 interface and a different RS485 ID is configured for every power inverter.

Each power inverter automatically transfers various information to the SOLIVIA Monitoring Portal (e.g. the serial number and the RS485 ID). This information is also displayed.

The details for the MPP tracker must be entered manually. See the descriptions on the next page.

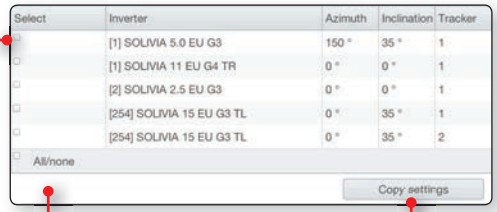
To complete the power inverter data, click here and open the file view.





This information is entered automatically.

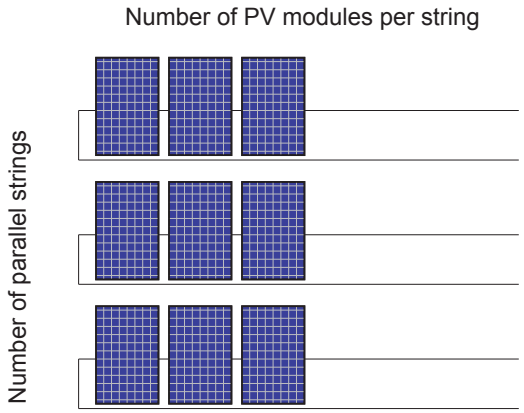
Select the power inverter to which you want to copy the settings for the current power inverter.



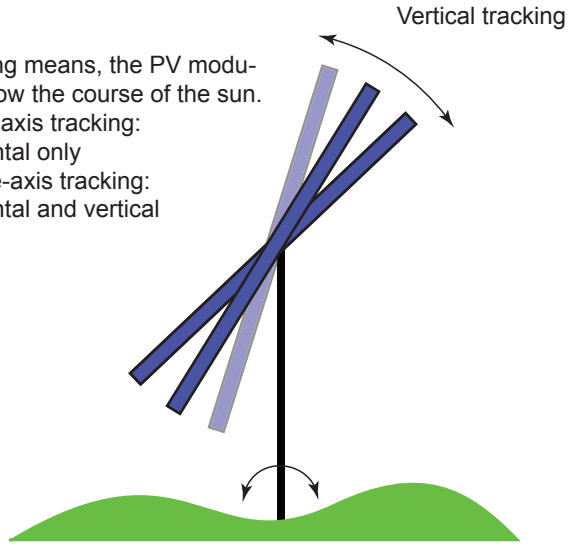
Click here to copy the settings to the selected power inverter.

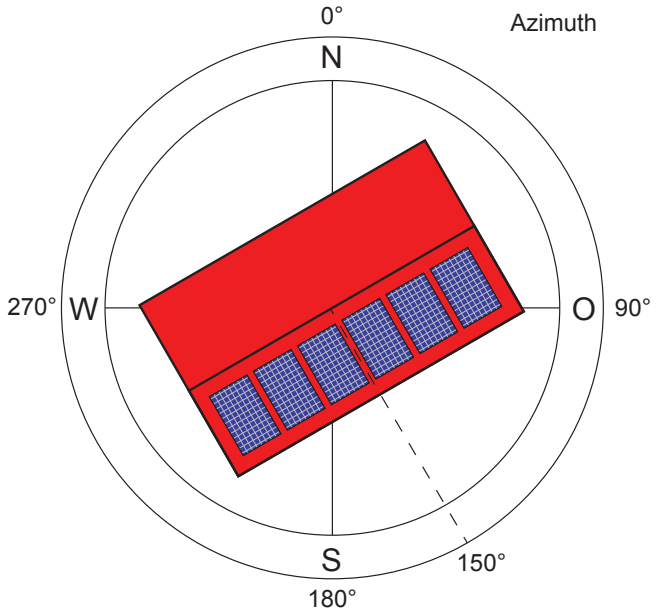
Copy the current settings to other power inverters.

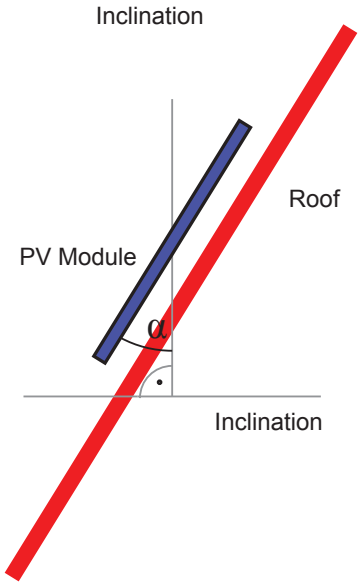
Set up a PV system | Power inverter | Create power inverter



Tracking means, the PV modules follow the course of the sun.
Single-axis tracking: horizontal only
Double-axis tracking: horizontal and vertical

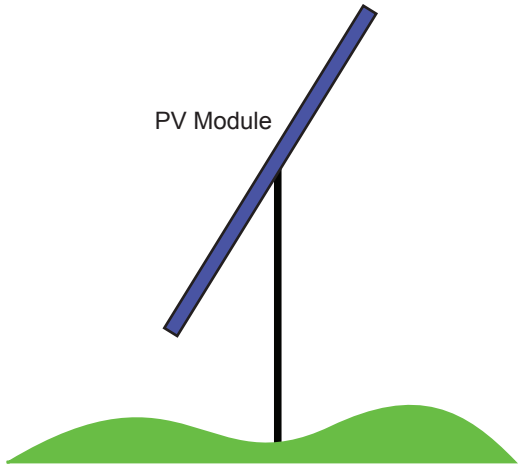




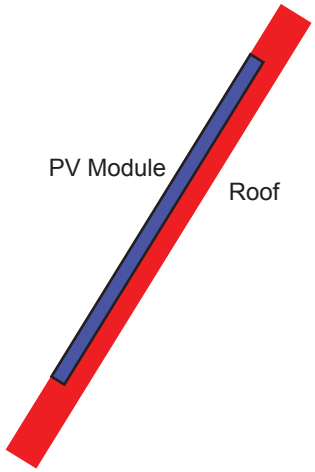


Type of installation

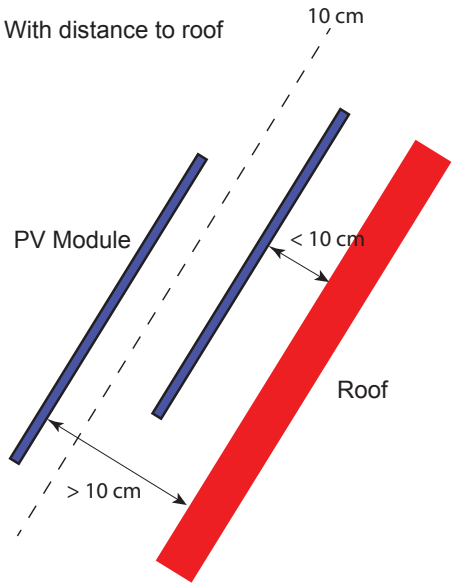
Open space

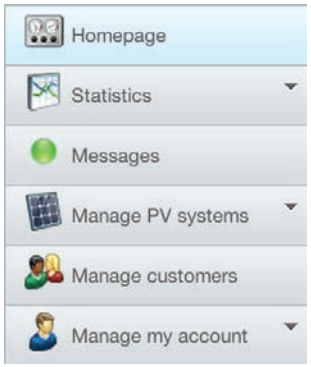


Integrated into the roof



With distance to roof





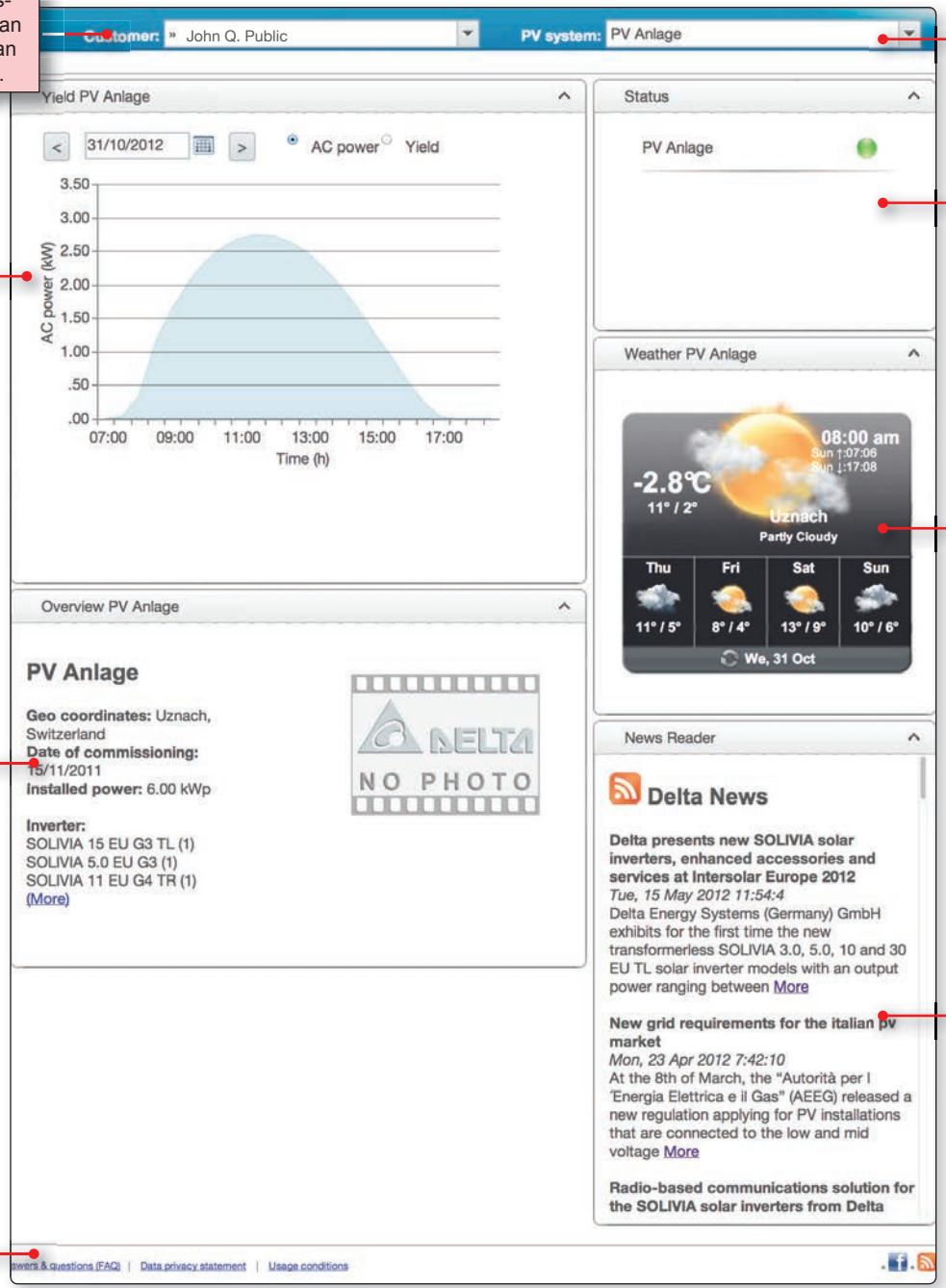
After creating a photovoltaic system in SOLIVIA Monitoring, in future you will be able to access all information via the Internet. The homepage provides a good overview of the current system status.
The individual sections on the homepage are explained on the following pages.

The ***Customer*** field is only displayed if you are registered as an Installer. As an Installer, you can manage your own customers.

Current energy generated by the PV system.

An overview of the most important technical data for the PV system.

The lower section provides links to important information and social networks.



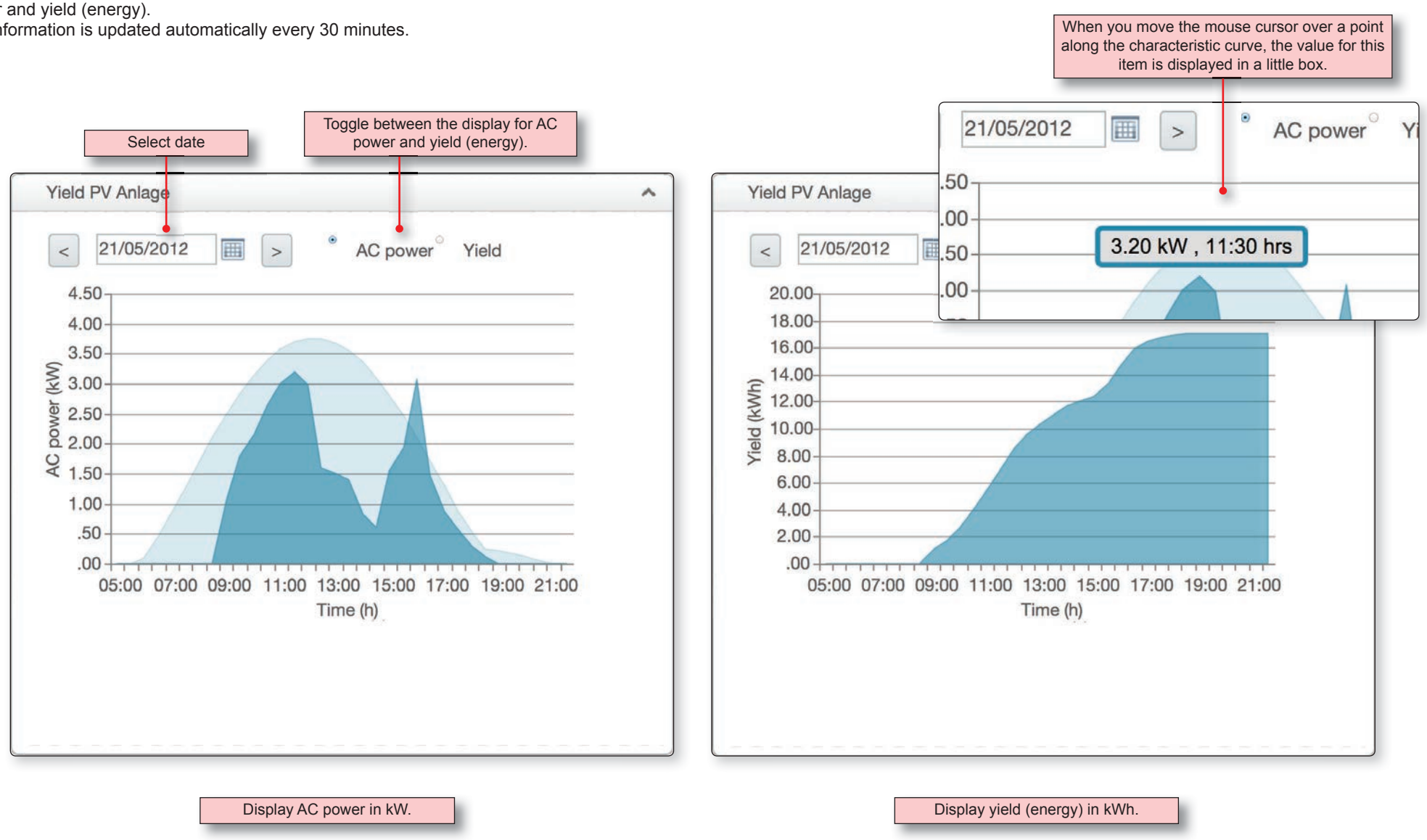
If you have installed several PV systems, you can toggle between them.

The current operational status for all PV systems. Any error messages issued by a power inverter are displayed here.

The current weather report for the location of the PV system.

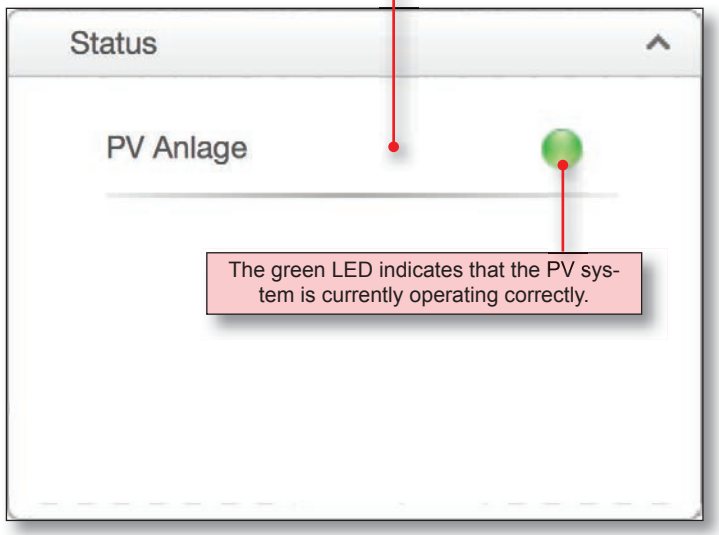
The newsletter provides important news and information about Delta and Delta products.

The "Yield" section displays the current and daily values for generated AC power and yield (energy).
The information is updated automatically every 30 minutes.



The light blue graph in the background represents the maximum possible AC power achievable if the sun shines all day.

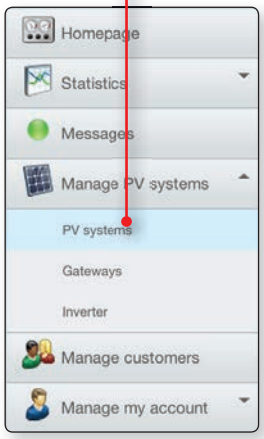
Click on a line to display the error messages in detail.

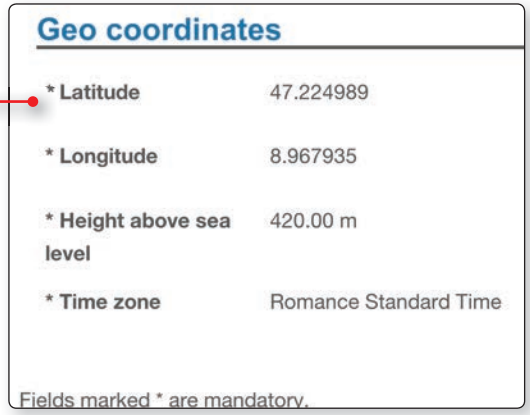


Export to CSV

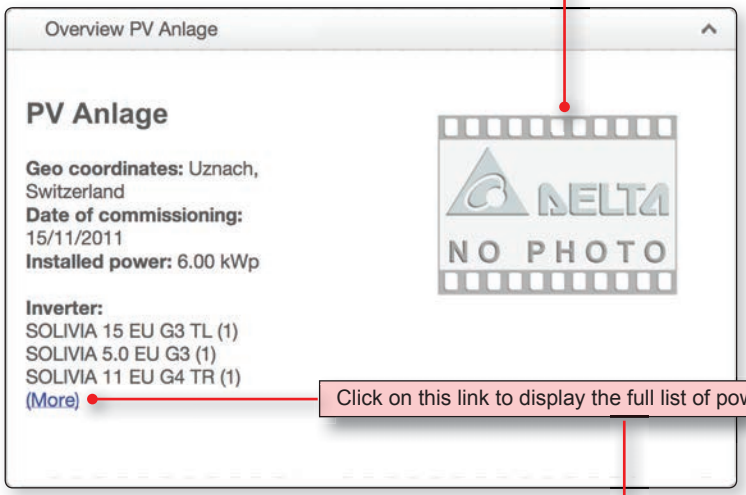
Status	Time	Inverter	Details	Edit status
	31/10/2012 07:53	[17] SOLIVIA 3.3 EU G3	AC Not OK	
	31/10/2012 07:53	[18] SOLIVIA 3.3 EU G3	AC Not OK	
	31/10/2012 07:38	[17] SOLIVIA 3.3 EU G3	Input Power Low	
	31/10/2012 07:38	[15] SOLIVIA 3.3 EU G3	Input Power Low	

The weather data are determined using the for the PV system geo-data (longitude and latitude) .

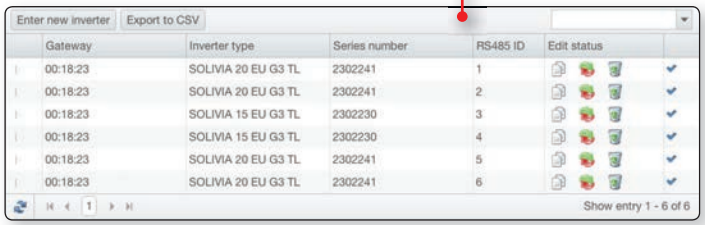




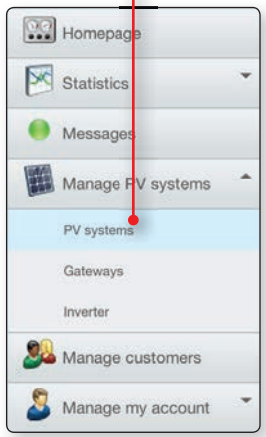
This is where you can view pictures of the system.

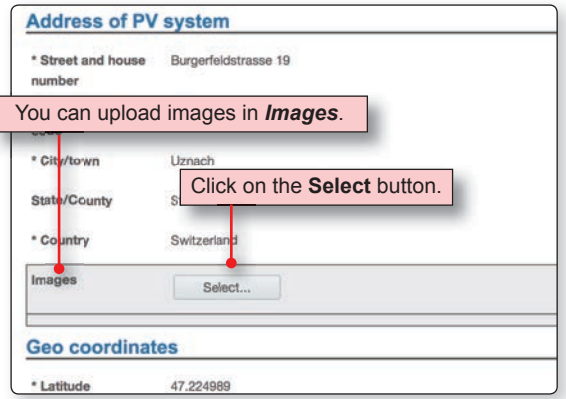


Click on this link to display the full list of power invertors.

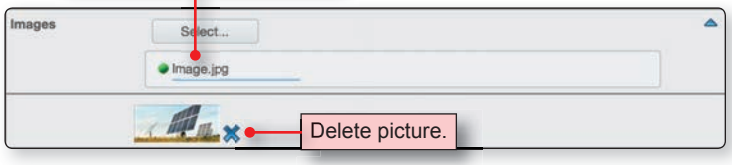


To upload an image of the system, switch to the menu **Manage PV systems > PV systems**.



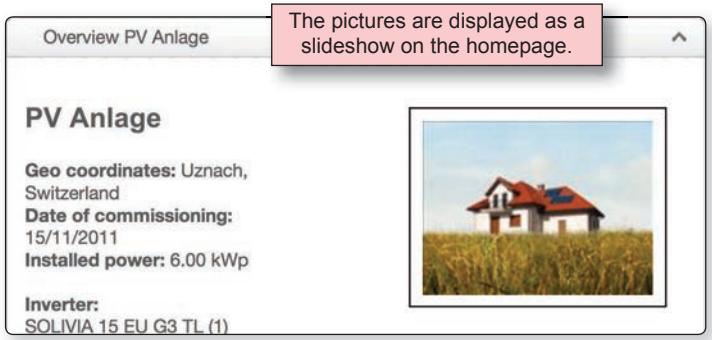


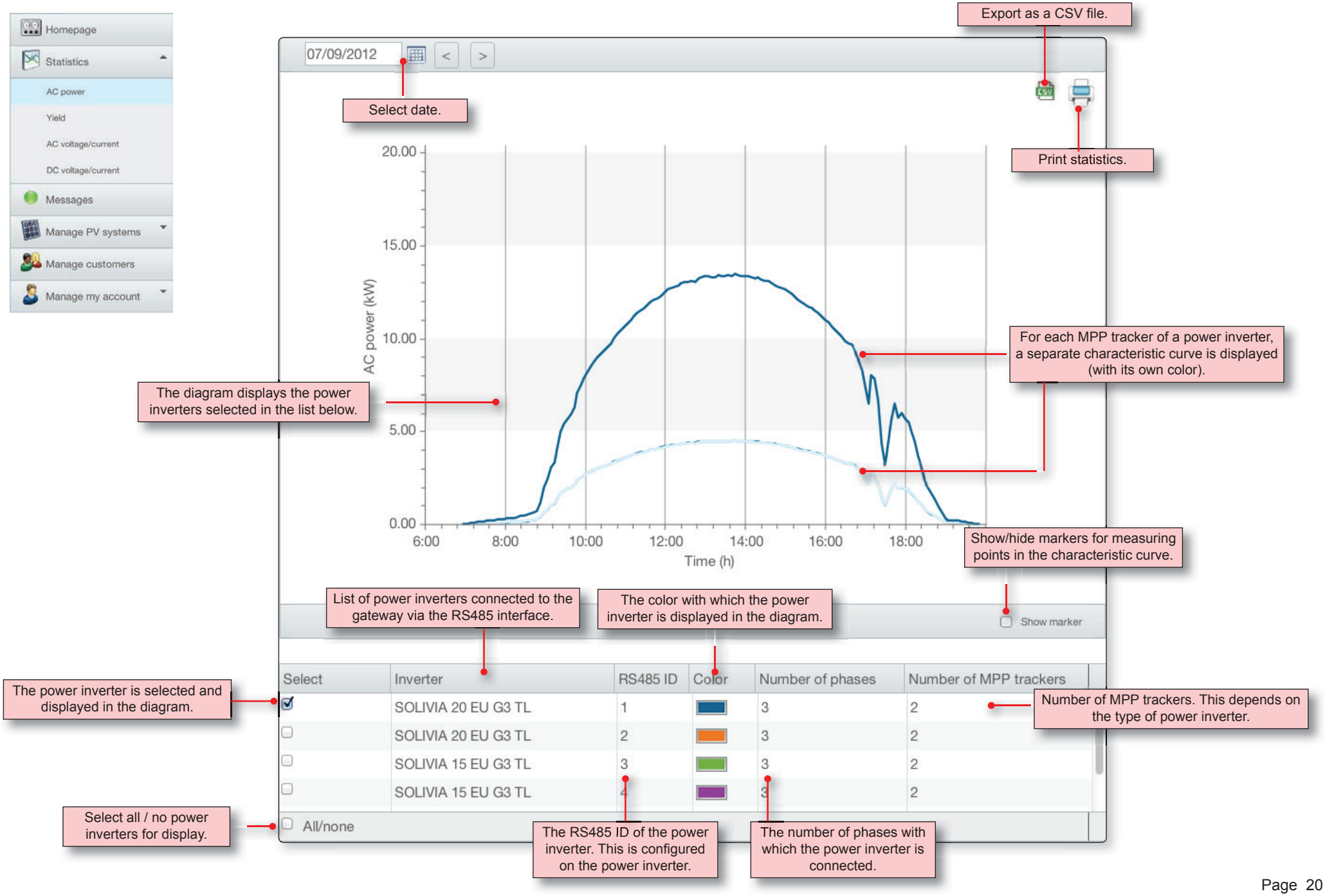
The new picture then appears in the list.



Delete picture.

The pictures are displayed as a slideshow on the homepage.

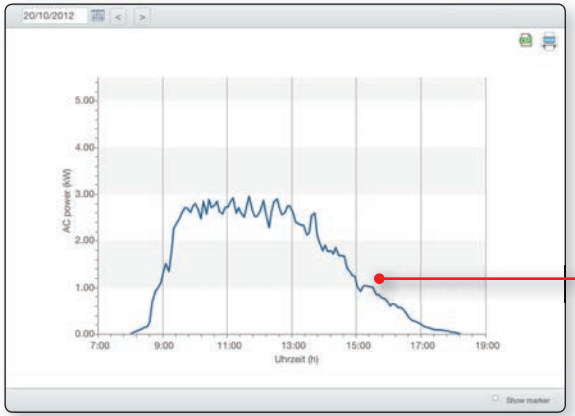


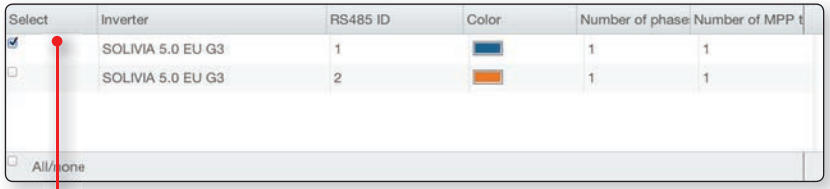

Homepage
Statistics
AC power
Yield
AC voltage/current
DC voltage/current
Messages
Manage PV systems
Manage customers
Manage my account
07/09/2012
Export as a CSV file.
Select date.
Print statistics.
20.00
15.00
10.00
5.00
0.00
AC power (kW)
6:00
8:00
10:00
12:00
14:00
16:00
18:00
Time (h)
The diagram displays the power inverters selected in the list below.
For each MPP tracker of a power inverter, a separate characteristic curve is displayed (with its own color).
Show/hide markers for measuring points in the characteristic curve.
Show marker
List of power inverters connected to the gateway via the RS485 interface.
The color with which the power inverter is displayed in the diagram.
Select
Inverter
RS485 ID
Color
Number of phases
Number of MPP trackers
SOLIVIA 20 EU G3 TL 1 3 2
SOLIVIA 20 EU G3 TL 2 3 2
SOLIVIA 15 EU G3 TL 3 3 2
SOLIVIA 15 EU G3 TL 4 3 2
All/none
The power inverter is selected and displayed in the diagram.
Number of MPP trackers. This depends on the type of power inverter.
Select all / no power inverters for display.
The RS485 ID of the power inverter. This is configured on the power inverter.
The number of phases with which the power inverter is connected.

The displayed power is the average for the configured calculation period.

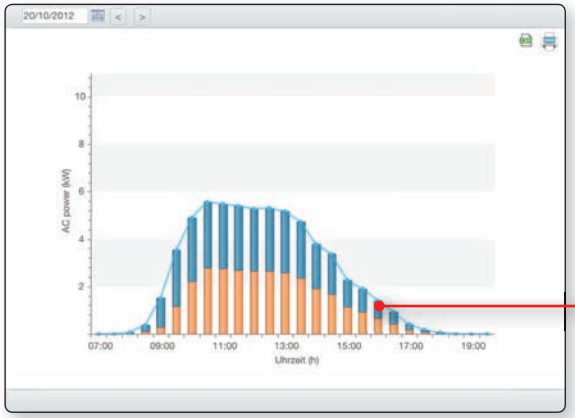
The calculation period depends on the time intervals at which the gateway data is transferred to the monitoring portal.

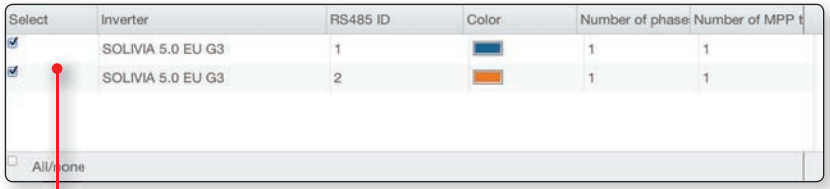
The time interval can be configured in the gateway configuration software.





If several power inverters are selected, the data is displayed as a graph.

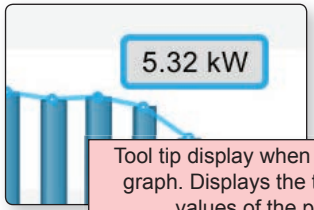




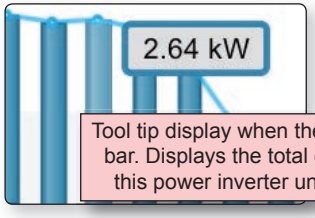
If several power inverters are selected, the data is displayed as a bar chart.

Tool tips

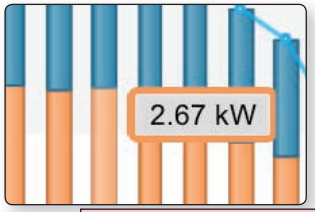
Additional information is displayed when you move the cursor over the graph line or bar:



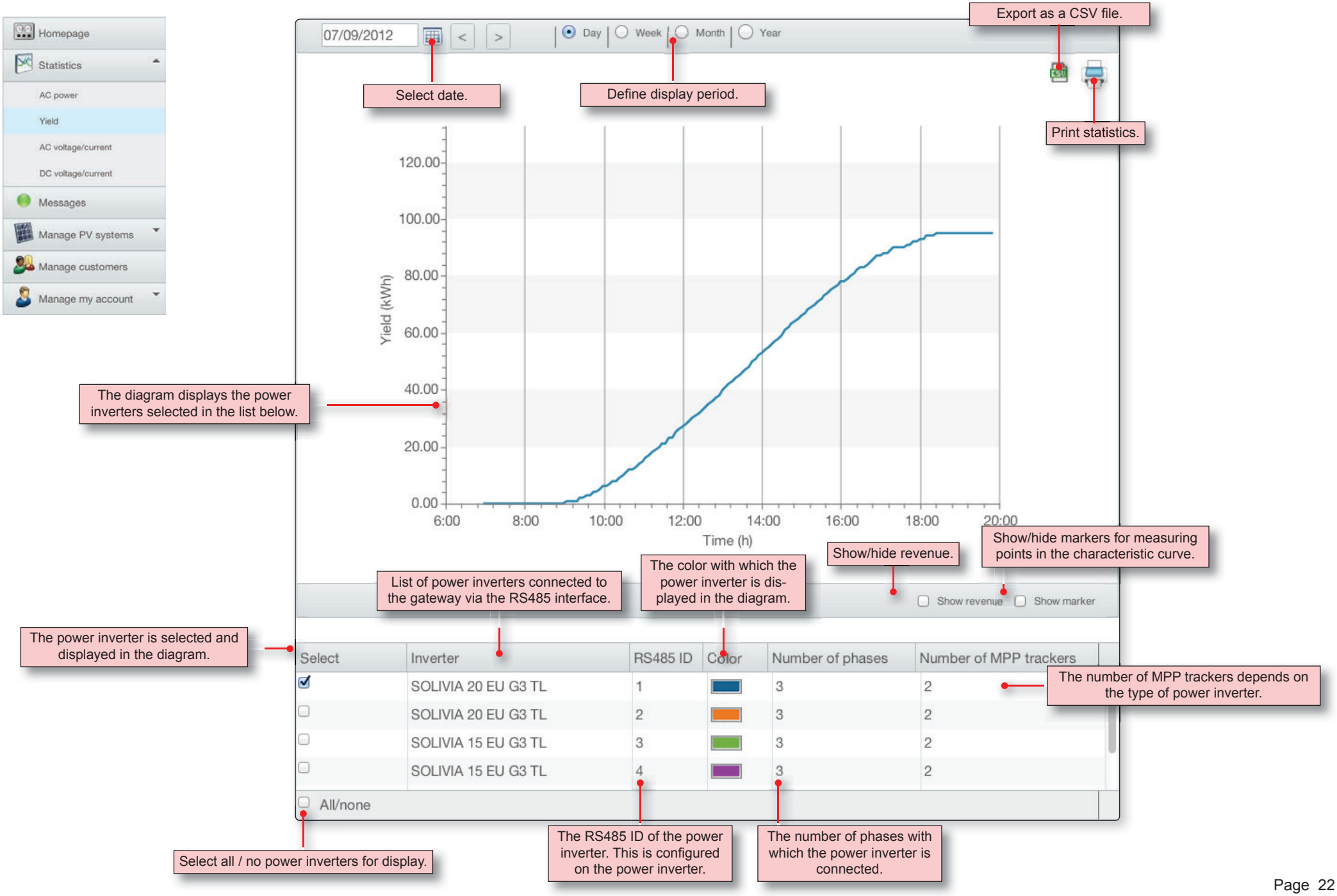
Tool tip display when the cursor is over the graph. Displays the total of the individual values of the power inverters.



Tool tip display when the cursor is over a blue bar. Displays the total energy generated by this power inverter until this point in time.



The color of the tool tip always matches the bar over which the cursor is positioned.


Homepage
Statistics
AC power
Yield
AC voltage/current
DC voltage/current
Messages
Manage PV systems
Manage customers
Manage my account
07/09/2012
Day
Week
Month
Year
Export as a CSV file.
Select date.
Define display period.
Print statistics.
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Yield (kWh)
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
Time (h)
The diagram displays the power inverters selected in the list below.
Show/hide revenue.
Show/hide markers for measuring points in the characteristic curve.
Show revenue
Show marker
List of power inverters connected to the gateway via the RS485 interface.
The color with which the power inverter is dis-played in the diagram.
The power inverter is selected and displayed in the diagram.
Select
Inverter
RS485 ID
Color
Number of phases
Number of MPP trackers
SOLIVIA 20 EU G3 TL 1 3 2
SOLIVIA 20 EU G3 TL 2 3 2
SOLIVIA 15 EU G3 TL 3 3 2
SOLIVIA 15 EU G3 TL 4 3 2
All/none
The number of MPP trackers depends on the type of power inverter.
Select all / no power inverters for display.
The RS485 ID of the power inverter. This is configured on the power inverter.
The number of phases with which the power inverter is connected.

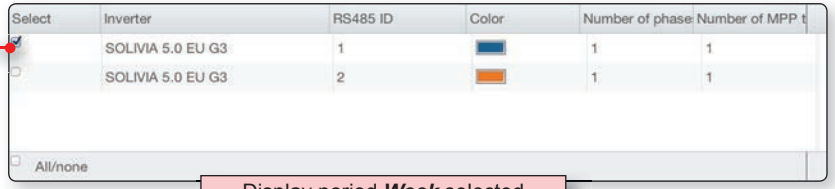
The statistics for the AC energy can be displayed for different periods:

- Day
- Week
- Month
- Year

You can switch the Y axis for the diagram between kWh and revenue (e.g. in euros).

The diagram display depends on the number of power inverters selected in the list.

The diagrams on this page are displayed when a single 1-phase power inverter is selected from the list.

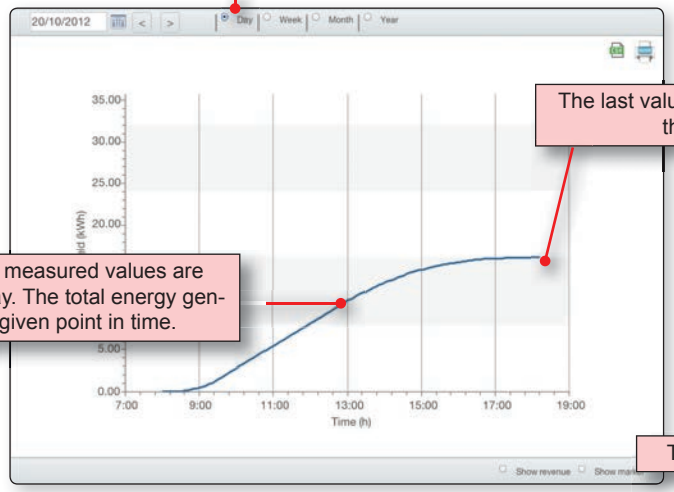


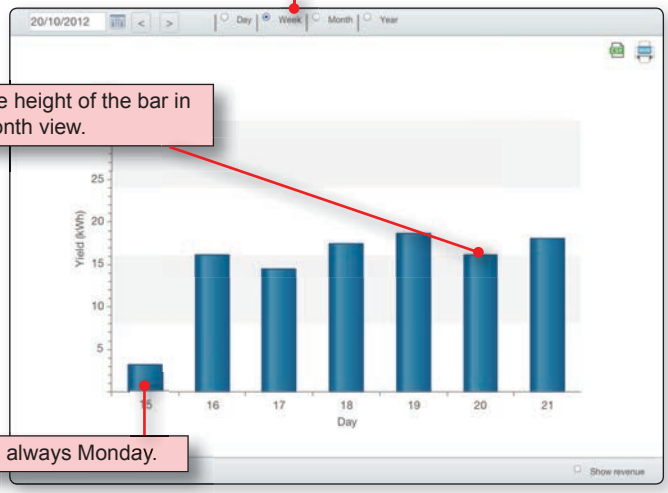
Display period ***Day*** selected

Display period ***Week*** selected

The last value matches the height of the bar in the week or month view.

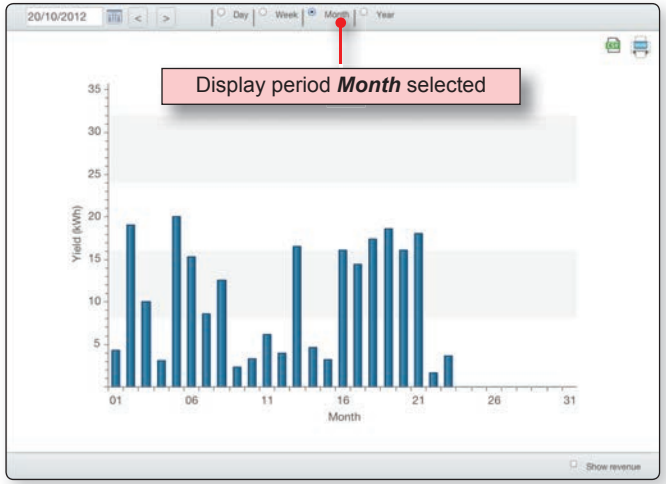
In the Day view, the individual measured values are totaled over the course of the day. The total energy generated is displayed up to a given point in time.



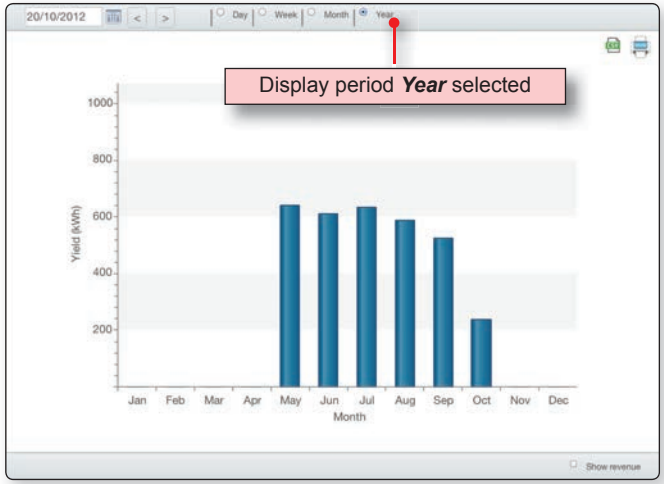


The first day is always Monday.

Display period ***Month*** selected



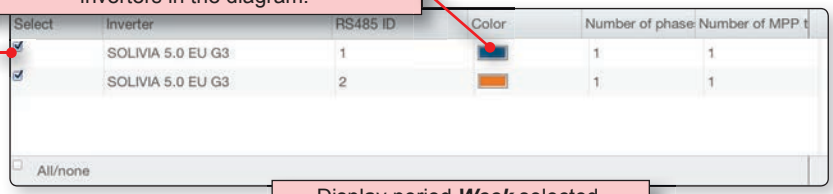
Display period ***Year*** selected



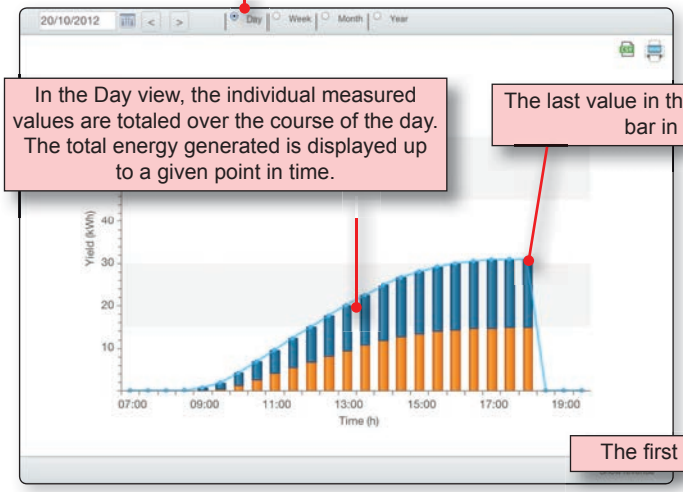
If several power inverters are selected in the list, the type of diagram display changes.

The diagrams on this page are displayed when two 1-phase power inverters are selected from the list.

These colors are used for displaying power inverters in the diagram.

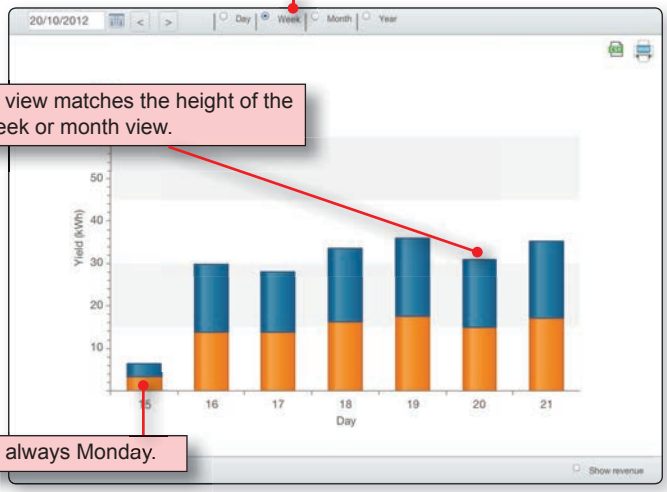


Display period ***Day*** selected.



In the Day view, the individual measured values are totaled over the course of the day. The total energy generated is displayed up to a given point in time.

Display period ***Week*** selected.

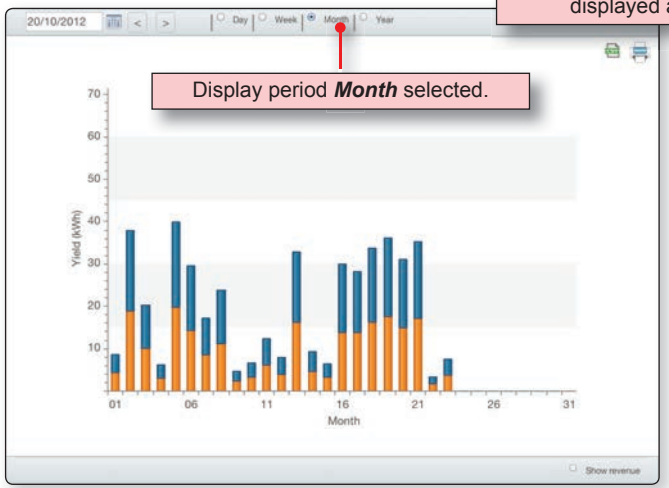


The last value in the Day view matches the height of the bar in the week or month view.

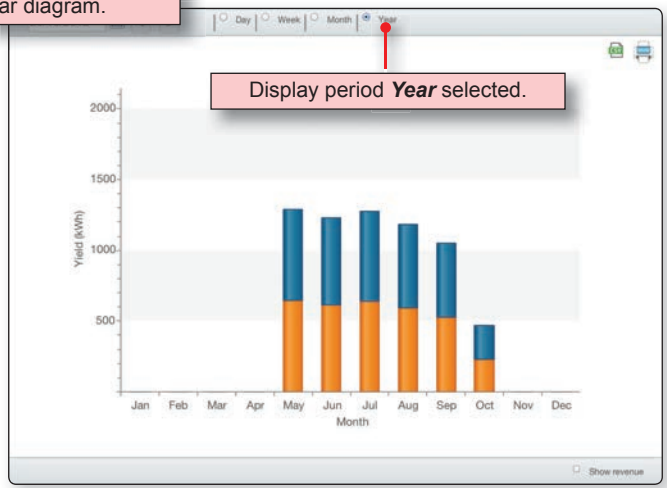
The first day is always Monday.

The values for the power inverters are displayed as a bar diagram.

Display period ***Month*** selected.

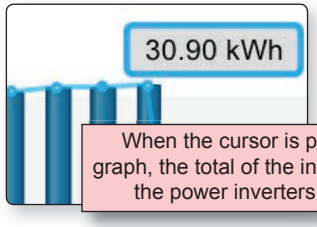


Display period ***Year*** selected.

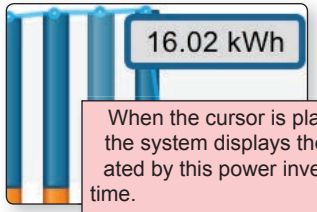


Tool tips

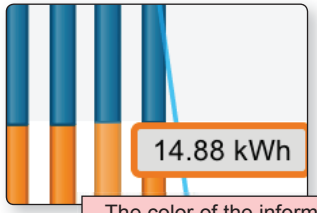
Additional information is displayed when you move the cursor over the graph line or bar:



When the cursor is placed over the graph, the total of the individual values of the power inverters is displayed.



When the cursor is placed over a blue bar, the system displays the total energy generated by this power inverter until this point in time.

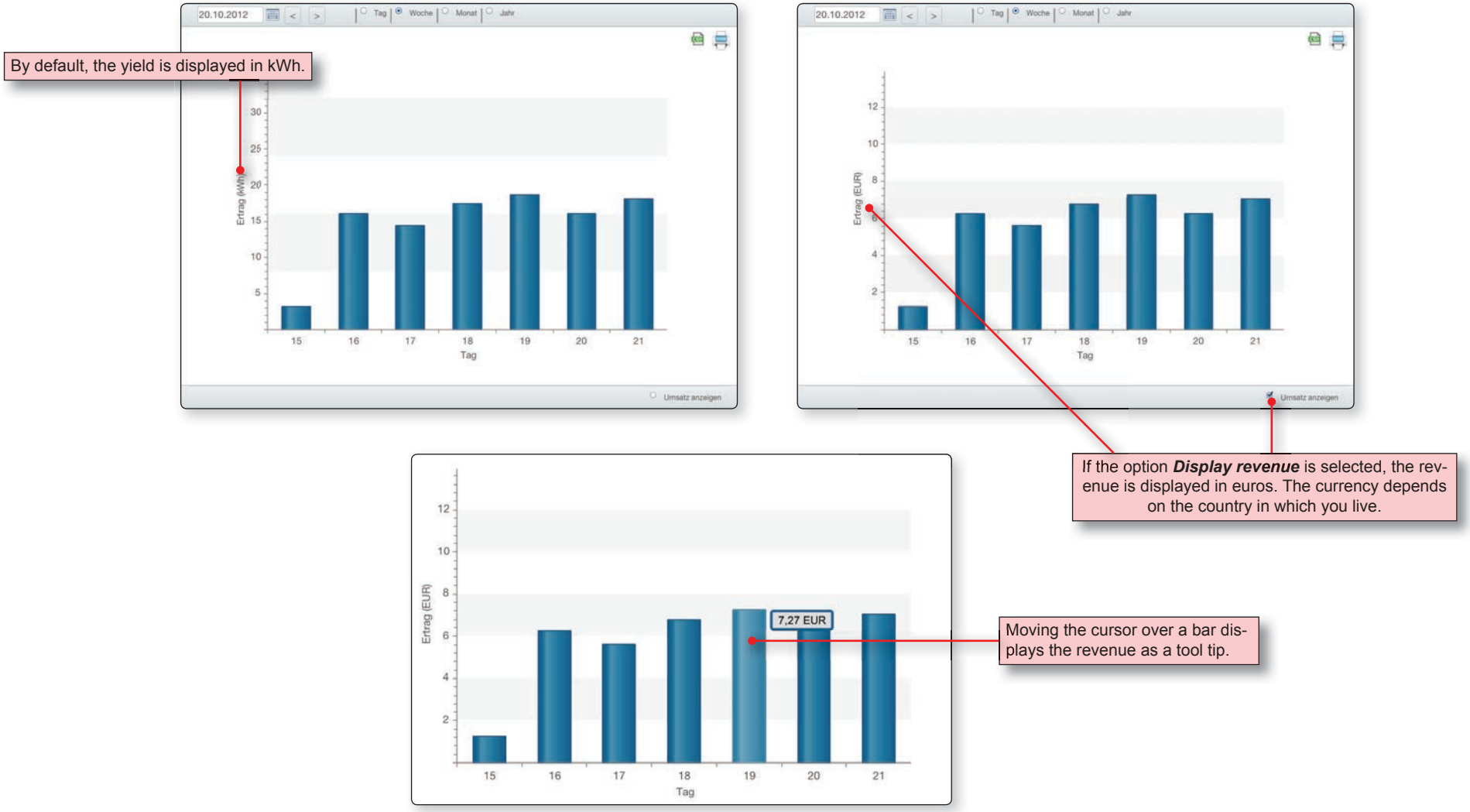


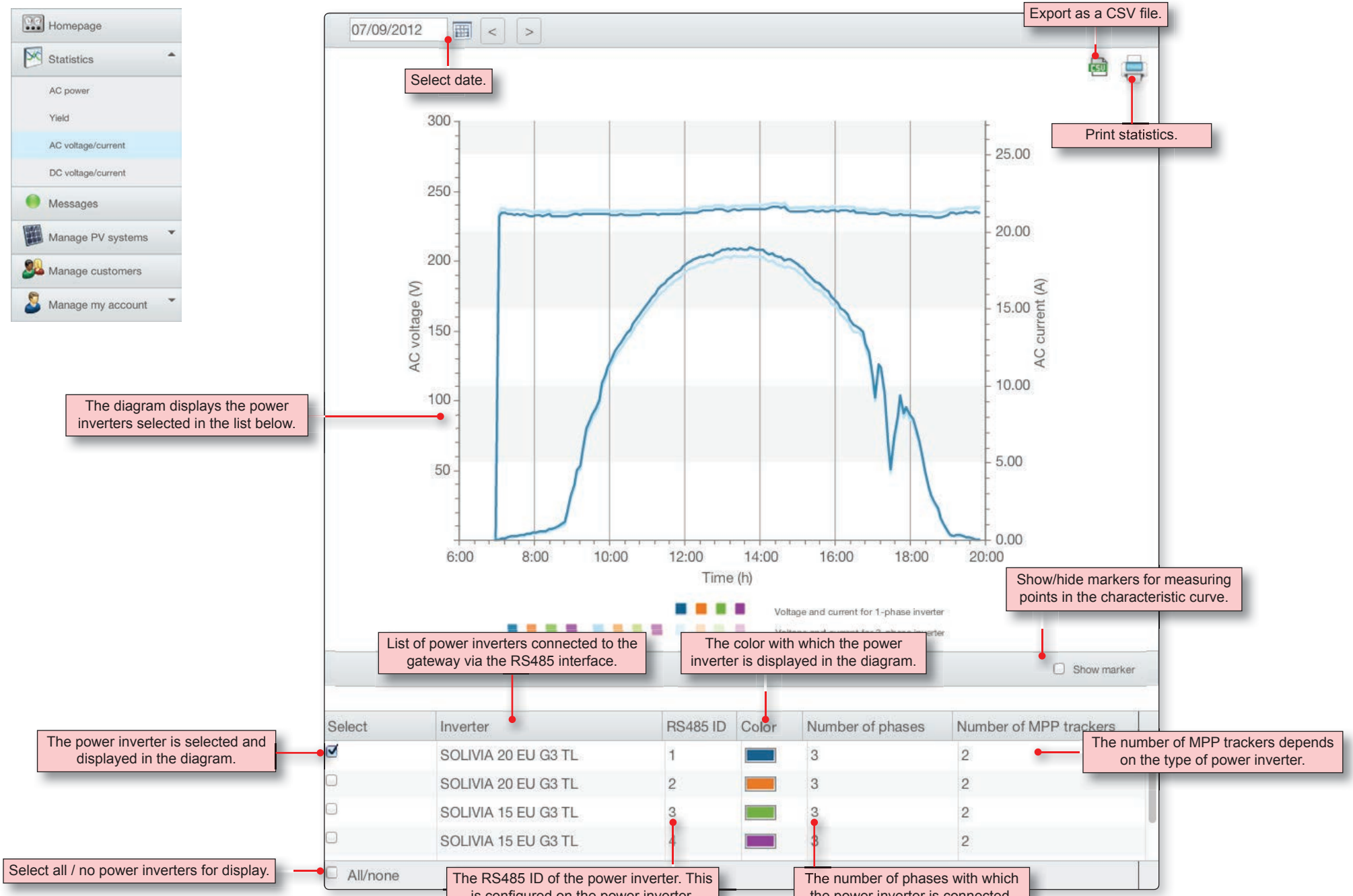
The color of the information box always matches the bar over which the cursor is positioned.

You can switch the display for yield between kWh and revenue (e.g. in euros).

Switching only changes the Y axis, the diagram itself does not change.

To display revenue, however, a value must be entered in **Manage PV systems > PV systems** in the field ***Payment per kWh***.




Homepage
Statistics
AC power
Yield
AC voltage/current
DC voltage/current
Messages
Manage PV systems
Manage customers
Manage my account
07/09/2012
Select date.
Export as a CSV file.
Print statistics.
AC voltage (V)
AC current (A)
Time (h)
The diagram displays the power inverters selected in the list below.
Voltage and current for 1-phase inverter
Show/hide markers for measuring points in the characteristic curve.
Show marker
List of power inverters connected to the gateway via the RS485 interface.
The color with which the power inverter is displayed in the diagram.
Select
Inverter
RS485 ID
Color
Number of phases
Number of MPP trackers
SOLIVIA 20 EU G3 TL
SOLIVIA 15 EU G3 TL
The power inverter is selected and displayed in the diagram.
The number of MPP trackers depends on the type of power inverter.
All/none
Select all / no power inverters for display.
The RS485 ID of the power inverter. This is configured on the power inverter.
The number of phases with which the power inverter is connected.

AC voltage and AC current are displayed for each phase.

This means that for 3-phase power inverters, six graphs are displayed.

Because this display quickly becomes confusing, we recommend only ever displaying one power inverter at a time.

Color coding

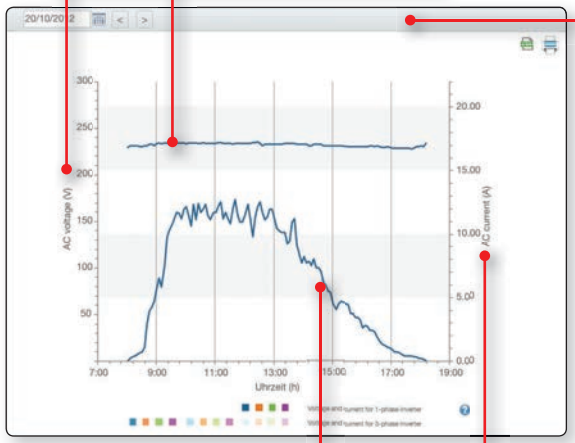
The top color sequence applies to 1-phase power inverters, while the bottom color sequence applies to 3-phase power inverters.

If more than four power inverters are connected, the color assignment starts again from the beginning. The fifth power inverter is therefore displayed in blue.

For 3-phase power inverters, the voltages and currents for each phase are displayed separately in different colors.

The 3-phase power inverters from Delta have integrated phase balancing, and therefore store the same current in each phase. This means that the graphs for the three phases are laid exactly one over the other and therefore only one graph is visible.

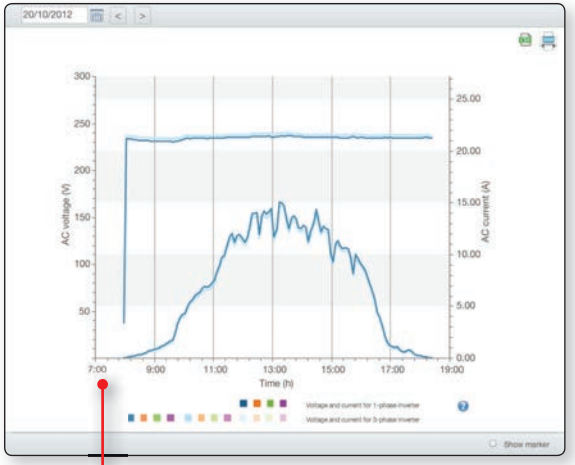
The upper graph shows the voltage and the Y-axis on the left applies.



The lower graph shows the current and the Y-axis on the right applies.

For 1-phase power inverters, two graphs are displayed per power inverter.

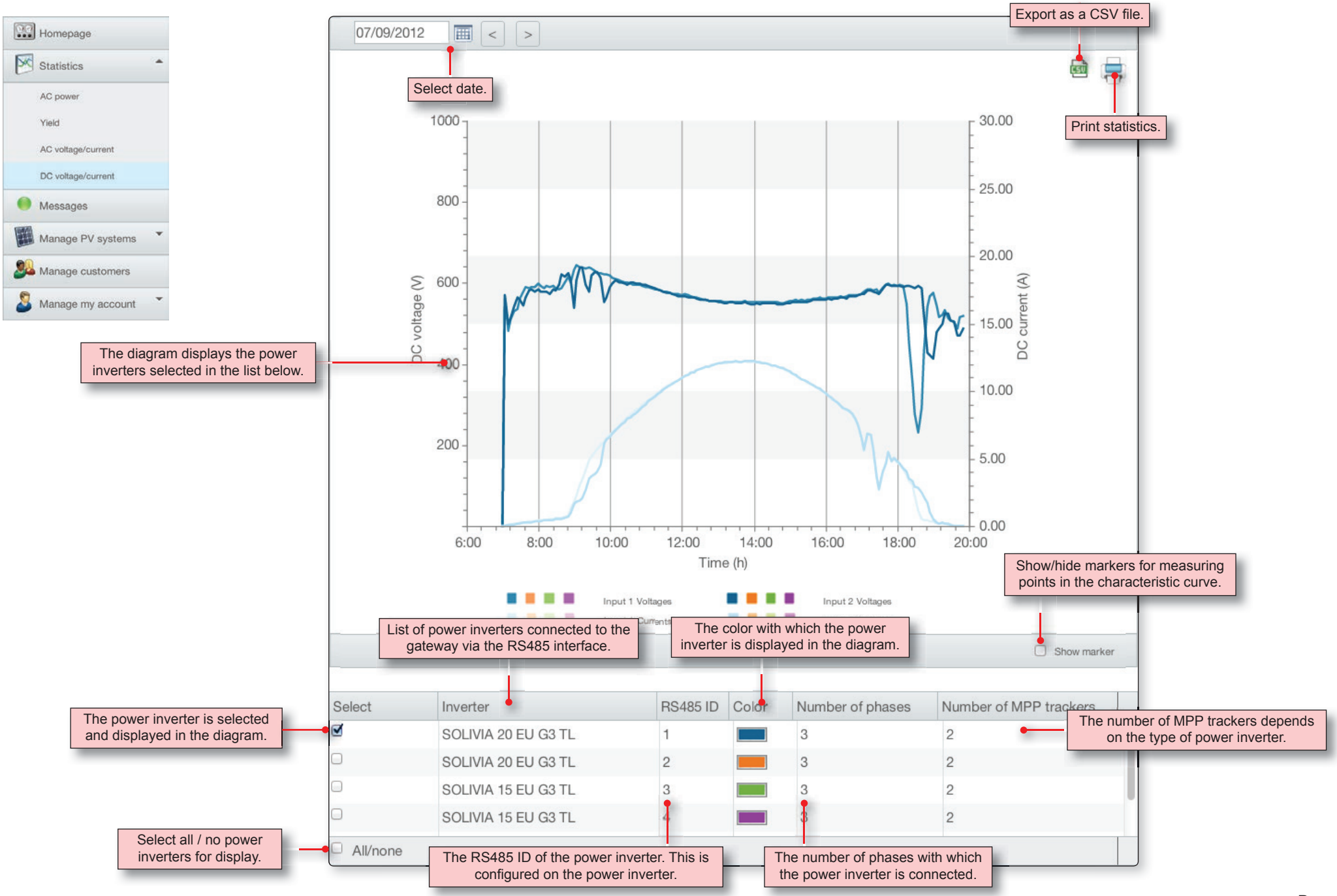
Select	Inverter	RS485 ID	Color	Number of phase	Number of MPP t
☑	SOLIVIA 5.0 EU G3	1		1	1
☐	SOLIVIA 5.0 EU G3	2		1	1
☐	All/none				



Select	Inverter	RS485 ID	Color	Number of phase	Number of MPP t
☑	SOLIVIA 20 EU G3 TL	1		3	2
☐	SOLIVIA 20 EU G3 TL	2		3	2
☐	SOLIVIA 15 EU G3 TL	3		3	2
☐	SOLIVIA 15 EU G3 TL	4		3	2
☐	All/none				

For each MPP tracker of a power inverter, a separate characteristic curve is displayed for voltage and current (with its own color).

For 3-phase power inverters, six graphs are displayed per power inverter. Two for each phase.


Homepage
Statistics
AC power
Yield
AC voltage/current
DC voltage/current
Messages
Manage PV systems
Manage customers
Manage my account
07/09/2012
Export as a CSV file.
Select date.
Print statistics.
DC voltage (V)
DC current (A)
Time (h)
The diagram displays the power inverters selected in the list below.
Input 1 Voltages
Input 2 Voltages
Show/hide markers for measuring points in the characteristic curve.
Show marker
List of power inverters connected to the gateway via the RS485 interface.
The color with which the power inverter is displayed in the diagram.
Select
Inverter
RS485 ID
Color
Number of phases
Number of MPP trackers
SOLIVIA 20 EU G3 TL
SOLIVIA 20 EU G3 TL
SOLIVIA 15 EU G3 TL
SOLIVIA 15 EU G3 TL
The power inverter is selected and displayed in the diagram.
The number of MPP trackers depends on the type of power inverter.
All/none
Select all / no power inverters for display.
The RS485 ID of the power inverter. This is configured on the power inverter.
The number of phases with which the power inverter is connected.

For every MPP tracker, DC voltage and DC current are displayed.

There are power inverters with one and two MPP trackers.

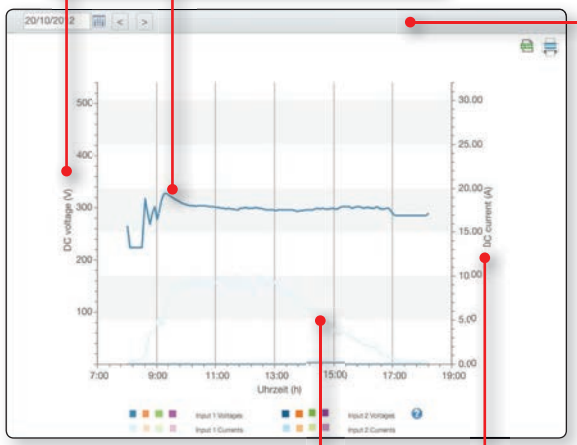
> Because this display quickly becomes confusing, we recommend only ever displaying one power inverter at a time.

Color coding

MPP 1 voltage
MPP 1 current
MPP tracker 1

MPP 2 voltage
MPP 2 current
MPP tracker 2

The upper graph shows the voltage and the Y-axis on the left applies.

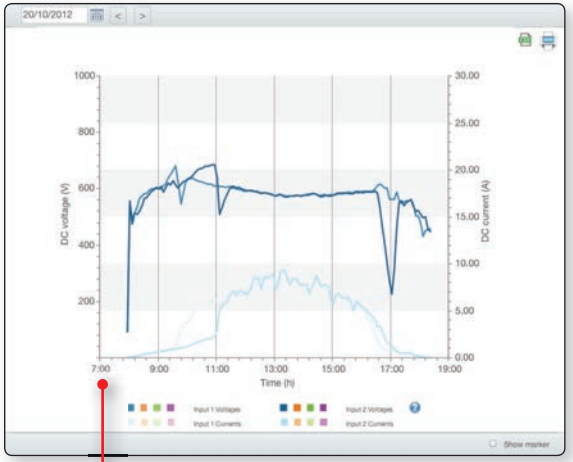


The lower graph shows the current and the Y-axis on the right applies.

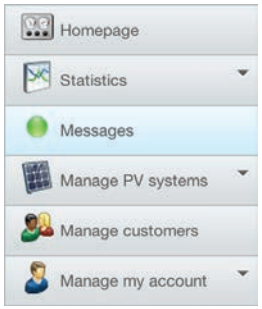
For power inverters with one MPP tracker, two graphs are displayed per power inverter.

Select	Inverter	RS485 ID	Color	Number of phase	Number of MPP t
☑	SOLIVIA 5.0 EU G3	1		1	1
☐	SOLIVIA 5.0 EU G3	2		1	1
☐	All/none				

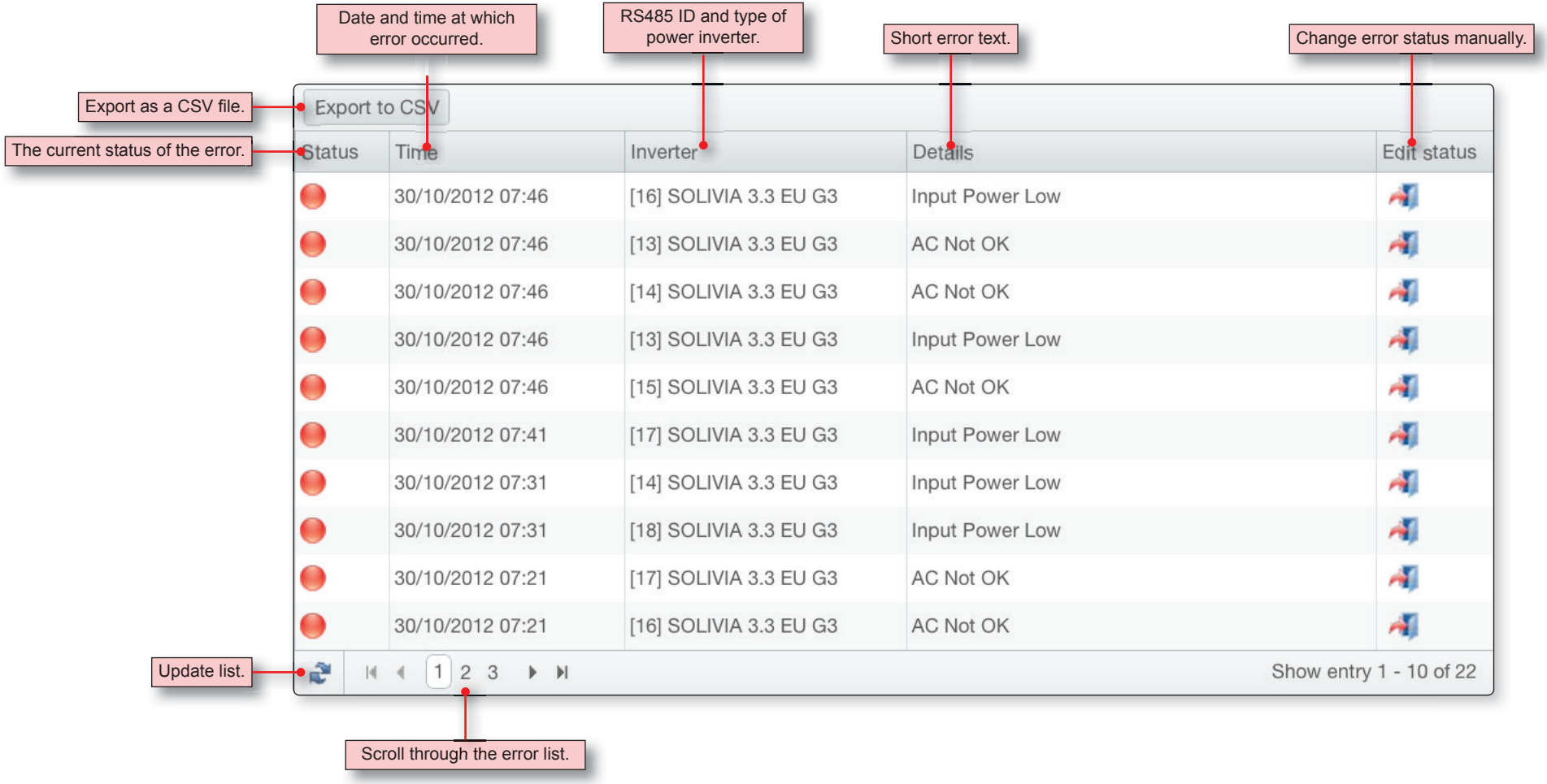
Select	Inverter	RS485 ID	Color	Number of phase	Number of MPP t
☑	SOLIVIA 20 EU G3 TL	1		3	2
☐	SOLIVIA 20 EU G3 TL	2		3	2
☐	SOLIVIA 15 EU G3 TL	3		3	2
☐	SOLIVIA 15 EU G3 TL	4		3	2
☐	All/none				

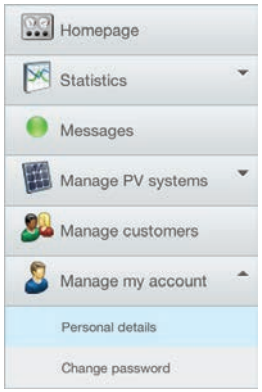


For power inverters with two MPP trackers, four graphs are displayed per power inverter.



To improve password security, you should use a mixture of upper and lower case letters, as well as numbers and special characters.
Do not use passwords that you use elsewhere (e.g. for Internet banking).

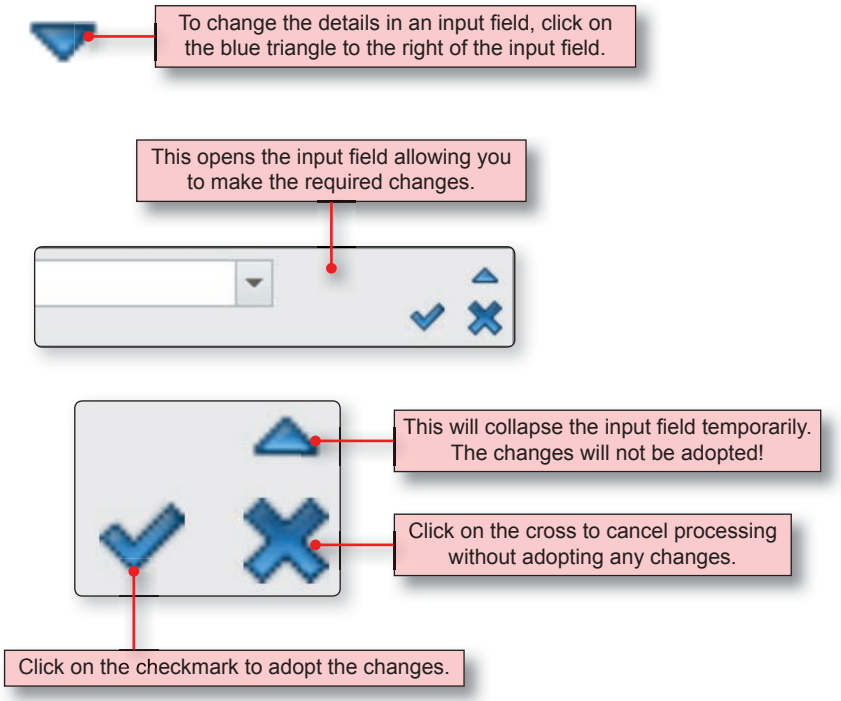


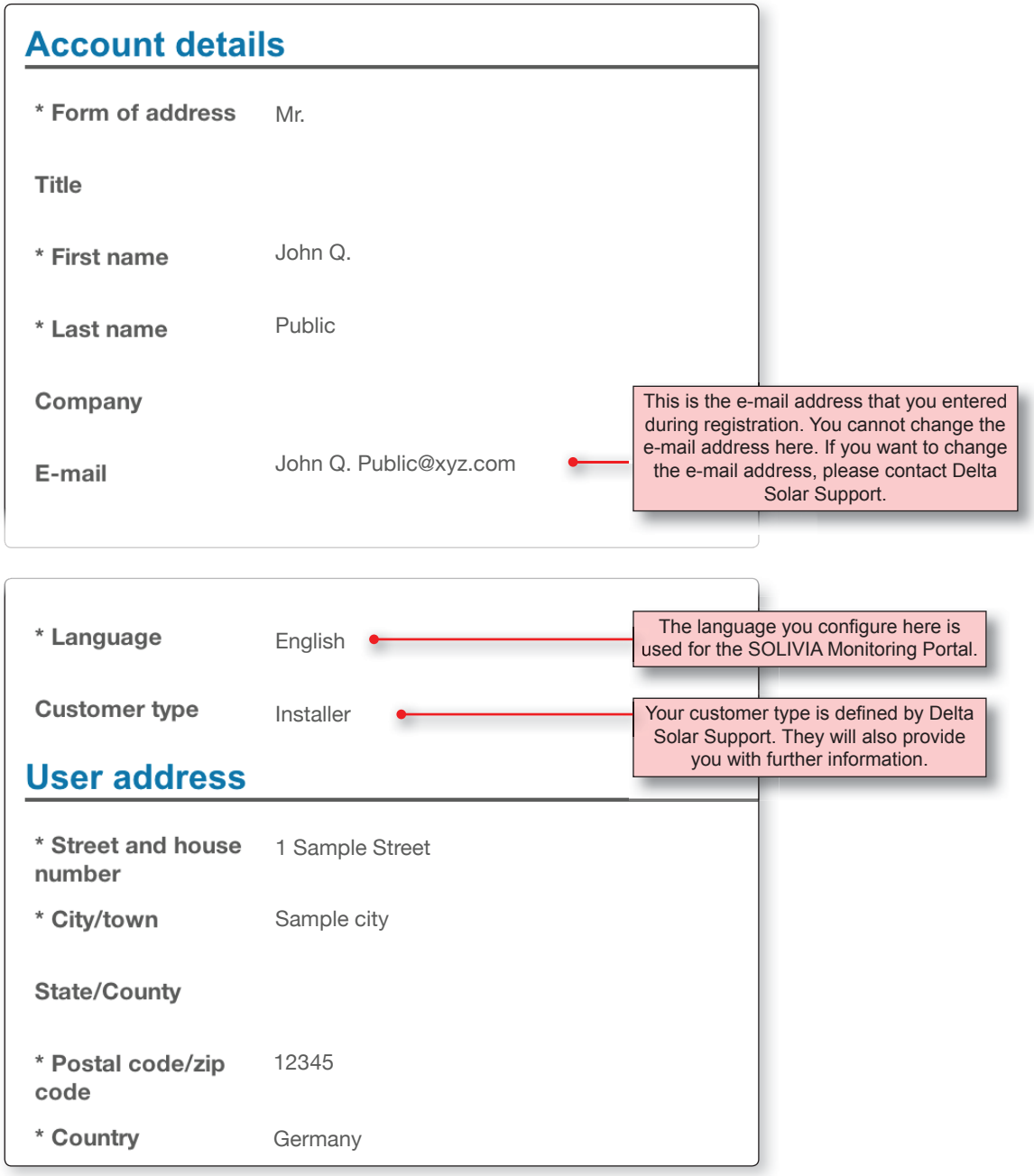


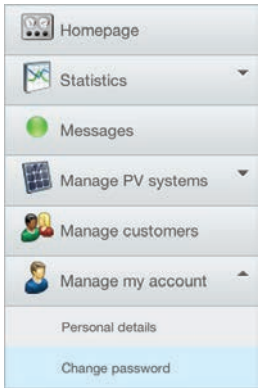
In this section, you can manage your personal data.

Fill out at least the fields indicated with an asterisk (*).

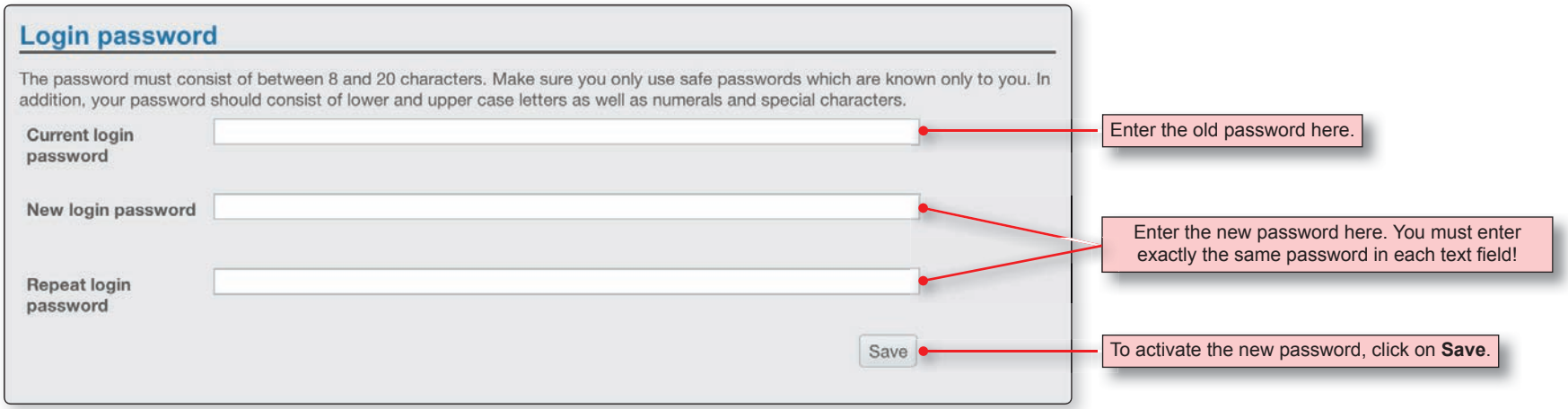
How to use

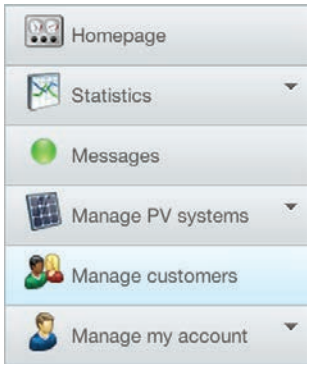






To improve password security, you should use a mixture of upper and lower case letters, as well as numbers and special characters.
Do not use passwords that you use elsewhere (e.g. for Internet banking).

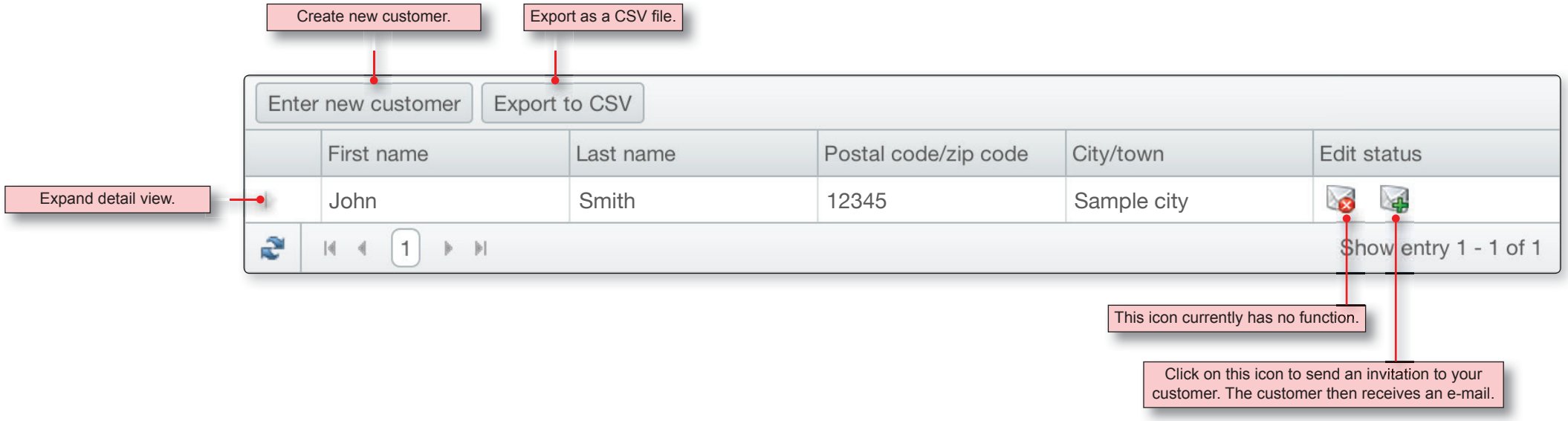




If Delta Solar Support has assigned you the appropriate customer type (e.g. "Installer"), then you can access customer management for your own customers.
You can access information on the individual customer types from Delta Solar Support.
Only Delta Solar Support can **delete a customer**.

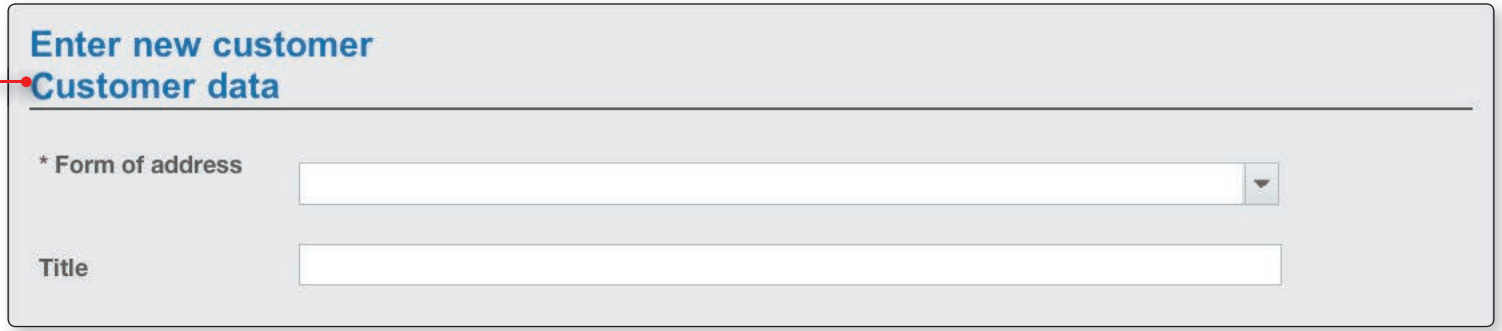
Before you create a new customer and enter their private data, make sure you obtain their consent first!
You customer has the option to register with the SOLIVIA Monitoring Portal independently of your customer management and create and manage their own PV system independently.

As soon as a customer has registered, you will no longer be able to access their personal data . From that point, only they can change this data.

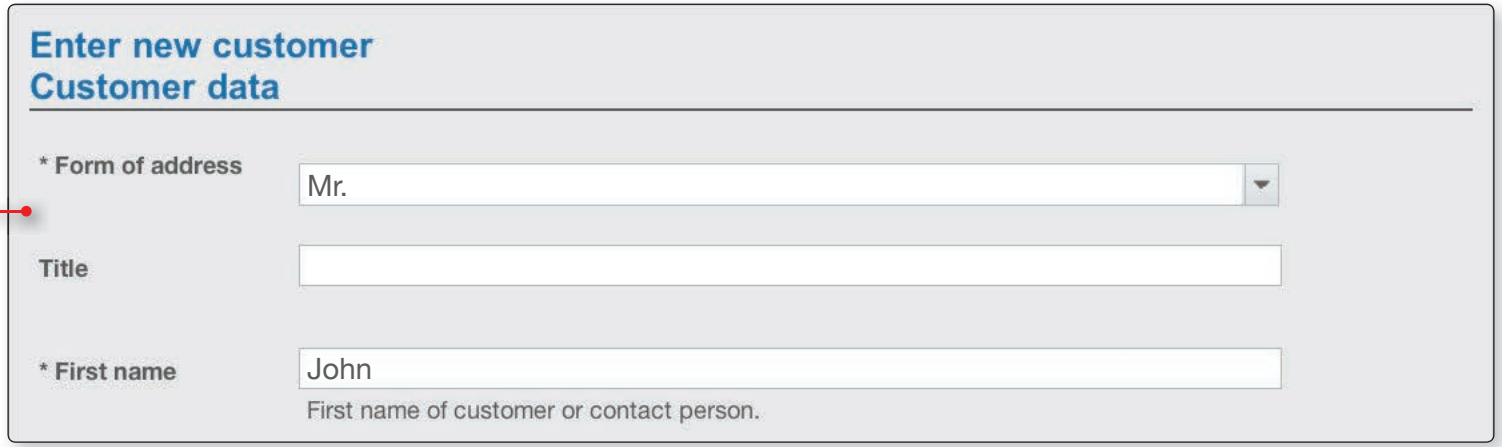


Click on the **Create new customer** button.

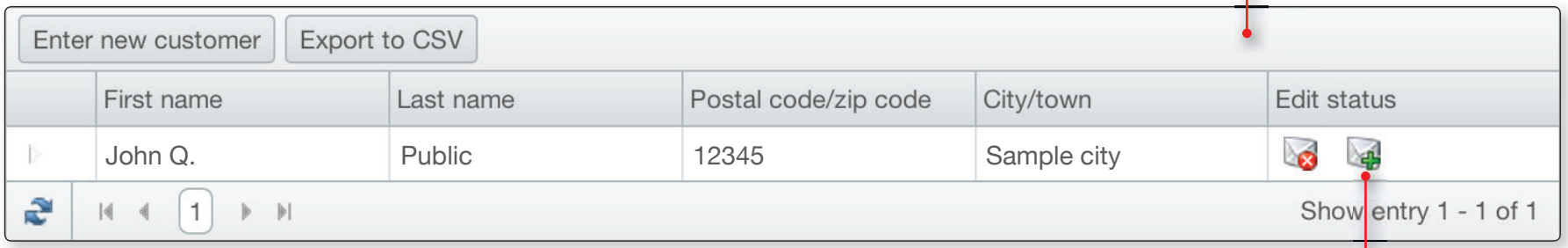
The system opens the form for new customer creation.



Fill out at least all the fields indicated with an asterisk (*).



Finally, click the **Save** button. The new customer is then added to the list of your customers.



Click on this icon to send an invitation to your customer. The customer then receives an e-mail.

Dear Mr. Public, John Q. - 12345 Sample city,

Ms. Jane Q. Public, is inviting you to register with Delta SOLIVIA Monitoring Portal. The SOLIVIA Monitoring Portal provides comprehensive information on the status of your photovoltaic system. After registration, you will be able to check the status of your photovoltaic system for yourself via the Internet. To accept this invitation and register with the SOLIVIA Monitoring Portal, click on the following link.

Note: The e-mail address used for this invitation must also be used for the registration. If you want t… tration, you must register yourself in the SOLIVIA Monitoring Portal.
https://login.solar-inverter.com/Account/Register?email=John Q. Public@xyz.com

To register themselves, customers must click on this link. The customer must use the same e-mail address during registration to ensure that automatic assignment to your account works!

After registration, you can log in to the SOLIVIA M…
https://pvmonitoring.solar-inverter.com/

After accepting the invitation, the customer can log in to the SOLIVIA Monitoring Portal via this link.

To reject the invitation, click on the following link:
https://pvmonitoring.solar-inverter.com/Account/CancelInvitation/7a55fe7e-1bc1-4f67-9a19-07a29945183c

The customer can reject the invitation here.

Note:
- If the links do not work, please copy the link into the address bar of your browser.
- The links are invalid after use.

With kind regards,
Your SOLIVIA team at Delta

SUPPORT - EUROPE

Austria
service.oesterreich@solar-inverter.com
0800 291 512 (Free Call)

Belgium
support.belgium@solar-inverter.com
0800 711 35 (Free Call)

Bulgaria
support.bulgaria@solar-inverter.com
+421 42 4661 333

Czech Republic
podpora.czechia@solar-inverter.com
800 143 047 (Free Call)

Denmark
support.danmark@solar-inverter.com
8025 0986 (Free Call)

France
support.france@solar-inverter.com
0800 919 816 (Free Call)

Germany
service.deutschland@solar-inverter.com
0800 800 9323 (N° vert)

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+49 7641 455 549

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+49 7641 455 549

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supporto.italia@solar-inverter.com
800 787 920 (Free Call)

The Netherlands
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0800 022 1104 (Free Call)

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+49 7641 455 549

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podpora.slovensko@solar-inverter.com
0800 005 193 (Free Call)

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podpora.slovenija@solar-inverter.com
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