SOLAR ELECTRIC

KOSTAL

Smart connections.

Operating instructions
KOSTAL (PIKO) Solar Portal

Legal notice

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KOSTAL Solar Electric GmbH is aware of the importance of language with regard to the equality of women and men and always makes an effort to reflect this in the documentation. Nevertheless, for the sake of readability we are unable to use non-gender-specific terms throughout and use the masculine form instead.

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Thank you for choosing a KOSTAL (PIKO) Solar Portal from KOSTAL Solar Electric GmbH!
We hope you enjoy consistently high energy yields with the PIKO inverter and your photovoltaic system.

If you have any technical questions, please call our service hotline:

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[1] Language: German, English

[2] Language: Spanish, English

[3] Language: English, Turkish

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1. Proper use

The KOSTAL (PIKO) Solar Portal, manufactured by KOSTAL Solar Electric GmbH, is a free internet platform for monitoring PV systems.

The PIKO inverter sends the PV system's yield data and event messages to the KOSTAL (PIKO) Solar Portal via the internet.

The information is then stored in the KOSTAL (PIKO) Solar Portal. You can view and call up this information via the internet.

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2. About this manual

Read this manual carefully in its entirety. It contains step-by-step instructions.

We recommend you print them out and follow them step-by-step to set up the KOSTAL (PIKO) Solar Portal.

Most of the user guidelines are self-explanatory. Every website has its own help texts. To view these texts, simply click on the linked word "More".

The most recent version of the operating manual for your product is available in the download area at www.kostal-solar-electric.com.

Target group

This manual is intended for PV system installers who set up PV plants and put them into operation. Technical expertise is required to use the KOSTAL (PIKO) Solar Portal correctly. For this reason, we recommend the KOSTAL (PIKO) Solar Portal is only installed by a properly qualified technician.

Information concerning your safety or that of the unit is highlighted especially.

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2.1 Navigation through the document

In order to enable navigation through this document, it contains clickable areas.

One of these is the navigation bar in the header of each page. Here you can go to the overview pages of the individual chapters in one click.

The table of contents can also be used in this way. From the index at the beginning of each chapter you can go to the indicated sub-chapter in one click.

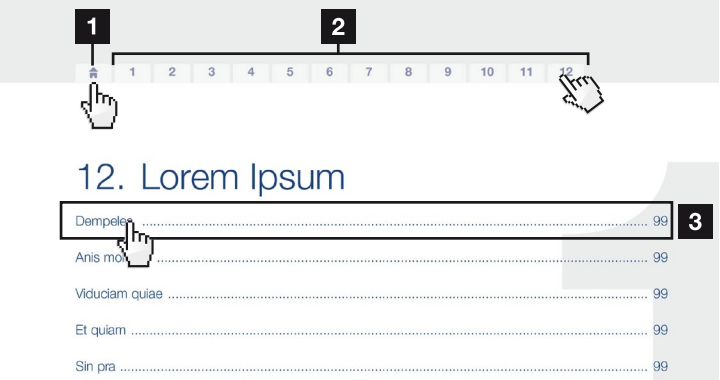

Fig. 1: Navigation through the document

1. Calling up the main table of contents
2. Navigation bar
3. Tables of contents

You can navigate to the referenced points in the document within the instruction text using the cross-references.

Ch. 1

Fig. 1, It. 2

Fig. 2: Examples of cross-references

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2.2 Notes in this manual

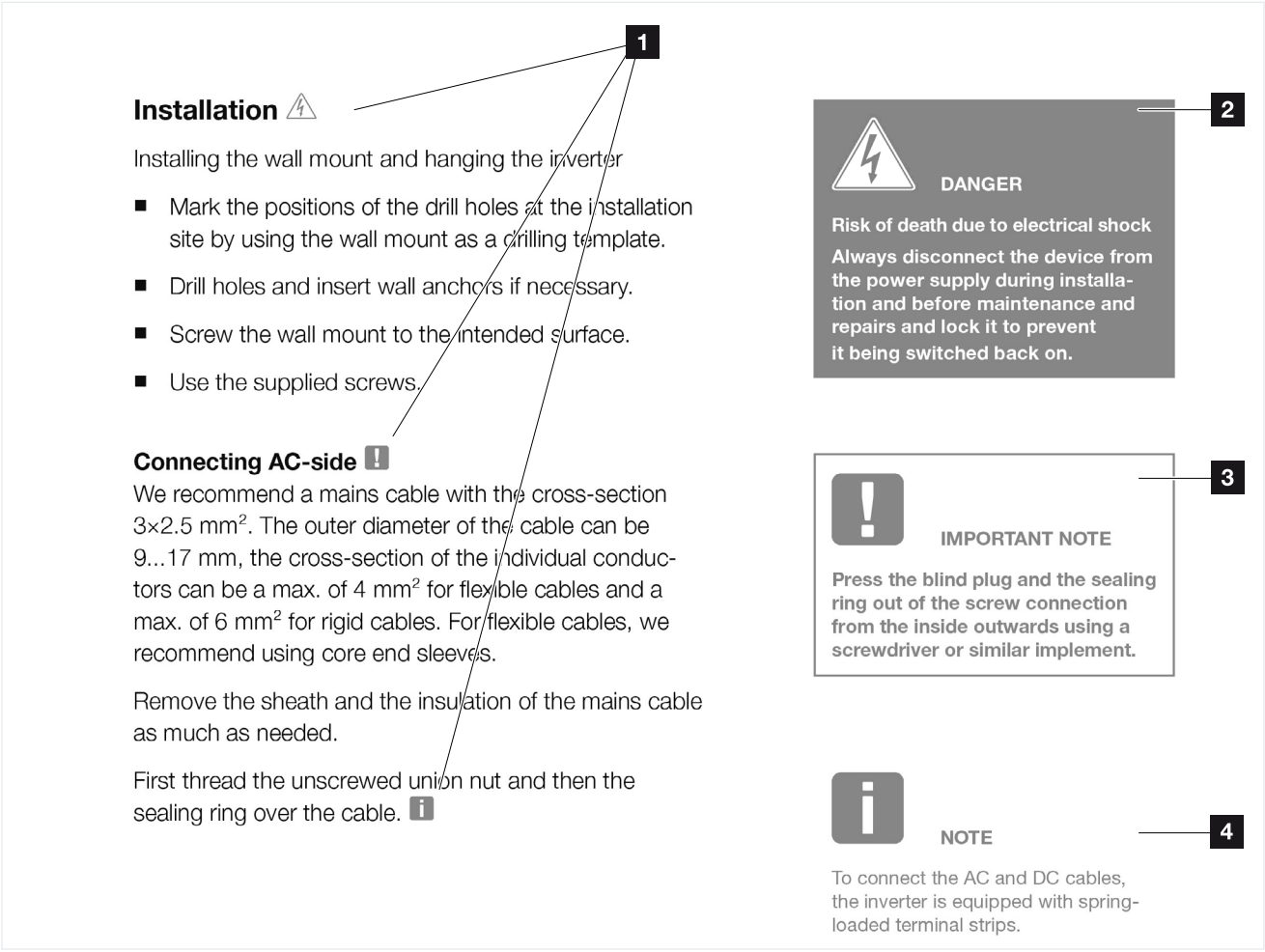

Fig. 3: Safety instructions in this manual

1 Reference icon within the instruction text
2 Warning
3 Information note
4 Other notes

Notes have been incorporated in the instruction texts. A differentiation is made in this manual between warnings and information notes. All notes are identified in the text line with an icon.

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2.3 Warnings

The warnings refer to life-threatening dangers. Serious injuries possibly resulting in death may occur.

Each warning consists of the following elements:

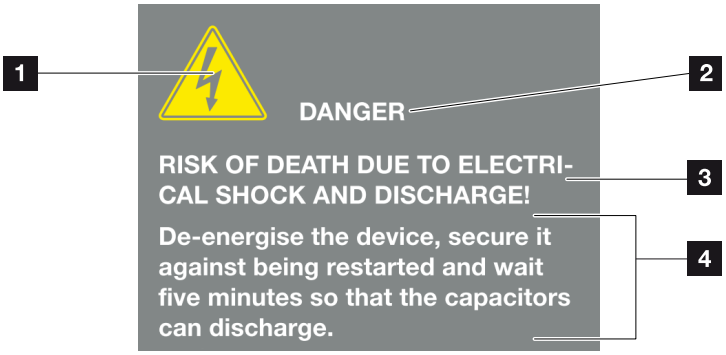

Fig. 4: Structure of the warnings

1. Warning symbol
2. Signal word
3. Type of danger
4. Corrective actions

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2.4 Warning symbols

Danger

Danger due to electrical shock and discharge

Signal words

Signal words are used to identify the severity of the danger.

DANGER
Indicates a direct hazard with a high level of risk, which can result in death or serious injury if it is not prevented.

WARNING
Indicates a hazard with a moderate level of risk, which can result in death or serious injury if it is not prevented.

CAUTIONIndicates a hazard with a low level of risk, which, if not avoided, may result in minor or slight injury or property damage.

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2.5 Information notes

Information notes contain important instructions for the installation and smooth operation of the backup unit. These must be followed at all times. The information notes also point out that failure to observe notes can result in damage to property or financial damages.

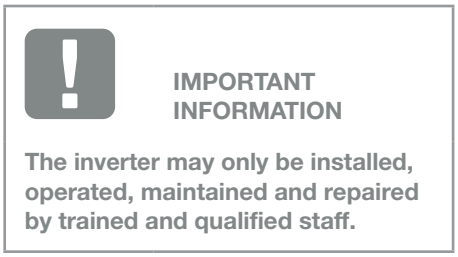

Fig. 5: Example of an information note

Symbols within the information notes

Important information

Damage to property possible

Other notes

They contain additional information or tips.

Fig. 6: Example of an information note

Symbols within the additional notes

Information or tip

Enlarged view

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2.6 Symbols used

Symbol	Meaning
1., 2., 3. ...	Sequential steps in a handling instruction
→	Effect of a handling instruction
✓	Final result of a handling instruction
	Cross-reference to other places in the document or to other documents
■	List

Tab. 1: Symbols and icons used

Abbreviations used

Abbreviation	Explanation
Tab.	Table
Fig.	Figure
It.	Item
Ch.	Chapter

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3. Prerequisites for using the KOSTAL (PIKO) Solar Portal

- The inverter must have a connection to the internet.
- The inverter must not yet be logged onto the KOSTAL (PIKO) Solar Portal
- The inverter must not yet be assigned to a plant.

To use the KOSTAL (PIKO) Solar Portal, follow these two steps:

1. Enable data transfer to the KOSTAL (PIKO) Solar Portal (either via the web server or via the inverter's control panel) .
2. Register (free of charge) on the KOSTAL Solar Electric GmbH website to use the KOSTAL (PIKO) Solar Portal.

INFO

If there are several inverters in a plant, data transfer to the KOSTAL (PIKO) Solar Portal must be set up separately for each inverter.

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3.1 Connecting the inverter and computer

If the inverter and PC are already linked by means of a router, you can go straight to **Ch. 3.2**.

If there isn't yet a link, connect the computer to the router using e.g. an Ethernet cable.

More information can be found in the inverter's operating manual.

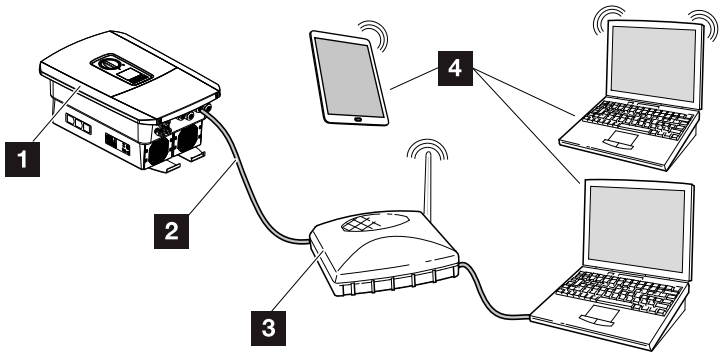

Fig. 7: Connecting inverter and computer

1 Inverter
2 Ethernet cable
3 Switch/hub/router with or without WLAN
4 Computer via LAN or WLAN
(for configuration or data retrieval)

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3.2 Activating data transfer to the KOSTAL (PIKO) Solar Portal via a web server

Calling up web server

1. Launch an Internet browser.
2. Enter the IP address of the inverter in the address line of the browser and confirm with "Return".

➔ The web server is called up.

3. To log in, click on Login and login as plant owner.

➔ The web server's menu opens.

INFO

The description in this document relates to the web server as of UI 06.00.

TIPP

Die IP-Adresse kann im Wechselrichtermenü abgefragt werden.

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Undertaking settings in the web server

After logging in, the settings required can be undertaken on the inverter via the web server.

1. Call up the "Settings" page
2. Depending on the web server version, you can now call “Portal Configuration” or “Solar Portal”.
3. Enter portal code or select a solar portal.
4. Click on the "Data export" checkbox to activate the data transfer to the KOSTAL (PIKO) Solar Portal.
5. Click on "Accept".

✓ Data transfer to the KOSTAL (PIKO) Solar Portal is now enabled.

INFO

Portal code for the KOSTAL (PIKO) Solar Portal = P3421

INFO

Data transmission to the KOSTAL (PIKO) Solar Portal can be activated or deactivated by clicking on the check box.

Checking the data connection between the inverter and the KOSTAL (PIKO) Solar Portal

If a value in minutes is displayed in the "Last portal connection" field, data has been sent to the KOSTAL (PIKO) Solar Portal.

✓ The data connection between the inverter and the KOSTAL (PIKO) Solar Portal is functioning correctly.

INFO

The registration may take up to 20 minutes.

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3.3 Activating data transfer to the KOSTAL (PIKO) Solar Portal on the inverter

To activate the KOSTAL (PIKO) Solar Portal on the inverter, proceed as follows.

PIKO 3.0-20

1. Select the "Settings" menu on the inverter with the "DOWN" key.
2. Confirm with the "ENTER" key.
3. Use the "UP" and "DOWN" keys to select the "Portal configuration" menu.
4. Enter the code "P3421" in the "Code:" field.
5. Press and hold down the "ENTER" key for approximately 3 seconds.
6. Select the "Accept" field.

✓ You have now entered the portal code. Data transfer to the KOSTAL (PIKO) Solar Portal is now enabled.

INFO

This option can only be used with PIKO inverters running UI software version 4.06 and higher.

INFO

The menu item can be found under "Settings / Communication / Portal configuration".

PIKO IQ / PLENTICORE plus

1. Select the “Settings” menu on the inverter.
2. Confirm with the “ENTER” key.
3. Select the “Solar Portal” menu.
4. Select a solar portal.
5. Activate the data export.
6. Select the “Accept” field.

✓ You have now entered the portal code. Data transfer to the KOSTAL (PIKO) Solar Portal is now enabled.

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4. The KOSTAL (PIKO) Solar Portal

Registration

1. Call up the KOSTAL (PIKO) Solar Portal home page (www.piko-solar-portal.com).
2. Click on the "Join now" button.

➔ This opens the "KOSTAL (PIKO) Solar Portal | Registration" website.

3. Fill out the registration form.
4. Click on the "Send registration" button.

➔ We will send you an e-mail to confirm your registration.

5. Open this e-mail and click on the link.

➔ This opens the "KOSTAL (PIKO) Solar Portal | Registration" website which shows "Registration finished".

✓ Registration in the KOSTAL (PIKO) Solar Portal is complete.

INFO

Please note the fields shown with * in the input masks. This fields are required entry fields and must be completed.

Login

1. Call up the KOSTAL (PIKO) Solar Portal home page (www.kostal-solar-portal.com).
2. Enter your e-mail address and password in the Log in area.
3. Click on the "Log in" button.

➔ This opens the "KOSTAL (PIKO) Solar Portal | Plant List" website.

✓ You have logged onto the KOSTAL (PIKO) Solar Portal.

INFO

Click on the check box next to "Remain logged in?" to stay logged in. This means you do not need to log in again when you return to the KOSTAL (PIKO) Solar Portal.

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4.1 Creating a plant in the KOSTAL (PIKO) Solar Portal

1. Log onto the KOSTAL (PIKO) Solar Portal.
2. Click on the icon .

➔ This opens the "KOSTAL (PIKO) Solar Portal | Plant List" website where you see the input fields for the item number and the serial number.

3. Input the item number and the serial number and click on "Next".

➔ The inverter is displayed for selection.

4. Select inverter and click on "Next".

➔ This opens the form where you fill in all the plant data.

5. Complete the form and click on the "Next" button.

➔ This opens the "KOSTAL (PIKO) Solar Portal | Plant List" website.

✓ The new plant is now displayed in the plant list.

Calling up the website with the plant data

1. Log onto the KOSTAL (PIKO) Solar Portal.
2. In the left-hand menu bar, click on "Plant List".
3. Click on the name of the active plant you require.

✓ This opens the "KOSTAL (PIKO) Solar Portal | Plant List | Plant" website where you see the selected plant.

INFO

Before you can register the inverter on the KOSTAL (PIKO) Solar Portal, the inverter has to log onto the KOSTAL (PIKO) Solar Portal. This may take up to 20 minutes from first being set up in the inverter.

INFO

Is this plant public?

If this option is enabled, the plant is visible to everyone.

Maximum deviation (per cent)

The KOSTAL (PIKO) Solar Portal calculates a possible average yield for all inverters installed in a plant configuration. This yield is calculated from the power output by the installed PV power, the number of inverters in the plant and actual power produced.

The "Maximum deviation" function is used to define a maximum deviation from the calculated average yield. If this maximum deviation is exceeded (an inverter supplies insufficient yield, for example), the KOSTAL (PIKO) Solar Portal sends a message to the user, if this function has been enabled.

Max. number of simultaneous data connections

We recommend you use this function for larger plants with GSM modem or UMTS data transfer. Communication conflicts may arise if data is sent from a number of inverters at the same time. This function limits the number of data connections that can be active at the same time. It sends data at different times to ensure the information reaches the KOSTAL (PIKO) Solar Portal more reliably.

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4.2 Overview of the "Plant List | Plant" menu

After you select a plant, a selection of menus is displayed.

An overview of these menus, with the data they display and their editing functions is shown below.

INFO

Please note the "More" link.
(It is blue and can be found at the end of the brief description.)

Click on this link to display more detailed information.

Designation	Data	Functions	
General information	Information about the plant (name, location, size, etc.)		Edit and change plant data
Yields and power	Power and yield data from plants and individual inverters. Yields in the periods of day, week, month and year; performance data for up to 7 days. Displayed as a diagram. For a PIKO (FW > 5.00) with a PIKO BA Sensor, the building consumption, level covered by PV energy and, if there is also a PIKO BA inverter, also the battery values can be displayed.		Export graphics
Inverter	List of inverters that are (or have been) assigned to the plant.		Add new inverters to the plant
			Delete an inverter from the plant
			Assign an inverter with all its data to a different plant
			Assign inverter without any data to a different plant
Sensor channels	Overview of the sensor channel assignment (module temperature, irradiation etc.)		Add a measuring channel (see Page 22)
Measuring channel configuration submenu (select a measuring channel)	PIKO Sensor data		Change measuring channel configuration.

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Designation	Data	Functions	
Events	List of events and faults that have occurred in the plant.		
User roles	List of users who are permitted to access the plant data.		Add user
			Delete user
Message configuration	List of users to whom a message will be sent.		Add user
			Delete user
Message configuration / General submenu (select a user)	Info about message configuration		Change message configuration
Message configuration / User submenu	List of users to whom a message will be sent.		Add user (for more information about individual user roles, click on the "More" link)
			Delete user
Message configuration/Event classes submenu	List of event classes that are taken into account		Add event class
			Delete event class
Export	List of inverters whose data can be exported		Export log data in CSV format

Tab. 2: Overview of the "Plant List | Plant" menu

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4.3 Adding measuring channel

Addition to the "Sensor channels" menu)

1. Go to the KOSTAL (PIKO) Solar Portal | Plant List | Sensor channels and click on the icon .

➔ This opens the "Measuring channel and inverter selection" menu.

2. Select the measuring channel and inverter you require and confirm by clicking "Next".

➔ This opens the "Measuring channel settings" menu.

3. Fill in the fields and click on "Next".

✓ This adds the measuring channel to the list.

INFO

You will find the data you need for the measuring channel in the operating manual. The PIKO Sensor data are listed below.

PIKO Sensor measuring values

Measurement parameter	Irradiation (terminal: AIn1)	Module temperature (terminal: AIn2) Ambient temperature (terminal: AIn3)	
		Communication board I	Communication board II
Range of values	0 ... 3.125 V	0 ... 4.7	0 ... 9.4
Measuring range	0 ... 1500 W	-35 ... 125 °C	
Factor	480	22.6*	11.3*
Offset	0	-20*	-14*

Tab. 3: PIKO Sensor measuring values

* The dependence is not linear. For a more precise trend, see PIKO Sensor operating instructions.

Overview of the "Administration" menu

Designation	Data	Functions	
User	User data		Change user data
			Delete user account

Tab. 4: Overview of the "Administration" menu

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04/2018 - EN - DOC02118148-0001 - This manual is subject to technical changes and printing errors.
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