KOSTAL

PIKO Plan 2.0

Software
Version 1.0

EN

Smart connections.

Operating Instructions

Planning tool PIKO Plan 2.0
for PIKO Inverter

Service information

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

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General note on gender equality
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.

Contents

General instructions

Read this manual carefully in its entirety. It contains important information on using the PIKO Plan 2.0 software. This manual applies to software version 1.0 and higher.

KOSTAL Solar Electric GmbH assumes no liability for damages arising from the non-observance of this manual.

Proper use

The PIKO Plan 2.0 software from KOSTAL Solar Electric GmbH is a free inverter layout software. The resulting yield calculations are determined on the basis of historical weather data and may deviate from the actual yields. Please always be sure to use the most recent version of the software.

Exclusion of liability

All names, trademarks, product names or other designations given in this manual may be legally protected even if this is not labelled as such (e.g. as a trademark). KOSTAL Solar Electric GmbH assumes no liability or warranty for their free usage. The illustrations and texts have been compiled with great care. However, the possibility of errors cannot be ruled out. The compilation is made without any guarantee.
Any instance of misuse of the PIKO Plan software will result in termination of the warranty, guarantee and general liability of the manufacturer.

About this manual

These instructions for the PIKO Plan 2.0 layout software are designed as a step-by-step instruction set. We recommend you print these instructions out and carry out the inverter layout step-by-step with the printout in your hand.
Most of the user guidelines are self-explanatory. On each layout page you will find help texts and notes near the bottom.

Target group

This manual is intended for installers who plan, install and commission PV plants. Technical expertise is required to use PIKO Plan.

Remarks concerning the software

False layout of a plant can result in reduced yields and/or damage to the inverter.

System prerequisites

Windows operating system

First steps

Download the PIKO Plan 2.0 planning tool from the homepage of KOSTAL Solar Electric (www.kostal-solar-electric.de) under "Download" > "PIKO Multi-String Inverters" and install the tool on your Windows system.

Please note the limitations of liability relating to usage and layout when installing.
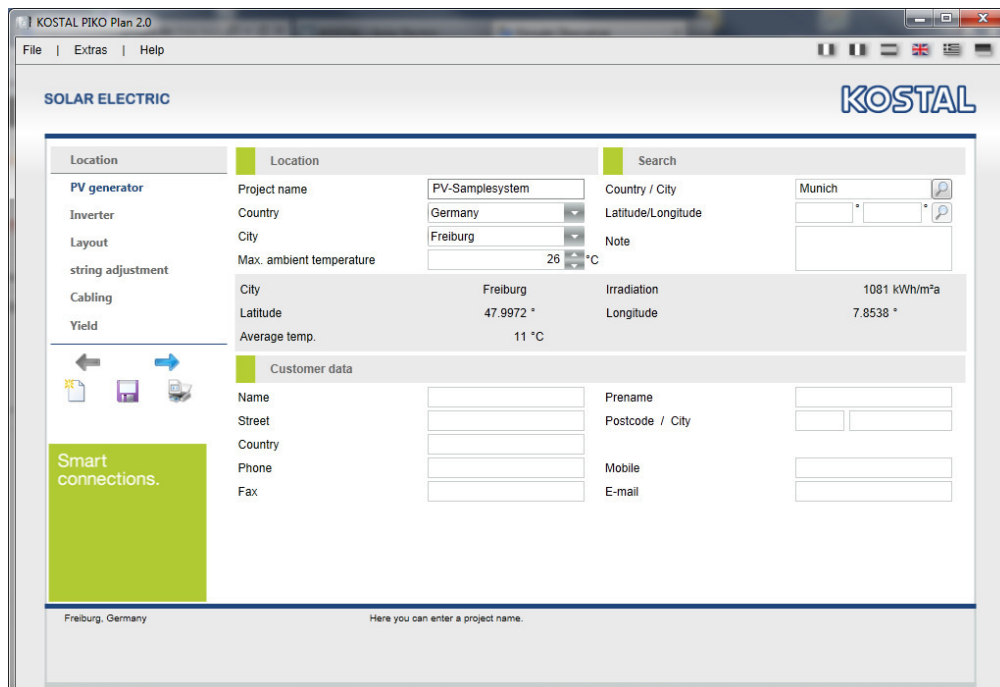


Explanation of the main functions

You can select the desired language at the top right.
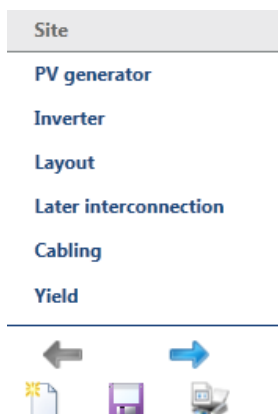
To the left is the navigation bar, where you can see where you are in the project.

In order to move one step back or forward, use the blue arrow in the desired direction, or directly click the desired step, such as "Layout".

Beneath the arrows you will find "New planning", "Save planning" and "Print preview" in PDF format ordered from left to right.
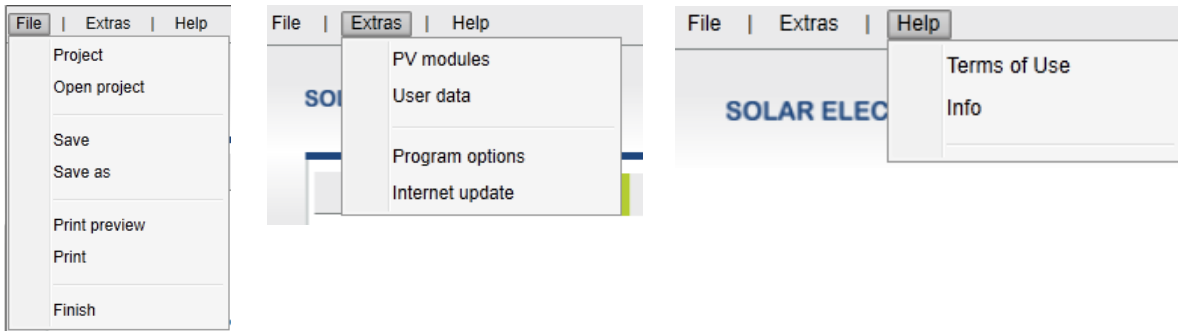
With the menu bar you can make use of the corresponding control functions or update the program. You will find the individual functions of the menu at the bottom.

File

Project:	Create new project
Open project:	Load saved project
Save:	Save current project. When this has not yet been saved, it will be saved under a new project designation with the suffix ".kse"
Save as:	Save current project under a new project designation with the suffix ".kse"
Print preview:	Print preview of the current project
Print:	Print the current project
Finish:	End program

Extras

PV modules:	Opens the module database, in which favourites can be selected or to which own modules can be added
User data:	Entry of the user data (installer data)
Program options:	Entry of proxy and general settings for updates/currency and module variance
Internet update:	Update check

Help

Terms of use:	Terms of use for PIKO Plan
Info:	Locations/contact data of the companies

User data

With the menu point "Extras" > "User data", all necessary information concerning your company that is subsequently to appear in the offer can be entered. Choose the "Search" function to insert a company logo.

PV modules

Own modules can be entered with the menu point "Extras" > "PV modules" or limited to certain favourites in the database. To do so, choose the star next to a module type, which then adds all modules of a manufacturer to your favourites.

Program options

With the menu point "Extras" > "Program options", automatic updates of modules can be set up and a check for updates initialised after the program is started.
In the event that a proxy server is used in the network, the necessary access data of the proxy server must be entered here.
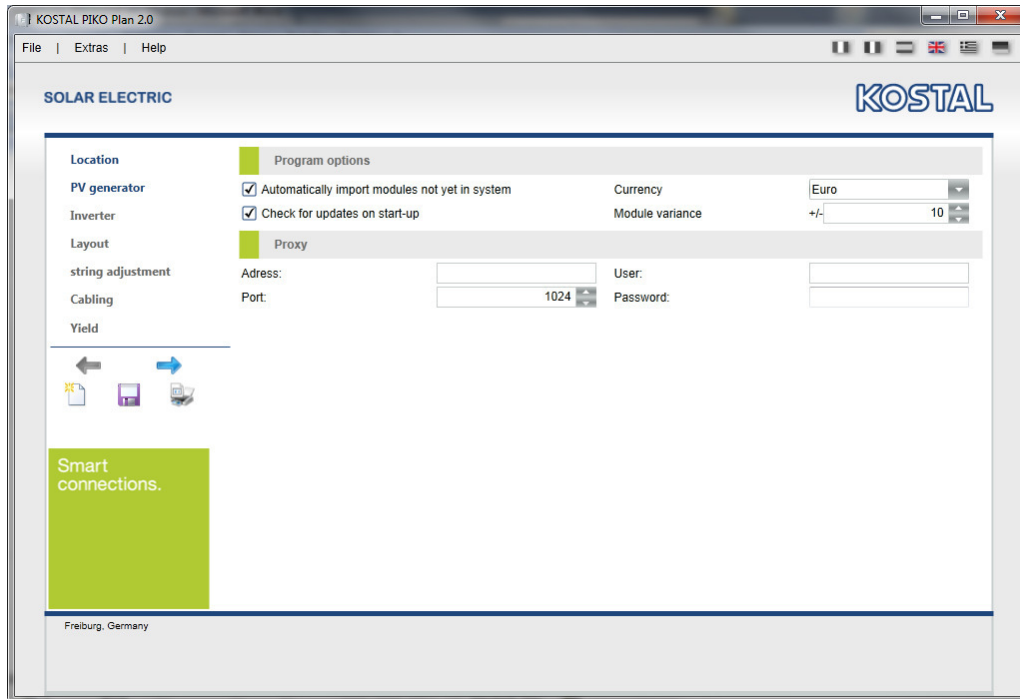
Internet update overview

With the menu point "Extras" > "Internet update overview", the program checks manually whether a current internet update is available or can check whether the entered proxy server settings are correct.
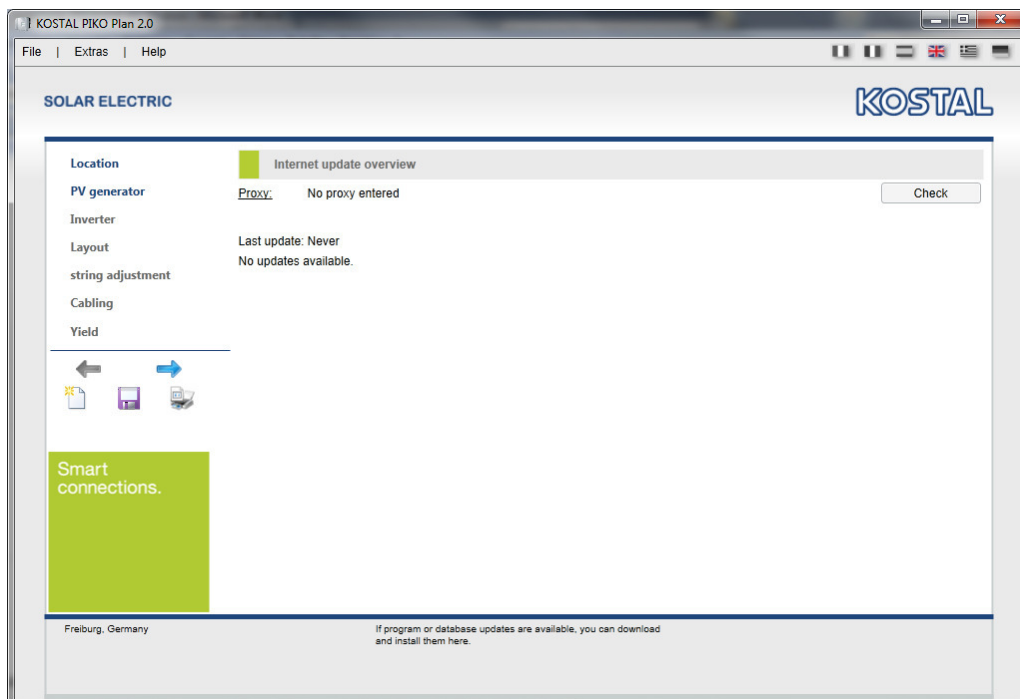
Use of PIKO Plan for inverter layout

Location

In order to commence with new planning, one must first enter the location. To this purpose call up the menu point "Location" on the left side.

Now enter the project name, the layout location and the customer data in order that these data can later be used in the print file. The indicated location is necessary for layout with relation to the irradiation and temperature data saved on location.

PV generator

Here a max. of 3 different PV generators (roofs incl. inclination and alignment) with modules (manufacturer and designation) and the desired rated output or the number of modules can be indicated. The entered data is confirmed by pressing the "Create" button.

In the event that one or more of the already created PV generators is to be processed, deleted or copied, use the buttons (pencil to edit, X to delete, letter to copy, diskette to save) next to the created generator. The diskette symbol is used to confirm the change.

An automatic calculation of the performance ratio (PR) with reference to the alignment is only possible for one created generator. The PR is to be determined manually when using up to 3 generators.

Inverter

Here the required grid settings (in some cases) prescribed by the grid operator are to be entered. In the event that an inverter is to be excluded from the layout calculation, this can be deselected with the help of the corresponding check to the right.

Layout

In this step PIKO Plan calculates the 5 favourable inverter layouts. The most favourable layout for the installer that can possibly be interconnected again in the next step is to be selected.

String adjustment

The individual inverters from the previous layout calculation are processed here. In the "Number of MPPT" column it is possible to select whether the standard inputs are to be used or whether the inputs should be connected parallel. In the lines below it is then possible under "Modules" to vary the respective number of modules, the connected strings and the selected PV generators.

Cabling

The lengths, cable cross-sections and material used between the PV generator and the inverters, as well as between the inverters and the AC connection, are to be indicated under this point. These are incorporated into the calculation of the yield.

Yield

Because the yield calculation is more complicated to explain, this will be done here using examples.

Here ("First period") you should enter the number of years and the value of the remuneration in cent for which you are guaranteed remuneration. If, like in the example shown below, you are only remunerated with 70%, set the left control to 70% and enter your costs for the power provided by the supplier into the field now appearing. In the event that you use the remaining 30% power yourself (internal consumption), the monetary value of this 30% (in relation to the generated kWh) will be incorporated into the total calculation.

The "Second period" can be used if you receive less remuneration after a certain period of time. The yields from internal consumption can be entered just as in "First period".

An overview of the yield calculation (e.g. yield, remuneration, avoided CO_2 emissions) is found in the bottom area.

Print preview

After all entries have been completed and the calculation has been carried out, with the "Print preview" button it is possible to view, save and/or print out the summarised PDF document with all necessary data (incl. your contact data) in order to make it available to the customer.

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