PV Link

Technical documentation

version 2.1



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The information contained in this documentation contains general and technical descriptions of the performance of the products to which the documentation relates. Advant sp. z o.o. accepts no responsibility for the misuse of the information contained in this document.

All relevant national, regional and local safety regulations must be observed during installation and use of this product. For safety reasons, repairs to the equipment must only be carried out by the manufacturer.

If the equipment is used in applications where there are technical safety requirements, the relevant instructions must be followed.

Failure to do so may result in personal injury or damage to the equipment.

1. Safety information

Before installing, operating, servicing and maintaining PV Link equipment, please read this documentation carefully and familiarise yourself with the construction of the equipment.

Advant sp. z o.o. accepts no liability for improper use of the PV Link device.

2. Safety precautions

Installation, wiring, testing and servicing must be carried out in accordance with all local and national electrical appliance regulations.

Carefully read and follow the precautions listed below.

To prevent the risk of electric shock, explosion or arcing, you must:

- Use appropriate personal protective equipment and follow safe electrical work practices.

- Carry out installation work in accordance with the installation instructions.

- Carry out installation work with the power supply disconnected or in PPN technique using the appropriate instructions.

- Disconnect all sources of electrical power before inspecting, testing or maintaining the unit. It should be assumed that all circuits are live until they have been completely de-energised, tested and marked. Careful consideration should be given to the design of the electrical power system. Consider all sources of electrical supply and, in particular, the possibility of reverse current.

- Do not exceed the maximum limits specified in the unit's rating data.

Failure to follow these instructions may result in death or serious injury.

3. Device description

PV Link is a device that ensures compliance of the inverter with the requirements of the Instruction of the Transmission Network Operation and Maintenance (IRiESD):

- ensures compliance with the requirements of the DSO with regard to the control of the inverter's operation, i.e. it implements the command to completely stop energy generation or to resume it, as well as to smoothly control active power.

- is the only device on the market that guarantees compliance with the DSO requirements laid down in the IRIESD for the control of photovoltaic installations.

3.1 Contents of the set

The PV Link kit includes the following components:

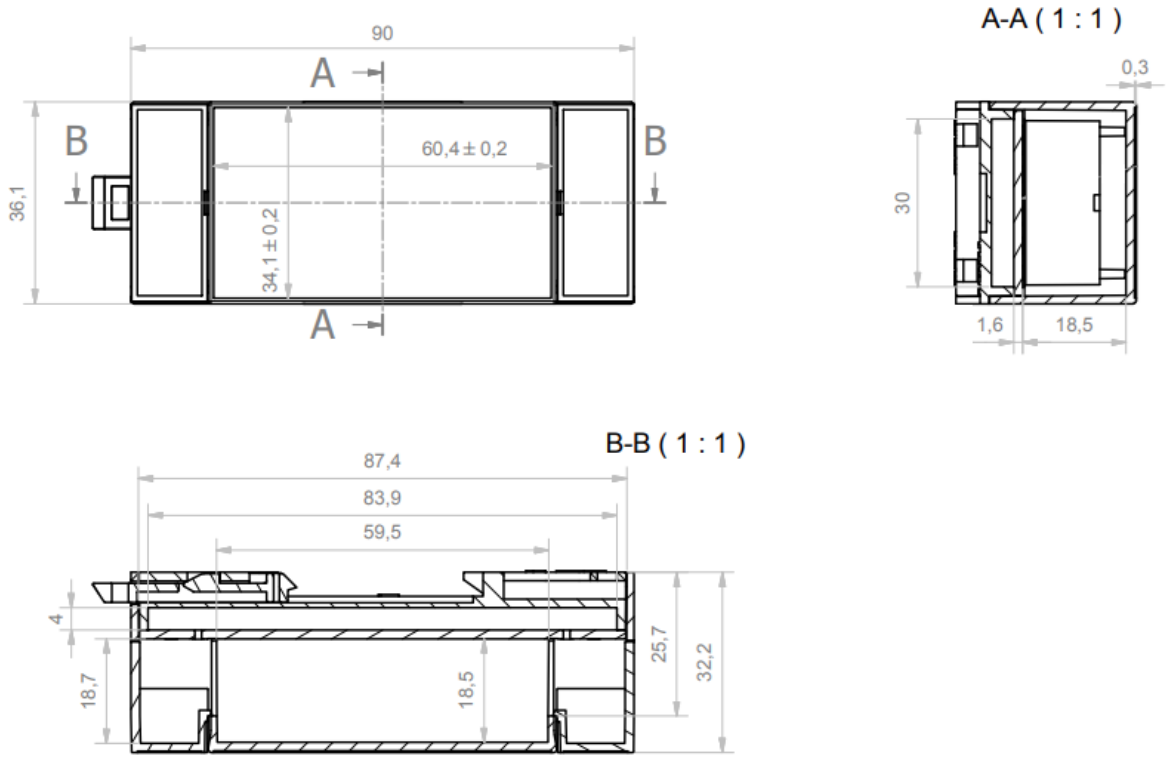
- PV Link device

- 12V DC DIN rail power supply (optional)





3.2 Device dimensions (mm)



4. How the device works

The PV Link device makes it possible to monitor and control photovoltaic installations in accordance with the Instruction of the Transmission Network Operation and Maintenance (IRiESD) of the national Distribution Network Operators (DSOs).

The device provides - in accordance with the requirements of the TNC - an RS485 port for communication with the photovoltaic installation via the SunSpec protocol. PV Link performs the role of ‘integrator’ mentioned in the TNC, enabling the monitoring of the operation and control of inverters that are not compatible with the SunSpec protocol, as well as installations that are equipped with more than one SunSpec-compatible inverter, in an appropriate way connecting them logically and providing a single ‘point of contact’ with the DSO.

The PV Link device is designed for installations with a nominal output of 200 kWp or less. Support for larger installations requires the use of a PV Supernode device.

5. Technical specifications of the device

- 2 x RS485 connector built on the main board of the device.

- power supply 7-36V DC

- WiFi connection

- real time clock (RTC) with battery backup

- size 36 x 90 x 32 mm, DIN rail mounting

- operating temperature from -10°C to 50°C

6. Communication

The PV Link device communicates with devices using the Modbus RTU protocol via an RS485 interface with the following parameters:

- speed - 9600 bps

- word length - 8 bits

- parity - N (none)

- number of stop bits - 1

Inverters connected to the PV Link should have the above RS485 communication parameters set.

It is possible to change the above RS485 communication parameters.

If several inverters are connected, make sure that each has a different Modbus ID address set (usually the default value on a new device is 1).

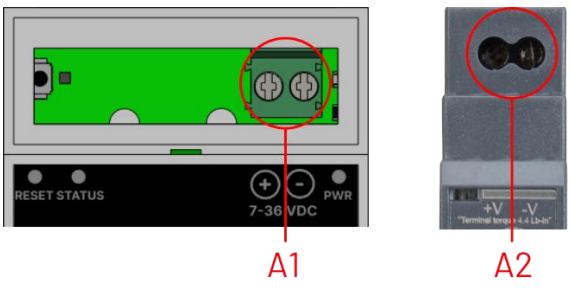
7. How to connect the device

7.1 Power connection

- Connect the cable to the power supply (A2), then to the screw connections (A1)

(V+ to DC+, V- to DC-)

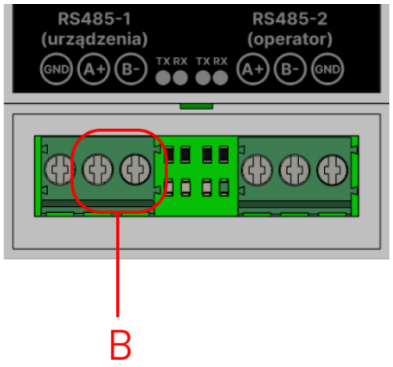
- Connect the power pack to the 230 V AC supply



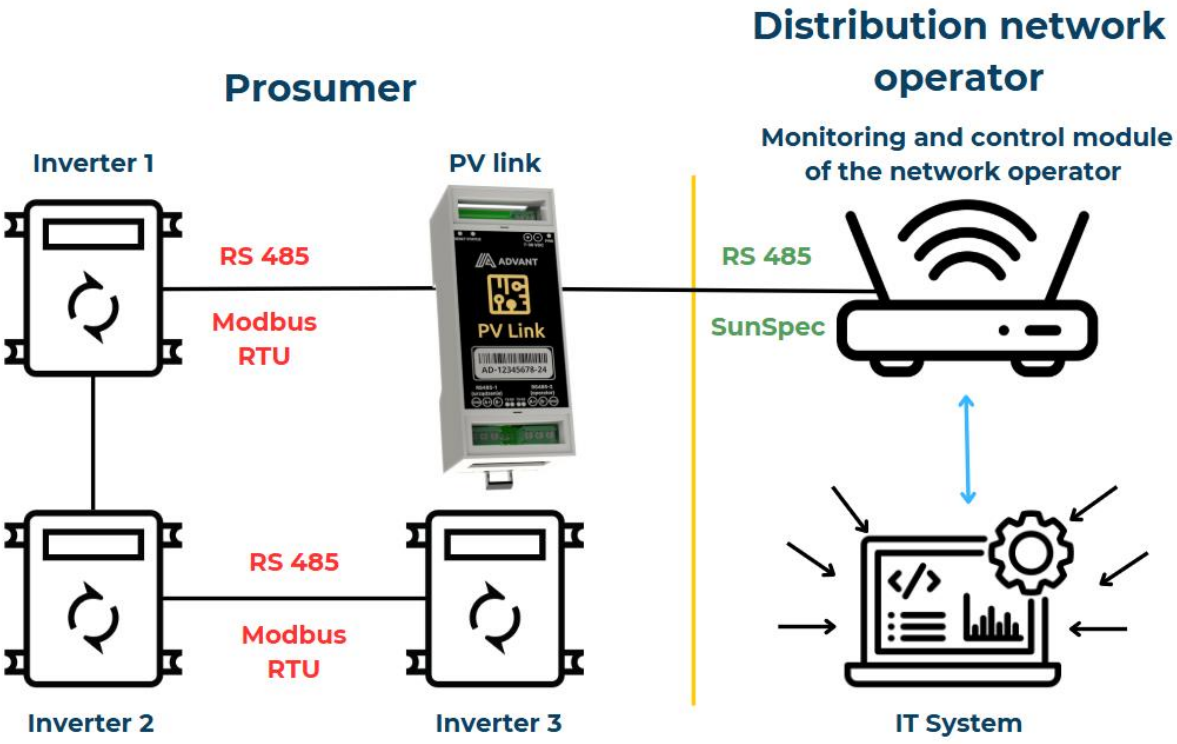
7.2 Connection of RS485 communication to the inverter

- Connect the RS485 cable to the screw terminals (B)

- Then connect the cable to the inverter (A+ to A+, B- to B-)



7.3 Connection diagram



8. Device configuration

In order to set up the device on the local Wi-Fi network after the device has started up, within 30 minutes, connect wirelessly to the hotspot provided by the PV Link device with the following parameters:

- SSID: pv_link_XXXXXXXXXXXXXX

- password: XXXXXXXXXX (last eight characters of serial number)

Once connected to the hotspot, a browser window will launch with the possibility to log in and configure the device.

9. Serial number of the device

The serial number of the device consists of 3 sections:

- A two-character company code (AD)

- An eight-character serial number

- A two-character indication of the year of manufacture

From this, a barcode sticker is generated in the following form:



10. Environmental protection

PV Link equipment is designed and manufactured in accordance with the requirements of the international standards for the ISO 9001 quality management system and the ISO 14000 environmental management system.

Both the design and production processes are carried out in accordance with environmental protection requirements - in particular with regard to the reduction of energy consumption, raw materials and the use of recycled materials.

The production technology ensures ease of subsequent disassembly and separation of the individual raw materials used in the construction of the PV Link device. This makes it possible to maximise the use of materials for reuse.

Do not dispose of the used appliance with ordinary waste/garbage. Take it to a special waste collection point for disposal. By doing so, you will help to protect the environment.