

INTIEL

THE ELECTRONICS ON YOUR SIDE

**CONTROLLER FOR CONTROL OF HEATERS FROM
PHOTOVOLTAIC PANELS**

type: PVBoiler

Rev.02

USER'S GUIDE



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Safety instructions:



- Check the integrity of the unit before installation.
- In case of damaged do not install until the malfunction has been corrected.
- Installation and dismantling of the unit must be carried out by a person who has previously read the product manual.
- To be installed in a dry and ventilated place, away from heat sources and flammable gases, liquids.
- Make sure that the mains voltage matches the voltage on the rating plate of the unit.
- Use power consumers that match the power output of the appliance.
- In the event of a malfunction of the appliance, switch off the appliance immediately and seek authorized service for repair
- In case of fire, use a fire extinguisher.
- For environmental reasons, do not throw away electrical appliances, appliances and their packaging marked with a sign.

crossed out trash



with household waste.

TECHNICAL DESCRIPTION

1. Application

The device is designed to control the heating of water heaters, buffer vessels and other photovoltaic panels.

2. Operation

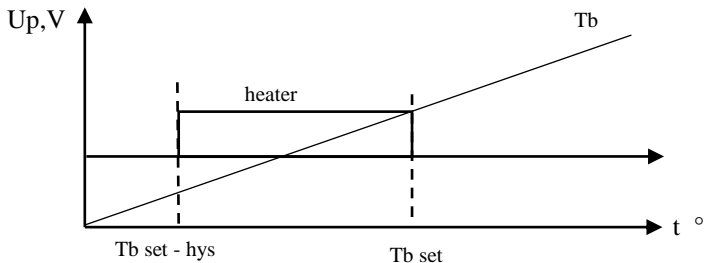
The controller maintains the water temperature in the boiler T_b , according to the set setpoint and hysteresis, by switching the heating on or off.

Monitors the current and voltage of the photovoltaic panel and measures the current power consumption.

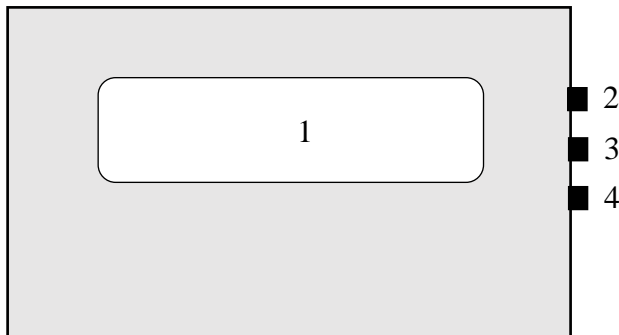
When "MPPT" mode is on monitors the point of maximum power from the panel according to the momentary sunlight. In this way, more efficient use of the panel is achieved in low sunlight. In this mode the set hysteresis does not affect the operation of the thermostat, the heater is always given power at a temperature lower than the set T_b set.

Work without "MPPT"

When the boiler temperature T_b is lower than the set T_b set - hys, the heating is switched on, the state continues until the set T_b set is reached.



3. Front panel



- 1 - indication;
- 2 - Button for change "ahead";
- 3 - Button for change "back";

4 – programmable entry / exit button;

The following parameters are displayed in the basic state of the display:

- U - panel voltage;
- Tb - current boiler temperature;
- P - panel power;

4. Programming

Use the “↑” or “↓” buttons to scroll until the desired setting is displayed. Press the “✓” button to enter programming mode, after which the setting value starts flashing. You can make changes with the “↑” or “↓” buttons.

To confirm the changes, press the “✓” button again.

<i>name</i>	<i>designation</i>	<i>limits</i>	<i>factory setting</i>	<i>note</i>
Set temperature	Tb set	5 – 90 °C	5 – 90	
hysteresis	Tb his	40	5	
Monitoring max. Power	MPPT	0 – disable 1 – enable	1	
Temperature correction	Tb cor	-10 to +10 °C	0	

Temperature correction

If there is a divergence of water temperature reading between the controller and the thermometer installed, due to the measurement of different locations of the water tank.

A correction can be made in order to align the readings as follows:

Press and hold “✓” for about 10 seconds, will show a request for password “Password”, with buttons “↑” or “↓” select 123 and press the key “✓” again.

With the “↑” or “↓” buttons you can make changes from -10 to 10 °C.

To confirm the changes, press the “✓” key again.

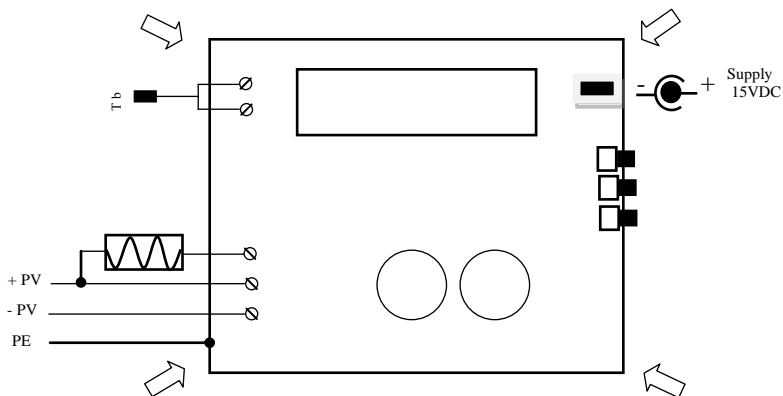
The menu will lock automatically 15 seconds after the last key press.

5. Electrical connection and technical data

To access the terminals, it is necessary to remove the cover of the box by unscrewing the upper bolts at the four ends of the box shown by arrows.

Technical Specifications:

Power supply - adapter	15 to 24VDC
Maximum switching current	MOSFET 320V/10A
Pt 1000 temperature sensor	(-50 to +250 ° C)
Measuring range	-10 +120 ° C
Maximum voltage from panels	up to 250V / DC
Unit of measurement	1 ° C
Ambient relative humidity	up to 80%
Degree of protection	IP20



6. Warranty

The warranty period is 24 months following the purchase date of the unit or its installation by a qualified staff, but not exceeding 28 months after the production date. The warranty is extended to the malfunctions that occur during the warranty period and are result of the production reasons or defective used parts.

The warranty does not relate to malfunctions corresponding to not-qualified installation, activities directed to the product body interference, not regular storage or transport.

The repairs during the warranty period can be done after correct filling of the manufacturer warranty card

Warranty Card

Manufacturer: INTIEL Ltd.

CONTROLLER FOR CONTROL OF HEATERS
FROM PHOTOVOLTAIC PANELS tipe: PVBoiler

Product type

Production number

Production date

Dealer's confirmation

Purchase date

Invoice number

Dealer's name, address and stamp

Seller's name and signature

Installation date

Date

Company (address, stamp)

Installer's name and signature