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# A-Z WATER INVERTER 2.0 LCD


A-Z WATER i 2.0

AZ WATER 2.0 is new in the product portfolio of AZ TRADERS . We have developed an extended version of the popular device for the realization of photovoltaic water heating AZ WATER INVERTER. The new generation in the form of AZ WATER 2.0 implements a number of improvements and extended functions that...

View product | Price after registration

## PRODUCT DESCRIPTION

**AZ WATER 2.0** is new in the product portfolio of **AZ TRADERS** .

We have developed an extended version of the popular device for the realization of photovoltaic water heating AZ WATER INVERTER. The new generation in the form of AZ WATER 2.0 implements a number of improvements and extended functions that will be appreciated by installation companies and end customers.

The AZ WATER 2.0 unit offers a full-color graphical touch LCD display, which clearly informs in the Czech language about the operating status and parameters of the entire system. Control is extremely clear and simple thanks to the use of graphic elements that intuitively represent individual functions. In addition to graphic control and display of the function mode, there is also an accurate measurement of the PV parameters, including the value of the total power delivered from the PV panels to the storage tank.

For maximum safety and user comfort, we have newly added " **AntiLegionella** " and " **FreezeSafe** " functions. In the case of the first function, the reservoir is regularly sanitized every 30 days to prevent the proliferation of Legionella and E. coli bacteria. The system also provides a check whether the sanitation has taken place in accordance with the requirements. Otherwise, it prompts the customer to take any action (e.g. increase the temperature on the boiler thermostat).

The latter function prevents the tank temperature from falling below 5 °C, so that the water cannot freeze and damage the tank. Both functions are user selectable. Another function, and perhaps the most important, is the function of setting the power of the cartridge, when even in case of inappropriate (higher) voltage of the PV string, the power will be limited to the set value and thus the overloading of the cartridge will be avoided! This function significantly facilitates the selection of panels, extends the life of cartridges and the unit itself, and prevents possible damage and the resulting service actions.

At the same time as this function, new "SMART" protections are implemented in the device, which minimize potential problems caused by incorrect installation or inappropriate selection of PV panels for trouble-free and stable operation of the entire system controlled by the AZ WATER 2.0 device.

The device now has a WiFi interface. After connecting the unit to the home WiFi network, the customer will receive automatic system updates, including the possible addition of new functions, accurate time from the Internet and, in the future, cloud monitoring and control.

This functionality is also related to the function of two time windows, which replace the HDO input for

time and economic optimization of maintaining the comfort temperature in automatic mode.

According to the set mode, the device directly feeds the boiler from the production of solar panels without unnecessary losses. For optimal efficiency, the power from the panels is processed via MPPT, which guarantees an optimal operating point and the highest efficiency of electricity production.

Since the boiler is essentially a purely ohmic load, the power is processed practically from the first produced watt (> 50W production) of energy from the panels directly into the hot water. Furthermore, the unit is equipped with the MPPS function, which regularly scans the characteristics of the entire string and, in the case of a partially shaded panel, finds the optimal point of the entire system of panels, thereby partially replacing the function of optimizers on PV panels.

With regard to the universality of use, the output voltage is alternating (modified sine square), thereby eliminating the need to use special boilers for direct current supply. The unit is designed for an input voltage of 75 – 350 V DC with regard to the operating voltage of the boiler heating cartridge! In practice, the optimal combination of 4 to 5 panels with a nominal power of 450-550 W per panel with a 230 V boiler.

The unit is supplied with a temperature sensor, thanks to which it is possible to set the minimum comfort temperature in full automatic mode and to read the current temperature in the tank. The unit requires a permanent connection to the distribution network, but only to operate its own control electronics or, in the case of additional heating from the network, to power the boiler. The actual consumption of the unit during heating from PV is approximately 0.5 - 3 W (display off without WiFi, display on, fan, WiFi communication). The unit cannot therefore be powered only from PV, a distribution network is always required.

| Technical parameters | Value |
|---|---|
| DC input voltage | 75-350V |
| Input voltage in PV mode: | 230 V, 50 Hz |
| Maximum string current | 15 A |
| Maximum AC current | 16 A |
| Maximum power of the heating cartridge | 2500 W |
| Comfort temperature setting range | 20 to 70 °C |
| Set temperature range | 30-70 °C |
| Operating temperature of the unit | -10 to 45 °C |
| Cover | IP20 |