

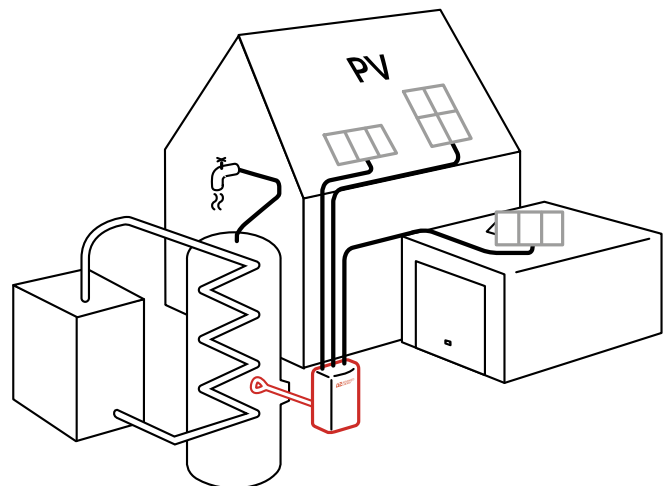
# AE PV Heater

Hot water from photovoltaics



- ✓ Cost-efficient
- ✓ Flexible
- ✓ Simple

The PV Heater uses the direct current produced by PV modules in a private home to heat the domestic hot water in heating systems. It boasts an efficiency grade of 99 % and saves hard cash. With the PV Heater a kilowatt hour of heat costs between 8 and 10 euro cents – which makes heat from the PV system cheaper than from an oil heating system. In addition, the heating system's CO<sub>2</sub> emissions are also lower, it does not use fossil fuels, and it is not tied to the price of oil. Six to twelve PV modules are sufficient for operating the PV Heater. The modules can even be aligned east to west or installed on facades. Extensive connection work is not required. No inverters, tubing, or similar is required. The only thing to do is to lay the cables. As the direct current voltage generated is only 50 V, you can even perform the connection yourself. There is no need to get to grips with bureaucracy, as the PV Heater is operated in your own home, completely independently of the grid. Energy efficiency was never so simple!



## TECHNICAL DATA

AE PV Heater

**Art. no.** 401R1K5

### ELECTRICAL DATA

Recommended PV power, kWp	1.5 ... 2.7
Heating capacity, W	1,500
MPPT range, V	16 ... 40
DC start voltage, V	18
Max. voltage DC, V	50
Max. current DC, A	3 x 20 (over-configuration up to 30 A permitted)
Recommended module type	60, 66, or 72 cells, mono or poly
MPP trackers	3
Number of DC inputs	3 x spring terminals 2.5 ... 6 mm <sup>2</sup>
Max. efficiency, %	> 99
European efficiency, %	> 99
Production starting at, W	2
Self consumption in night operation, W	0

### AMBIENT CONDITIONS

Cooling	Natural convection
Ambient temperature, °C	-25 ... +50, derating 4 %/K up to 70 °C
Site altitude, m above sea level	4,000
Noise, dBA	< 35

### STANDARDS AND APPROVALS

Product standard	EN 60730-1:2011, EN 60730-2-11:2008
EMC	EN 61000-6-3, EN 61000-6-2
Internal overvoltage protection (EN 61643-11)	Type 3
Protection class	III (as per IEC 62103-1), protective extra-low voltage / PELV
Overvoltage category	DC: II (as per IEC 60664-1)
Certification	CE

### MANAGEMENT, COMMUNICATION

Interfaces	6 status LEDs, Ethernet, 1 x inverter contact, (5 A, 30 VDC), digital input, 2 external PT1000 sensors
Monitoring	Integrated data logger, energy meter, AE SiteLink
Max. heating temperature (configurable), °C	Up to 80
Safety limit, °C	85

### MECHANICAL DATA OF HOUSING

Type of protection	IP21 as per EN 60529
Dimensions W x H x D, mm	210 x 235 x 90
Weight, kg	1.7

### MECHANICAL DATA OF HEATING ELEMENT

Material of heating element	High-quality nickel iron chrome alloy
Maximum operating pressure, bar	10
Unheated area, mm	100
Dimensions L x Ø, mm	400 x 40
Connection thread	1 1/2"
Fitting length, mm	14
Use	Drinking water, hot water
Weight, kg	1.0

Subject to modification. Technical specifications are subject to change without notice.

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