

## Description

The thermostat distributor AD-THV 10 serves the temperature-dependent regulation of a circulation pump and, at the same time, supplies an electric heating rod to a maximum of 2000 Watt (for higher performance, an external power-relay can be mounted). With this simple regulating device, a small amount of water can be heated electrically and, on reaching a temperature limit, a circulation pump can be switched on to a maximum of 100 Watt. The small amount of water heated in this way is now pumped into a large buffer supply tank (i.e. water storage tank in the heating). Due to this simple loading pump principle, the buffer supply tank is completely heated through. The known layering in the storage tank (warm at the top ... cold at the bottom) is therefore significantly reduced. With permanent operation, the buffer supply tank can be brought to an even maximum temperature. The AD-THV 10 requires a PT1000 resistance sensor for the temperature measuring, which is contained in the package. The switch point of the pump relay can be adjusted via an internal potentiometer. The switching hysteresis is permanently set.

## Application

Complete through stratification of water reservoirs on the charge pump principle. Works best in conjunction with the flow heater set AD-DLE.



## Specific characteristics

- Simple thermostat function for controlling a pump
- Adjustable switching threshold by potentiometer
- Fixed hysteresis
- No external wiring required
- Control of pumps up to 100 Watt
- IP65 casing

## Business data

Order number AD-THV 10

## Technical specifications

### Sensor input

Type	PT1000
Feeding voltage	5 V DC
Measuring range	0 ... 150 °C

### Output electric heater

Max. power	2000 W (higher performance via external relay possible)
Supply voltage	230 V AC +/- 10 %

### Output pump

Max. power	100 W
Supply voltage	230 V AC +/- 10 %

### Relay

Contact construction	closing contact
Switching operations mechanical	1 000 000
At 230V/2A AC, cos(phi)=1	600 000
At 230V/2A AC, cos(phi)=0,4	200 000

### Supply

Voltage range AC	230 V AC +/- 10 %
Nominal voltage AC	230 V AC / 50 ... 60 Hz
Power consumption AC / DC	max. 2,3 VA

### Transmission behaviour

Basic accuracy	+/- 1 °C
Temperature influence	100 ppm/K
Response time	ca. 500 ms
Switching hysteresis	ca. 3 °C

### Housing

Dimensions (WxHxD)	160x140x80 mm
Type of protection	IP 65
Connection method	screw clamp
Terminals, wire cross section	2,5 mm <sup>2</sup> flex wire / 4 mm <sup>2</sup> one wire
Bolting torque terminals	0,5 Nm
Weight	~ 510 g
Manner of fastening	wall housing

### Environmental conditions

Ambient temperature	0 ... 50 °C
Storage and transport	-10 ... 70 °C (no thawing)

### EMC

Product family standard	EN 61326 <sup>1)</sup>
Emitted interference	EN 55011, CISPR11 Cl. B

### Electrical safety requirements

Product family standard	EN 61010-1
Overvoltage category	II
Pollution degree	2

### Galvanic isolation, test voltages

Power supply / sensor	4 kV, 50 Hz (1 min.)
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### Protection circuits

Temperature input	electrical surge protection
Pump output	spark quenching
Power supply	Protection against overvoltage and overcurrent

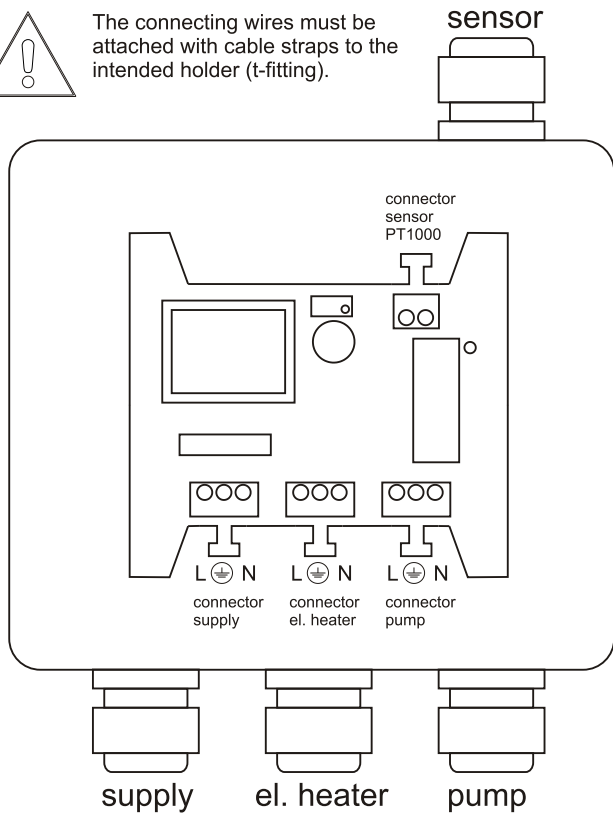
<sup>1)</sup> During checking, slight signal deviations are possible.



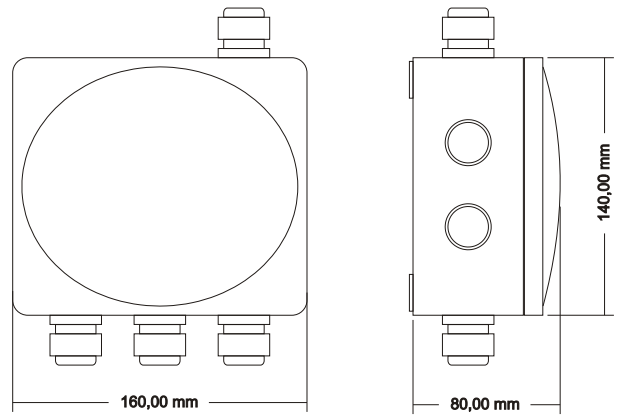
### Block and wiring diagram



The connecting wires must be attached with cable straps to the intended holder (t-fitting).



### Dimensions



**Circuit examples**

**assembly scheme**

Storage charge with heater, thermostat distribution beam and Photovoltaik Optimizer.

