

DeltaTherm® PHM

Power-to-Heat manager

The *DeltaTherm®* PHM is the ideal solution for using excess PV current for the control of different loads. Heat pumps, electric immersion heaters, and charging stations for electric vehicles can be controlled as needed. All the while household power has absolute priority.

Each load can also be supplied with mains current on a time-controlled basis.

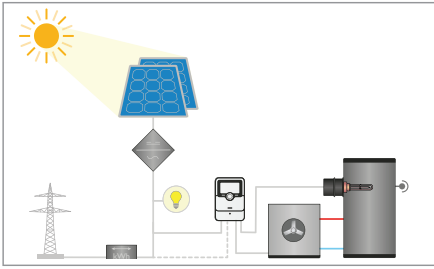
Furthermore, the *DeltaTherm®* PHM measures the electric loads at the energy meter which can be visualised via VBus.net.

Intelligent distribution of excess PV current

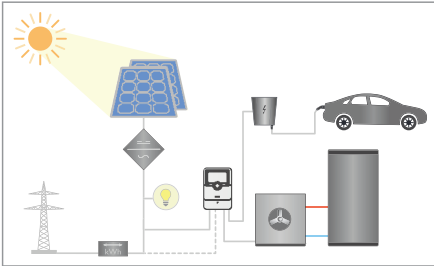
- Increase in self-consumption
- Reduction of heating costs
- Control of a heat pump
- Control of a wallbox
- Control of up to 3 electric immersion heaters (via auxiliary relays)
- Household current priority
- Can be used with all PV systems
- Time-controlled backup heating (with mains current)

Article no.	Article	Price bracket
115 007 13	<i>DeltaTherm®</i> PHM – Full kit >> incl. measuring unit, 3 current sensors and 3 Pt1000 sensors (FRP6)	A

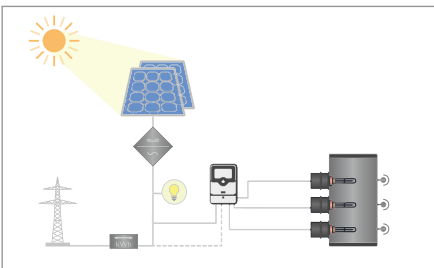
EXAMPLES



Control of an electric immersion heater* and of a heat pump



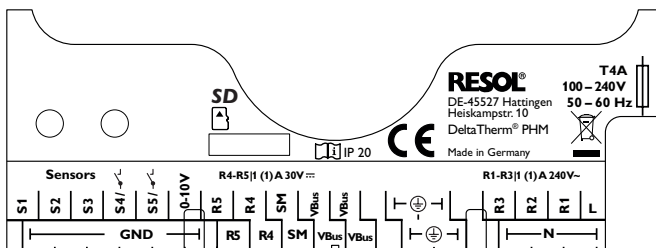
Control of a heat pump and of a wallbox



Control of 3 electric immersion heaters*

*via auxiliary relay(s)

ELECTRICAL CONNECTION



TECHNICAL DATA

DeltaTherm® PHM

Inputs: 5 Pt1000 temperature sensors (2 of them convertible to switch)

Outputs: 3 electromechanical relays, 2 potential-free extra-low voltage relays and 1 PWM output (convertible to 0-10 V)

Switching capacity:

1 (1) A 240 V~ (electromechanical relay)

1 (1) A 30 V== (potential-free relay)

Total switching capacity: 3 A 240 V~

Power supply: 100 – 240 V~ (50 – 60 Hz)

Supply connection: type X attachment

Standby: < 1W

Mode of operation: type 1.B.C. action

Rated impulse voltage: 2,5 kV

Data interface: RESOL VBus®, MicroSD card slot

VBus® current supply: 35 mA

Functions: measurement and balancing of the current flow at the energy meter; control of a heat pump; control of up to 3 electric loads (e.g. immersion heaters); control of a wallbox

Housing: plastic, PC-ABS and PMMA

Mounting: wall mounting; mounting into patch panels is possible

Indication / Display: full graphic display; operating control LED (Lightwheel®) and background illumination

Operation: 4 buttons and 1 adjustment dial (Lightwheel®)

Ingress protection: IP 20 / EN 60529

Protection class: I

Ambient temperature: 0 ... 40 °C

Pollution degree: 2

Dimensions: 110 x 166 x 47 mm

Measuring unit (DeltaTherm® E sensor)

Inputs: 3 current inputs and 3 voltage inputs for SW16 current sensors

Power supply: 100–240 V~ (50–60 Hz)

Supply connection: type Y attachment

Standby: < 1W

Rated impulse voltage: 1.0 kV

Data interface: VBus®

Functions: energy measuring unit

Housing: plastic, PC (UL 94 V-0)

Mounting: DIN rail in the domestic distribution board

Indication / Display: 2 operating control LEDs

Protection type: IP 20 / EN 60529

Protection class: II

Ambient temperature: 0 ... 40 °C

Degree of pollution: 2

Dimensions: 71 x 90 x 58 mm

ACCESSOIRES

Datalogger DL2



For visualisation via VBus.net, incl. SD card and network cable, VBus® cable pre-connected

AM1



Alarm module for signaling system failures

KM2 Communication module



Incl. service CD, network cable and mains adapter, VBus® cable pre-connected

MicroSD card



MicroSD card, 4 GB memory capacity, incl. Adapter

Electric immersion heater



Single-phase electric immersion heater up to 3 kW, variable and grid-compliant

HR230/3 Auxiliary relay



Three-phase, suitable for all RESOL controllers