



MODERN CONTROLLERS FOR HEAT PUMPS

+ PLUM mobile solutions

PLUM RESEARCH PROJECT

concerns the use of innovative adaptive-predictive algorithms for control of electronic expansion valves and compressors in order to obtain the maximum SCOP and COP factor values in air-to-water heat pumps. The controller, developed in PLUM, is based on a modelled object controlled by neural network used for artificial intelligence devices.

The controller “learns” an object and can foresee the settings based on external as well internal conditions, to ensure maximum work performance. The main objective of further tests is to reach a maximum value of SCOP factor physically obtainable from a given heat pump.

ecoNET CONTROL ON-LINE



An internet module fulfilling the role of a service system for an online control and management.

ecoTRONIC 100

for ground source heat pump



This controller is being designed for control of ground source heat pump therefore it can control the bottom heat source, CH and DHW heating circuits, compressor and DHW tank heater and bivalent source. The controller is using the measurements from weather control sensor.

The controller has the ability to calculate the values of COP and SCOP factors.

ecoTRONIC 200

for air source heat pump



This controller is being designed for control of air source heat pump therefore it can control the bottom heat source, CH and DHW heating circuits, compressor and DHW tank heater and bivalent source. The controller is using the measurements from weather control sensor. The controller can work together with two types of air source heat pumps: monoblock or split.

The controller has the ability to calculate the values of COP and SCOP factors.

ecoTRONIC 200 HYBRID



*

The ecoTRONIC 200 Hybrid will be a device designed for control of heat pump and additional heat source simultaneously (e.g. gas or oil boiler or solar thermal collector etc.)

This unique feature gives the possibility to encompass control over variable devices with just one controller.

5"

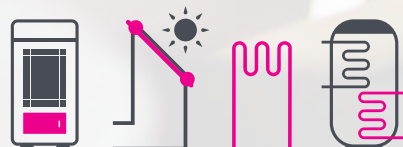
* in development

ecoTRONIC 050

for air source heat pump



This device can control DHW tank, circulation pump or additional heat source. It comes also with the extensive time schedule functionality, which enables automatic operation time programming.



ecoSTER TRONIC

remote control straight from Your living room



5"
 * in development

The ecoSTER TRONIC is a remote control device equipped with room thermostat enabling easy temperature control. Apart from thermostat function it enables to the User reading and supervision of each and every heat pump parameter and alarm as well editing a basic set of functions and operation modes. There is also a possibility to set individual time schedule of day and night temperatures. This device is compatible only with PLUM controllers.

- Central management of heating network
- Room thermostat
- Product customization – tailored to Customer Needs
- Intuitiveness – a touch screen easy to read and use
- Individual temperature time schedules
- Information about alarms and fuel level
- Software update with the use of MicroSD memory card.

ecoNET 300 + mobile applications

a new dimension of comfort



The ecoNET 300 internet module enables remote access to a controller with PC, tablet or smartphone. The user has the ability to change basic as well service parameters of the controller thus having influence on operation of heat pump and entire heating installation. From the user point of view, clear and straightforward chart visualization of operation history of heat pump or heating installation is a major advantage.