

DeltaSol® E



rosenthal design 

The DeltaSol® E controller is designed for solar thermal systems and heating systems. It is pre-programmed for 7 basic solar systems and up to 30 variations which can even be used to control large systems. A multitude of adjustable functions and options are possible using 7 relay outputs, 13 sensor inputs for Pt1000, CS10, V40 and Din. Due to its intelligent and easy-to-understand system configuration and its integrated calorimeter, the controller also offers the control of complex systems with up to 4 weather-compensated heating circuits. For data communication and remote maintenance, the controller is equipped with the RESOL VBus®, which permits two-way communication between modules, PC's or data loggers.

RESOL DeltaSol® E

System controller for solar and heating systems (Unit °C)

Article no.: 115 662 27

RESOL DeltaSol® E - Full kit

System controller for solar and heating systems (Unit °C)
incl. 6 Pt1000 sensors (2 × FKP6, 4 × FRP6)

Article no.: 115 662 37

RESOL DeltaSol® E

System controller for solar and heating systems (Unit °F)

Article no.: 115 663 17

RESOL DeltaSol® E - Full kit

System controller for solar and heating systems (Unit °F)
incl. 6 Pt1000 sensors (2 × FKP6, 4 × FRP6)

Article no.: 115 663 27

- 7 basic solar systems are possible
- Pump speed control, solar operating hours counter and energy metering
- Internal calorimeter
- 1 internal heating circuit and control of 3 additional weather-compensated heating circuits by additional modules
- 13 sensor inputs
- 7 relay outputs
- Function control
- RESOL VBus®
- Housing with outstanding design
- User-friendly operation



The controller can be branded with your own logo. Please contact our sales team.

Accessory

RESOL SP10

Overvoltage protection device placed in housing with outstanding design, suitable for mounting outdoors. We generally recommend installing the overvoltage protection in order to avoid overvoltage damage at collector sensors, e.g. caused by local lightning storms.



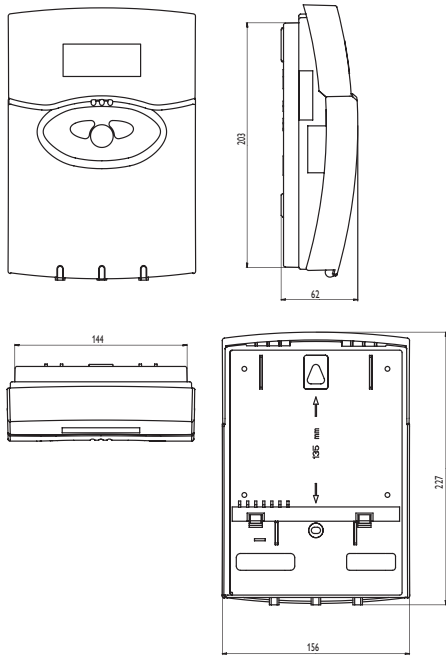
RESOL SP10

Sensor overvoltage protection

Article no.: 180 110 70

For an overview of accessories see page 46-47!

Technical data



Housing: plastic, PC-ABS and PMMA

Protection type: IP 20/EN 60529

Ambient temperature: 0 ... 40 °C / 32 ... 104 °F

Dimensions: 227 × 156 × 62 mm / 8.9" × 6.1" × 2.4"

Size: wall mounting, also suitable for mounting into patch panels

Installation: 4-line LC-text display, illuminated, menu-driven (multilingual)

Operation: 3 push buttons at the front

Functions: solar system controller for application in solar and heating systems. 7 pre-programmed solar- and heating systems, internal calorimeter; 1 internal heating circuit and control of 3 weather-compensated heating circuits by modules. Adjustable system parameters and options (menu-driven), balance- and diagnostics functions, function control

Inputs: 13 Pt1000 sensor inputs, CS10, V40

Outputs: 7 relay outputs, 6 of them semiconductor relays, 3 of them for pump speed control and 1 dry contact relay

Bus: RESOL VBus®

Power supply: 100 ... 240 V~

Power consumption: < 1.6 W (standby)

Total switching capacity: 4 (2) A 100 ... 240 V~

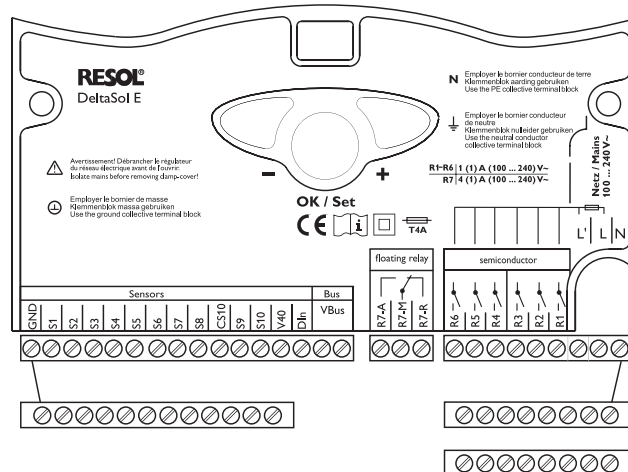


Rapid maintenance



Easy operation and control

Electrical connection



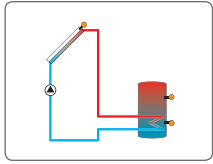
Seven solar basic systems are pre-programmed for the controller

- 1: Solar system with 1 tank
- 2: East-/west collectors/1 tank
- 3: Solar system with 2 tanks
- 4: East-/west collectors/2 tanks

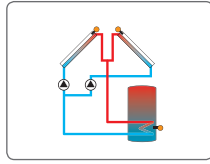
- 5: Solar system with 3 tanks
- 6: East-/west collectors/
3 tanks
- 7: Solar system with 4 tanks

Basic systems DeltaSol® E

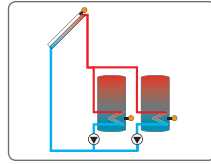
The controller is pre-programmed for 7 basic systems. A multitude of versions is possible by add-on functions and options.



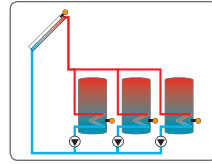
Solar system with 1 tank



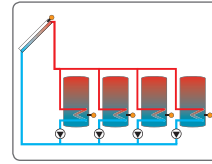
Solar system with east-/west collectors and 1 tank, pump-control



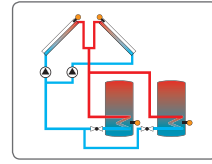
Solar system with 2 tanks, pump control



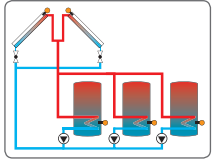
Solar system with 3 tanks, pump control



Solar system with 4 tanks, pump control

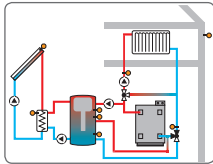


Solar system with east-/west collectors and 2 tanks, pump-/valve control

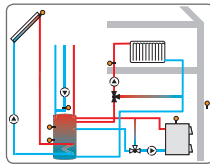


Solar system with east-/west collectors and 3 tanks, valve-/pump control

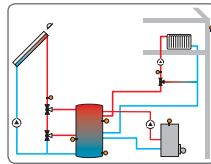
Examples



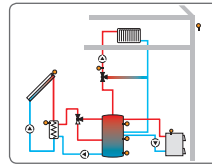
Solar system with combined tank, external heat exchanger, weather-compensated heating circuit, return preheating and backup heating



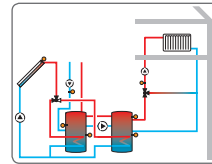
Solar system with weather-compensated heating circuit, solid fuel boiler and circulation pump control



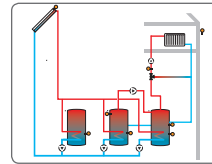
Solar system with tank load in layers, backup heating and weather-compensated heating circuit



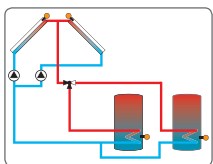
Solar system with external heat exchanger and backup heating by solid fuel boiler



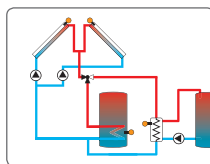
Solar system with 2 tanks, circulation pump control, heat exchange control and weather-compensated heating circuit



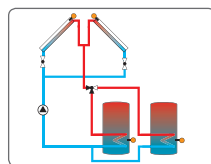
Solar system with 3 tanks pump control, heat exchange controller and weather-compensated heating circuit



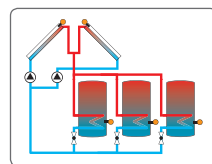
Solar system with east-/west collectors and 2 tanks, pump-/3-way-valve control



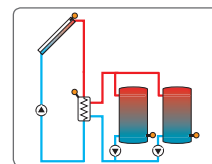
Solar system with east-/west collectors, 2 tanks and external heat exchanger, 3-way-valve control



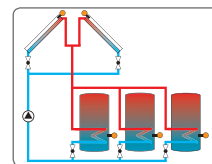
Solar system with east-/west collectors and 2 tanks valve-/3-way-valve control



Solar system with east-/west collectors and 3 tanks, pump-/valve control



Solar system with 2 tanks and external heat exchanger, pump control



Solar system with east-/west collectors and 3 tanks, valve-control

More examples can be found at www.resol.com

Accessories for the DeltaSol® E controller



... with energy metering

The RESOLV40 is a measuring instrument with a contactor for measuring the flow of water or water-glycol-mixtures and can be connected directly to the controller for energy metering. After a specific volume has passed, the V40 sends an impulse to the controller. The heat quantity used is calculated from these impulses and the temperature difference measured between flow and return using pre-defined parameters (glycol type, concentration, heat capacity etc.). The temperature sensors are delivered with sensor wells and can be easily installed (also subsequently) into flow and return by means of a T-piece.



... with additional heating circuit module

The heating circuit module HKM2 (see page 27) as an accessory for the system controller DeltaSol® E makes it possible to control three additional heating circuits. The controller can be extended to a coupled heating/solar controller unit by a simple connection via the VBus®.



... and remote control

The remote control RTA11-M is designed for connection to the HKM2 and the controller and allows a comfortable adjustment of the controllers heating curve. The rise of the heating curve causes an increase in flow temperature, a fall causes a decrease. The remote control additionally contains the functions "heating circuit off" and "rapid warm-up".



... and additional plausibility control

The solar cell is used for measuring the momentary irradiation intensity and allows additional plausibility control for the system status. The connection line can be extended up to 100 m.



... and GA3/SD3

The Large Display GA3 and the Smart Display SD3 are completely mounted display modules used for visualizing collector temperature, tank temperature and the energy yield of a solar thermal system via one six-digit and two four-digit seven-segment displays. Designed for simple connection to all controllers with RESOL VBus®. For further information see pages 36 and 37.