





rosenthal design 👔



# DeltaSol Fresh®

RESOL offers a range of solutions for the control of DHW exchange modules. The new controller platform is equipped with an enhanced and faster control algorithm and enables the precise and energyefficient control of the draw-off temperature. In order to achieve the best possible control quality, our laboratories run a number of dimensioning tests and check measurements. Classification of control quality is conducted on the basis of research results of the Rapperswil Institute for Solar Technology and the Institute for Solar Energy Research in Hamelin (ISFH).

# DHW exchange controller platform

- Constantly high control quality by adaptation to the end user system by means of self-learning neural networks
- Customised control for systems with or without circulation
- Flexible circulation function for different user profiles, also available with thermal disinfection
- Reliable DHW heating even in the case of a fault condition
- Control of PWM and LIN bus pumps
- Adaptable to many commonly used flow rate sensors
- Cascades of up to 6 DHW exchange controllers or stations
- Numerous check measurements run by our laboratories

**RESOL** develop and produce the right controller to suit your DHW exchange module, PLEASE CONTACT US!

| Article no. | Article   | Price bracket |
|-------------|---|---------------|
|             | DeltaSol® Fresh – DHW exchange controller (solutions for the control of OEM DHW exchange modules) | Α             |

#### **EXAMPLES**



DHW heating



with stratified return



Cascade - DHW heating



Cascade – with stratified return



with circulation



with circulation and stratified return



Cascade - with circulation



Cascade – with circulation and stratified return

# TECHNICAL DATA (EXAMPLE)

#### Inputs:

6 Pt1000 temperature sensors,1 flow rate sensor (0-500 Hz interface or Grundfos Direct Sensor™ analogue (depending on the product version)) **Outputs:** 3 semiconductor relays, 2 PWM outputs,

1 potential-free extra-low voltage relay

PWM frequency: 512 Hz

**PWM voltage:** 11 V **Switching capacity:** 

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

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

Total switching capacity:  $4 A 240 V \sim$ Power supply:  $100-240 V \sim (50-60 Hz)$ 

Supply connection: type X attachment

Standby: 0.97 W Mode of operation: type 1.B.C.Y action

Rated impulse voltage: 2.5 kV

Data interface: VBus<sup>®</sup>, cascade bus, LIN bus interface, MicroSD card slot

**VBus<sup>®</sup> current supply:** 60 mA

Housing: plastic, PC-ABS and PMMA

Mounting: wall mounting, mounting into patch panels is possible Indication / Display: full graphic display, operating control LED (Lightwheel®) Operation: 4 buttons and 1 adjustment dial (Lightwheel®)

Ingress protection: IP 20/EN 60529

Protection class: | Ambient temperature: 0 ... 40 °C

Degree of pollution: 2

Relative humidity: 10...90 % Fuse: T4A

Maximum altitude: 2000 m above MSL

Dimensions: 110 x 166 x 47 mm

## ELECTRICAL CONNECTION (EXAMPLE)



## FURTHER POSSIBLE SENSOR TYPES:

- Ultrasonic sensors
- Vortex sensors
- Turbine sensors

(On request)

## ACCESSORIES

#### KM2 Communication module



For remote access to the controller viaVBus.net



DL2 Plus Datalogger

For remote access to 2 controllers, integrated data logging and connection to a BMS



Alarm module for signalling system failures