



rosenthal design 



DeltaSol® MX

The *DeltaSol® MX* is the most versatile system controller for complex solar and heating systems in our product range. It is ideal to control a combination of solar and non-solar parts of the system.

Easy combination and parameterisation of pre-programmed functions for several millions of hydraulic variants.

**Certified for the
North American market!**



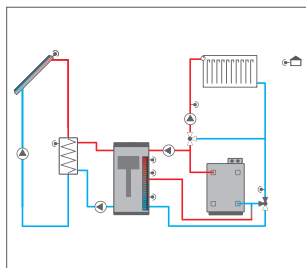
The cLCus certification confirms that the controller is certified to UL 60730-2-9 and CSA - E60730-2-9-01.

The all-rounder!

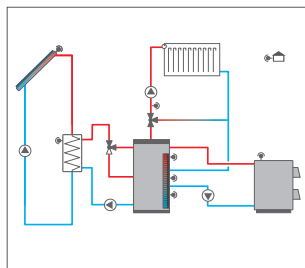
- 14 relay outputs and 12 inputs for Pt1000, Pt500 or KTY temperature sensors
- Up to 5 extension modules via RESOL VBus® (45 sensors and 39 relays in total)
- Inputs for analogue and digital Grundfos Direct Sensors™ as well as for FRH and FRHd humidity sensors
- Integrated control of up to 4 high-efficiency pumps via PWM outputs
- Data logging, storing, easy transfer of controller adjustments prepared and firmware updates via SD card
- Cooling over the heating circuit with condensation detection
- Dew point calculation by means of the FRH(d) humidity sensor to avoid condensation
- Simplified timer, 0-10V boiler control and DHW preheating
- Remote access to the heating circuits with room control unit(s) or the VBus®Touch HC App
- Extended optional functions, e.g. solid fuel boiler function with mixer and target temperature control
- Heat pump demand (optional)

Article no.	Article	Price bracket
115 992 03	DeltaSol® MX – System controller	A
115 992 13	DeltaSol® MX – Full kit » incl. 6 Pt1000 sensors (2 x FKP6, 4 x FRP6)	A

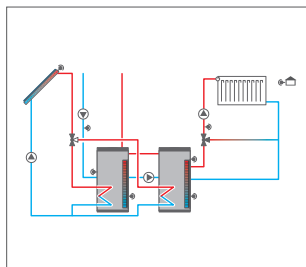
EXAMPLES



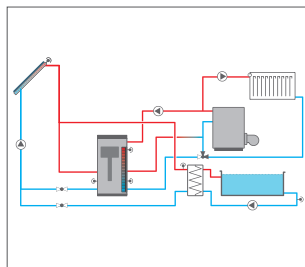
Solar system with combined store, external heat exchanger, weather-compensated heating circuit, return preheating and backup heating



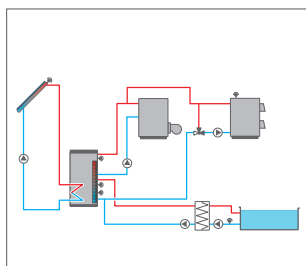
Solar system with external heat exchanger, store loading in layers and backup heating by solid fuel boiler



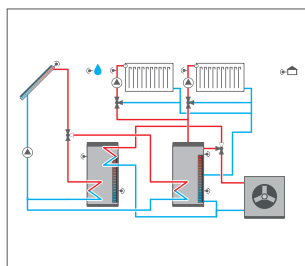
Solar system with 2 stores, circulation pump control, heat exchange control and weather-compensated heating circuit



Solar system with combined store and swimming pool, backup heating, heating circuit loading and return preheating

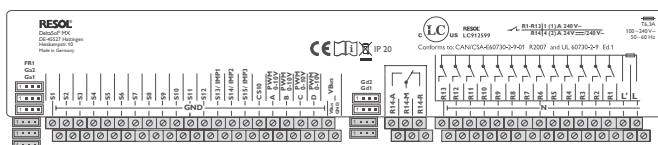


Solar system with store, swimming pool and backup heating over gas- and solid fuel boiler



Solar system with 2 stores and 2 weather-compensated heating circuits for heating or cooling application of a heat pump as well as dew point calculation by means of the FRH(d) humidity sensor

ELECTRICAL CONNECTION



Inputs: 12 Pt1000, Pt500 or KTY temperature sensor inputs (can optionally be used for remote controls, operating mode switches or potential-free switches), 3 impulse inputs for V40 flowmeters (can optionally be used for Pt1000, Pt500 or KTY temperature sensors, remote controls, operating mode switches or potential-free switches), 1 frequency input, 1 CS10 solar cell, 2 analogue inputs for VFS/RPS Grundfos Direct Sensors™ or FRH humidity sensors, 2 digital inputs* for VFD/RPD Grundfos Direct Sensors™ or FRHd humidity sensors

Outputs: 14 relays, 13 of them semiconductor relays for pump speed control, 1 potential-free relay and 4 PWM outputs (convertible to 0-10 V signal outputs)

PWM frequency: 512 Hz

PWM voltage: 10.5 V

Switching capacity:

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

4 (2) A 24 V~ / 240 V~ (potential-free relay)

Total switching capacity: 6.3 A 240 V~

Power supply: 100–240 V~ (50–60 Hz)

Supply connection: type X attachment

Standby: 0.82 W

Temperature controls class: VIII

Energy efficiency contribution: 5 %

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

Rated impulse voltage: 2.5 kV

Data interface: RESOL VBus®, SD card slot

VBus® current supply: 35 mA

Functions: 7 integrated calorimeters and control of weather-compensated heating circuits. Adjustable system parameters and add-on options (menu-driven), balance and diagnostics functions, function control according to VDI 2169

Housing: plastic, PC-ABS and PMMA

Mounting: wall mounting, mounting into patch panels is possible

Indication/Display: full graphic display, operating control LED

(directional pad) and background illumination

Operation: 7 buttons

Ingress protection: IP 20/EN 60529

Protection class: I

Ambient temperature: 0...40 °C

Degree of pollution: 2

Relative humidity: 10...90 %

Fuse: T6.3A

Maximum altitude: 2000 m above MSL

Dimensions: 253 x 200 x 47 mm

* For the Inputs Gd1 and Gd2, the following sensor combinations are possible:

1 x RPD, 1 x VFD / 2 x VFD, but with different measuring ranges only

/ 1 x VFD, 1 x FRHd / 1 x RPD, 1 x FRHd

ACCESSORIES

KM2 Communication module



For remote access to the controller via VBus.net

EM Extension module



Sensor and relay extension module with 5 outputs and 6 inputs

FRH (analogue) and FRHd (digital)



For measuring the relative humidity and the room temperature

RCP12 Room control unit



The heating curve can be comfortably adjusted, incl. operating mode switch

RTA12 Remote control



The heating curve can be comfortably adjusted from the living area