RESOL®
CONTROL TECHNOLOGY

rosenthal design **r**

VBus.net

RPT

VBus®Apps

HE pump control

DeltaSol® MX Plus

The **DeltaSol®** MX Plus combines the functional range of the **DeltaSol®** MX with an integrated Web server. Configuration, function control and access to VBus.net can be carried out easily and conveniently on any mobile device via a Web interface.
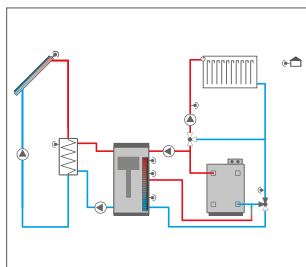
Interfaces such as LAN and Modbus RTU (optional) as well as WLAN functionality and a WLAN access point offer many connectivity options.
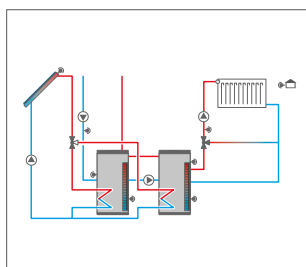
The network professional

- 15 relay outputs and 15 inputs for Pt1000, Pt500 or KTY temperature sensors

- Up to 5 extension modules via VBus® (45 sensors and 40 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

- Cooling over the heating circuit with condensation detection

- Dew point calculation by means of the FRH(d) humidity sensor to avoid condensation

- Remote access to the heating circuits via the Web interface, room control unit(s) or the VBus®Touch HC App

- Integrated Web server for configuration and function control

- LAN interface, WLAN functionality, WLAN access point and optional Modbus RTU interface

- Easy access to VBus.net via the Web interface

- Operation via any mobile device

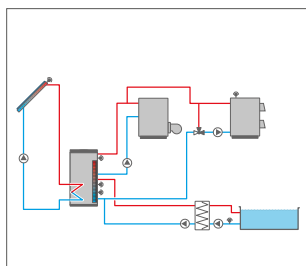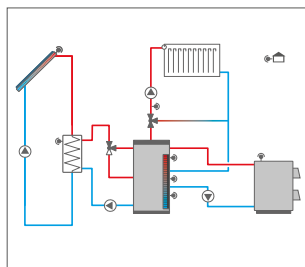| Article no.	Article	Price bracket
115 993 03	DeltaSol® MX Plus – System controller	A
115 993 13	DeltaSol® MX Plus – Full kit » incl. 6 Pt1000 sensors (2 x FKP6, 4 x FRP6)	A

EXAMPLES

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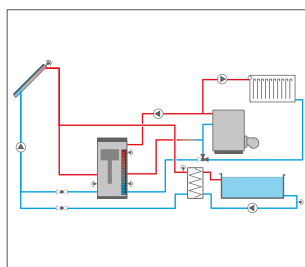

Solar system with external heat exchanger, store loading in layers and backup heating by solid fuel boiler

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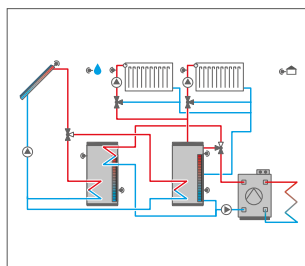

Solar system with combined store and swimming pool, backup heating, heating circuit loading and return preheating

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

TECHNICAL DATA

Inputs: 15 Pt1000, Pt500 or KTY temperature sensor inputs (can optionally be used for remote controls, operating mode switches or potential-free switches), 4 impulse inputs for V40 flowmeters, 2 frequency inputs, 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: 15 relays, 13 of them semiconductor relays for pump speed control, 1 potential-free relay, 1 potential-free extra-low voltage 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)
1 (1) A 30 V⎓ (potential-free relay)

Total switching capacity: 6.3 A 240 V~

Power supply: 100–240 V~ (50–60 Hz)

Supply connection: X

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, 10/100 Base TX Ethernet, Auto MDIX, WLAN 2.4~2.4835 GHz, Modbus RTU (optional)

WLAN encryption: WPA/PSK, WPA2/PSK

Transmit power limit (e.i.r.p.): < 100 mW

VBus® current supply: 35 mA

Functions: integrated Web server for configuration and function control, 7 integrated calorimeters, 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

Operation: 7 buttons, via the Web interface on the mobile device

Ingress protection: IP 20/DIN EN 60529

Protection class: I

Ambient temperature: 0…40 °C

Degree of pollution: 2

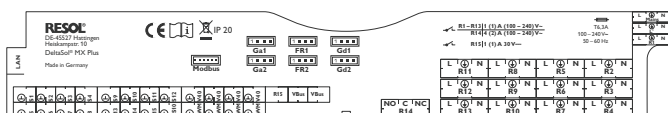**Relative humidity:** 10…90 %

Fuse: T6.3A

Maximum altitude: 2000 m above MSL

Dimensions: 253 x 258 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

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

RTA12 Remote control

The heating curve can be comfortably adjusted from the living area

RCP12 Room control unit

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

RTS Room control unit

For measuring the relative humidity and the room temperature as well as for adjusting the set room temperature