



rosenthal design



## DeltaSol® BX Plus

The **DeltaSol® BX Plus** is a system controller for multi-store solar and heating systems. The intuitive commissioning menu leads you through the system configuration by requiring the most important adjustments directly after connecting the controller.

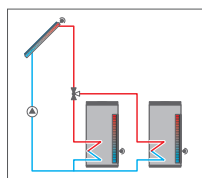
For an optimum overview, all sensor and relay allocations are listed in the service menu.

## More possibilities!

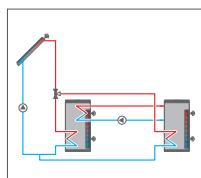
- 5 relay outputs and 8 inputs for Pt1000, Pt500 or KTY temperature sensors
- Up to 2 extension modules via VBus® (21 sensors and 15 relays in total)
- Inputs for digital Grundfos Direct Sensors™ as well as for FRHd humidity sensors
- Integrated control of up to 2 high-efficiency pumps via PWM outputs
- 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 FRHd humidity sensor to avoid condensation
- Simplified timer, 0-10 V 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
115 001 33	DeltaSol® BX Plus – System controller	A
115 001 43	DeltaSol® BX Plus – Full kit » incl. 5 Pt1000 sensors (2 x FKP6, 3 x FRP6)	A

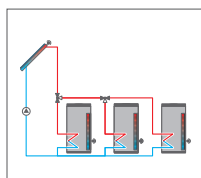
## EXAMPLES



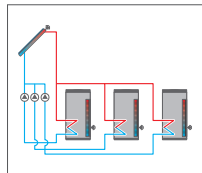
2-store system with valve logic, 1 pump, 3 sensors and 3-port valve



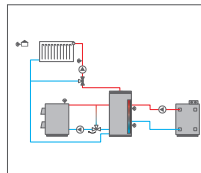
2-store solar system with valve logic and heat exchange control



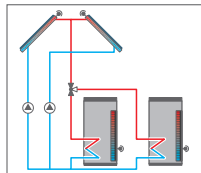
Solar system with 3 stores, 3-port-valve logic



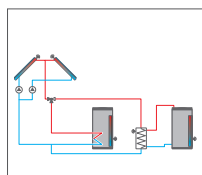
3-store solar system with pump logic and priority logic



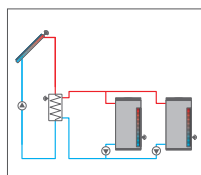
1 mixed heating circuit with solid fuel boiler and backup heating (demand)



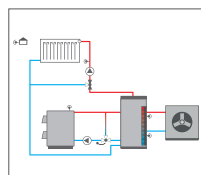
Solar system with east-/west collectors and 2 stores (valve logic)



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

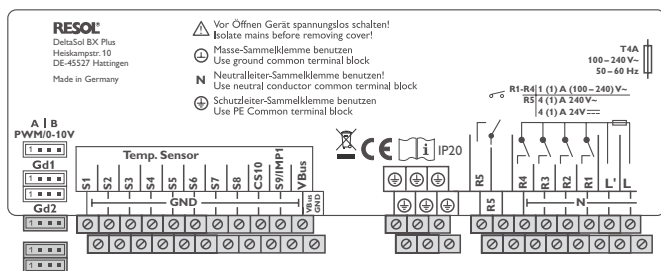


Solar system with 2 stores and external heat exchanger, pump logic



1 mixed heating circuit with solid fuel boiler and backup heating with heat pump (demand)

## ELECTRICAL CONNECTION



\* 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

## TECHNICAL DATA

### Inputs:

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

### Outputs:

5 relays, 4 of them semiconductor relays for speed control, 1 potential-free relay, 2 PWM outputs (switchable to 0-10 V)

**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:** 4 A 240 V~

**Power supply:** 100–240 V~ (50–60 Hz)

**Supply connection:** type X attachment

**Standby:** 0.73 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:** VBus®, SD card slot

**VBus® current supply:** 60 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:** T4A

**Maximum altitude:** 2000 m above MSL

**Dimensions:** 198 × 170 × 43 mm

## ACCESSORIES

### KM2 Communication module



For remote access to the controller via VBus.net

### VFD / RPD Grundfos Direct Sensor™



Digital sensors in different versions

### FRHd (digital)



For measuring the relative humidity and the room temperature

### Calorimeter extension kits



Calorimeter extension kits (consisting of 2 x FRP30, 1 x V40 flowmeter)

### EM Extension module



Sensor and relay extension module with 5 outputs and 6 inputs