



DeltaSol® CS series

The controllers of the *DeltaSol® CS* series are used for speed control of a HE pump in small standard solar thermal and heating systems.

They are equipped with a PWM output as well as with an input for a VFD Grundfos Direct Sensor™ which enables precise heat quantity measurement. The commissioning menu ensures an easy and quick configuration.

Customised and OEM versions are available on request. Please contact our sales team.



High-efficiency even for small systems!

DeltaSol® CS series

- 1 input for a VFD Grundfos Direct Sensor™
- Heat quantity measurement
- Commissioning menu
- Drainback option

DeltaSol® CS/4, CS Plus

- 3 basic system layouts (*DeltaSol® CS/4*), 10 basic system layouts (*DeltaSol® CS Plus*) to choose from
- Tube collector function, thermal disinfection function

DeltaSol® CS Plus bidirectional

- Status display possible with a bidirectional HE pump
- 2 PWM feedback inputs

RESOL DeltaSol® CS

Price bracket A | Article no. CS/2: **115 004 73**
Price bracket A | Article no. CS/4: **115 004 53**

RESOL DeltaSol® CS – Full kit

Incl. 3 Pt1000 sensors (1 x FKP6, 2 x FRP6)
Price bracket A | Article no. CS/2: **115 004 63**
Price bracket A | Article no. CS/4: **115 004 43**

RESOL DeltaSol® CS Plus

Price bracket A | Article no.: **115 003 13**

RESOL DeltaSol® CS Plus – Full kit

Incl. 4 Pt1000 sensors (2 x FKP6, 2 x FRP6)
Price bracket A | Article no.: **115 003 03**

A PWM adapter cable is included with the controller. For our range of Grundfos Direct Sensors™ see page 91!

RESOL DeltaSol® CS Plus bidirectional

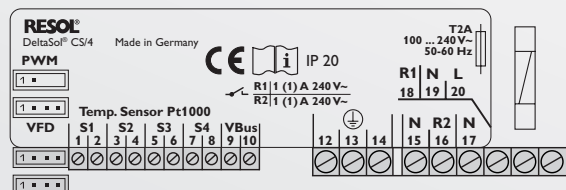
Price bracket A | Article no.: **115 005 43**

RESOL DeltaSol® CS Plus bidirectional – Full kit

Incl. 4 Pt1000 sensors (2 x FKP6, 2 x FRP6)
Price bracket A | Article no.: **115 005 53**

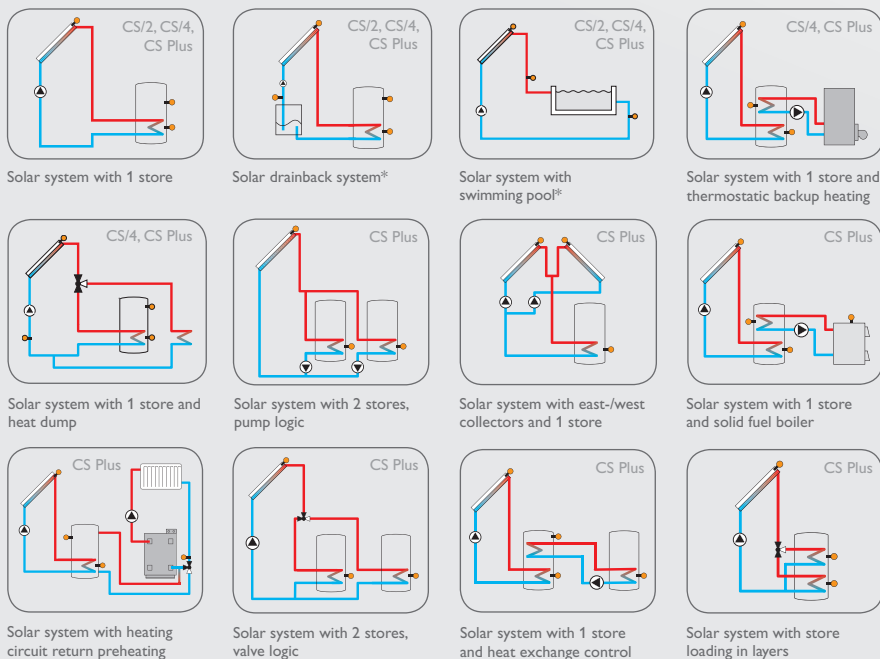
2 PWM adapter cables are included with the controller.

ELECTRICAL CONNECTION



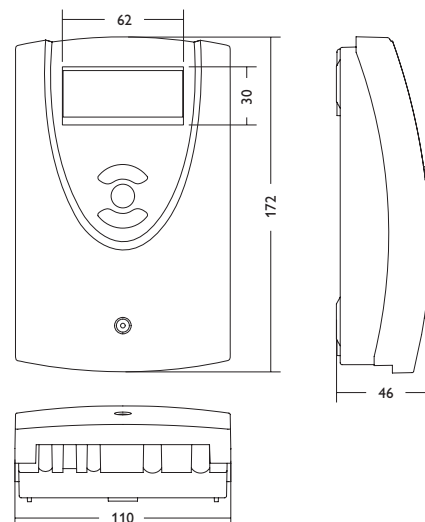
Example DeltaSol® CS/4

EXAMPLES



* Application examples

TECHNICAL DATA



Inputs: 4 Pt1000 temperature sensors, 1 VFD Grundfos Direct Sensor™, 2 PWM feedback inputs (CS Plus bidirectional)

Outputs: 1 semiconductor relay, 1 PWM output (CS/2), 2 semiconductor relays, 1 PWM output (CS/4), 2 semiconductor relays, 2 PWM outputs (CS Plus)

PWM frequency: 512 Hz

PWM voltage: 10.5 V

Switching capacity:

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

Total switching capacity:

1 A 240 V~ (CS/2)

2 A 240 V~ (CS/4, CS Plus)

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

Supply connection: type Y attachment

Standby: 0.58 W (CS/2), 0.60 W (CS/4), 0.59 W (CS Plus), 0.61 W (CS Plus bidirectional)

Temperature controls class:

I (CS/4, CS Plus, CS Plus bidirectional)

Energy efficiency contribution:

1 % (CS/4, CS Plus, CS Plus bidirectional)

Mode of operation: type 1.C.Y action

Rated impulse voltage: 2.5 kV

Data interface: RESOL VBus®

VBus® current supply: 35 mA

Functions: tube collector function and thermostat function (CS/4, CS Plus), function control, operating hours counter, speed control, drainback option and heat quantity measurement

Housing: plastic, PC-ABS and PMMA

Mounting: wall mounting, mounting into patch panels is possible

Indication/Display: System-Monitoring-Display for visualisation of systems, 16-segment and 7-segment display, 8 symbols for indication of system status

Operation: 3 push buttons

Ingress protection: IP 20/EN 60529

Protection class: I

Ambient temperature: 0 ... 40 °C

Pollution degree: 2

Dimensions: 172 x 110 x 46 mm

ACCESSORIES

RESOL Moisture-proof housing (IP 66/67)



Moisture-proof housing for controller installation outdoors or in highly humid locations (without controller)

Price bracket B | Article no.: **290 028 70**

RESOL AM1



Alarm module for signaling system failures

Price bracket B | Article no.: **180 008 70**

VFD Grundfos Direct Sensor™



Digital sensors in different versions

RESOL VBus® / USB interface adapter



PC connection kit for RESOL controllers with VBus® incl. Service CD

Price bracket B | Article no.: **180 008 50**

RESOL KM2 Communication module



Incl. RESOL service CD, network cable and mains adapter, VBus® cable pre-connected

Price bracket A | Article no.: **180 012 10**

RESOL SP10



Sensor overvoltage protection

Price bracket A | Article no.: **180 110 70**