



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 up to 2 PWM outputs 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.

The DeltaSol® CS series is available in 4 versions, depending on the demands. Details concerning the number of the relays as well as additional functions are shown in the technical data.

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.

RESOL DeltaSol® CS Plus bidirectional

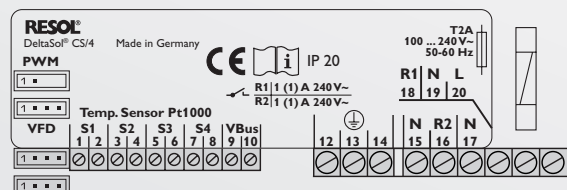
Price bracket A | Article no.: **115 005 43**

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**

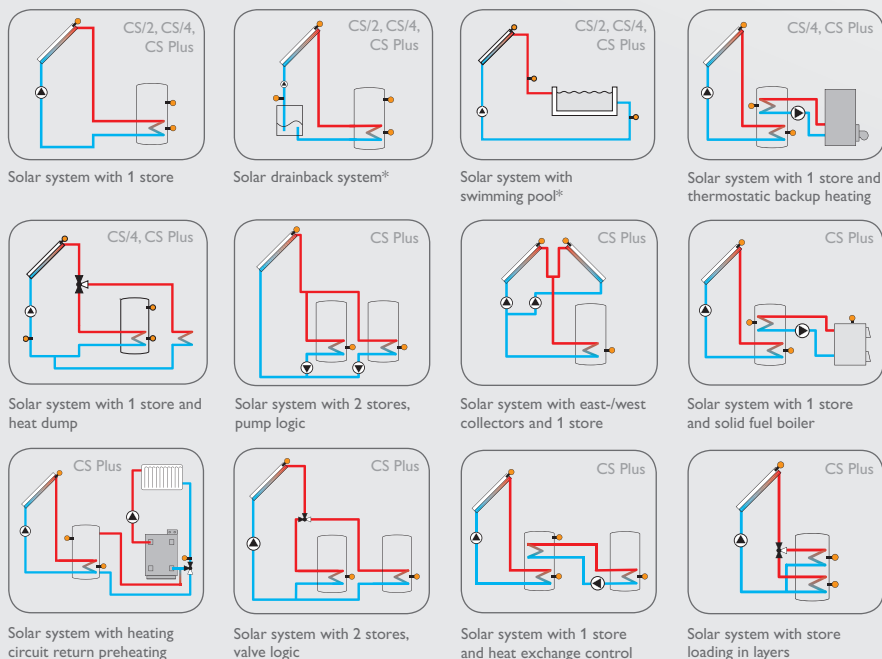
2 PWM adapter cables are included with the controller.

ELECTRICAL CONNECTION



Example DeltaSol® CS/4

EXAMPLES



* Application examples

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 signalling 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**

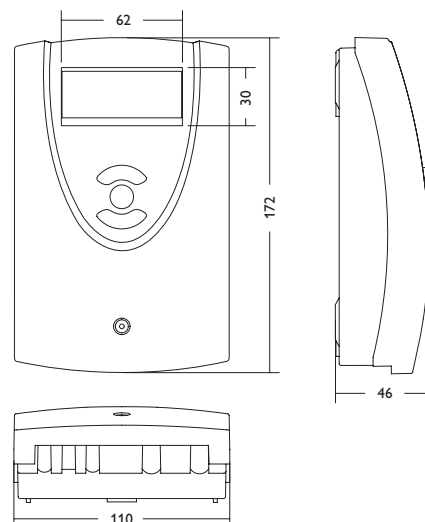
RESOL SP10



Sensor overvoltage protection

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

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: 0.57 W (CS/2), 0.59 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 system visualisation, 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