



## SC300 U

6 inputs,  
3 outputs



The SC300 U controller was specially developed for the North American market based on the SC300 basic controller. With its special certification (ETL label) from a Nationally Recognized Testing Laboratory (NRTL) in the US, the controller meets the safety standards and minimum requirements of the North American market.

As a particular highlight, the SC300 U stores the system's operational data on a SD card. The 40 pre-programmed systems and numerous additional functions allow universal use of the controller. The large graphic display shows the animated control circuits, which allows you to view the operating statuses of each system. The SC300 U has six inputs for recording temperatures or pulse values, as well as an extra Grundfos Direct Sensors™ input for combined temperature and flow rate measurement. Pumps and switching valves are controlled using three outputs, some of which can be speed controlled.

### Product features

- Compact, multipart designer casing
- Electronic speed control
- High level of operational safety through fault diagnosis
- Hours-of-operation logger
- Software update possible
- Storage tank target temperature loading
- Seasonal systems (loading of pool / storage tank according to the time of the year)
- Daily pump start
- Screw terminals allow universal and rapid installation

### Displays

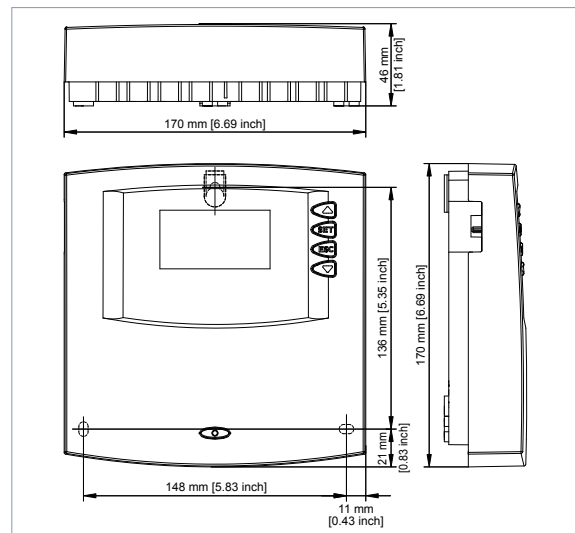
- Multifunction graphical LCD display with backlighting
- Animated representation of the systems and operating states

### Operation

- Multilingual menu navigation
- Side switch for manual, auto, off

### Functions

- Data logger on SD card
- Heat quantity (Grundfos Direct Sensors™, pulse generator, determination)
- Heating return increase
- Reduction of stagnation phases
- Holiday (storage tank recooling)
- Circulation (controlled by temperature / time / pulse)
- Back-up heating
- Solid fuel boiler
- Storage tank quick charge
- Bypass
- Thermostat
- Differential thermostat
- Timer
- Interval / tube collector
- Anti-freeze
- Anti-legionella cyclical storage tank heating
- Display storage tank top
- Alarm output
- Two loading zones



	SC300 U
System voltage	120 V AC, 60 Hz optional 240 V AC, 60 Hz
Own consumption	≤ 2 W [0.003 HP]
Inputs	6 5 x temperature (Pt1000) 1 x temperature (Pt1000) or pulse
Additional input	1 x Grundfos Direct Sensors™ (temperature / flow rate)
Outputs	3 2 x triac for speed control (R1, R2), max. 130 W / 0.17 HP (120 V AC) 1 x switch output relay (R3), max. 400 W / 0.5 HP (120 V AC) or R3 voltage free
Additional output	1 x alarm output
Hydraulic schemes	40
Ambient temperature	0 °C [+32 °F] ... +45 °C [+113 °F]
Interfaces	SD card, RS232, RS485
Data logging	SD card
Degree of protection	IP 20 / DIN 40050
Dimensions (X x Y x Z)	170 x 170 x 46 mm [6.69 x 6.69 x 1.81 inch]
Weight	0.45 kg [14.47 oz]

Technical data at 25 °C / 77 °F

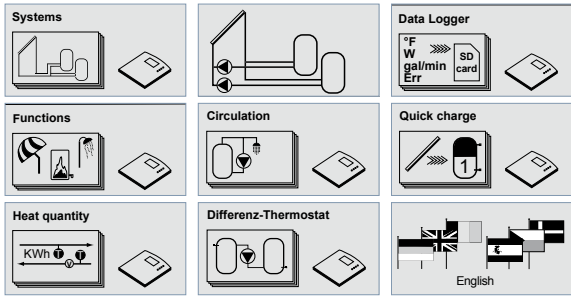
[areas of application]



[inputs/outputs]



\*The trademark Grundfos Direct Sensors™ is owned and controlled by the Grundfos group.

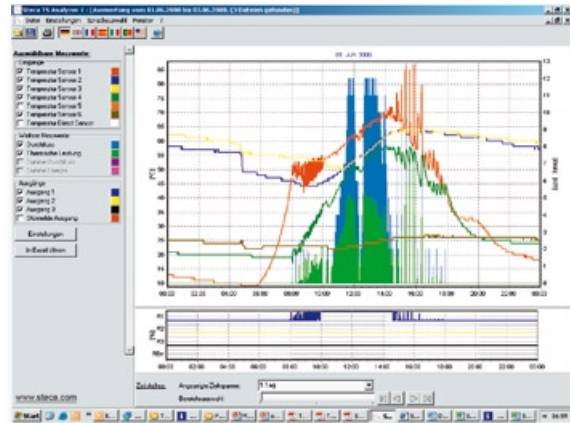


### Display examples

The display examples shown here are merely a selection, designed to show the many and diverse function displays of the solar controller SC300 U.

### Datalogging on SD card

The SC300 U stores the solar thermal system's operational data on an SD card. This can be used for evaluation purposes.

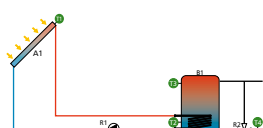


### Systems with one storage tank

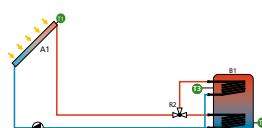
#### 1 collector array



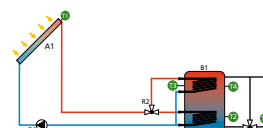
Internal heat exchanger, intelligent pump control



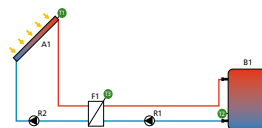
Internal heat exchanger, intelligent pump control, heating return increase



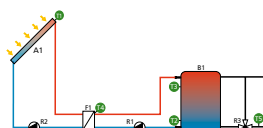
Internal heat exchanger, zone loading, intelligent valve control, heating return increase



Internal heat exchanger, zone loading, intelligent valve control, heating return increase



External heat exchanger, intelligent pump control



External heat exchanger, intelligent pump control, heating return increase

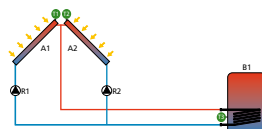


External heat exchanger, zone loading, intelligent valve control, heating return increase

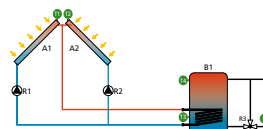


External heat exchanger, intelligent pump control, heating return increase

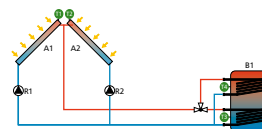
#### 2 collector arrays (east/west roof)



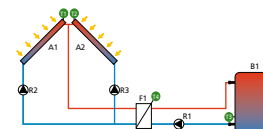
Internal heat exchanger, intelligent pump control



Internal heat exchanger, intelligent pump control, heating return increase



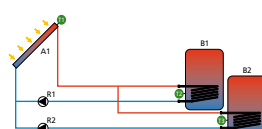
Internal heat exchanger, zone loading, intelligent valve control, heating return increase



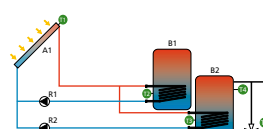
External heat exchanger, intelligent pump control

### Systems with two storage tanks

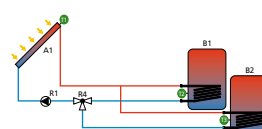
#### 1 collector array



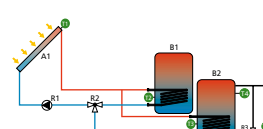
Internal heat exchanger, intelligent pump control



Internal heat exchanger, intelligent pump control, heating return increase



Internal heat exchanger, intelligent valve control, heating return increase

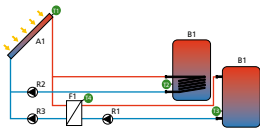


Internal heat exchanger, intelligent valve control, heating return increase

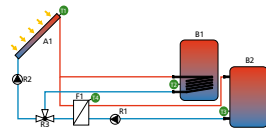


Systems with two storage tanks

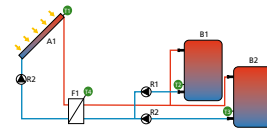
1 collector array



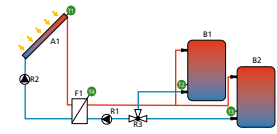
Internal/external heat exchanger, intelligent pump control



Internal/external heat exchanger, intelligent valve control



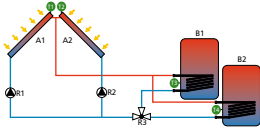
External heat exchanger, intelligent pump control



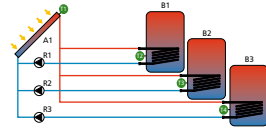
External heat exchanger, intelligent valve control

Systems with three storage tanks

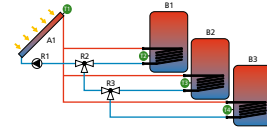
2 collector arrays (east/west roof)



Internal heat exchanger, intelligent valve control



Internal heat exchanger, intelligent pump control



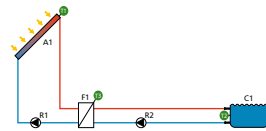
Internal heat exchanger, intelligent valve control

Systems with a swimming pool

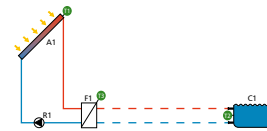
1 collector array



Direct flow-through, intelligent pump control

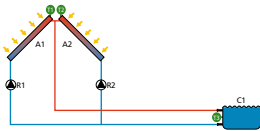


External heat exchanger, intelligent pump control

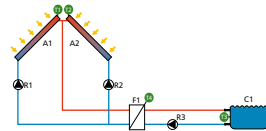


Stand-alone operation of the external heat exchanger, intelligent pump control

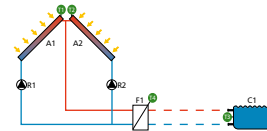
2 collector arrays (east/west roof)



Direct flow-through, intelligent pump control



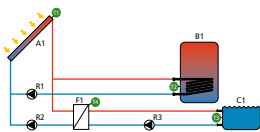
External heat exchanger, intelligent pump control



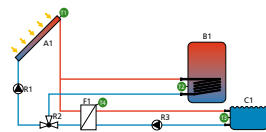
Stand-alone operation of the external heat exchanger, intelligent pump control

Systems with one storage tank and a swimming pool

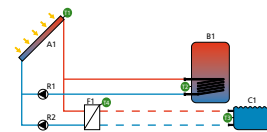
1 collector array



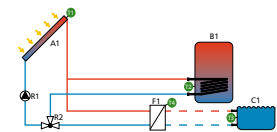
External heat exchanger, intelligent pump control



External heat exchanger, intelligent valve control



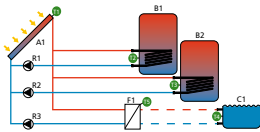
Stand-alone operation of the external heat exchanger, intelligent pump control



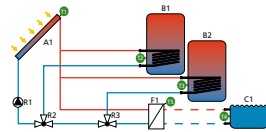
Stand-alone operation of the external heat exchanger, intelligent valve control

Systems with two storage tanks and a swimming pool

1 collector array



Stand-alone operation of the external heat exchanger, intelligent pump control



Stand-alone operation of the external heat exchanger, intelligent valve control