

## Steca TR A301 PWM

### 3 inputs, 1 PWM output

The Steca TR A301 PWM controller was designed for use with new high-efficiency, cost and energy saving solar heating pump technology. This latest generation of electrically commutated circulation pumps have an integrated frequency converter and a permanent magnet motor. The PWM control signal must be specially activated in order to control this type of high-efficiency ECM pump. With this pulse width modulated DC square-wave signal the Steca TR A301 PWM controller can automatically exactly adapt the pump speed via a separate control cable to match the continually changing requirements of the system.

In addition to PWM speed control of the solar circulation pump, the Steca TR A301 PWM also allows hydraulic compensation of the solar energy system via Grundfos Direct Sensors™.

The clear, graphically animated display provides visualisation of the current operating status and also the complete solar circuit. The consistent use of pictograms helps make the controller easy to operate.

The controller also performs important system monitoring and safety functions to ensure safe and long-lasting operation of the entire system.

The operational safety of the system is supported by a sophisticated fault diagnosis. The multi-coloured LCD backlight ensures quick and safe location of occurring errors and facilitates quick troubleshooting.

### Product features

- Compact, multipart designer casing
- Electronic speed control via pulse width modulation (PWM)
- Maximum storage tank temperature
- High level of operational safety through fault diagnosis
- Logging of minimum and maximum temperature values
- Temperature display °C / °F
- Collector overtemperature disconnection
- Hours-of-operation logger
- Storage tank target temperature loading
- Spring clamp terminals allow rapid and easy installation
- Flow rate and temperature display using Grundfos Direct Sensors™

### Displays

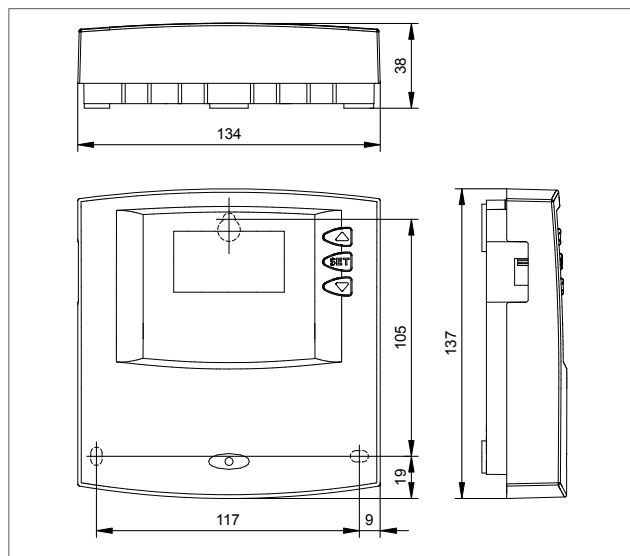
- Graphical LCD display with backlighting
- Animated representation of the systems and operating states

### Operation

- Non-verbal menu navigation
- Side switch for manual, auto, off

### Functions

- Flow rate acquisition for hydraulic compensation
- Holiday (storage tank recooling)
- Interval / tube collector
- Anti-freeze



	TR A301 PWM
System voltage	230 V (± 15 %), 50 Hz optional 115 V (± 15 %), 60 Hz
Own consumption	≤ 1 W
Inputs	3 2 x temperature (Pt1000) 1 x Grundfos Direct Sensors™ VFS 1-12 (temperature / flow rate)
Output	1 R1: switched triac output for pump power supply, max. 250 W (230 V) C: PWM control signal for pump speed, 8 mA; 5 V; 250 Hz
Turn-on temperature difference	8 K
Turn-off temperature difference	4 K
Ambient temperature	0 °C ... +45 °C
Degree of protection	IP 20 / DIN 40050
Dimensions (X x Y x Z)	134 x 137 x 38 mm
Weight	250 g

Technical data at 25 °C / 77 °F

System type
1 collector array



Internal heat exchanger, intelligent pump control

Areas of application:



inputs/outputs:

