



Temperature Differential Controller

3 inputs / 1 output

Steca TR 0301 U

- Digital accuracy
- LCD provides real time operating temperatures at up to three locations
- Animated representation of system operation
- Sophisticated monitoring and fault diagnostics
- Fused output protection for pump circuit
- Varistor high voltage spike protection
- RTD type 1000 Ω sensors
- Adjustable high limit temperature of storage tank
- Evacuated tube & freeze recirculation functions
- Vacation overheat protection
- Accessible side-mounted on, off, auto switch
- Three temperature sensor inputs, one 120 VAC output
- Pump protection activated when collector reached 266 °F

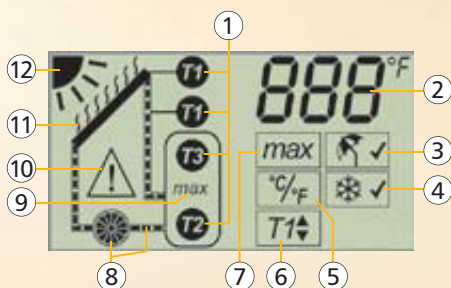


Spezialized
for the USA

Made in Germany

Steca is
„ISO9001“ and „ISO14001“
certified and registered

Display



- | | |
|---|--|
| ① Temperature sensor symbols | ⑧ Solar circuit symbols |
| ② Displays the temperature values and faults, e. g. short circuit, interruption or SYS = system error | ⑨ Displays message "Maximum storage tank temperature has been reached" |
| ③ Holiday function | ⑩ Warning display if faults occur, e. g. short circuit, interruption or SYS = system error |
| ④ Anti-freeze function | ⑪ Displays message for evaporation of the collector fluid |
| ⑤ Selecting the temperature unit °F / °C | ⑫ Displays message for sufficient heat supply |
| ⑥ Tube collector function | |
| ⑦ Setting the maximum storage tank temperature | |

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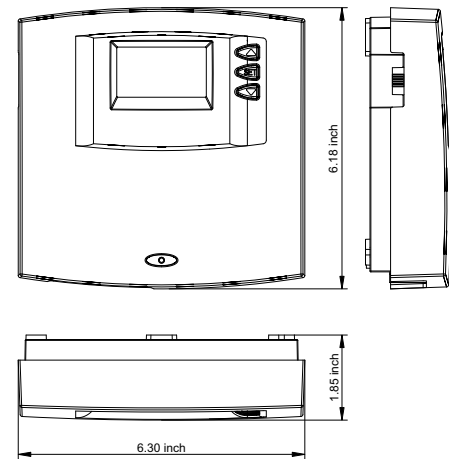
The Steca model **TR 0301 U** differential temperature control provides automatic, safe and reliable operation of domestic solar water heating systems. The **TR 0301 U** output is wired to a pump that circulates the heat transfer fluid between the solar thermal collectors and the storage tank during the course of the day. This microprocessor-based **TR 0301 U** utilizes two RTD (resistance temperature detector) type sensors to monitor collector and tank temperatures with digital accuracy. The LCD gives the homeowner a variety of real time information including system temperatures at up to three separate locations. The consistent use of simple pictograms ensures ease of operation and troubleshooting.

In addition to the primary function of turning the circulating pump on and off during the day, the **TR 0301 U** provides important diagnostic and safety functions. For example, the LCD pictograms will indicate fault conditions such as sensor shorts or pump failures. The installation manual also clearly describes the fault symptoms, possible causes and remedies.

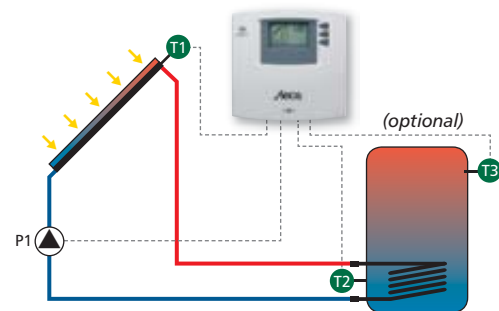
The **TR 0301 U** features a total of three inputs for recording temperature and one 120 VAC output for the circulating pump. Varistors protect the sensor inputs against high voltage spikes. The load side is fuse protected. The control package includes two RTD type sensors, a seven foot line cord and a spare fuse. An optional third sensor displays the upper tank temperature and eliminates the need for an analog thermometer and fittings.

The numerous additional features of the **TR 0301 U** include an adjustable high limit (32° F - 205° F), an evacuated tube collector function, vacation overheat protection to minimize collector stagnation, and a freeze-recirculation option. Temperatures can be displayed in either Fahrenheit (°F) or Celsius (°C).

Dimensions

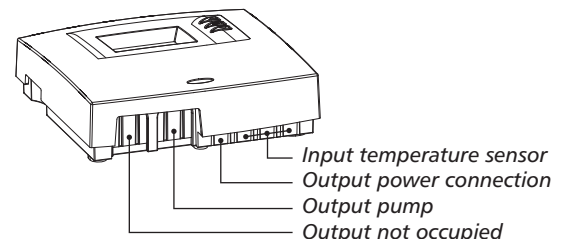


System setup

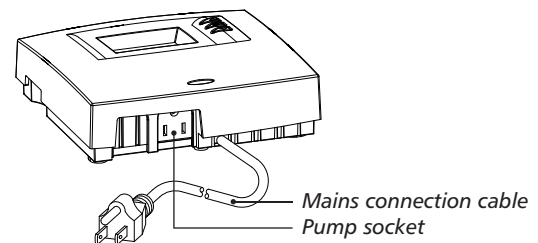


Single-storage solar system

Overview of the device versions



Standard; without connection cable



Prefabricated; with mains connection cable and pump socket

Sensors



Storage tank sensor Pt1000-Lug



Collector sensor, Pt1000-Probe

Temperature sensor included

Technical Data TR 0301 U

Operating voltage	120 VAC, 60 Hz [optional 240 VAC, 60 Hz]
Self consumption	≤ 0.001 HP
3 inputs for temperature recording	Pt1000
1 output	Switch relay; Switching performance max. 0.5 HP (120 V~); 1 HP (240 V~)
Fuse protected	Fuse: Littelfuse 215.004
Line cord	7', 18 AWG rated at 221 °F
Display	Animated LCD display, 2-color background
Protection class	IP 20/DIN 40050
Permitted ambient temperature	32 to +113 °F (0 to +45 °C)
Installation	Wall-mounted with screws
Weight	19.54 oz (0.55 kg) include cable
Case	Recyclable 3-piece plastic case
Dimensions	6.3"(W) x 6.18"(H) x 1.85"(D) (160 L x 157 B x 47 H mm)
Temperature sensors 2x Pt1000	Collector sensor: 59 inch (1.5 m) silicone cable with bushing (Measuring range up to +356 °F (+ 180 °C)) Storage tank sensor: 11.8 inch (0.3 m) twisted single conductor flat surface sensors with compression cable lug (Measuring range up to 222 °F (+105 °C))

Available from: