

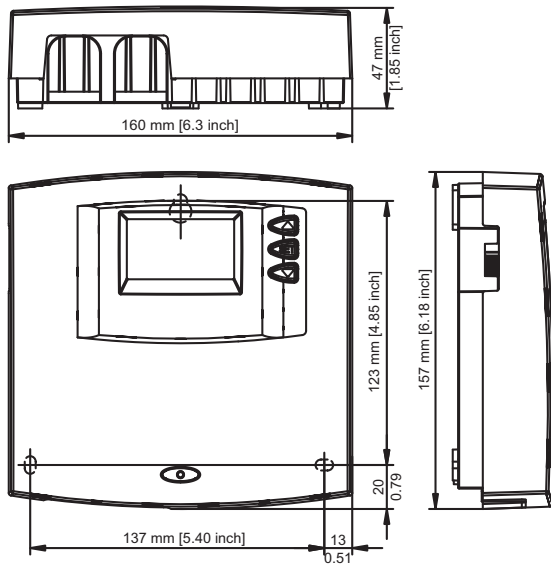
TR0301 U Solar Controller

Engineering
Submittal
Sheet

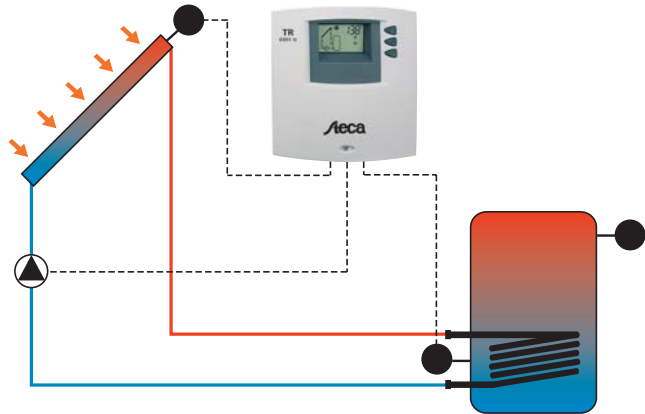


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Controller Dimensions and System Example



System example with one storage tank:



Controller Specifications

The following shall be the specifications for the solar controller:

For a controller, the system shall use the TR0301U controller with 3 PT-1000 sensor inputs and 1 output.

The controller shall be pre-wired with the main power supply connection and the pump socket outlet.

The controller shall be ETL certified for both USA and Canada. The unit shall be microprocessor controlled with date and time, electronic pump control with switch relay on 1 output, and animated multifunction LCD display.

The controller shall be a compact, 3-piece designer case and shall have a backlight LCD display with animated representation of solar system functions, pump operating status display, and

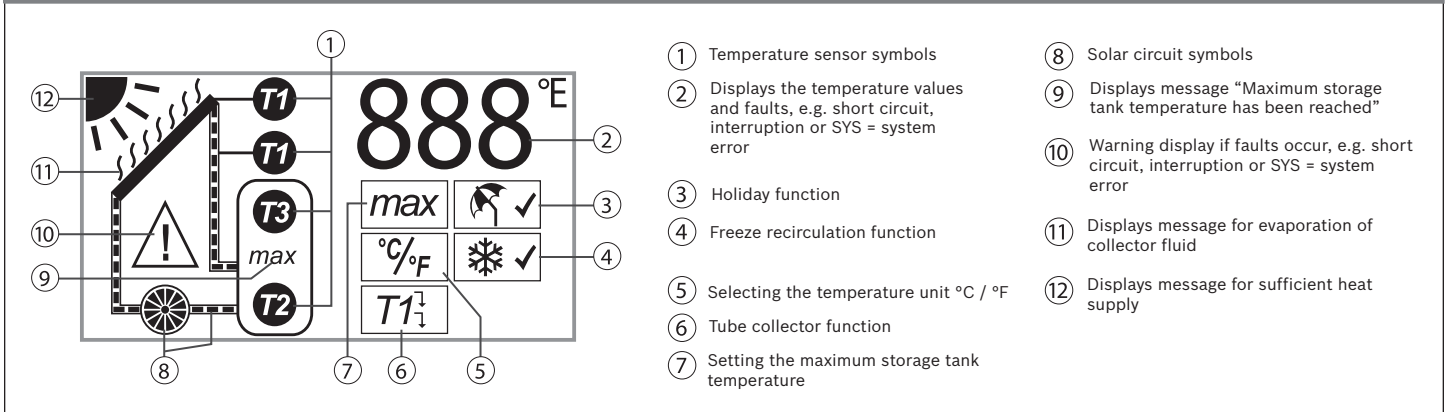
temperature display for storage tank and collector in both °F and °C.

The controller shall the following functionality: freeze recirculation function, holiday function, automatic charging shutdown, automatic storage tank charging, evacuated tube collector function, and temperature sensor and system monitoring.

The collector sensor shall be silicone cable with bushing at a length of 59 in (1.5 m) and a measuring range up to 356 °F (180 °C). The storage tank sensor shall be twisted single conductor flat surface sensor with compression cable lug at a length of 11.8 in (0.3 m) and a measuring range up to 222°F (105°C).

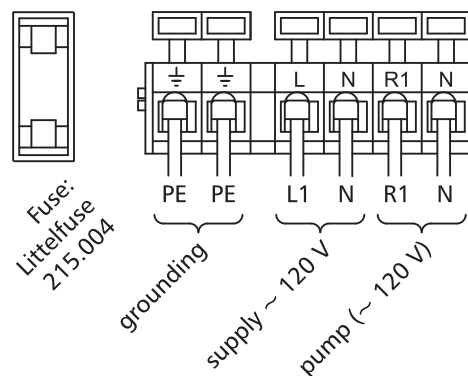
Controller Specifications		
Part Number	7747208381	
System voltage	120 V AC, 60 Hz	
Max. own consumption	≤ 1 W (0.001 HP)	
Inputs	3 3 x temperature recording (Pt1000)	
Outputs	Switch relay; switching performance max. 400 W (0.5 HP [120 V~]) or 800 W (1 HP [240 V~])	
Turn-on temperature difference	16 °F	
Turn-off temperature difference	8 °F	
Ambient Temperature	0 °C (+32 °F)... +45 °C (+113 °F)	
Animated LCD display	2 color backlight	
Protection class	IP 20/DIN 40050	
Dimensions (X x Y x Z)	160 x 157 x 47 mm (6.3" x 6.18" x 1.85")	
Weight	0.55 kg (19.54 oz) including cable	
Temperature sensors 2 x Pt1000	Collector:	59 in (1.5 m) with measuring range up to 356 °F (180 °C)
	Storage Tank:	11.8 in (0.3 m) with measuring range up to 222 °F (105 °C)

Display Overview

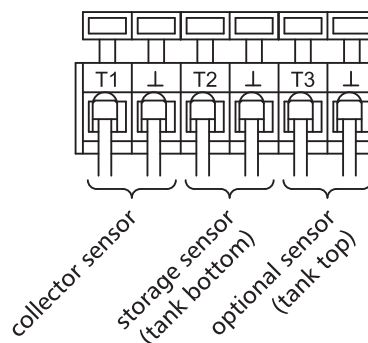


Terminal Plan

Terminal plan 120 V version



Sensor wiring Class 2



- Sensor cables may be extended to a maximum length of ca. 330 ft. When using extension cables, select the following cable cross sections:
 - #AWG 18 up to 165 ft. long
 - #AWG 14 up to 330 ft. long
- Connect the cables in accordance with the terminal plan.