

Technical Data Manual

Part Nos. and Pricing: see Price List



Vitosolic 200

VITOSOLIC 200

**Electronic temperature differential control unit
for up to four energy consumers**

for systems with dual mode DHW heating or dual mode DHW
and swimming pool water heating or space heating backup
using solar panels and oil-/gas-fired boilers

With digital temperature display, energy meter,
reloading suppression for the boiler, heating-up of the pre-heat
stage and diagnostic system

For wall mounting

With optional connection of solar cell

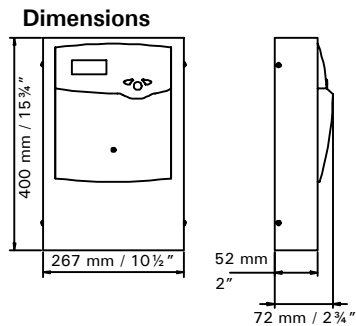
Product Information

Vitosolic 200

Standard equipment

Vitosolic 200, part no. 7134 552,
with

- Tank temperature sensor
- Collector temperature sensor
- Temperature sensor (swimming pool / space heating water tank)



Construction and function

Construction

Vitosolic 200 comprises:
Electronics, digital display and setting keys.

Vitosolic 200 offers terminals for the connection of power supply, solar loop pump, bypass circuit pump, circulation pump for heating up the pre-heat stage, swimming pool / space heating tank pump switching output for suppressing reheating by the boiler, additional DHW heating function, thermostat function and central fault messages. An additional solar cell can be installed to measure radiation intensity.

Function

Vitosolic 200 starts the solar circuit pump for DHW heating and (if installed) the solar circuit pump for heating swimming pool water and/or pump for space heating storage tank, when the respective differential temperature has been reached.

Optional safety shutdown of collectors and DHW tank in case of excessive temperatures.

Calculation of the energy production of solar system is achieved by measuring the temperature differential between the solar collector sensor and the storage tank sensor, and by input of the solar fluid volume flow rate. The energy production is displayed in kW/h.

Accumulative run hours run the solar circuit pump can be displayed.

To improve the start-up characteristics of the system or for systems with several collector arrays, operation with a bypass circuit is feasible. This requires the use of the optional solar cell.

Reheating by the boiler will be suppressed if the solar circuit pump is already active.

■ Systems with Vitotronic control units and KM BUS:

A third set DHW temperature is encoded at the boiler control unit. The DHW tank will only be heated by the boiler, if this set value cannot be achieved by the solar heating system.

■ Systems with additional Viessmann control units:

An actual DHW temperature which is 10°C / 18°F higher is simulated via a resistor in the connection extension, which should be installed on site. The DHW tank will only be heated by the boiler if this actual temperature cannot be achieved by the solar heating system.

Additional function for DHW heating:

In systems with a capacity above 400 litres, the entire water content must be heated to 60°C / 140°F once every day.

■ Systems with Vitotronic control units and KM BUS:

A second set DHW temperature is encoded at the boiler control unit, and the fourth DHW phase is activated. This signal is transferred to the solar control unit, and the circulation pump (reheating) will be started.

■ Systems with additional Viessmann control units:

The circulation pump (reheating) is started at the adjustable time, if the DHW cylinder has not been heated to 60°C / 140°F at least once every day. A DHW temperature of approx. 35°C / 95°F is simulated via an on-site resistor.

Systems with dual mode DHW heating:

The temperature in the DHW tank is limited by the electronic temperature limiter (safety shutdown at 90°C / 194°F) in Vitosolic 200 or by the high limit safety cut-out (if required).

This device switches the solar circuit pump OFF when the set temperature has been exceeded.

Systems with dual mode DHW and swimming pool water heating:

DHW heating has priority. When the swimming pool water is heated (consumer with the lower set temperature), the circulation pump will be switched OFF in accordance with a timer, to establish whether the DHW tank (consumer with the higher set temperature) can be reloaded. If it is being heated or if the temperature of the solar fluid is insufficient for heating the DHW tank, the system continues to heat the swimming pool water.



*Refer to Vitosolic 200
Installation and Service
Instructions for detailed
descriptions of all functions
and possible system
configurations.*

Vitosolic 200

Technical data

Rated voltage: 120 VAC
 Rated current: 10 A
 Rated frequency: 60 Hz
 Power consumption: 6 W
 Safety class: II

Permissible ambient temperature
 ■ during operation: 0 to 40 °C / 32 to 104 °F
 Use in living space and boiler rooms (standard ambient conditions)
 ■ during storage and transport: -20 to 65 °C / -4 to 149 °F

Rated relay output breaking capacity at 120 VAC
 ■ Total: max. 10A

Collector temperature sensor

For connection inside the equipment, cable length 2.5 m / 8¼ ft.
 On-site extension of the connecting cable:
 ■ 2 conductor cable, max. 60m / 196 ft. when using 16-gage wire
 ■ Do not run the cable immediately next to 120/240 VAC cables.

Permissible ambient temperature
 ■ during operation: 0 to 180 °C / 32 to 356 °F
 ■ during storage and transport: -20 to 70 °C / -4 to 158 °F

DHW tank temperature sensor or temperature sensor (swimming pool/space heating water tank)

For connection inside the equipment, cable length 3.75 m / 12¼ ft.
 On-site extension of the connecting cable:
 ■ 2 conductor cable, max. 60m / 196 ft. when using 16-gage wire
 ■ Do not run the cable immediately next to 120/240 VAC cables.

Permissible ambient temperature
 ■ during operation: 0 to 90 °C / 32 to 194 °F
 ■ during storage and transport: -20 to 70 °C / -4 to 158 °F

For systems with DHW tanks from Viessmann, the tank temperature sensor is installed directly into the sensor well of the elbow threaded into the heating water return.

When a temperature sensor (swimming pool) is used to record the swimming pool temperature, a stainless steel sensor well should be installed directly into the swimming pool return.

Accessories

Accessories

Temperature sensor (DHW tank/space heating water tank), part no. 7170 965

For diverting circulation in systems with two DHW tanks or diverting the return between the boiler and the space heating water storage tank.

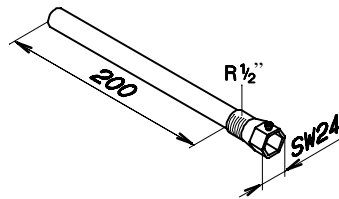
On-site extension of the connecting cable:

- 2 conductor cable, max. 60m / 196 ft. when using 16-gage wire
- Do not run the cable immediately next to 120/240 V cables.

Permissible ambient temperature

- during operation: 0 to 90 °C / 32 to 158 °F
- during storage and transport: -20 to +70 °C / -4 to 158 °F

Stainless steel sensor well, part no. 7819 693



For aquastats, tank temperature sensor or temperature sensor (swimming pool)
For Viessmann DHW cylinders, part of the standard delivery.

Collector temperature sensor, part no. 7814 617

For systems with two collector arrays.

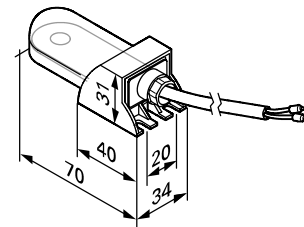
On-site extension of the connecting cable:

- 2 conductor cable, max. 60m / 196 ft. when using 16-gage wire
- Do not run the cable immediately next to 120/240 VAC cables.

Permissible ambient temperature

- during operation: 0 to 180 °C / 32 to 356 °F
- during storage and transport: -20 to 70 °C / -4 to 158 °F

Solar cell, part no. 7408 877



Solar cell CS 10 with connecting cable, 2.3 m long.

The solar cell records the intensity of solar radiation and signals this value to Vitosolic 200. When an adjustable threshold value has been exceeded, Vitosolic 200 starts the bypass circuit pump.

On-site extension of the connecting cable: 2-core lead with a max. length of 35 m when using a cross-section of 1.5 mm² copper.

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