

SOLAR CONTROL

SC100/3



The Solar Control thermostat is an electronic instrument based on **BEINAT's** many years of experience in temperature control.

This device allows maintaining precise control of the temperature of the solar panels connected to the boiler's sanitary hot water.

It detects the boiler water temperature through the 3 provided sensors and compares it with the solar panels fluid.

When the panels temperature is higher than the boiler's water, the control unit starts the pump allowing thermal exchange between panels and boiler.

Its second main function is to use a supplementary source of heat when the temperature is lower than the set integration temperature.

In order to ensure a perfect thermal exchange, the device is fitted with a "delta T" temperature differential that varies from 1 to 9°C, and can be regulated using the knob on the thermostat front panel.

Thanks to the 3-module Omega-type format, you can build several systems exploiting the modularity of the DIN rail in the previously set electrical panels.

Installation and user guide

Firmware

Version 1.0

CONFORMITY

EMC EN50270

Important Note

Before connecting the unit careful reading of instruction booklet is recommended, and it is kept in a safe place for future reference.

Furthermore, the correct electrical connections according to the enclosed drawings, complying with instructions and regulations in force, is recommended.

Useful information

CHECK the integrity of the thermostat after having removed it from the box.

Check that the data written on the box correspond to the product.

Any use of the detector for purposes other than the intended one is considered improper, and as a result of which **BEINAT S.r.l.** therefore disclaims any responsibility for possible damages caused to people, animals or objects.

Never clean with chemical products. If necessary after remove the voltage, wash with a moist cloth.

Entrust always the installation and maintenance to technicians qualified and / or authorized which can ensure the original spare parts in case of failure.

Checking package contents

No. 1 SOLAR CONTROL SC100 control unit

No. 3 Temperature probes in thermoplastic weatherproof case, immersion version with IP55 protection degree



Accessories on demand

Immersion version temperature probes with chromium plated weatherproof case.



Technical Specifications

Power supply 230V~ ±10% 50Hz

Power demand 1 VA

Relay Contact Range 10A 250V resistive 5A 30V resistive

Free of voltage contacts

Type of sensors NTC 47K

Functioning temperature sensors -20°C to 120°C

Accuracy ± 1°C

Resolution 1 °C

Max. distance between probes and unit 150 m

Cable diameter for connecting probes 1 mm²

Integration Switch Automatic, Manual

Force pump switch on the panel Built in

Functioning temperature 0°C to 50°C

Storage temperature -10°C to +60°C

Humidity limits 90% RH non-condensing

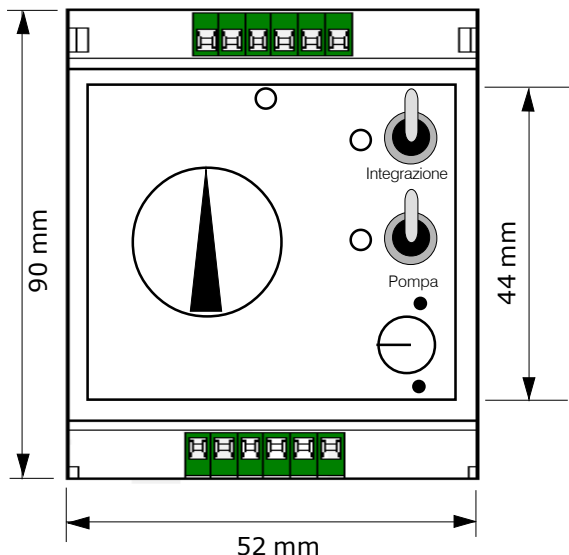
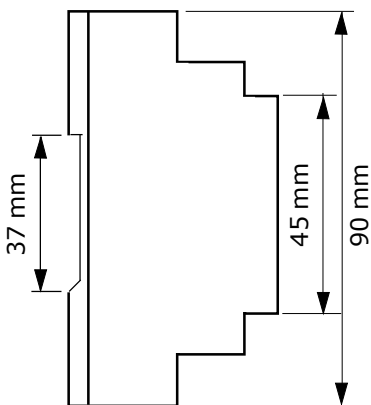
Electromagnetic Compatibility "CE" Reference norms

Degree of protection IP20 air

Omega-type size DIN EN 50092 3 modules 53*90*58

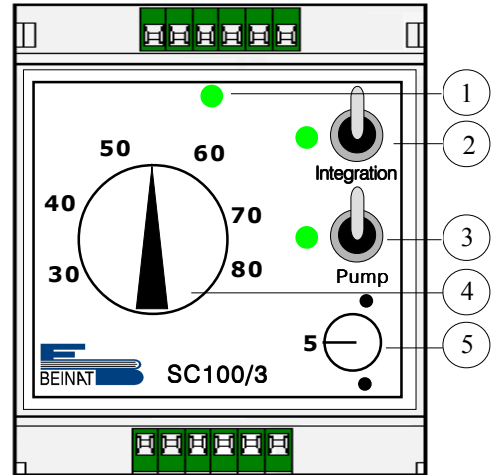
Mounting Panel mounted

Warranty Three years



SC100/3 Components and Commands

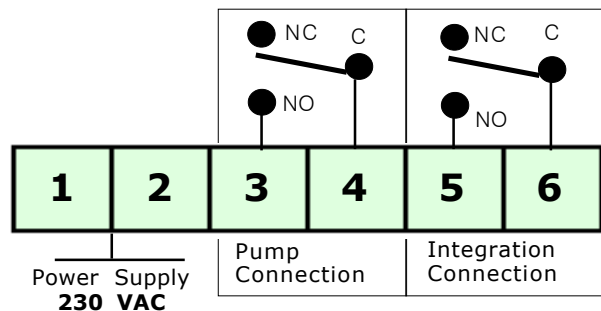
- 1) "Power connected" LED, thermostat working.
- 2) Automatic/Manual Switch for sanitary hot water **integration**. AUTOMATIC. By setting the switch up, you select the automatic functioning.
- a) **Automatic**. functioning works according to the temperature set using the graduated knob from 30°C to 80°C. Please see point No. 4
- b) **Manual**. By setting the switch down, you select the manual functioning. When selecting the manual functioning, the integration is always ON.
- 3) **Forced pump insertion** switch, between **boiler and panel**. By setting the switch down, you select to forcedly insert the circulation pump between panel and boiler.
- 4) **Temperature selection** knob. It is used to set the desired sanitary hot water temperature before activation of the integration.
- 5) **DELTA T** knob on the panel. It is used to program the temperature difference between BOILER and PANEL. It was set to 5°C in the factory. To change the temperature difference, proceed as follows: If you turn the knob clockwise, the difference decreases, if you turn it counter clockwise, it increases.



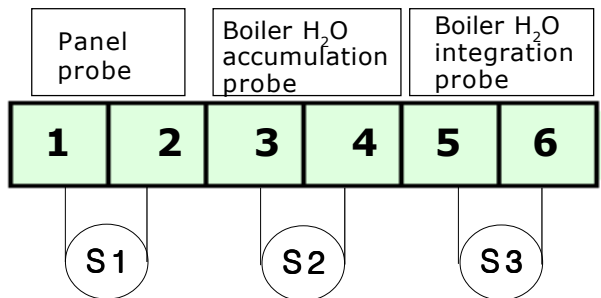
Electrical connections

Before connecting to the mains power, ensure the voltage is correct. Carefully follow the instructions and the connections according to Regulations in force, keeping in mind that the signal cables should be laid separate from the power cables

Electrical connection of the terminal block at the top
The relays schematized are free voltage with a capacity of 10 A resistive.



Electrical connection of the terminal block at the bottom
The immersion probes can be inverted one with the other both for position and polarity. Max. distance 150 m, with minimum diameter of 1 mm²



Before calling a technician, check...

If the device does not turn on: Check that all the 230V cables are firmly connected the terminal block's poles 1 and 2. Check if the mains power supply is present.

The control unit works well but cannot drive the appliances: Check that all the wiring is correct. Please remind that all relays are free of voltage. Check that the resistive values are right. Please see table on the side.

If other problems arise, a specialised and/or authorised technician and/or the Distributor of **BEINAT S.r.l.** should be contacted directly.

PROBES

Conversion from temperature to ohmic value of the probes

Temp.	Resistive values	Temp.	Resistive values
0°C	155.820	10°C	94.523
30°C	37.704	40°C	24.695
50°C	16.533	60°C	11.296
70°C	7.865	80°C	5.573
95°C	3.427	100°C	2.936

INSURANCE. This device is insured by the SOCIETÀ REALE MUTUA for the PRODUCT'S GENERAL LIABILITY up to a maximum of 1,500,000.00 EURO against damages caused by the device in case of failures in functioning.

WARRANTY. The warranty term is 3 years from manufacturing date, in agreement with the following conditions. The components acknowledged as faulty will be replaced free of charge, excluding the replacement of plastic or aluminium cases, bags, packing, batteries and technical reports.

The device must arrive free of shipment charges to **BEINAT S.r.l.**

Defects caused by unauthorized personnel tampering, incorrect installation and negligence resulting from phenomena outside normal functioning shall be excluded from the warranty.

BEINAT S.r.l. is not liable for possible damage, direct or indirect, to people, animals, or things; from product faults and from its enforced suspension of use.



DISPOSAL OF OLD ELECTRICAL & ELECTRONIC EQUIPMENT.

This symbol on the product or its packaging indicates that this product shall not be treated as household waste. Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment, such as for example:

- sales points, in case you buy a new and similar product
- local collection points (waste collection center, local recycling center, etc...).

By ensuring this product is disposed of correctly, you will help prevent potential negative consequence for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Attention: in some countries of the European Union, the product is not included in the field of application of the National Law that applies the European Directive 2002/96/EC and therefore these countries have no obligation to carry out a separate collection at the "end of life" of the product.



Solar Thermostat **SC100/3**

Lo styling è della b & b design

Purchase date

Stamp and signature of the dealee

Serial Number

In agreement with its continuous development policy, it reserves the right to modify its products without notice.

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