

**Differential temperature control
for swimming pool solar heating**

SOLAR CONTROLS FOR SURFACE INSTALLATION

OKU-SUNCONTROL

Item number: 600100

Mounting and operating manual

Status 01.05.2025

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plastic and pool products

oku[®]

Obermaier GmbH

We thank you for you for choosing OKU Suncontrol. Please read the manual carefully to avoid errors during installation and operation. Keep this manual in a safe place. Make sure that the environmental conditions are adequate before installing the regulator, as well as working temperature, humidity, pollution and gas emission, since any of these factors may affect the correct operation of the product.

- Suncontrol is an independent control device to mount on a dry environment surface and with pollution type 2. Cables should be channelled in tubes or gutters to be properly installed.

- For any handling during either installation or repairing procedures the regulator should be disconnected from the electric grid.

- The electrical connections must be those indicated in this manual and the label at the back of the connection lid. The connections referred to in this manual are those of the regulator; to connect the rest of the installation components, the user should check

the technical instructions for each piece of equipment (collectors, tanks, valves, etc.). For a correct operation of your installation, make sure that the technical features of the elements are compatible and that they comply with current standards.

- This regulator is not a safety device, neither can be used as such; it is the responsibility of the person in charge to include adequate protection for each type of installation (complying with the standards).

- Assembly, electrical connection, set-up, and maintenance should be carried out by qualified technicians.

- If possible defects are detected that may jeopardise or lead to incorrect operation of your installation, it is recommended not to connect this device.

- Total or partial reproduction of this document is forbidden by any means without prior consent in writing by SONDER REGULATION S.A.

- The graphics and information in this manual are illustrative and they might include technical or typographic mistakes.

- Sonder Regulación S.A. reserves the right to make any changes to the product, the technical data, or the assembling instructions, without prior notice.

This device's warranty covers 2 years. This warranty is limited to replacement of the defective part, which will be delivered in the same material conditions as they were received, not responding for packaging, batteries, instructions, or any other accessory that this product includes, and that is not included in the delivery note.

We disclaim all responsibility for damaged devices as a result of improper handling, omission of warnings given in this manual, or lack of technical knowledge as to the needs of the installation.

For any repair covered by this warranty it is necessary to present the documentation proving the purchase of this product within the period of time covered by the warranty herein, together with a description made by the user as accurate as possible of the defect or anomalous operation of the product.

If repairs are out of warranty, the user will be inform of their feasibility and costs of those repairs. Assessment by our technical department might result in an additional cost for the user.

Out of warranty:

- Devices with serial number damaged, deleted or modified.
- Devices connected or used without complying with the instructions included in the device package.
- Devices modified without prior consent on the part of the manufacturer.
- Devices damaged either by impacts or liquid or gaseous spillage or emissions. Devices presenting natural wear-and-tear or because of improper use of the device.
- **Those costs resulting from delivery or reception of material.**
- Demands of compensation due to loss of profit, compensation for utilization as well as indirect damages, as long as these are not of obligatory liability in compliance with the law.

Designed and manufactured in compliance with:

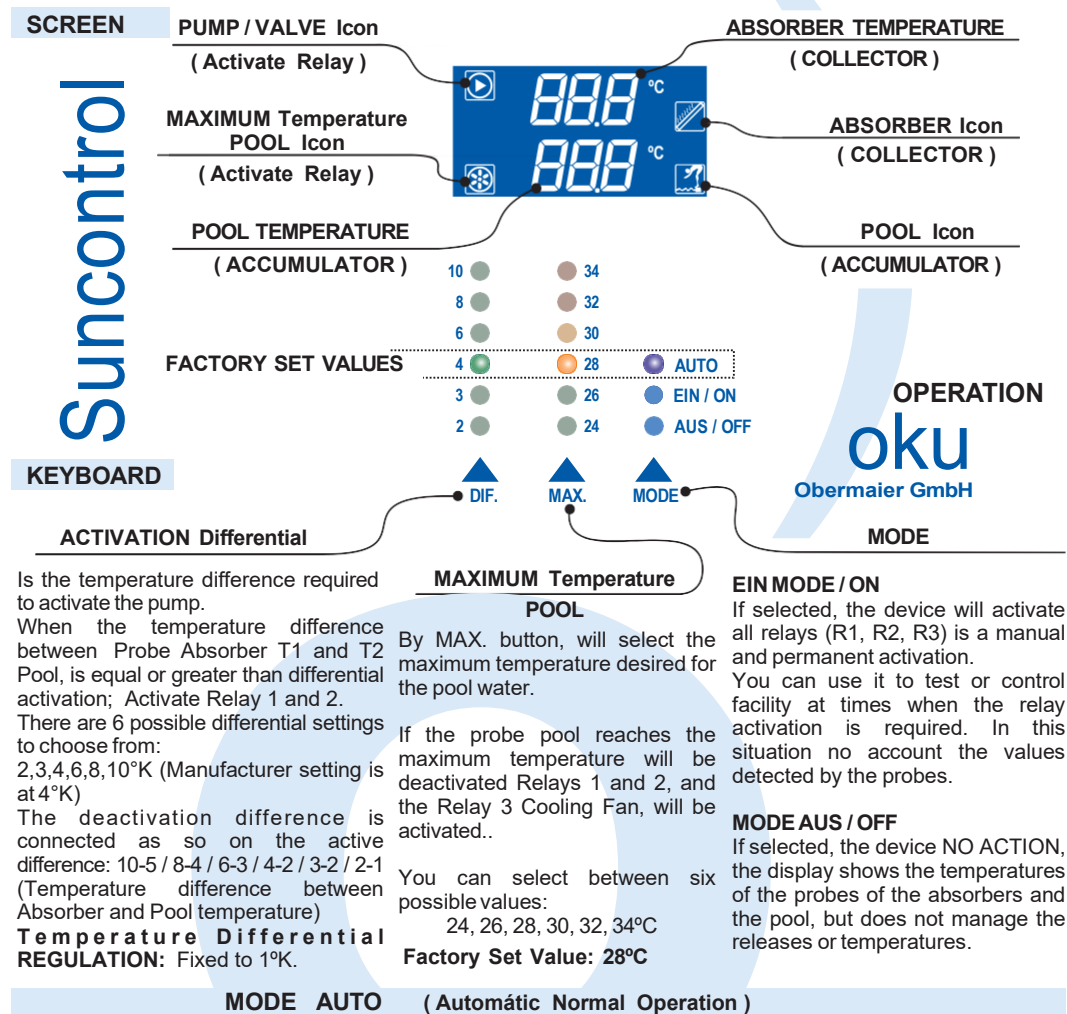
UNE-EN 60730-1 + A1:2005 + A12:2004 + A13:2005
UNE-EN 60730-2-1: 1998 + A11:2005



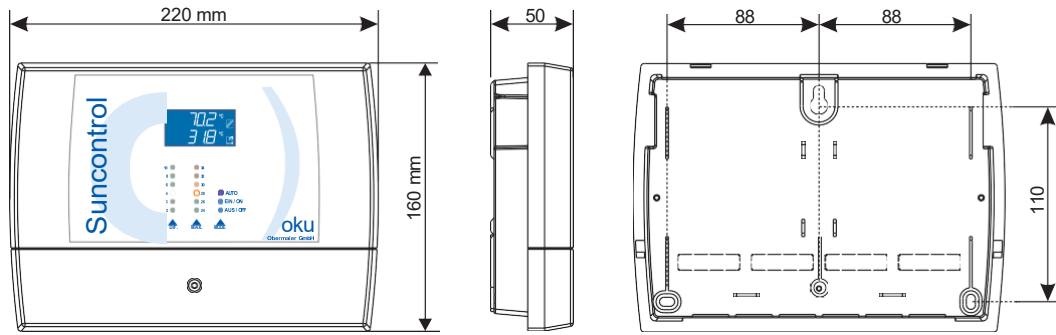
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With **Suncontrol**, you can view and manage quickly and easily all the information necessary to configure and adjust installation. During operation in normal mode (AUTO MODE), you can see on the screen temperature probes and status of the devices associated with the relays.

KEYBOARD OPERATION. When you press one of the three buttons, the LED is on, will be intermittent, with each additional press will go advanced and changing value cyclically. After 4 seconds without pressing the LED will be fixed in the new selected value.



- MODE AUTO (Automático Normal Operation)**
- Relay 1 and 2 are **Activated** when the temperature difference between T1 and T2 probe is equal or higher to the activation differential.
 - Relay 1 and 2 will be **Deactivated** when the temperature difference drops below the deactivation differential.
 - Relay 1 and 2 will be **Disabled** when the pool temperature reaches the maximum temperature (MAX), and Relay3 Cooling fan will be **Activated**.
 - Relay 3 air heater is **Desactivated** when the pool temperature drops below the maximum temperature minus differential, and turn **Enable** Relays 1 and 2.



Power supply: 230V~ +10 /-15% 50/60Hz
 LCD lit-up: 40 x 20 mm
 Box: Plastic ABS V0 IP40
 Environment: Humidity= 20 to 85% / Pollution= 2

Temperature: Storage= -10...60 °C
 Operation=-5...40°C
 Operation: Software type A. Type of action 1.B
 Relays: SPDT with potential free contacts

OKU SUNCONTROL	Relays	Probes
600100	3 (10A tipo SPDT)	2 PT1000 1,5m

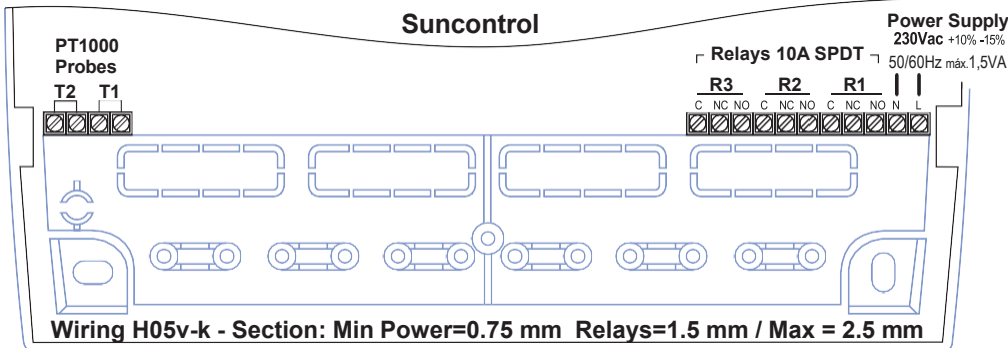
Probe testing scale

°C	-20	-10	0	+10	+20	+30	+40	+50
W	921	961	1000	1039	1078	1117	1155	1194

°C	+60	+70	+80	+90	+100	+120	+140	+160
W	1232	1271	1309	1347	1385	1461	1536	1610



Electrical Wiring



PROBES

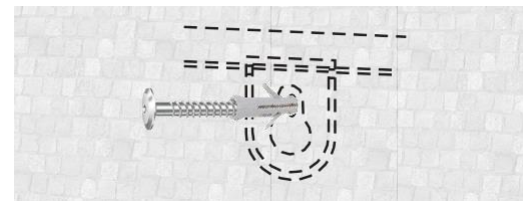
- It is recommended to use original probes only (1.5m PT1000); if they need to be lengthened the connection has to be welded not to lose the reading value and retracted to isolate them from moistness.
- The Absorber probe must be installed on the output side of the absorption system. (see Photo 1).
- The Pool probe is supplied with pocket, for the installation in the circulation circuit pool. (see photo 2).
- The probe cables should never be embedded in the same channel as the electrical wires.

RELAYS

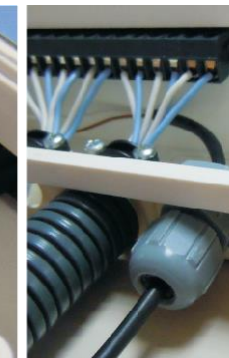
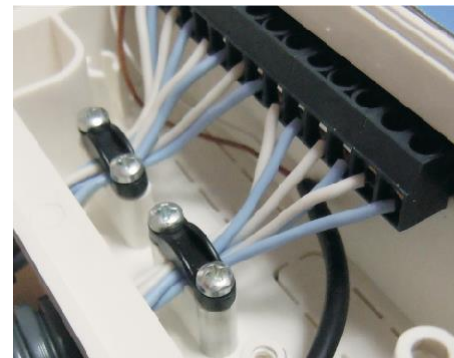
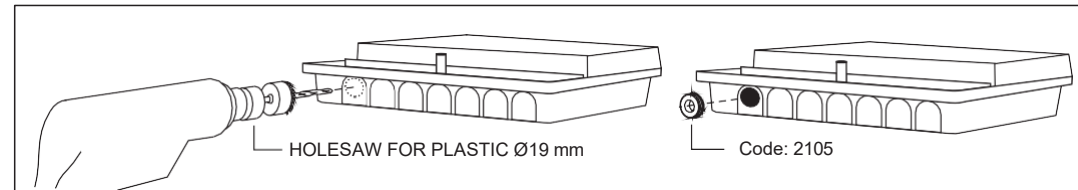
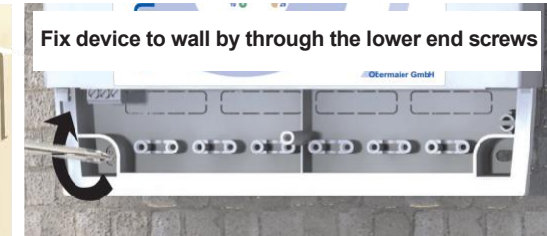
- The relays enabling your installation devices are potential-free contact and work as switches only, which means that they only open/close the contacts, and that they feed the devices connected to the relay corresponding to each device.
- Make sure to have properly made the electrical connections from the devices to the relay contacts before feeding the **Suncontrol** terminal.

SURFACE ASSEMBLY

1.- Hang to wall by screw.



2.- Open cover conexions



IT IS RECOMMENDED

To comply with electrical safety standards when connecting probes, devices, and power supply wiring, using cable holders, channelling by means of tubes or compression glands, and to provide the installation with adequate electrical safety.

At the controller's base die cutters are arranged in case the wiring does not come from a junction box and the cables come from behind.

You can use the modes EIN / ON - AUS / OFF to check the connection and disconnection of the devices associated with the relays.

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If **Suncontrol** behave abnormally installation, result of a malfunction in one of the Probes, T1 Absorber

(Collector) and / or T2 Pool (Accumulator), the device will inform us with "Error" (mal function) message:



PROBE ERROR T1

When the device detects a failed Absorber Probe T1 (Collector), show Erro message displayed next to the icon Probe T1, and activate relays R1 and R2 to avoid excessive temperature rise in the solar collector circuit.



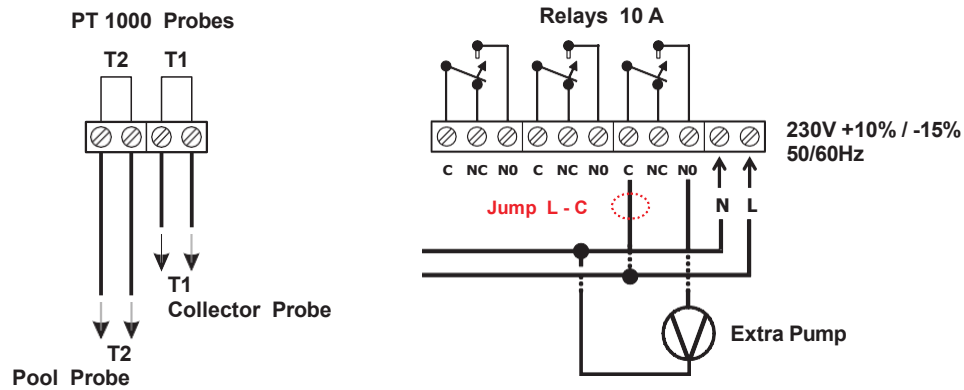
PROBE ERROR T2

When an Error is detected in the Probe T2 Pool, will display the message Erro icon next to the Probe T2. The device acts in two different ways:

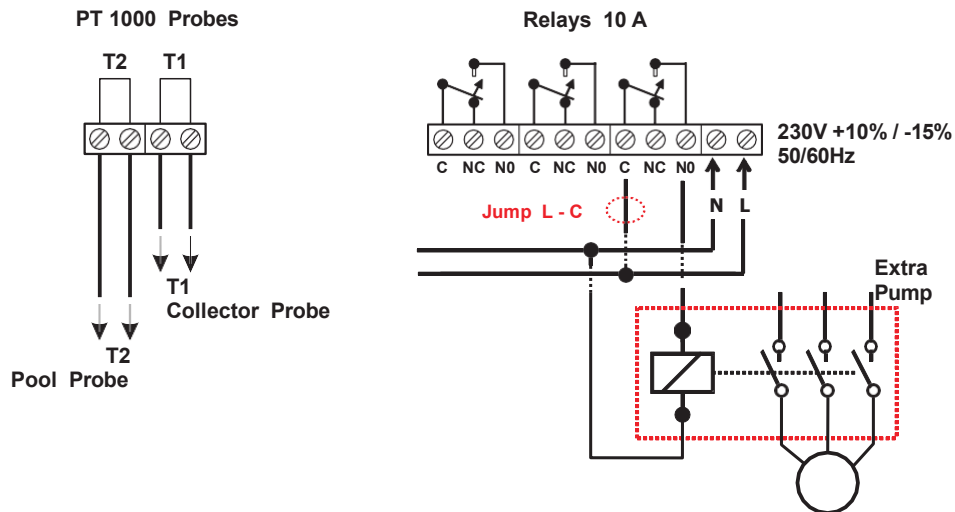
- If the temperature T1 is equal to 50°C or higher : R1 and R2 will Activate.
- If the temperature T1 is equal to 49°C or lower : Turns OFF, R1 and R2.

ELECTRICAL WIRINGS

OKU Suncontrol Electrical wirings for Installation with Extra Pump

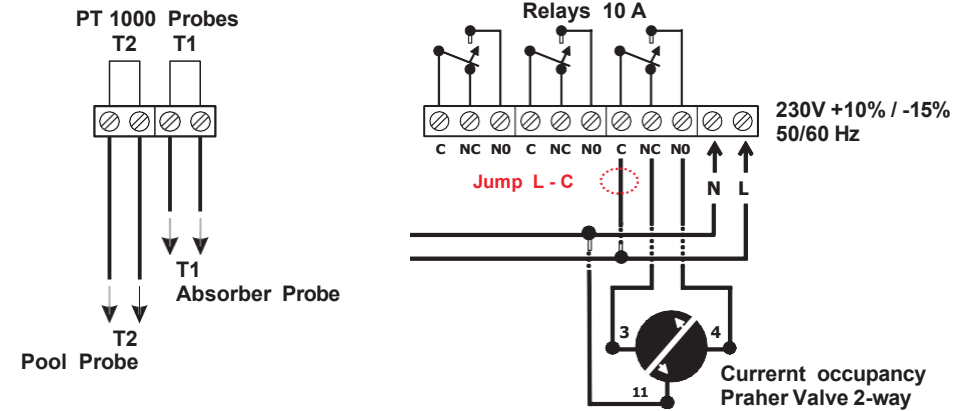


OKU Suncontrol Electrical wirings for Installation with extra pump and contactor

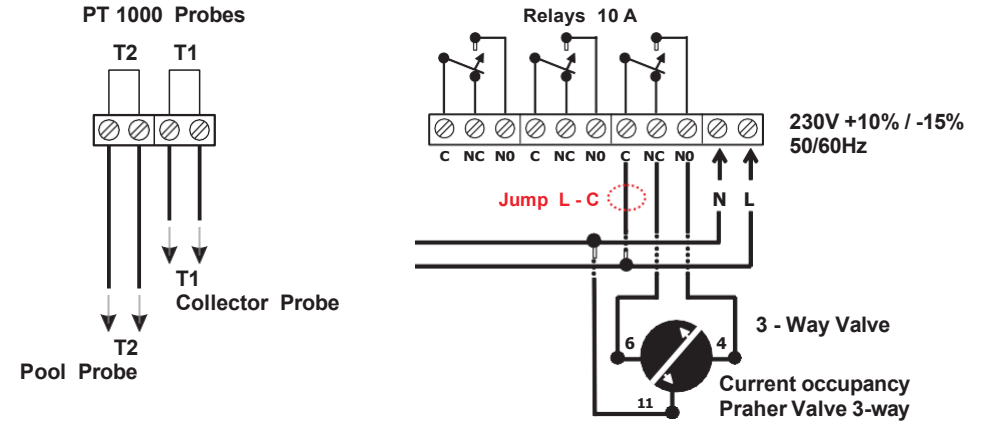


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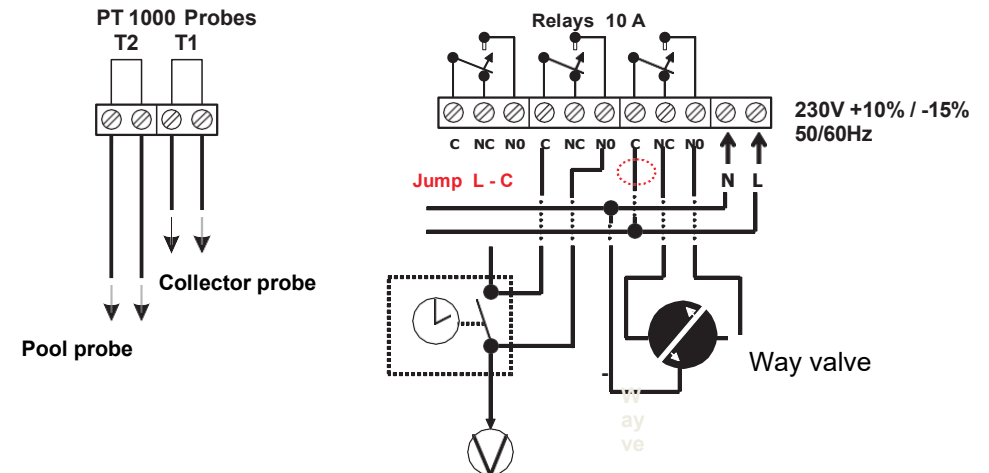
OKU Suncontrol Electrical wirings for Installation with 2-way valve



OKU Suncontrol Electrical wirings for Installation with 3-way valve



OKU Suncontrol Electrical wirings for Installation with 3-Way Valve & Filter Pump Start



Available spare parts

Item number	Description
600100-1	Contact sensor PT 1000
600100-2	Immersion sensor PT 1000
600100-3	Immersion sleeve TH 30, 30 mm, ET 1/2"
600100-4	Replacement board from July 2015
600100-5	Replacement board until June 2015

To install spare parts before carrying out repairs, it is essential to disconnect the power supply

Waste disposal



Please dispose the product as electrical or electronic waste and hand it over to the local waste collection system. The separate collection and recycling of old appliances at the time of disposal will help to ensure that they are recycled in a way that protects human health and the environment. Contact your local authorities for information on where to drop off your electrical appliance for recycling