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> DIGITEN DTC101 Temperature Controller User Manual

## DIGITEN DTC-101UK

# DIGITEN DTC101 Temperature Controller User Manual

Model: DTC-101UK | Brand: DIGITEN

## 1. INTRODUCTION

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Thank you for choosing the DIGITEN DTC101 Temperature Controller. This device is designed to precisely regulate and maintain desired temperatures within a range of  $-40^{\circ}\text{C}$  to  $248^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $480^{\circ}\text{F}$ ). It is suitable for a wide array of applications, including greenhouses, mushroom houses, reptile breeding, animal feeding, aquariums, wine cellars, cigar storage, homebrewing, seed germination, heating mats, and fermentation. This manual provides essential information for safe and effective operation.



## Multiple Purpose



The image highlights the versatile applications of the DTC101 controller, showing its use in diverse environments such as reptile breeding, cured meat storage, greenhouses, and cigar humidors.

## 2. SAFETY INFORMATION

- Read all instructions carefully before use.
- Ensure the power supply matches the device's requirements.
- Do not immerse the controller unit in water or expose it to excessive moisture. The sensor probe is waterproof, but the main unit is not.
- For long-term stability and safety, it is recommended to restrict the connected load current to 7 amps, even though the device is rated for 10 amps.
- The controller supports high and low-temperature alarms, which are crucial for protecting your equipment and environment from exceeding safe temperature ranges. Configure these alarms according to your specific application needs.
- Keep out of reach of children.

### 3. PRODUCT OVERVIEW

The DIGITEN DTC101 is a plug-and-play temperature controller featuring a clear LED display and intuitive controls. It includes a main control unit and a waterproof temperature sensor probe.

#### 3.1. Components

- Main Temperature Controller Unit
- Waterproof Temperature Sensor Probe

#### 3.2. Display and Controls

The bright LED display provides real-time temperature readings and settings. The unit features three easy-to-use buttons: SET, UP (▲), and DOWN (▼).



This image shows a detailed view of the DIGITEN DTC101 display, highlighting the current temperature (PV), run temperature (RV), stop temperature (SV), and the 'RUN' and 'STOP' indicators for heating/cooling modes.

- **PV (Current Temp):** Displays the actual temperature measured by the sensor.
- **RV (Run Temp):** The temperature at which the connected device will activate (start heating or cooling).
- **SV (Stop Temp):** The temperature at which the connected device will deactivate (stop heating or cooling).
- **RUN Indicator:** Illuminates when the connected device is active.
- **STOP Indicator:** Illuminates when the connected device is inactive.

The controller also features a practical 'Hold Design' with an eyelet tab, allowing it to be conveniently hung on a wall or hook, keeping cords tidy.



The image illustrates the 'Hold Design' of the DTC101 controller, featuring an eyelet tab at the top for convenient hanging and installation.

## 4. SETUP

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1. **Connect the Sensor:** Insert the temperature sensor probe into the designated port on the controller. Ensure it is securely connected.
2. **Position the Sensor:** Place the sensor probe in the environment where temperature control is required (e.g., inside an aquarium, greenhouse, or terrarium).
3. **Plug in Heating/Cooling Device:** Connect your heating or cooling equipment (e.g., heating mat, fan, heater) to the output socket of the DTC101 controller.
4. **Power On:** Plug the DTC101 controller into a standard power outlet. The display will illuminate.
5. **Mounting (Optional):** Use the integrated eyelet tab to hang the controller on a wall or hook for optimal placement and cable management.



This image demonstrates a typical setup where the DTC101 temperature controller is connected to a power outlet and a heating/cooling device (represented by a plant growing light) to maintain a desired temperature.



The image shows the DTC101 temperature controller positioned next to an aquarium, illustrating its application in maintaining stable water temperatures for aquatic environments.

## 5. OPERATING INSTRUCTIONS

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The DTC101 is designed for user-friendly operation with its three-button interface.

### 5.1. Setting Temperature Units (°C/°F)

To switch between Celsius and Fahrenheit:

- Press the **UP** (▲) and **DOWN** (▼) buttons simultaneously. The display will toggle between °C and °F.

### 5.2. Setting Run Temperature (RV) and Stop Temperature (SV)

1. Press the **SET** button once. The RV (Run Temp) value will flash.
2. Use the **UP** (▲) or **DOWN** (▼) buttons to adjust the desired Run Temperature.
3. Press the **SET** button again. The SV (Stop Temp) value will flash.
4. Use the **UP** (▲) or **DOWN** (▼) buttons to adjust the desired Stop Temperature.
5. Press the **SET** button a third time to confirm and exit the setting mode. The display will return to showing the current temperature.

### 5.3. Selecting Heating or Cooling Mode

The controller automatically determines the operating mode based on your RV and SV settings:

- **Heating Mode:** If  $RV < SV$ , the controller will operate in heating mode. The connected device will turn on when the temperature drops to RV and turn off when it reaches SV.
- **Cooling Mode:** If  $RV > SV$ , the controller will operate in cooling mode. The connected device will turn on when the temperature rises to RV and turn off when it drops to SV.

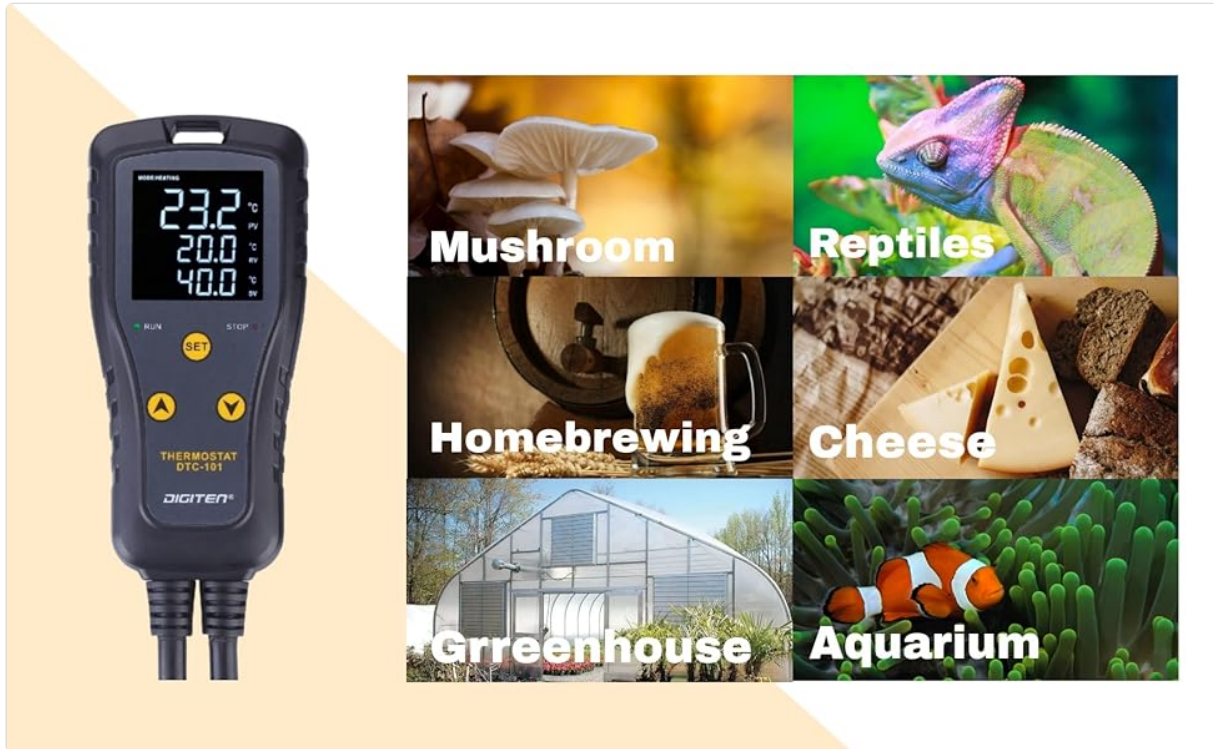
### 5.4. Compressor Delay Setting

The compressor delay function protects refrigeration equipment by preventing rapid cycling. This setting is typically adjusted within the advanced menu (refer to specific instructions for accessing advanced settings if needed, as this is not detailed in the basic product information).

## 5.5. LCD Backlight Control

To turn off the LCD backlight:

- Press the **UP (▲)** and **SET** buttons simultaneously for approximately 3 seconds until the light bulb symbol disappears. The LCD backlight will shut off automatically after 30 seconds of inactivity.



This visual guide explains how to convert temperature units (°C/°F), set the heating or cooling mode based on Run Value (RV) and Stop Value (SV), and activate/deactivate the LCD backlight on the DTC101 controller.

## 6. MAINTENANCE

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- **Cleaning:** Wipe the controller unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Care:** Ensure the sensor probe is clean and free from debris that could affect its accuracy. Avoid bending or damaging the sensor cable.
- **Storage:** When not in use, store the controller in a cool, dry place away from direct sunlight and extreme temperatures.

## 7. TROUBLESHOOTING

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### 7.1. Device Not Powering On / No Output

- **Check Power Connection:** Ensure the controller is securely plugged into a working power outlet.
- **Check Connected Device:** Verify that the heating/cooling device plugged into the controller's output is functional and properly connected.
- **Verify Settings:** Double-check your RV and SV settings. If RV and SV are set to the same value, or if the current temperature is within the set range, the output may not activate.
- **Reset:** Unplug the unit from the power source for a few minutes, then plug it back in.

## 7.2. Inaccurate Temperature Readings

- **Sensor Placement:** Ensure the sensor probe is correctly positioned and not exposed to direct heat sources, drafts, or extreme localized temperatures that do not represent the overall environment.
- **Sensor Damage:** Inspect the sensor cable and probe for any visible damage. A damaged sensor may provide incorrect readings.

## 7.3. Alarms Triggering Unexpectedly

- **Review Alarm Settings:** Check your high and low-temperature alarm thresholds to ensure they are set appropriately for your application.
- **Environmental Fluctuations:** Significant and rapid temperature changes in the environment can trigger alarms.

## 8. SPECIFICATIONS

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<b>Brand</b>	DIGITEN
<b>Model</b>	DTC-101UK
<b>Display Type</b>	LCD
<b>Temperature Control Range</b>	-40°C to 248°C (-40°F to 480°F)
<b>Current Rating</b>	10A (Recommended max 7A for long-term stability)
<b>Included Components</b>	Temperature Controller with Sensor

## 9. WARRANTY AND SUPPORT

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For warranty information, technical support, or service inquiries, please refer to the documentation included with your purchase or contact DIGITEN customer support directly through their official website or the retailer where the product was purchased. Please have your model number (DTC-101UK) and purchase date available when contacting support.