

Lamp Temperature Control

How to use

Attention

This remote experiment interface works with the most common browsers. However there are some problems with Internet Explorer / Edge browsers with live view.

Access instructions

Accessing the application involves the following steps:

- I. "Go to the application" link (same webpage of this tutorial);
- II. "Log in as a guest" button (inside the Moodle platform);
- III. "Lamp Temperature Control" link (topic 1);
- IV. The application should load the interface depicted below.

The screenshot shows the 'Lamp Temperature Control' interface. It features a blue header bar with the title. Below the header, there are two buttons: 'Switch lamp' (with a lightbulb icon) and 'Switch fan' (with a fan icon), both circled with a green '1'. To the right, a box displays 'Temperatures [°C]: Lamp temperature: 26.7' and 'Room temperature: 28.0', circled with a green '2'. Below this is a live video feed of the experimental setup, circled with a green '3'. To the right of the video is a 'Plot' graph showing Temperature (°C) vs Time (s), with two lines (red and green) showing a sharp rise and then leveling off, circled with a green '4'. Below the video, there is a control panel with a checkbox for 'On-off temperature control', a 'Reference [°C]: 40.0' field, and a 'Tolerance [%]: 0.05' field, circled with a green '5'. At the bottom right, there are two buttons: 'Save temperatures' and 'Save graph', circled with a green '6'.

Interface features

The interface comprises six sections:

1. Command for switching on/off the lamp and the fan;
2. Visualization of the lamp and room temperatures;
3. Remote experiment live view;

4. Graphic with both temperatures;
5. On-off control section;
6. Save buttons for the temperatures and graphs.

Operation modes

Manual actuation

In this mode, the user can switch on/off the lamp and the fan. It is possible to observe the effect of the fan operation in the lamp temperature.

On-off temperature control

In this mode, the user can enable the on-off temperature control and set two parameters: the reference temperature and the tolerance.