

CLIMA100

air conditioning unit

INTEGRATION

Recommended installation is at the top of the device where the highest temperature is. It is necessary to ensure that direct sunlight does not shine on the outside cooler and that air may flow around it. The "chimney effect" is ideal when designing the structure of final device.

REAL PERFORMANCE

The actual cooling performance is dependent on the outside climatic conditions and the interior and exterior design of the kiosk. Under optimal conditions, full cooling performance reaches 100W at an internal temperature of 50 °C ~ 60 °C

CUSTOMIZATION

CLIMA100 units can be customized according to customer requirements. For more information, contact: info@clima100.com



Modul Clima100 is designed to protect the device from high and low temperatures outside the normal operating range of 10 °C ~ 60 °C. Thanks to its operating range, it enables passive cooling of the outdoor cooler and meets the IP67 requirements.

It is designed based on the requirements of information kiosk and terminal manufacturers and offers many additional features such as display backlight control, light sensor connection and output to protect additional electronics and temperature recordings over time.

The Clima100 is equipped with a USB interface. There is a user utility that allows you to completely set all parameters. Once set up, the unit can operate in fully autonomous mode.

Air conditioning may not only be a non-cooperative independent unit, but may be a part of your system !

Main features

- Cooling and heating
- IP67 from the outside
- Light sensor input
- Backlight regulation
- Signaling of dangerous conditions
- Data logger
- USB interface

APPLICATIONS

Info kiosks
Industrial terminals
Advertising boards
Electric switchboards

MAIN PARAMETERS

Power supply	24V/5A (max 120W)
Dimensions (TBD)	300(L)x102(W)x135(H)
Operating temp.	-40°C ~ +85°C
Weight	3.5 kg

SUPPORTED OS

Windows 7, Windows 10
Linux (2Q / 2019)

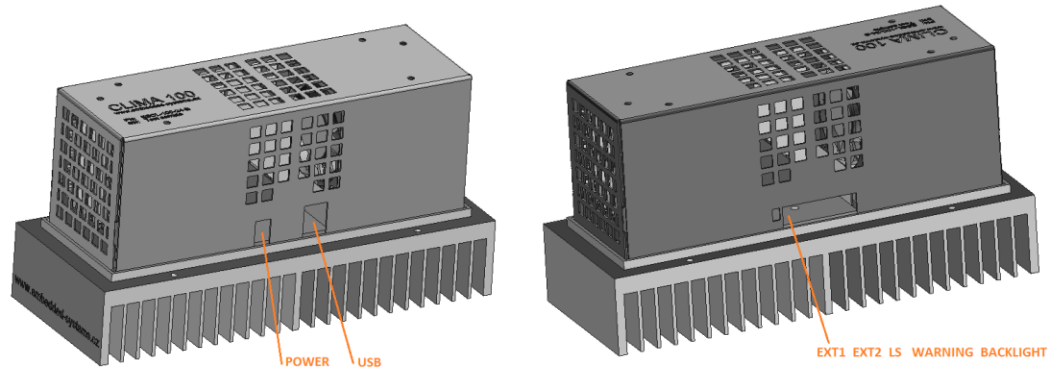
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Connection

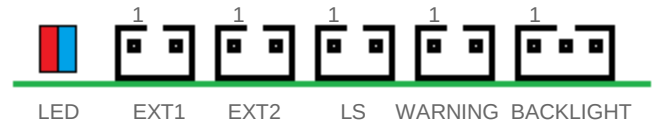
WARNING

The outdoor cooler's temperature may be up to 85 ° C depending on climatic conditions. There is a risk of burns.

The heat conductive paste used for heat transfer from Peltier cells degrades over time and may lead to reduced efficiency.



Sensor connectors



LED	signaling LEDs		
EXT1	temperature sensor 1	pin 1 = Vcc	pin 2 = IN
EXT2	temperature sensor 2	pin 1 = Vcc	pin 2 = IN
LS	light sensor	pin 1 = Vcc	pin 2 = IN
WARNING	I/O warning output	pin 1 = I/O	pin 2 = GND
BACKLIGHT	backlight regulation	pin 1 = ENABLE	pin 2 = PWM pin 3 = GND

Power supply and USB



POWER	power supply 24V / 5A (max120W)	pin 1 = +24V	pin 2 = GND
USB	USB as Virtual Com port		

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Install the user interface

MAIN TABS

REGULATOR SETTINGS

It contains basic configuration such as turning on / off the unit and setting the control limits (maximum and minimum allowable temperature).

OVERVIEW OF SENSORS

This tab shows the actual settings stored in the air conditioner and the current status of all sensors.

LS<->CONTROL

When this function is enabled, the unit reacts to the increase in the intensity of the sun's brightness and assumes the temperature rise and begins to pre-cool.

BACKLIGHT <-> CONTROL

Possibility to set the PWM value for the backlight. Either on a fixed value or according to the table depending on the light intensity. Possibility to limit or turn off backlight when critical temperature is exceeded.

WARNING SIGNAL

Generate a warning signal when the specified temperature is exceeded.

1. Install the driver

The Clima100 has a USB interface with a standard FTDI chip (FT230XS) and either the default Windows driver is installed or the FTDI driver is installed. After successful installation, it can be seen in System as VirtualComPort. (communication speed 115200).

2. Install Clima100 SW Tool

The user interface does not need to be installed - just unpack it and run the *Clima100.exe* file in the directory. The directory must contain the file *Clima100.con* (configuration) and *datafile_Clima100.txt* (temperature recorder).

3. Configuration

Select the VirtualComPort on which the drive is connected, and select *Connect* button. In the tabs, make changes and settings to your needs and save them to the air conditioner using the *Save changes* button. Information about the current status of all settings and sensors is visible in the chart and in the *Sensors and Settings Overview* tab. Configuration can be performed without a 24V power supply - the control unit is powered only by USB.

4. Modes

After the settings have been successfully uploaded to the drive, you can disconnect the USB and use it in a fully autonomous mode. To use the temperature recorder, USB is required - data is stored on the computer.

