

HARVIA XENIO CX180

EN

Control unit

中文

电热桑拿炉控制器 安装与使用说明书



These instructions for installation and use are intended for owners of saunas, heaters and control units, persons in charge of managing saunas, heaters and control units, and for electricians responsible for installing heaters and control units. Once the control unit is installed, these instructions of installation and use are handed over to the owner of the sauna, heater and control unit, or to the person in charge of maintaining them.

CONTROL UNIT HARVIA XENIO (CX180)

Control unit's purpose of use: the control unit is meant for controlling the functions of a sauna heater. It is not to be used for any other purpose.

Congratulations on making an excellent choice!

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本安装与使用说明书 应给予本产品拥有者、负责人或安装电工阅读。电工安装完成后，应把本安装与使用说明书，交予本产品拥有者或负责管理人。

HARVIA XENIO 控制器 (CX180)

触摸式电热桑拿炉控制器用途: 本产品是特意为控制电热桑拿炉而设计，严禁在其它用途上使用。

注意！请在使用电热桑拿炉前小心阅读说明书。

祝贺您 明智的选择！

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1. HARVIA XENIO

1.1. General

The purpose of Harvia Xenio control unit is to control an electric sauna heater within an output range of 2.3–18 kW. The control unit consists of a control panel, a power unit and a temperature sensor. See figure 1.

The control unit regulates the temperature in the sauna room based on information given by the sensor. The temperature sensor and the overheat protector are located in the temperature sensor box. The temperature is sensed by an NTC thermistor and the overheat protector can be reset (►3.4.).

An additional sensor is available as an option. By using two sensors, it is possible to acquire more accurate temperature readings from the sauna room.

The control unit can be used to preset the start of the heater (pre-setting time). See figure 3a.

1.2. Technical Data

Control panel:

- Temperature adjustment range: 40–110 °C.
- On-time adjustment range: family saunas 1–6 h, public saunas in apartment buildings 1–12 h. *For longer operating times consult the importer/manufacturer.*

- Control of lighting
- Dimensions: 85 mm x 24 mm x 110 mm
- Length of data cable: 5 m (10 m extension cables available, max. total length 30 m)

Power unit:

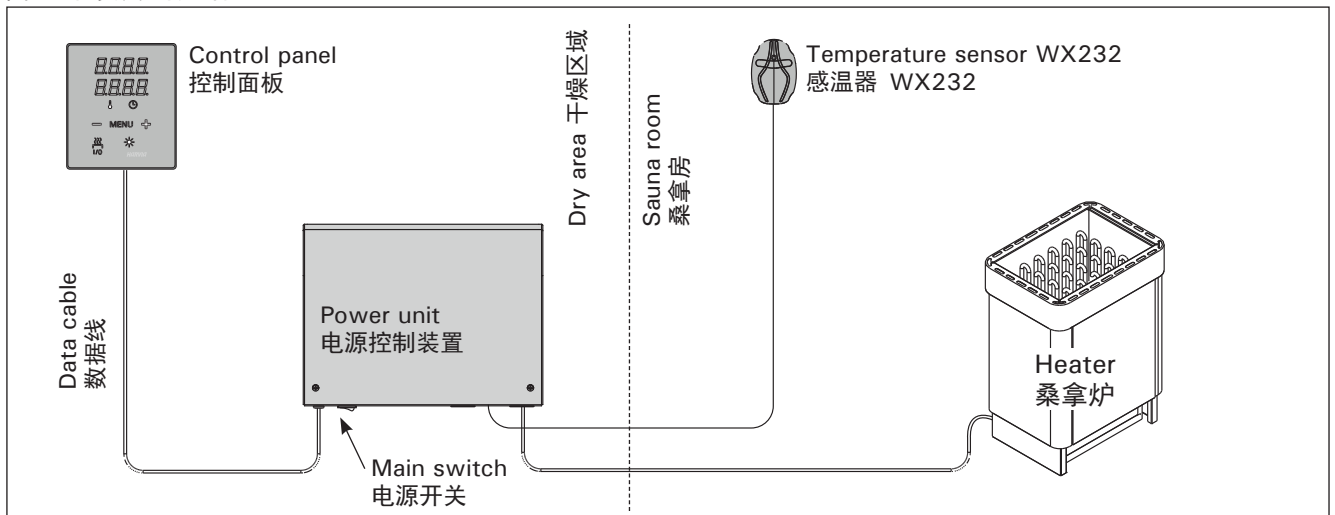
- Supply voltage: 400 V 3N~
- Max. load: 18 kW
- Lighting control, max. power: 100 W, 230 V 1N~
- Fan control, max. power: 100 W, 230 V 1N~
- Dimensions: 300 mm x 110 mm x 240 mm

Sensors:

- The temperature sensor is equipped with a resettable overheat protector and a temperaturesensing NTC thermistor (22 kΩ / T = 25 °C).
- Weight: 175 g with leads (ca 4 m)
- Dimensions: 51 mm x 73 mm x 27 mm

Figure 1. System components

图1. 桑拿炉控制组件



1. HARVIA XENIO 控制器

1.1. 概要

HARVIA XENIO 触摸式电热桑拿炉控制器是特意来控制电热桑拿炉而设计。输出范围 2.3 – 18 千瓦。控制器由控制面板，电源控制装置和感温器组成。参见图1

控制器通过感温器调节桑拿房内温度。感温器及过热保护器位于感温器胶盒内。感温器用NTC热敏电阻感应温度，并有可复位过热保护功能（见章节3.4）。

通过使用两个感温器，可获得更准确温度。附加的感应器（可选配）。

控制器可预置桑拿炉开启时间（预约时间设定）。参见图3a。

1.2. 技术参数

控制面板：

- 温度调节范围: 40–110 °C
- 预调工作时限：
家用桑拿 1–6小时
公用桑拿 1–12小时，
更长工作时限设定请咨询供应商/厂商
- 操作选配设备：照明灯
- 控制面板尺寸: 85 mm x 24 mm x 110 mm
- 数据线长度: 5 米（可选配延长线10米，最多总长30米）

电源控制装置：

- 电源: 400 V 3N~
- 最大输出: 18 kW(千瓦)
- 照明灯控制功率、最大: 100 W(瓦), 230 V 1N~
- 排气扇控制功率、最大: 100 W(瓦), 230 V 1N~
- 电源控制装置尺寸: 300 mm x 110mm x 240 mm

感温器：

- 感温器有可复位过热保护功能，并用NTC热敏电阻感应温度 (22kΩ / T=25 °C)
- 重量: 175克 (包含4米线连接电缆)
- 感温器尺寸: 51 mm x 73 mm x 27 mm

1.3. Troubleshooting

If an error occurs, the heater power will cut off and the control panel will show an error message "E (number)", which helps troubleshooting the cause for the error. Table 1.

Note! All service operations must be done by professional maintenance personnel. No user-serviceable parts inside.

1.3. 问题解决

如有问题发生，控制器将会切断桑拿炉电源，控制面板显示错误信息代码，"E(数字)"有助找出问题之原因。见表1

注意！所有维修业务必须由专业维修人员处理。控制器内没有用户可维修的部件。

	Description/错误信息代码说明	Remedy/排除问题方法
E1	Temperature sensor's measuring circuit broken.	Check the red and yellow wires to the temperature sensor and their connections (see figure 6) for faulties.
	感温器电路断线	检查感温器至控制装置之间红, 黄色电线连接(见图. 6)
E2	Temperature sensor's measuring circuit short-circuited.	Check the red and yellow wires to the temperature sensor and their connections (see figure 6) for faulties.
	感温器电路短路	检查感温器至控制装置之间红, 黄色电线连接(见图. 6)
E3	Overheat protector's measuring circuit broken.	Press the overheat protector's reset button (▷3.4.). Check the blue and white wires to the temperature sensor and their connections (see figure 6) for faulties.
	过热保护器电路断线	按过热保护器上复位按钮(▷见章节3.4.) 检查感温器至控制装置之间蓝, 白色电线
E9	Connection failure in the system.	Switch the power off from the main switch (figure 1). Check the data cable, sensor cable/s and their connections. Switch the power on.
	装置连接故障	从主开关关闭电源(见图1.), 检查数据线、感温器线路及各自之连接。重新开启电源

Table 1. Error messages. Note! All service operations must be done by professional maintenance personnel.
表1. 错误信息代码. 注意! 所有维修业务必须由专业维修人员处理

2. INSTRUCTIONS FOR USE

2.1. Using the Heater

When the control unit is connected to the power supply and the main switch (see figure 1) is switched on, the control unit is in standby mode and ready for use. I/O button's background light glows on the control panel.

WARNING! Before switching the heater on always check that there isn't anything on top of the heater or inside the given safety distance.

2. 使用及操控

2.1. 使用桑拿炉

接通电源及启动电源开关(见图1.)控制器进入待机模式, 控制面板I/O键背景灯亮起。

注意! 使用桑拿炉之前必需确保桑拿炉机身上或近侧没有杂物。

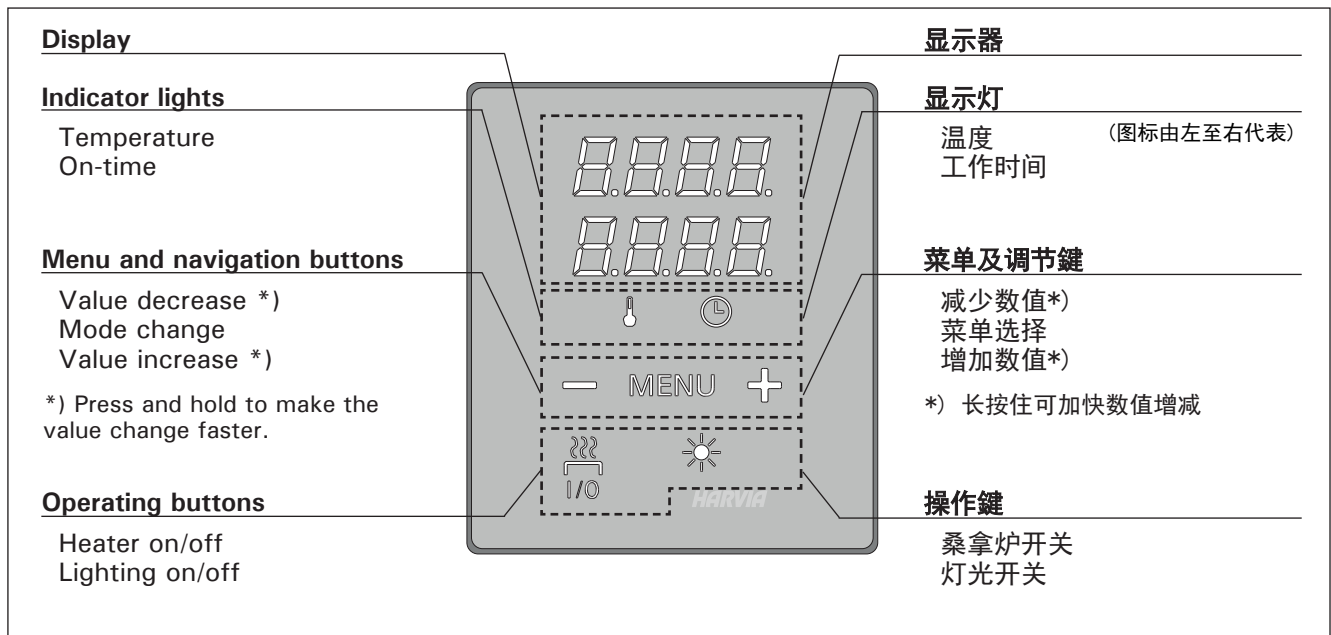


Figure 2. Control panel
图2. 控制面板

2.1.1. Heater On



Start the heater by pressing the heater I/O button on the control panel.

When the heater starts, the top row of the display will show the set temperature and the bottom row will show the set on time for five seconds.

When the desired temperature has been reached in the sauna room, the heating elements are automatically turned off. To maintain the desired temperature, the control unit will automatically turn the heating elements on and off in periods.

If the heater efficiency is suitable and the sauna has been built correctly, the sauna takes no more than an hour to warm up.

2.1.2. Heater Off

The heater turns off and the control unit switches to standby-mode when

- the I/O button is pressed
- the on-time runs out or
- an error occurs.

NOTE! It is essential to check that the control unit has cut off power from the heater after the on-time

2.1.1. 开启桑拿炉



按控制面板 I/O键启动桑拿炉

当桑拿炉启动时, 控制面板显示器亮起, 上排显示设定温度及下排显示设定工作时间5秒。

到桑拿房间达至设定温度时, 电热管电源会关闭。控制器会自动控制电热管电源, 维持设定温度。

正确的桑拿房尺寸及桑拿炉设备配置, 可以使房间在一小时内升温至合适温度。

2.1.2. 关闭桑拿炉

桑拿炉会在如下情况下关闭及进入待机模式

- 按下控制器上的 I/O 键
- 设定工作时间完成
- 出现问题

注意! 浴后, 必须确定桑拿炉完全关掉, 桑拿炉设定工作时间完成,

has elapsed, the dehumidification has ended or the heater has been switched off manually.

2.2. Changing the Settings

The settings menu structure and changing the settings is shown in figures 3a and 3b.

The programmed temperature value and all values of additional settings are stored in memory and will also apply when the device is switched on next time.

2.3. Using Accessories

Lighting can be started and shut down separately from other functions.

2.3.1. Lighting

The lighting of the sauna room can be set up so that it can be controlled from the control panel. (Max 100 W.)



Switch the lights on/off by pressing the control panel button.

确定除湿设定工作完成或人工关机后, 桑拿设备电源关闭。

2.2. 操作及更改设定

操作及更改设定方法 见图 3a 和 3b.

设定更改后会存储在控制器内存中, 下次开机时不用再次设定。

2.3. 操作选配设备

照明灯可在待机模式时操作

2.3.1. 照明灯

可以使用控制器开关键, 控制桑拿房之照明灯。(最大100瓦)



按控制器上照明灯键控制开关。

BASIC SETTINGS/基本操作方法

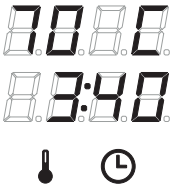
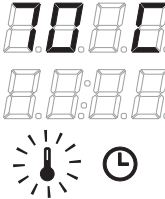
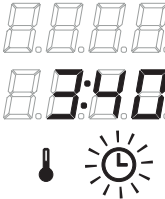
	Basic mode (heater on) The top row shows the sauna room temperature. The bottom row shows the remaining on-time. Both indicator lights glow.	基本操作模式（桑拿炉工作中） 上行显示桑拿房温度。 下行显示剩余工作时间。 两个显示灯会同时亮起。
	Press the MENU button to open the settings menu.	按 MENU 菜单键开始进入调节模式
	Sauna room temperature The display shows the sauna room temperature setting. Temperature indicator light blinks. • Change the setting to the desired temperature with the – and + buttons. The range is 40–110 °C.	桑拿房温度 数字显示器会显示设定温度，温度显示灯闪动 • 按 – 键或 + 键调节温度。 可调节温度范围为 40 – 110 °C度。
	Press the MENU button to access the next setting.	按 MENU 菜单键进入下一项设定
	Remaining on-time Press the + and – buttons to adjust the remaining on-time. Example: the heater will be on for 3 hours and 40 minutes.	剩余工作时间 按 – 键或 + 键调节剩余工作时间。 例子：桑拿炉剩余工作时间为3小时40分
	Press the MENU button to exit.	按 MENU 菜单键进入下一项设定

Figure 3a. Settings menu structure, basic settings
图 3a. 基本操作方法

ADDITIONAL SETTINGS/更改设定方法

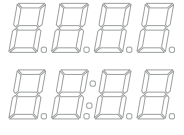
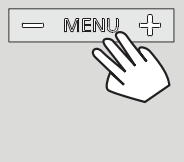
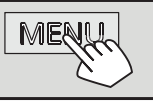
	Control unit standby I/O button's background light glows on the control panel.	待机模式中 控制面板 I/O键背景灯亮起
	Open the settings menu by simultaneously pressing the locations of the buttons -, MENU and + (see figure 2). Press for 5 seconds.  The buttons do not glow when the control unit is in standby mode.	同时按下 -, MENU, +, 3个键 (见图2) 长按5秒  当控制器于待机模式, 该按钮不会发光。
	Maximum on-time The maximum on-time can be changed with the - and + buttons. The range is 1-12 hours (6 hours*). Example: the heater will be on for 6 hours from the start. (Remaining on-time can be changed, see figure 3a.)	最长工作时间 按 - 或 + 按键减少或增加最大工作时间。可调时间为1-12小时 (预设值6小时*) 例子: 桑拿炉将会工作6小时 (调节剩余工作时间见图3a)
	 Press the MENU button. The control unit switches to standby-mode.	按 MENU 菜单键完成设定, 返回待机模式

Figure 3b. Settings menu structure, additional settings
 图 3b. 更改设定方法

*) Factory setting/预设值

3. INSTRUCTIONS FOR INSTALLATION

The electrical connections of the control unit may only be made by an authorised, professional electrician and in accordance with the current regulations. When the installation of the control unit is complete, the person in charge of the installation must pass on to the user the instructions for installation and use that come with the control unit and must give the user the necessary training for using the heater and the control unit.

3.1. Installing the Control Panel

The control panel is splashproof and has a small operating voltage. The panel can be installed in the washing or dressing room, or in the living quarters. If the panel is installed in the sauna room, it must

3. 安装指示

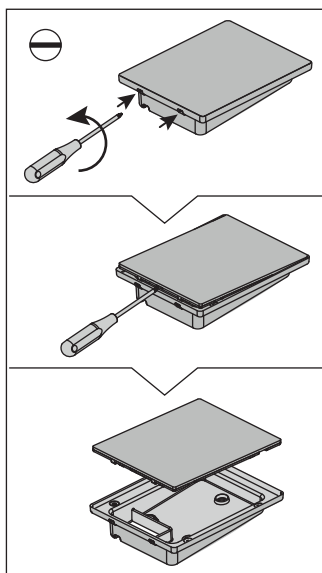
控制器之安装及电源连接必须按照国家法规，并且由合格之电工安装。电源线必须符合国家安全标准。安装完成后安装人员应把本安装与使用说明书，交予本产品拥有者或负责管理人。并且让负责管理人学习如何使用此控制器。

3.1. 控制面板安装

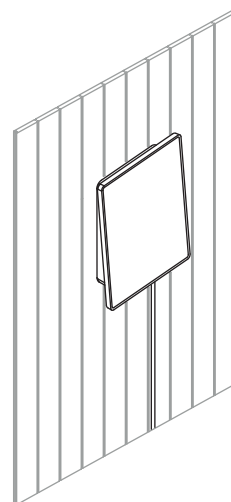
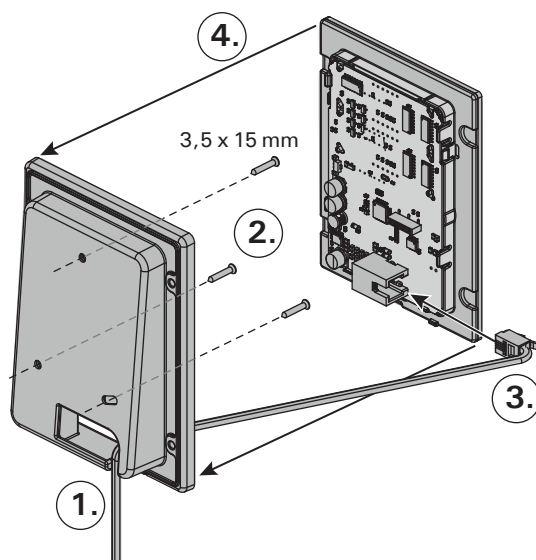
控制面可防溅水花并用底电压工作。该面板可安装在洗涤间、更衣室或在居室区域内，

1. Thread the data cable through the hole in the back cover.
2. Fasten the back cover to a wall with screws.
3. Push the data cable to the connector.
4. Press the front cover into the back cover.

1. 把数据线穿过控制器底盖孔位
2. 用螺丝钉固定制器底盖
3. 数据线与数据线连接器扣紧
4. 控制器面板与底盖扣好



A



B

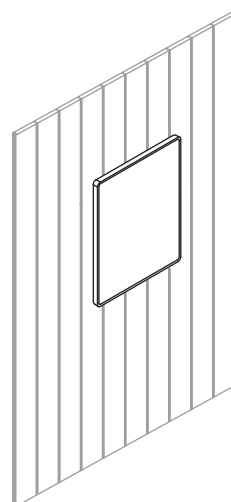
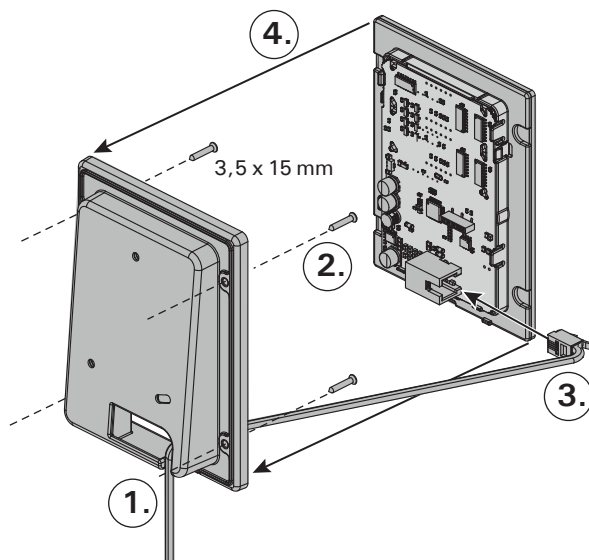
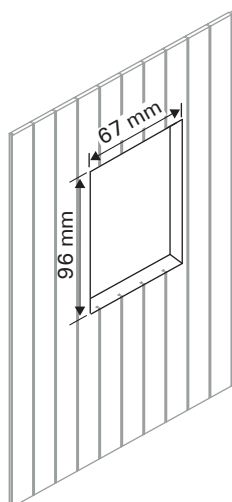


Figure 4. Fastening the control panel
图4. 控制面板安装

be at the minimum safety distance from the heater and at a maximum height of one metre from the floor. Figure 4.

Conductor tubing ($\varnothing$ 30 mm) inside the wall structure allows you to thread the data cable hidden within the wall – otherwise the installation will have to be on the wall surface. We recommend you to install the control panel embedded in to the wall and far away from possible splashes.

3.2. Installing the Power Unit

Install the power unit to a wall outside the sauna room, in a dry place with an ambient temperature of $>0^{\circ}\text{C}$. See figure 5 for instructions on how to open the power unit cover and how to fix the unit to the wall.

Note! Do not embed the power unit into the wall, since this may cause excessive heating of the internal components of the unit and lead to damage. See figure 5.

如果面板安装在桑拿房，它必须安装在离开桑拿炉的最小安全距离，并离地面不高于一米高度。图4。

您可以用导线管（直径30mm）把数据线隐藏在墙壁内部，否则，数据线将会显在墙面上。我们建议控制面板安嵌入墙体，远离可能溅起的水花

3.2. 电源控制装置

电源控制装置要安装在干燥的桑拿房间外，周围环境的温度要大于 $>0^{\circ}\text{C}$

电源控制装置安装及面盖打开方法见 图5。

注意！ 电源控制装置不能藏于墙内安装。电源控制装置内热力如不能散发会导致事故发生，正确位置请参见 图5。

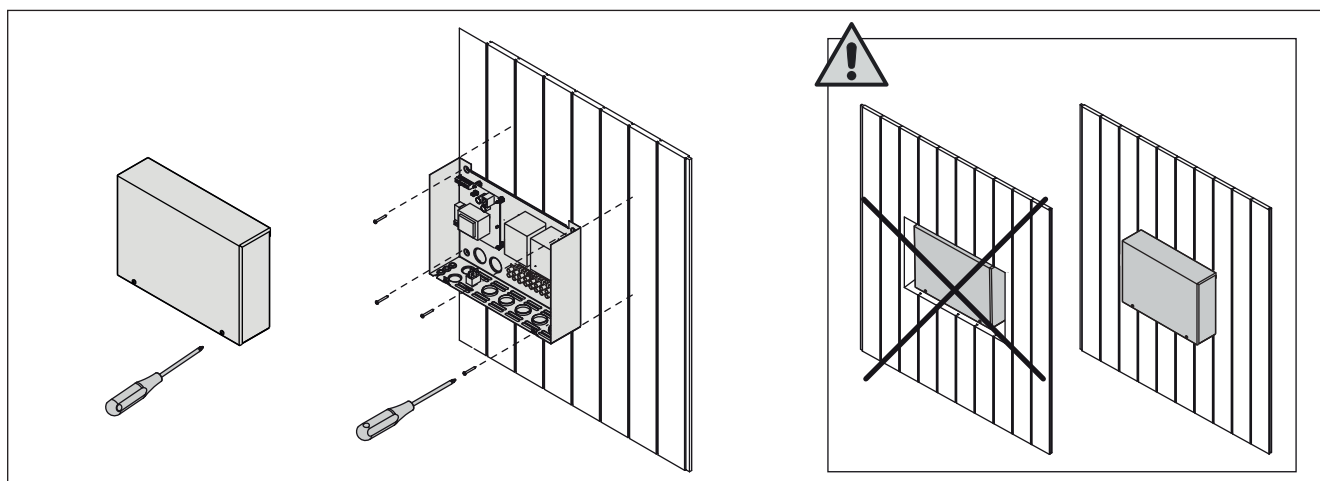


Figure 5. Opening the power unit cover and mounting the unit to a wall
图5 电源控制装置面盖打开方法及正确安装位置

3.2.1. Electrical Connections

Figure 6 shows the electrical connections of the power unit. For more detailed installation instructions see the instructions for installation and use of the selected heater model.

3.2.2. Power Unit Fuse Faults

Replace a blown fuse by a new one with the same value. The placement of the fuses in the power unit is shown in figure 6.

- If the fuse for the electronic card has blown, there is likely a fault in the power unit. Service is required.
- If the fuse in the line U2 has blown, there is a problem with lighting. Check the wiring and functioning of lighting and fan.

3.2.1. 电源接线

电源连接必须按照国家法规，并且由合格之电工安装。图6. 电源线必须符合国家后与安全标准。可参考桑拿炉附带的说明书获得更多电源连接资料。

3.2.2. 保险丝故障

保险丝烧断后，请在排除问题后更换同一型号之保险丝。图6。

- 如果电路板保险丝为已熔断，有可能是电源控制装置故障。必需要维修服务。
- 如果U2保险丝已熔断，表示选配安装的照明灯设备有问题。请检查照明和风扇的线路和运作。

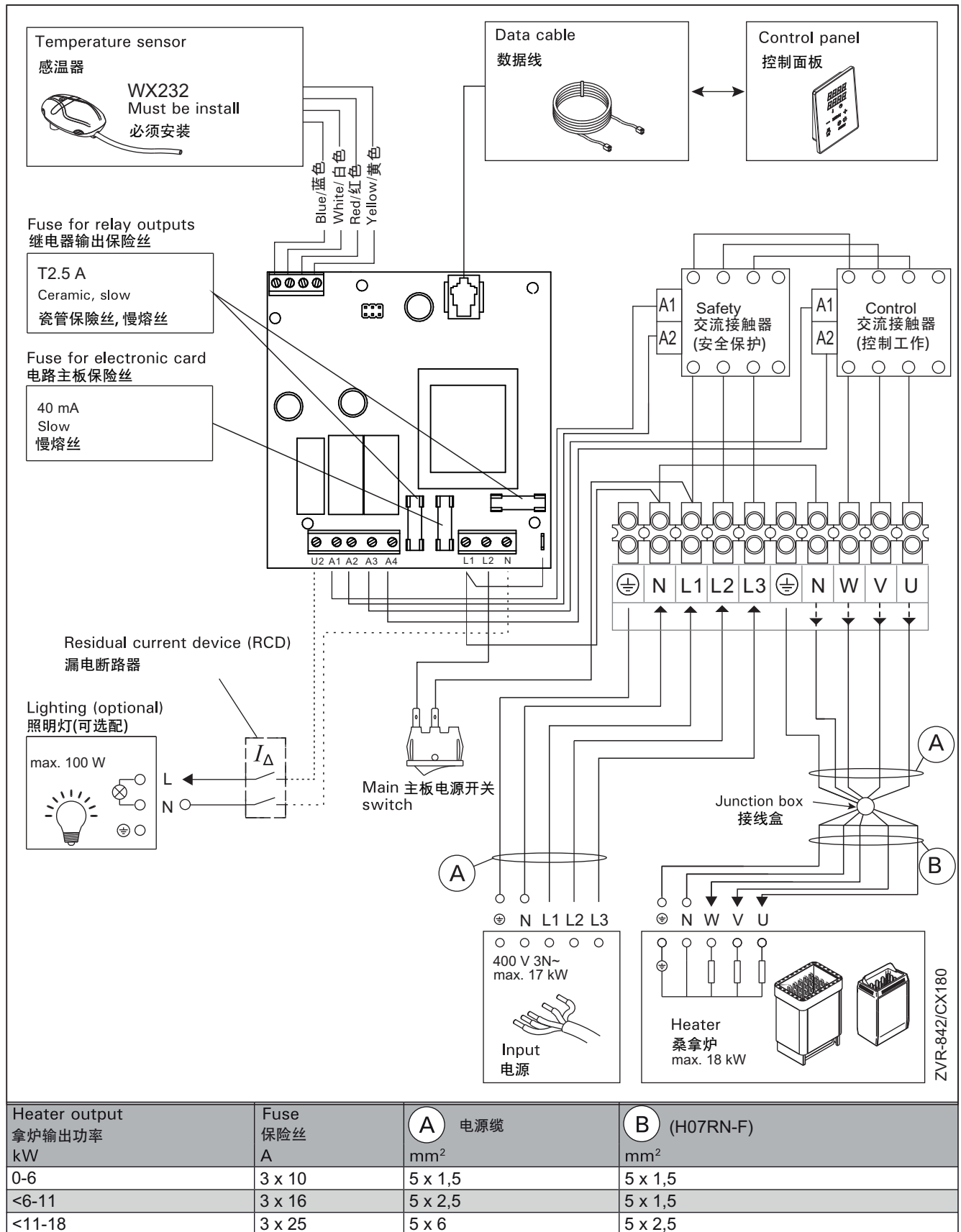


Figure 6. Electrical connections
图6. 接线图

3.3. Installing the Temperature Sensors

Note! Do not install the temperature sensor closer than 1000 mm to an omnidirectional air vent or closer than 500 mm to an air vent directed away from the sensor. See figure 9. The air flow near an air vent cools down the sensor, which gives inaccurate temperature readings to the control unit. As a result, the heater might overheat.

3.3.1. Installing the Temperature Sensor WX232

Check the correct location for the temperature sensor from the heater's instructions for installation and use.

Wall-mounted heaters (see figure 7)

- Fasten the temperature sensor on the wall above the heater, along the vertical centre line running parallel to the sides of the heater, at a distance of 100 mm from the ceiling.

Floor-mounted heaters (see figure 8)

- Option 1: Fasten the temperature sensor on the wall above the heater, along the vertical centre line running parallel to the sides of the heater, at a distance of 100 mm from the ceiling.
- Option 2: Fasten the temperature sensor to the ceiling above the heater, at a distance of 100–200 mm from the vertical centre line of the heater's side.

3.3. 感温器安装

注意! 感温器不能置于通风口旁边, 气流会降低感温器感应温度。因而使桑拿炉过热。正确的通风口与感温器安装间距位置、见 图 9。全方向性的通风口最小间距1000毫米、定向性的通风口最小间距500毫米。

3.3.1. 安装感温器 WX232

从安装与使用说明书检查正确的感温器与桑拿炉安装位置。

挂墙型桑拿炉感温器安装位置 (图7)

- 感温器安装在桑拿炉垂直中心线上方, 天花板对下100毫米

座地型桑拿炉感温器安装位置 (图8)

- 选择1: 感温器安装在墙侧, 桑拿炉中心上方, 天花板对下100毫米。注意! 桑拿炉与墙身距离。
- 选择2: 感温器安装在天花板, 与桑拿炉侧面的垂直中心线的距离保持100–200毫米适当水平距离。

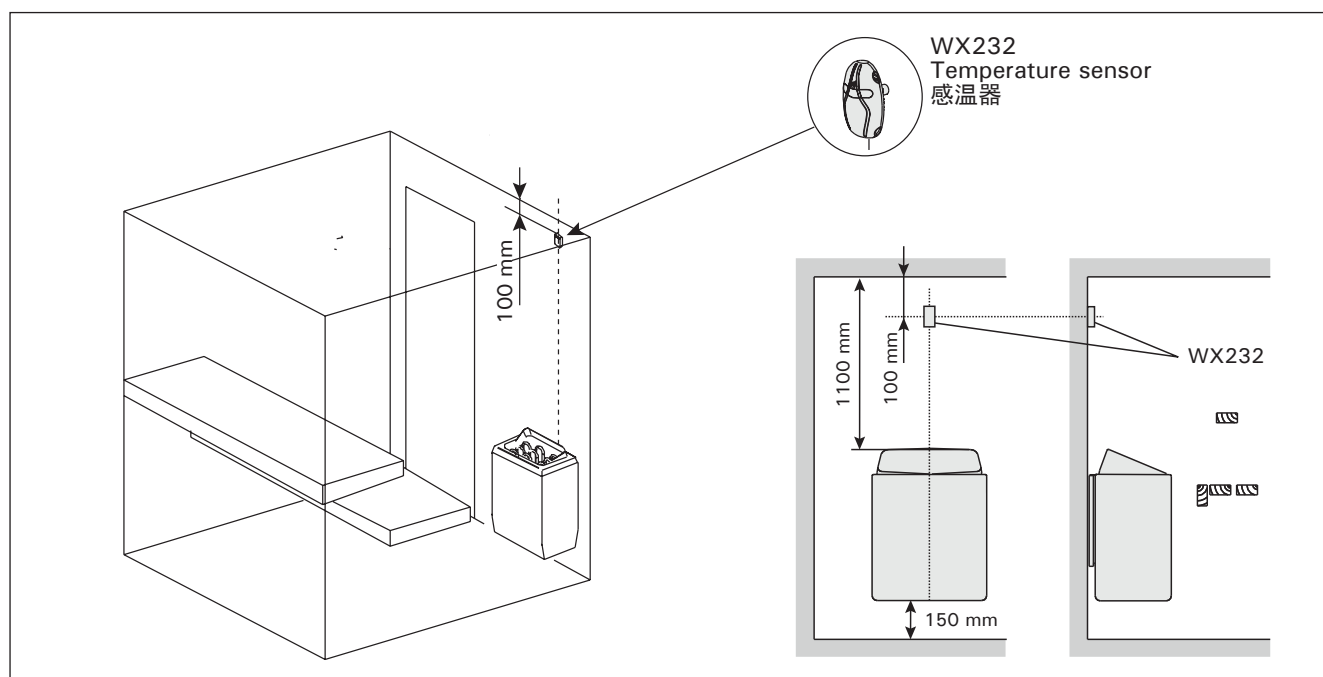


Figure 7. The place of the temperature sensors in connection with wall-mounted heaters
图7. 挂墙型桑拿炉感温器安装位置

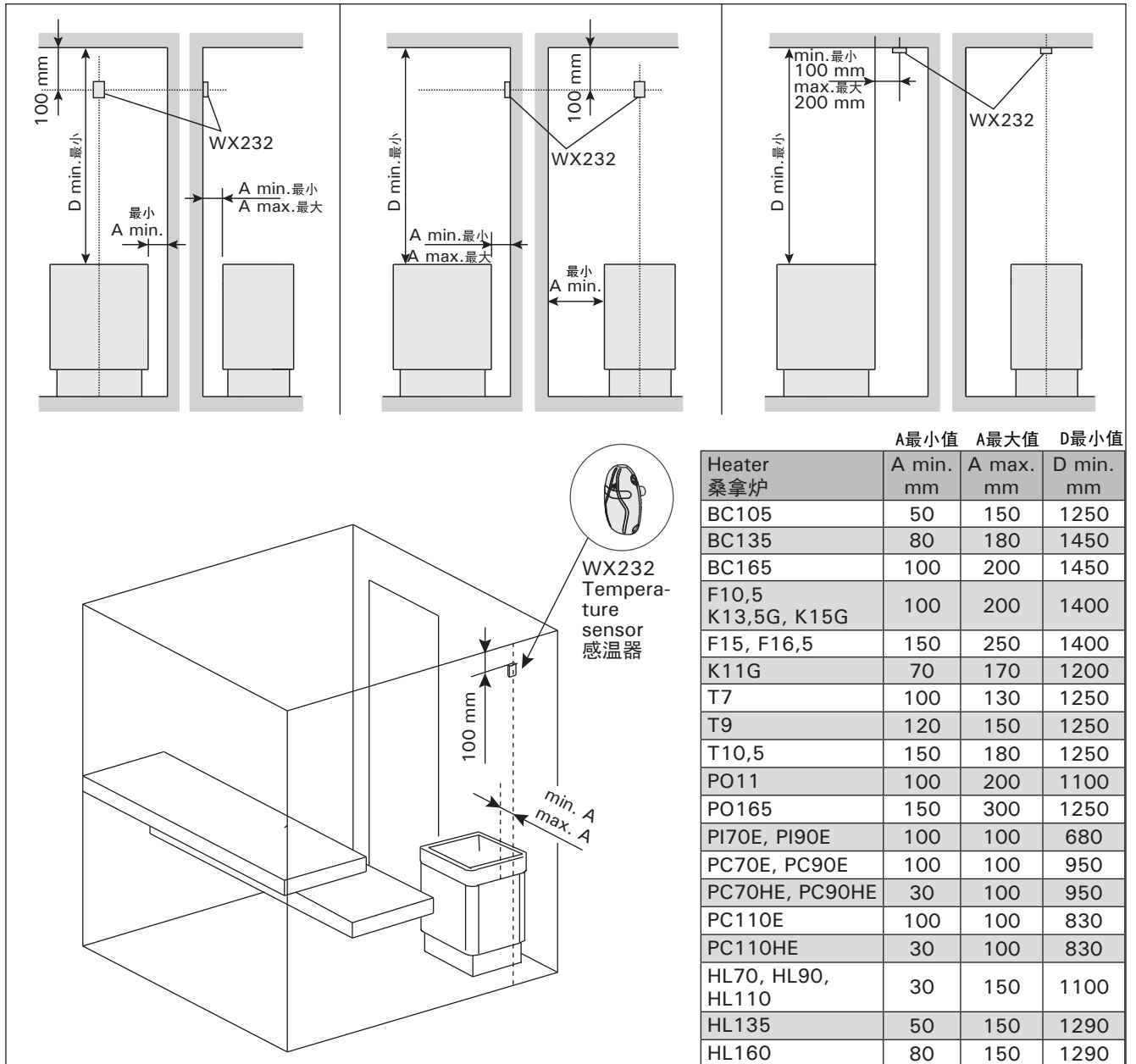


Figure 8. The place of the temperature sensors in connection with floor-mounted heaters
图 8. 座地型桑拿炉感温器安装位置

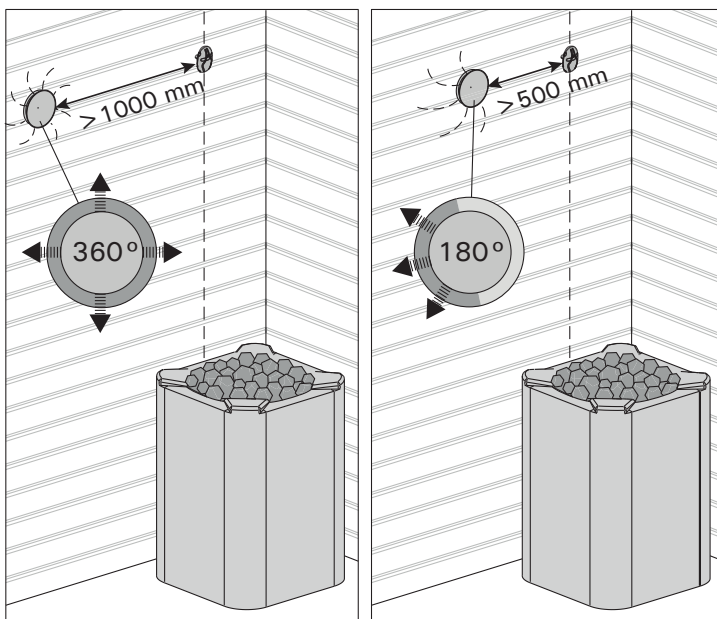


Figure 9. Sensor's minimum distance from an air vent
图 9. 感温器与通风口安装间距

3.4. Resetting the Overheat Protector

The sensor box (WX232) contains a temperature sensor and an overheat protector. If the temperature in the sensor’s environment rises too high, the overheat protector cuts off the heater power. Resetting the overheat protector is shown in figure 10.

Note! The reason for the going off must be determined before the button is pressed.

3.4. 过热保护器复位

感温器 (WX232) 内包含温度传感器及可复位式过热保护器。当传感器周边温度过热时过热保护器会切断桑拿炉电源。见图10。

注意！ 按下复位按钮之前必须确定故障原因已修理好。

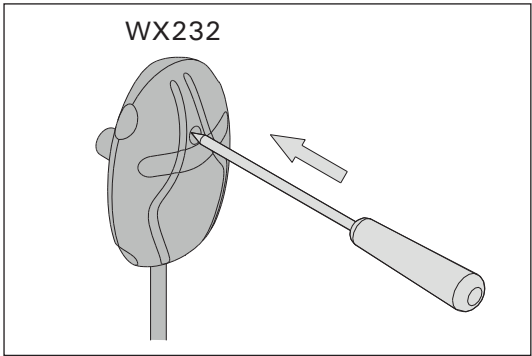
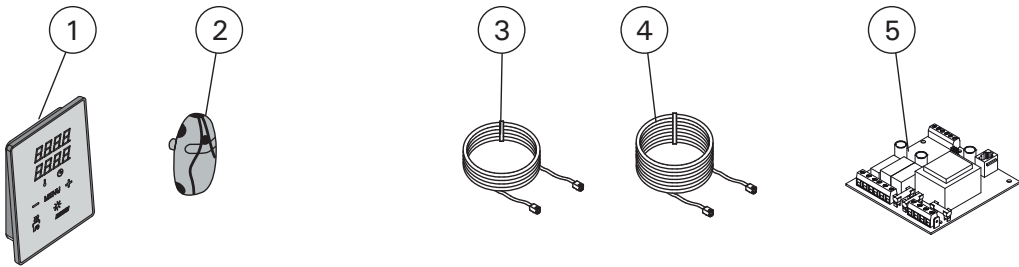


Figure 10. Reset button of the overheat protector
图 10. 过热保护器复位

4. SPARE PARTS

4. 零件



1	Control panel (CX180)	控制面板 (CX180)	WX385
2	Temperature sensor	感温器	WX232
3	Data cable 5 m	数据线 5 米	WX311
4	Data cable extension 10 m (optional)	附加数据线 10 米(可选配)	WX313
5	Circuit board	控制器主电路板	WX386

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