

## GHC 窗玻璃加热控制器 Window glass heating controller

### 概述

#### Overview

GHC型窗玻璃加热控制器是针对船舶处于低温环境时，为防止船舶驾驶室玻璃窗表面冰、雪、霜、雾影响驾驶员视线而设计的一种可以手动/自动控制玻璃窗加温的设备。窗玻璃加热控制器不仅外型美观大方、操作简单、性能可靠，而且还具有加热温度可调、温度实时显示、温度巡检、超温报警等功能，是船舶窗玻璃加热的理想产品。

GHC window glass heating controller is a device used to manually or automatically control window glass heating in order to prevent window glass surface of ship wheelhouse from ice, snow, frost and fog which affect the sight of bridge crews when the ship is in a low temperature environment. The window glass heating controller is not only elegant in shape and easy to operate, and has reliable performance. It has free temperature control, real-time temperature display, temperature data patrol, over temperature alarm and other functions, and is an ideal product for marine window glass heating.

### 产品特点

#### Product features

- 控制面板采用LED指示、按键操作，外形美观，指示清晰，便于操作与维护；  
The control panel is provided with LED display and key operation, with nice appearance, clear indication, and easy to operate and maintain;
- 控制面板具有本地调光功能，同时具有远程统一调光的CAN接口；  
The panel has a local dimming function, and has a CAN interface for remote unified dimming;
- 温度显示及设定：窗加热控制器可显示窗玻璃的实时温度并对其加热温度进行设定；  
Temperature display and setting: the window glass heating temperature can display the real-time temperature and set the heating temperature of window glass;
- 超温自动报警：当玻璃温度超过设定报警温度值2度（防止加热器的余温影响）时，蜂鸣器发出间断报警音，提醒操作人员；  
Over temperature alarm: when the temperature exceeds the setting alarm temperature value 2 degrees (prevent the effect of heater's residue temperature), the buzzer send out a discontinuous sound to remind the operators;



- 手动/自动模式可切换：手动模式时，当窗玻璃温度低于设定的加热温度范围下限时，对窗玻璃进行单次加热，当窗玻璃达到设定温度范围上限后则自动停止，不再进行工作；自动模式时，当窗玻璃温度低于设定的加热温度范围下限时，自动加热窗玻璃；当窗玻璃达到设定温度范围上限后则自动停止，实现窗玻璃的循环加热；

Manual/automatic mode can be switched: in the manual mode, when the glass temperature is below the lower limit of the predesigned heating temperature range, the controller controls the heater only to heat the glass one time; when the glass temperature reaches the upper limit of the predesigned temperature range, it will automatically stop and no longer work; in the automatic mode, when the glass temperature is below the lower limit of the predesigned heating temperature range, the controller controls the heater to heat glass automatically; and after the glass temperature reaches the upper limit of the predesigned temperature range, it will automatically stop, which makes a window glass heating cycle;

- 巡检模式/定点模式选择：巡检：窗加热控制器按顺序循环显示“窗玻璃号”和对应的“窗玻璃温度”；定点：窗加热控制器指定显示单一的“窗玻璃号”和对应的“窗玻璃温度”。

Patrol mode/designated mode selection: Patrol: the window heating controller repeatedly shows the 'window number' and the corresponding 'window temperature' in sequence; the designated mode: the window heating controller specifically displays a single 'window number' and the corresponding 'window temperature'.

### 产品组成

#### Product composition

- 窗加热控制面板  
Window heating control panel

- 电源控制箱  
Power supply control box

### 技术指标

#### Technical index

- 工作电压：单相AC220V±10%，50/60Hz或  
三相AC220V±10%，50/60Hz或  
三相AC380V±10%，50/60Hz  
Working voltage: Single-phase AC220V ±10% 50/60Hz or  
Three-phase AC220V ±10% 50/60Hz or  
Three-phase AC380V ±10% 50/60Hz

- 控制功率：实际功率由玻璃的面积及玻璃类型确定，  
Control power: actual power is determined by the area of glass and glass type
- 输入信号：PT100热电阻信号  
Input signal: PT100 thermal resistance signal
- 输出路数：1~12路  
Number of output channels: 1~12

- 控制方式：自动/手动  
Control mode: auto/manual
- 自动控制：≤20°C时开始加热（可设定）  
≥40°C时停止加热（可设定）  
Automatic control: Start heating at ≤20°C (adjustable)  
Stop heating at ≥40°C (adjustable)
- 超温报警：≥50°C（可设定）  
Over temperature alarm: ≥50°C (adjustable)
- 环境温度：-10°C~55°C  
Working tempre: -10°C~55°C

- 安装方式：窗加热控制面板 嵌入式  
电源控制箱 壁挂式  
Installation: Window heating control panel flush-type  
Power supply control box wall-mounted
- 防护等级：窗加热控制面板 IP20  
电源控制箱 IP23  
Protection grade: Window heating control panel IP20  
Power supply control box IP23

■ 产品标准尺寸见下表：  
Product standard sizes are shown in the following table:

设备名称 Equipment name	外形尺寸mm Outline dimensions (mm)			安装尺寸mm Installation dimensions (mm)		备注 Remarks
	宽 W	高 H	深 D	宽 W	高 H	
窗加热控制面板 Window heating control panel	192	192	50	167	167	Fig.1
电源控制箱 Power supply control box	500	500	210	380	540	Fig.2

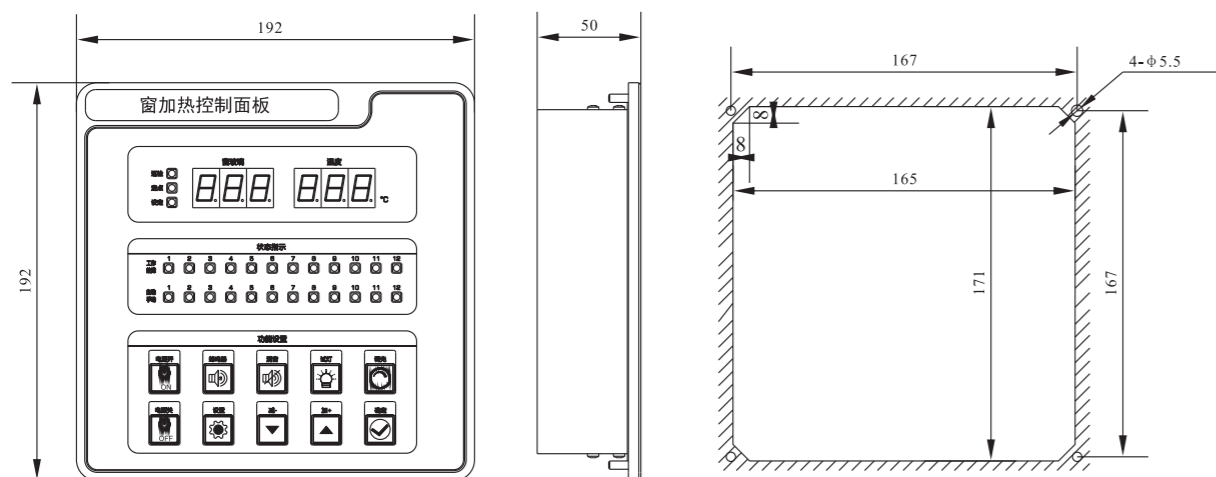


Fig.1

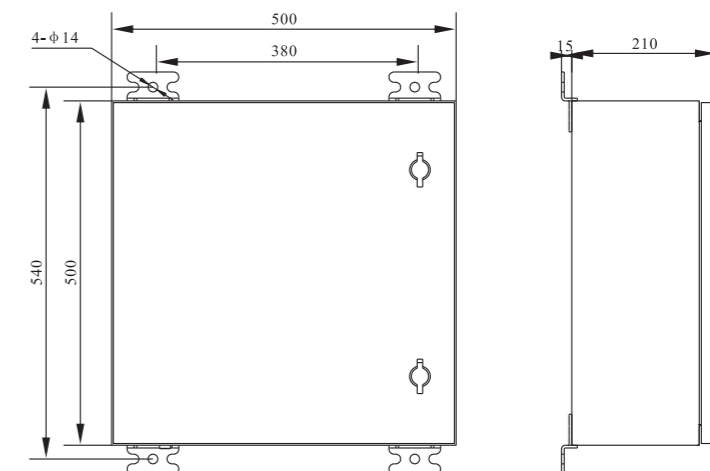
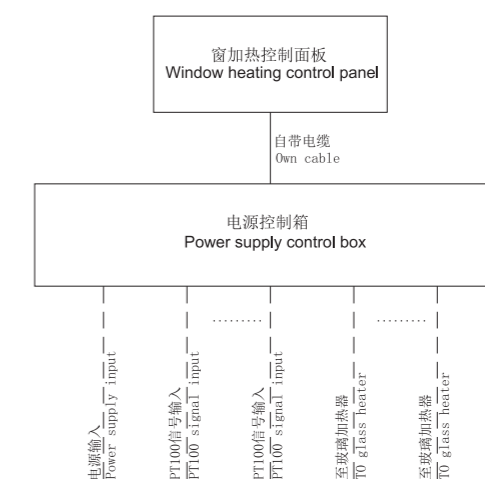


Fig.2

### 型号命名 Model naming

产品型号 Product model	GHC	- □	/□
工作电压 M2:单相AC220V M3:三相AC220V Q3:三相AC380V Working voltage: M2: single phase AC220V M3: three-phase AC220V Q3: three-phase AC380V			
输出路数: 1~12 Number of output channels: 1~12			

### 系统图 System diagram



### 选型说明 Selection description

例：GHC-M2/5  
表示：工作电压为单相AC220V,输出路数为5路的窗玻璃加热控制器  
For example: GHC-M2/5  
It means: the window glass heating controller with working voltage of single-phase AC220V and 5 channels output