



## **GST852RP LCD Repeater Panel**



**Installation and Operation Manual**

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## **1 Overview**

GST852RP LCD Repeater Panel is designed with a microprocessor. It can be connected to the RS485 loop of GST200, GST500 or GST5000 fire alarm control panel, disposing and displaying messages from the control panel like the location and description message of the detectors in alarm, and give audible and visual signals. When several floors or zones are monitored by one fire alarm control panel, a repeater panel can replace the zonal fire alarm control panel on each floor or in each zone.

## **2 Features**

GST852RP connects with fire alarm control panel through RS-485 cable. Each RS-485 can have 64 repeater panels. This repeater panel only displays fire alarm, but not other information like fault and action.

### 3 Specifications

1. Operating Voltage: 24VDC
2. Display Capacity: Maximum 126 pieces of fire message can be displayed by the repeater panel.
3. Display Range: Each screen can display 1 piece of fire message. If there are more than one piece of message, it will display them in turn. Pressing *Self-test/Scroll* key can manually display the next.
4. Wiring: Connecting with fire alarm control panel by polarity sensitive two-wire; two additional 24VDC power are needed which are polarity insensitive.
5. Operating environment:  
Temperature:  $0^{\circ}\text{C}\sim+40^{\circ}\text{C}$   
Relative Humidity  $\leq 95\%$ , non condensing
6. Quiescent power consumption  $\leq 2\text{W}$   
Maximum power consumption  $\leq 5\text{W}$

## 4 Construction

### 4.1 Front Panel

4.1.1 Front panel of the repeater panel is shown in Fig. 1.

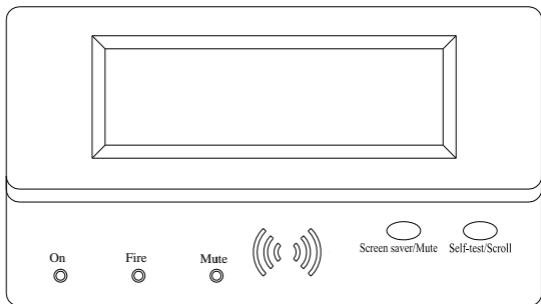


Fig. 1

#### 4.1.2 Keys and indicators

✧ **Self-test/Scroll** key: In monitor state, pressing this key, the repeater panel will check all indicating parts automatically. In alarm state, pressing this key can review each alarm in sequence when there are multiple alarms.

- ✧ **Screen saver/Mute** key: In monitor state, pressing this key, the repeater panel enters non-power-saving mode, which is defaulted as power-saving mode on power-up. In alarm state, pressing this key, the alarm sound is silenced. Pressing it again, the sound resumes. If it receives an alarm again in mute state, it automatically sounds again.
- ✧ **On** LED: Green. It illuminates when the repeater panel is working.
- ✧ **Fire** LED: Red. It illuminates when any of the detectors reports fire.
- ✧ **Mute** LED: Yellow. It illuminates when the repeater panel is in mute state.

## 4.2 Installation

The repeater panel is wall-mounted. External cables are connected to its base which is shown in Fig. 2.

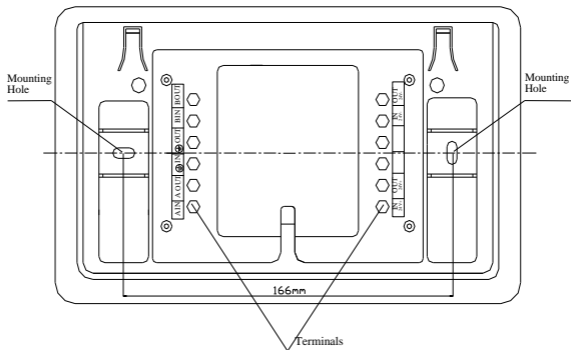


Fig. 2

#### 4.2.1 Installing the base

- Drill two  $\Phi$  8mm holes on the wall with 166mm spacing.
- Insert two  $\Phi$  8 expansion sleeves into the holes.
- Put the base on the wall. Twist plugs through the mounting holes of the base into the expansion sleeves.

### 4.2.2 Wiring




Terminals on the base are shown in Fig. 2, and those on the repeater panels are shown in Fig.3. Connection of these terminals is as follows:

A IN, B IN: connecting with terminals A and B from the repeater panel (Fig. 3) respectively.

A OUT, B OUT: connecting with RS-485 loop.

24V +IN, 24V -IN: connecting with D1 and D2 from the repeater panel (Fig. 3) which are polarity insensitive.

24V +OUT, 24V -OUT: connecting with 24V power supply which is polarity insensitive.

“ IN” connects to the “” of the repeater panel as in Fig. 3; “ OUT” connects to the ground.

### 4.2.3 Installing the repeater panel

Aligning the three holes on the repeater panel to



the studs on the base, push it to the wall vertically and slide it down until the top two hooks appears to hook up the repeater panel.

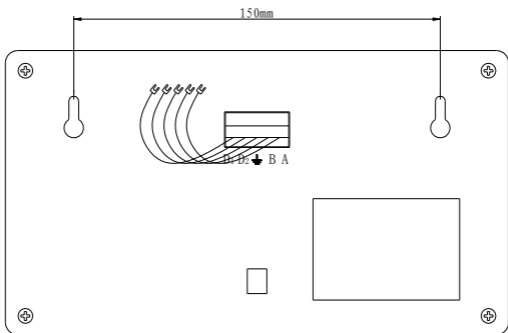


Fig. 3

## 5 Operation

Open the cover on top of the repeater panel, you can turn on or off the power, adjust LCD definition, and set code of the repeater panel (Fig. 4). Keys for setting the repeater panel are shown in Fig. 4.

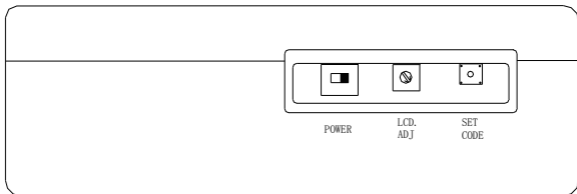


Fig. 4

## 5.1 Power-up

Turn on the power to repeater panels in the fire protection room, then turn on the POWER switch of the field repeater panel, it will test itself automatically. After self-test, it will enter monitoring state with the *ON* indicator illuminating.

## 5.2 Adjusting LCD definition

You can adjust the LCD. ADJ (Fig.4) and make the LCD clearer.

### 5.3 Setting device code

According to project requirement, you can set the system by the SETCODE button. The method is: Switch on the repeater panel, then press and hold the SETCODE button while the repeater panel is rebooting (the device code on the LCD screen is flashing), the code number of the repeater panel increases. Release the button, the code number stops increasing and the displayed number is the device code.

**Note: The device code ranges from 01 to 64. After the code number is up to 64, it will return to 01.**

## 6 Troubleshooting

Problem	Connecting with a fire alarm control panel, the repeater panel cannot be registered after starting
Reasons	Communication between the repeater panel and the fire alarm control panel is abnormal. (1) The polarity of RS485 is reversed. (2) RS485 cables are not threaded as required. (3) RS485 cables are threaded in the same conduit with strong current circuit.
Solution	(1) Change the polarity of RS485. (2) RS485 should be connected by requirements. (3) Separate the RS485 cables from strong current circuit.
Remarks	The LED of repeater panel should flash once in 10 seconds after the problem is resolved.

## **7 Cautions**

1. This panel is precision electronic product and must be maintained by professional person.
2. Please contact your local distributor for any problem. Never open the repeater panel and repair it.



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