〖Please read this user manual carefully before installation〗

TCSG5270 Sounder Strobe

User Manual

Liaoning·Tiancheng Fire Protection Equipment Co., Ltd

1. General

The TCSG5270 sounder strobe uses two buses to connect to the control panel. It is mainly installed in public places. When a fire occurs, the sounder strobe generates dazzling strong light and emits an alarm sound, which is used as a fire alarm. Its built-in microprocessor has independent measurement and processing functions. Fuzzy logic processing is performed on the collected information, and various measurement data are transmitted to the control panel, and judged by the control panel so that the alarm information can be issued quickly and accurately. This sounder strobe has the characteristics of reliable performance, convenient installation, and beautiful appearance. It is a fire alarm device with high reliability and strong anti-interference ability.

2. Characteristics

2.1 Adopt two-bus system: two-bus without polarity signal.
2.2 Built-in microprocessor, with intelligent judgment ability.
2.3 The address is set through electronic coding, and there is no dial switch, which increases the airtight property in structure.
2.4 With self-diagnosis function to ensure its reliable operation.
2.5 The status signal value can be provided, which intuitively reflects the current working status of the sounder strobe.
2.6 Multi-level filtering with software and hardware can effectively suppress interference signals.
2.7 When the sounder strobe is activated, it can emit strong light and produce a harsh alarm sound.
2.8 The appearance design is beautiful, the installation and wiring are convenient and reliable.

3. Specifications

3.1 Working voltage：
Signal bus voltage：bus 24V Allowed range: 17V～28V
3.2 Working current：
Bus standby current≤0.2mA Bus alarm current≤4mA
3.3 Temperature：－10℃～＋50℃
3.4 Humidity：≤95% (40±2℃)
3.5 Main sound frequency：1.67KHZ~5.9KHZ
3.6 Frequency range：1.67KHZ~5.9KHZ
3.7 Sound type: constant
3.8 Sound mode: alarm
3.9 Tone variety:1
3.10 Sound pressure level：db@1m
The test was carried out in accordance with Clause 5.3.1 of EN 54-3:2014 + A1:2019.

Operational performance **Specimen № 1 Maximum Volume**						
Angle	**Sound Pressure level dB(A)**					
	Horizontal Plane			**Vertical Plane**		
	Max 26V	**Min** 16V	**Difference**	**Max** 26V	**Min** 16V	**Difference**
15°	90.1	85.0	5.1	86.1	81.5	4.6
45°	85.7	81.5	4.2	81.3	78.9	2.4
75°	89.7	84.8	4.9	87.5	84.5	3.0
105°	87.4	84.2	3.2	88.7	84.5	4.2
135°	87.1	84.1	3.0	88.4	85.6	2.8
165°	86.3	82.9	3.4	85.9	81.8	4.1

3.11 Tone modification cycle：3.5S~4.5S
3.12 Flash frequency：1HZ~2HZ

3.13 Application environment：indoor（non-residential）
3.14 Outline：140mm×115mm×55mm(l×w×h)
3.15 Standard：EN 54-3:2001 + A1:2002 + A2:2006; EN 54-3:2014 + A1:2019
3.16 Indoor type：A
3.17 IP level:IP21C
3.18 Weight:200g

4. Structure and Function

4.1 Outline of the sounder strobe is shown as Fig.1.

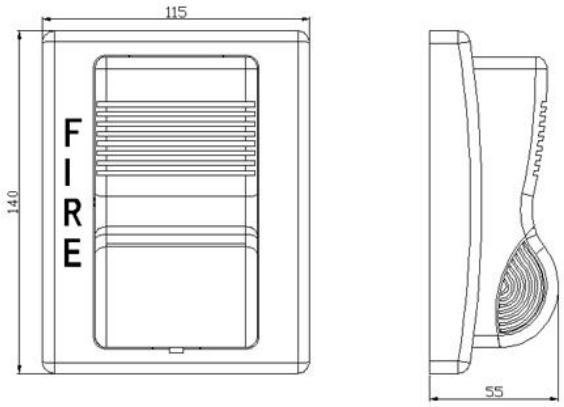

Fig. 1 TCSG5270 Sounder Strobe--Outline Structure and Installation Dimensions

4.2 Working principle

The sounder strobe has a built-in microprocessor, which realizes the communication with the control panel and the activation of sound and light signals. As the sounder strobe receives the start command of the control panel, it starts light and sound signals. The sound chip is amplified by the transistor and inductor to drive the speaker to make a sound; the timing circuit is used to control the ultra-high light-emitting diode to emit a shining light signal.

5. Installation and Wiring

5.1.1 Take the base. The TCSG5270 sounder strobe is composed of two parts: "base" and "top cover (including circuit board)". Remove the "base" first after taking it out of the box. (Note: If the two parts have been fastened, turn counterclockwise to loosen them and store them separately).

5.1.2 Fix the base. Pass the wire through the threading hole from the back of the base, and fix the base according to the characters on both sides of the threading hole and the arrow direction.

5.1.3 The sounder strobe is installed with pre-embedded pipes, the bottom box is installed on the 86H50 embedded box with a distance of 60mm (see Figure 3). The installation diagram is shown in Figure 2.

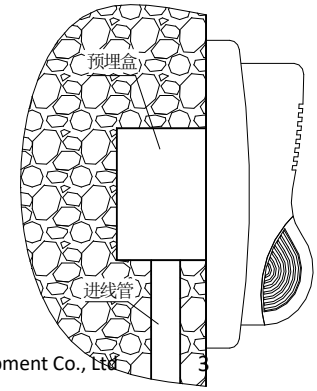

Fig.2 Pre-embeded Diagram of Incoming Wire Duct

5.1.4 Wiring. Take out the "upper cover" and correctly connect the wires to the corresponding terminals. The contact should be reliable and firm, and there should be no burrs.

5.1.5 Insert the upper cover. After the system wiring is verified, insert the upper cover into the base in the correct direction, and press to fasten the two parts.

5.2 The diagram of the wiring terminal is shown in Fig. 3.

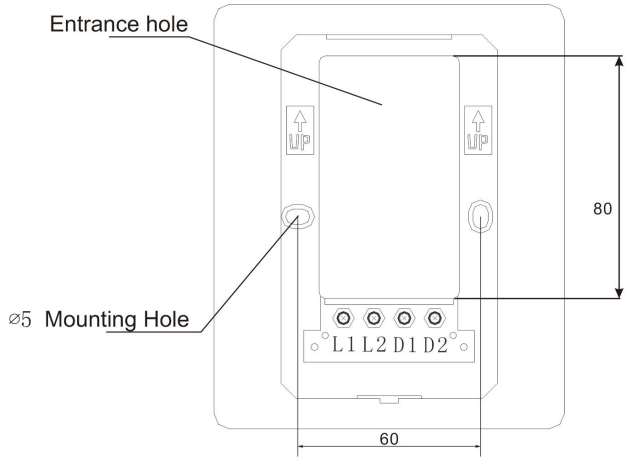

Fig.3 Diagram of Wiring Terminals of Sounder Strobe TCSG5270

Terminal description:

L1, L2: Two bus input terminals without polarity loop

5.3 Wiring requirements

L1, L2 non-polar loop two-bus lines use BV twisted pair with cross-sectional area ≥ 1.0mm2.

Please refer to local regulations.

6. Test

Warning: Turn on the system power after all equipment has been installed correctly.

6.1 The sounder strobe must be tested at least annually after installation or during use.

6.2 Before the sounder strobe is tested, the relevant management department should be notified that the system will be maintained and will temporarily stop working due to this. At the same time, the logic control function of the area or system to be maintained should be cut off to avoid unnecessary alarm linkage.

6.3 Test content: A start command is issued from the control panel to the sounder strobe, the sounder strobe will act, and emit sound and light signals, which indicates that the sounder strobe is normal.

6.4 After test, disconnect the power to reset the sounder strobe, and notify the relevant management department that the system is back to normal.

6.5 During the test, the unqualified audible and visual alarms shall check whether their connecting wires are normal, and then perform the test. If they still fail to pass the test, they shall be returned for repair.

7. Use and Operation

The coding method of this sounder strobe is electronic coding that is simple and fast. The TCBM5023 electronic encoder produced by our company can be used for coding on site. When coding, the electronic encoder is connected to the bus terminal of sounder strobe (regardless of polarity). Then the address code can be written

and read.

First go through the main "operation menu" of the encoder and press the No. 2 key to select "(2) mode setting", enter the sub-menu and select "(1) TC5000", you can also press "(5), (6), (7)" to choose incremental, normal, or degressive coding, which is convenient to use (Note: the default is TC5000, normal code). After selecting, you can press the "clear key/page key" to directly enter the addressing interface, or press the "exit key" back to the main operation menu, press the No. 1 key to select "(1) Read and write address", then connect the encoder to the bus terminals 1, 3 of the sounder strobe, and enter the address code (1-255) under standby state , press the "write address" key, if encoding succeeds, it displays "successful", otherwise displays "failed".

8. Application

The signal bus of the sounder strobe is connected to the loop bus of the control panel. If it is necessary to start the sounder strobe, the fire alarm controller can directly start it or start through a linkage programming.

9.Documents and Maintenance Manual

9.1. Packing documents: 1) Packing list: 1; 2) User manual: 1

9.2. Warranty: Our company is responsible for the maintenance of this product. If you find any problems, please contact our company's technical service department in time. Users are not allowed to disassemble or repair it by themselves, otherwise the consequences are at their own risk.

9.3. The contact information for maintenance is as follows:

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