

船用传令钟  
Marine Engine Order Telegraph  
Type SY-993

使用说明书  
Operation Manual

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## 前言

### Introduction

感谢您使用 SY-993 型传令钟，本使用说明书尽量详尽的阐述了本装置的安装方法、操作方法及注意事项等，为能充分发挥本装置的性能以及保持良好的运行状态，请您仔细阅读本使用手册并正确使用本装置。

另外请您妥善保管好本手册，不要遗失或损坏，出海时务必携带好本手册。

Thanks for using SY-993 engine order telegraph. The operation manual states the installation method, operation method and precautions of the device as specifically as possible. To fully obtain its performance and keep good operation state, please carefully read the operation manual and correctly use the device.

Besides, please take good care of the manual, and do not lose or damage it. Be sure to bring the manual when at sea.

#### 注意事项

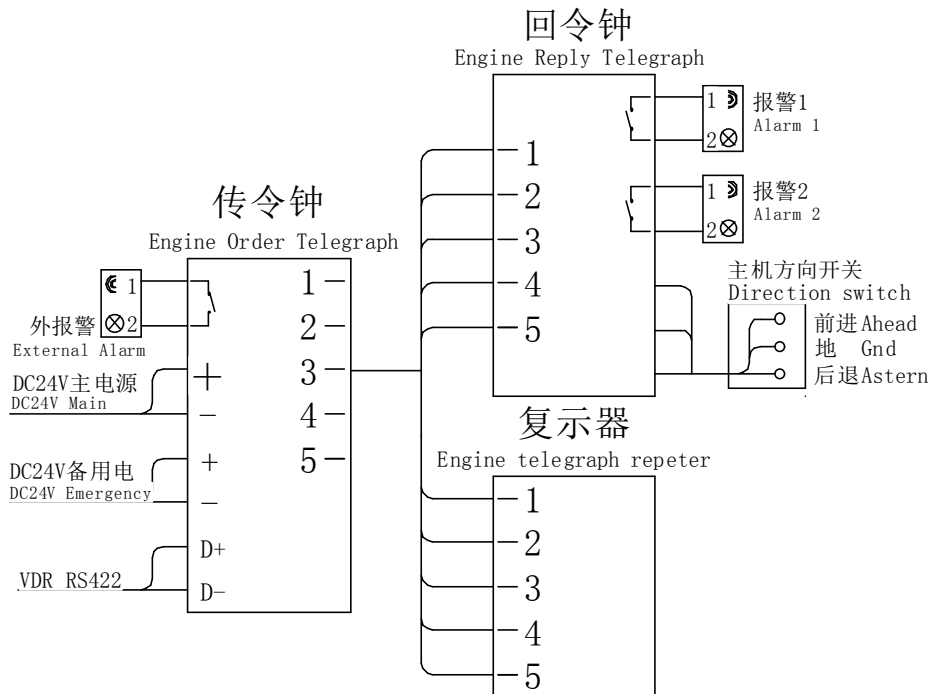
- 1、使用前务必仔细阅读并理解相关章节。
- 2、电源电压必须按规定的要求使用。

#### Precautions

1. Be sure to read carefully and comprehend the contents of the relevant chapters before operating.
2. The power supply and voltage must be used according to requirement.

## 外部线路连接

### Connections



-1、-2、-3、-4、-5 连接的是主机（传令钟）和机舱（回令钟）的电缆芯线，若此电缆线损坏或连接错，传令钟和回令钟对应的连续 6 个（进一、进二、进三、进四、备车、停车）灯将会出现闪亮现象。

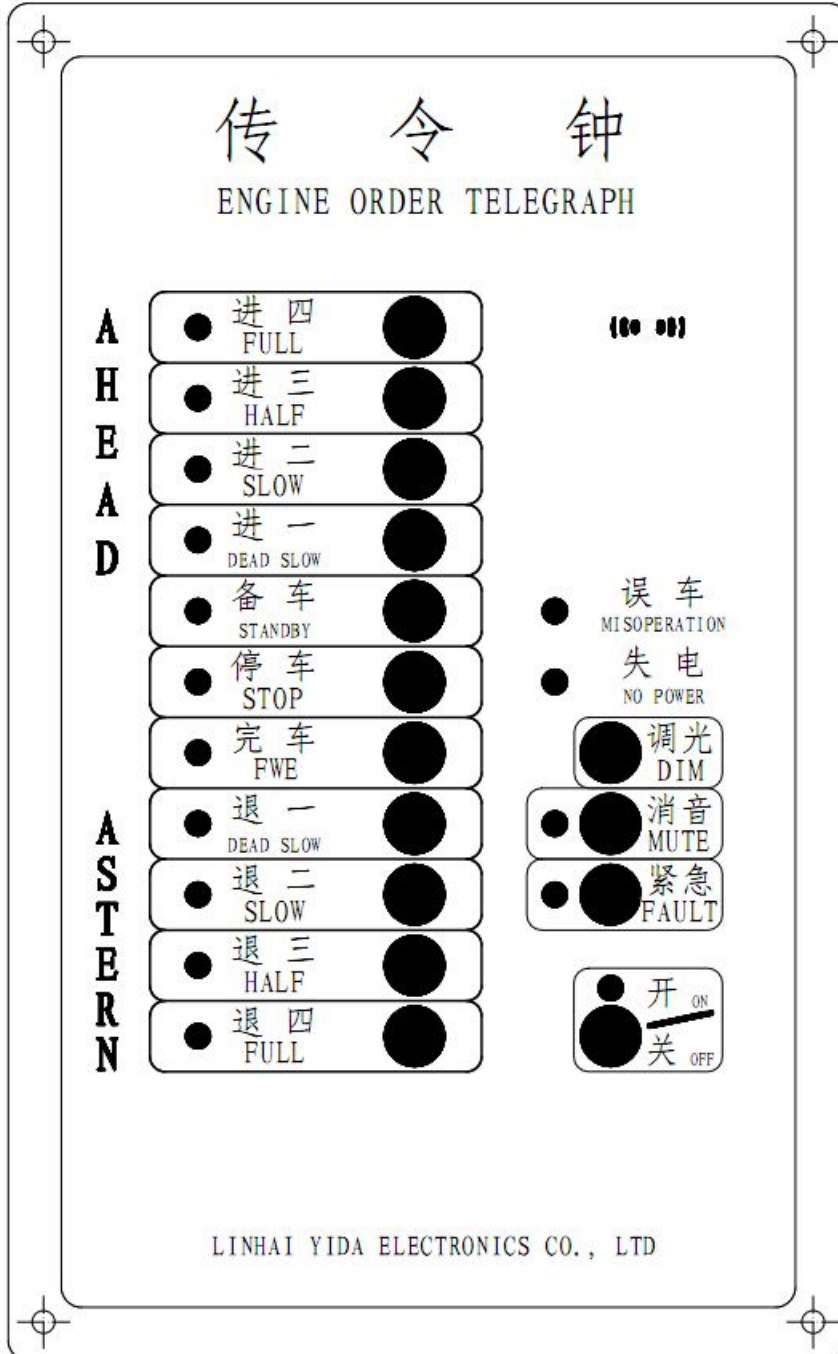
误车报警：当机舱控制主机前进或后退的控制开关打在前进档位，主机（传令钟）进行后退操作，对应的指示灯将会出现闪亮显现提示主机操作失误。方向开关打在后退档位时主机不能进行前进操作，否则提示操作失误。

报警接口都是常开状态，有报警时关闭短路。

Note:-1, -2, -3, -4 and -5 are connected with the cable core of the host machine(engine order telegraph) and passenger's compartment (engine reply telegraph). If the cable core is damaged or wrongly connected, the successive 6 lights(ahead dead slow, ahead slow, ahead half, ahead full, standby and stop) that correspond to engine order telegraph and reply telegraph will flash. 6 and 7 is externally connected with warning device. 8, 9 and 10 are controlling switches by which the passenger's compartment controls the host machine to move ahead or astern. If the direction switch is on the ahead gear and the host machine (telegraph) moves astern, the corresponding indicating light will flash and indicate that the host machine operation is wrong. In the same way, if the direction switch is on the astern gear, the host machine shall not move ahead, otherwise it will indicate that the operation is wrong.

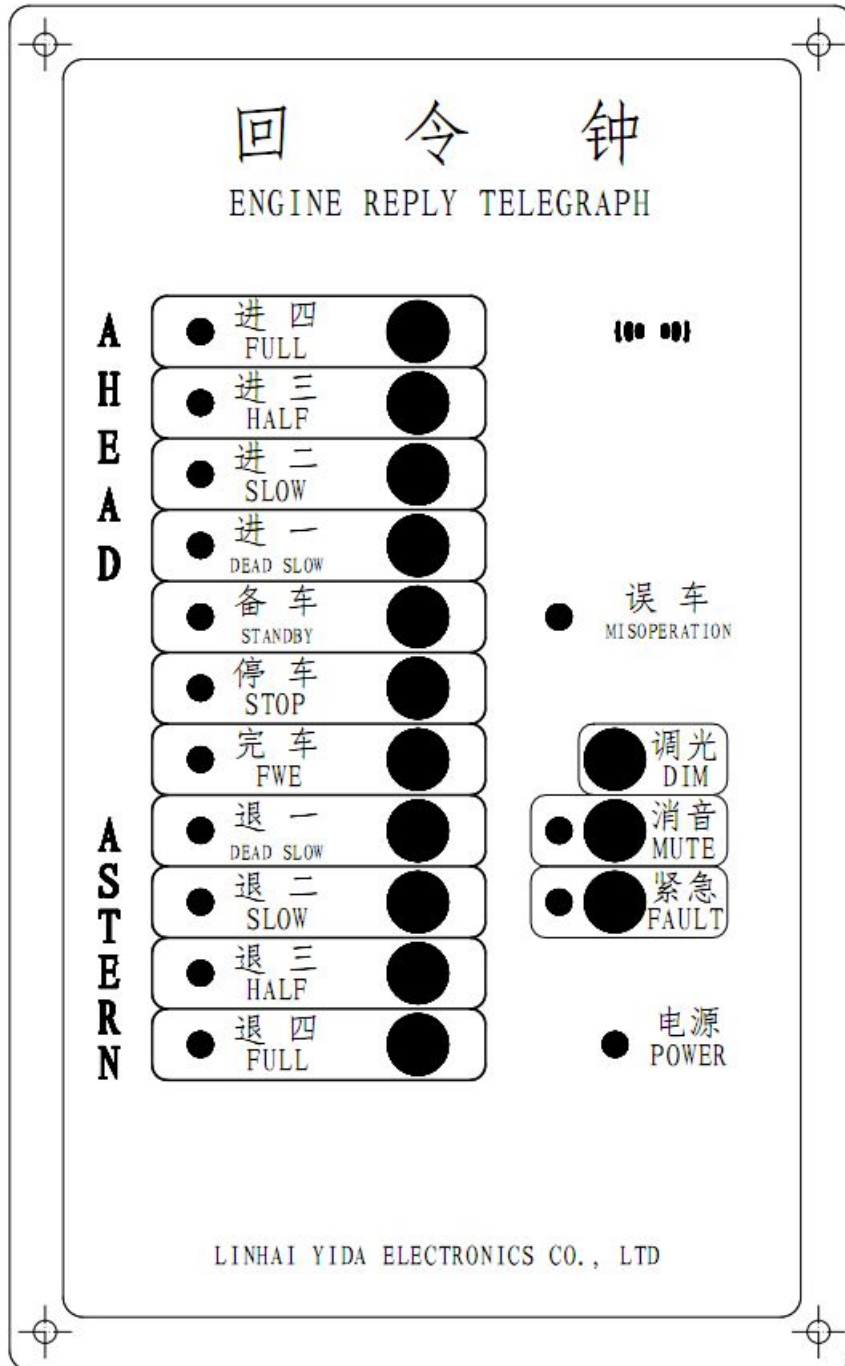
前面板说明

Front panel description



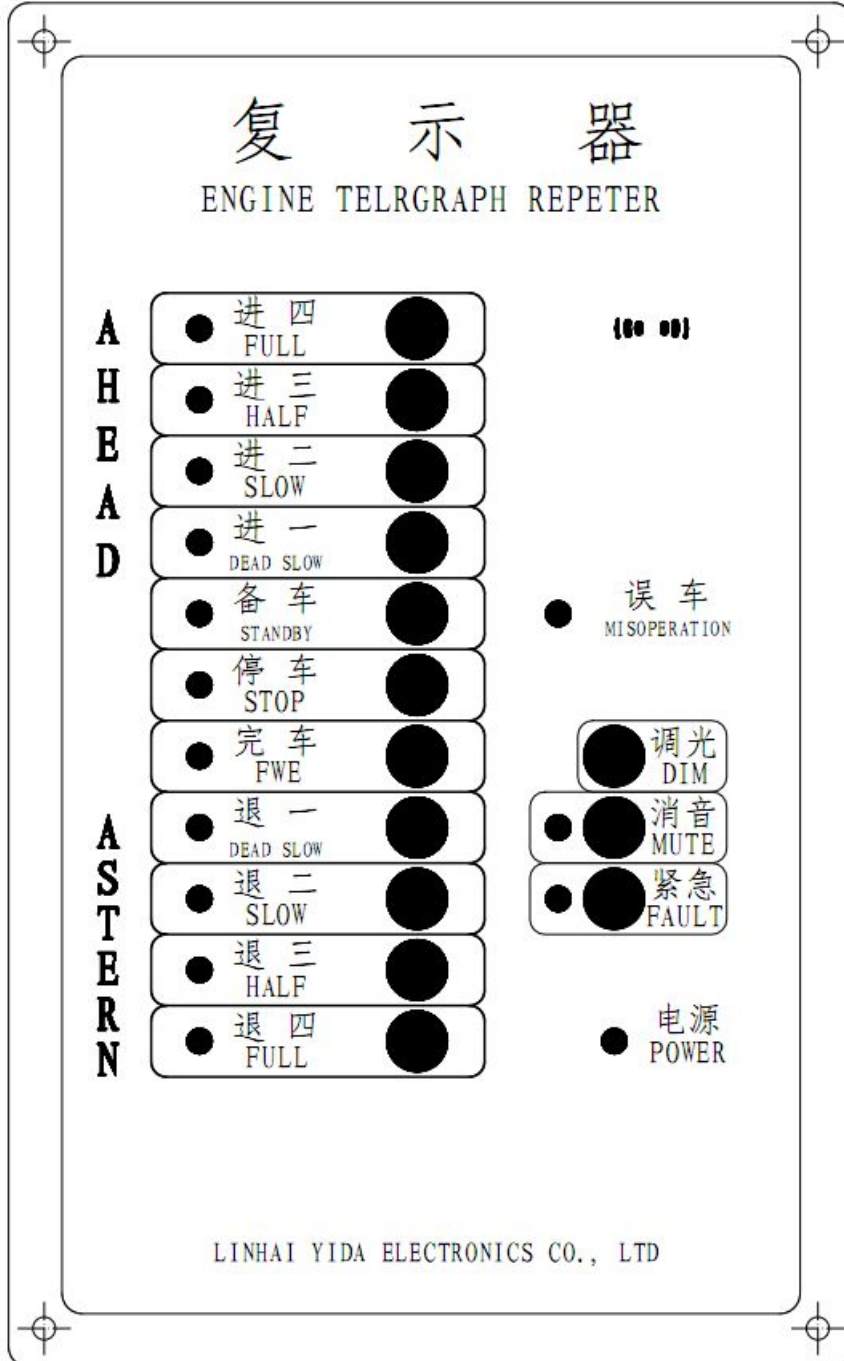
前面板说明

Front panel description



前面板说明

Front panel description



## 前面板说明

### Front panel description

- 档位:** 该传令钟共分为十一个档位, 即进一、进二、进三、进四、停车、完车、备车、退一、退二、退三、退四。
- 通信:** 采用串行数据传输技术, 使发送器(驾驶室传令钟)到接收器(机舱回令钟)的传输信号不被外界环境干扰。
- 显示:** 能同时显示双方(传令钟和回令钟)的工作状态, 当传令钟向回令钟发送信号时, 对应的指示灯为闪亮同时伴有声音报警, 直到机舱回令钟回复驾驶室传令钟时, 指示灯变为常亮状态同时声音报警消失, 机舱传令钟再次回复信号后指示灯信号消失, 恢复初始状态。同理: 当机舱回令钟向驾驶室传令钟发送信号时, 重复上述过程。
- 失电报警:** 当主电源(AC24V)失电时, 自动转到 DC24V, 同时对应的 LED 闪亮报警, 主电源恢复正常后自动撤销报警。
- 误车报警:** 当机舱传令钟或驾驶室回令钟操作失误时, 对应的红色 LED 闪亮, 警告主机操作失误。
- 紧急按钮:** 当驾驶室传令钟或机舱回令钟出现故障时, 双方可以使用面板上的紧急按钮传递信号。
- 调光:** 按自己需要可调节指示灯亮到适当亮度。
- 消音:** 出现报警时, 可以按此按钮消除报警声。
- VDR 接口:** 符合 NMA0183 标准, 该接口可接车钟记录仪。

**Gears:** The engine order telegraph is divided into 11 gears, i.e., ahead full, ahead half, ahead slow, ahead dead slow, standby, stop, fwe, astern dead slow, astern slow, astern half and astern full.

**Communication:** It adopts serial data transmission technology, which makes the transmission signal from the transmitter(engine order telegraph in the operator cab) to the receiver(engine reply telegraph in the passenger's cab) undisturbed by external environment.

**Displaying:** It can simultaneously display the working state of both the engine order telegraph and engine reply telegraph. When the engine order telegraph sends signal to the engine reply telegraph, the corresponding indicating light flashes with audible alarm. When the engine reply telegraph in the passenger's compartment replies to the engine order telegraph in the operator's cab, the indicating light turns to be normally on and the audible alarm disappear. When the engine reply telegraph in the passenger's compartment replies to the signal again, the signal of indicating light disappear and return to original state. In the same way, when the engine reply telegraph in the passenger's compartment sends signal to the engine order telegraph in the operator's cab, repeat the above process.

**No-power alarm:** When the main power supply(AC24V)has no power, it will automatically turn to DC24V, and meanwhile the corresponding LED flashes for alarm. When the main power supply returns to normal, the alarm will



automatically revoke.

**Dim:** Adjust the illumination of the indicating light according to the need.

**Misoperation alarm:** When there is run error on the engine order telegraph in the operator's cab or on the engine reply telegraph in the passenger's compartment, the corresponding red LED flashes to warn that operation of the host machine is wrong.

**Fault button:** When the engine order telegraph in the operator's cab or engine reply telegraph in the passenger's compartment breaks down both sides can send signal by using the fault button on the panel.

**VDR interface:** It complies with NMEA0183 standard, and the interface can connect the telegraph recorder.

**Mute:** It complies with NMEA0183 standard, and the interface can connect the telegraph recorder.

**Mute:** you can press this button to eliminate the alarm sound.

## 通信协议

### Communication protocol

\$YDXDR,02,1,11,2\*hh<CR><LF>

说明:

\$: 帧头 (0x24)

YD: 公司标志

XDR: 标准格式识别码

02: 传令钟处在第 2 档, 根据不同档位 (1-11) 修改

1: 发送标志

11: 回令钟处在第 11 档, 根据不同档位 (1-11) 修改。

2: 接收标志

\*: 字尾 (0x2A)

hh: 校验和 (\$与\*之间[不含\$和\*]字符串异或) , 以 ASCII 码发送

<CR>: 回车 (0x0D)

<LF>: 换行 (0x0A)

RS485 通信采用 NMEA0183 协议, 波特率为 4800bps, 每个数据的格式为: 1 个起始位、8 个数据位、1 个停止位, 1 个校验位。

#### Instruction:

\$: frame header (0x24)

YD : corporate mark

XDR: standard format identification code

02: the telegraph in second gear, according to the current gears (1-11)

1: send signs

11: the telegraph in eleventh gear, according to current gears (1-11)

2: receive signs

\* : the suffix (0x2A)

HH:checksum (between \$ and \*, not and excluding \$ and \*, ASCII code XOR

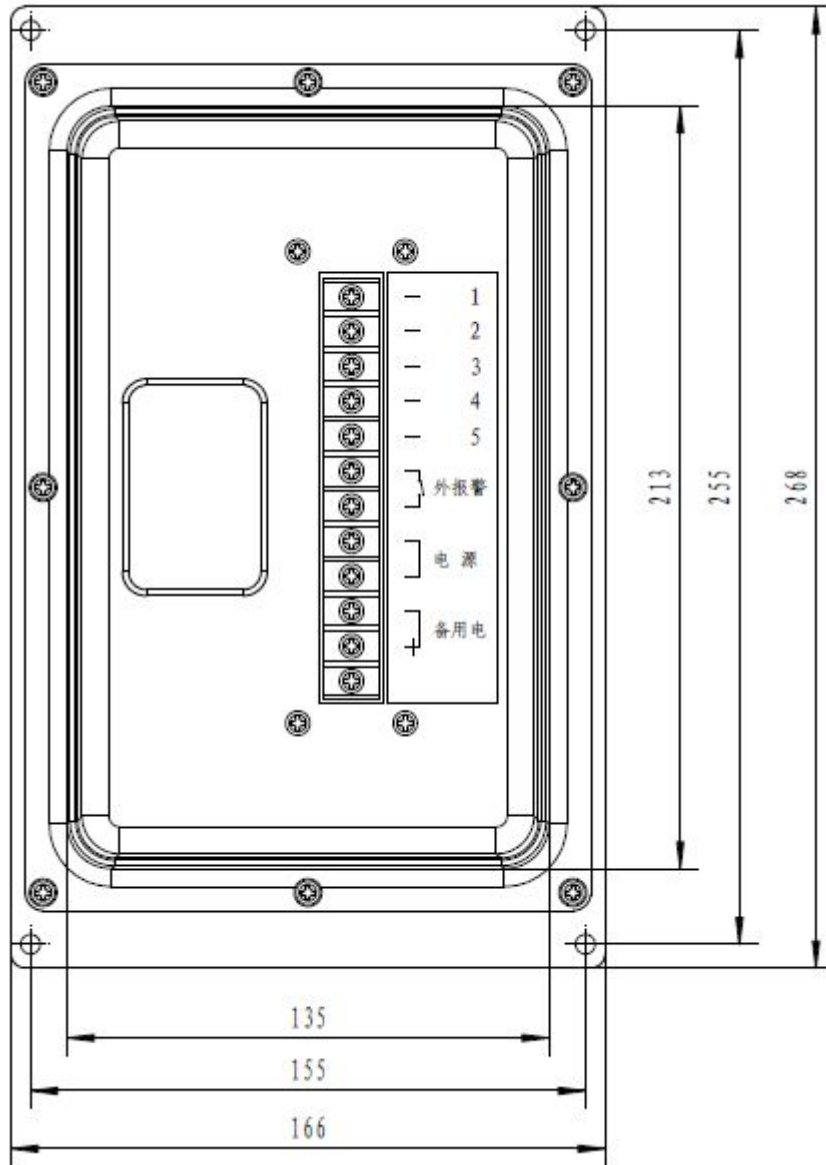
<CR>: Enter (0x0D)

<LF>: newline (0x0A)

RS485 communication, NMEA0183 protocol, the baud rate is set to 4800bps, each data format: 1 start bit, 8 data bits, 1 stop bit, 1 parity bit.

# 安装尺寸

Installation dimensions



## 故障诊断与处理

### Diagnosis and treatment

#### 简单故障的诊断和处理

- 1、若开机后整机不工作，请检查电源是否接正确。
- 2、若对应的前 6 个灯在闪亮，请检查电缆线是否损坏和两机连接是否正确。
- 3、若正常运行过程中某指示灯不亮，可以重新开机启动自检功能，若还是不亮，说明发光管已坏。

#### Diagnosis and treatment of simple faults

1. If the complete device does not work after starting, please check whether the power supply is connected correctly.
2. If the corresponding first 6 lights are flashing, please check whether the cable core is damaged or whether the connection of the two devices is correct.
3. When some indicating light is off during normal operation, please restart the machine and activate its self-testing function. If the light does not come back, it proves that the luminotron maybe damaged.

## 产品质量跟踪卡

### Product quality tracing card

尊敬的用户：

为了使本公司产品能忠实的为您服务，同时也利于我公司的质量信息反馈工作，请您对传令钟的使用情况以及产品质量方面的意见和建议及时寄回我公司，届时您一定能得到我公司满意的答复和诚挚的谢意。

此致  
敬礼！

Dear User,

To better serve you with our products and to get our products quality feedback, please send your opinions and suggestions on your using condition and quality of the Marine engine order telegraph to our company. You will surely get satisfactory reply and sincere thanks from our company then.

Thanks and best regards!

来信请寄：浙江省临海市沿江镇红光村 338-1 号

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附(Attachment):

用户姓名(User's Name): \_\_\_\_\_

联系电话(Contact Tel): \_\_\_\_\_

详细地址(Address): \_\_\_\_\_

产品型号(Product Model): \_\_\_\_\_

购机日期(Purchase Date): \_\_\_\_\_

安装日期(Installation Date): \_\_\_\_\_

安装单位(Installation Company): \_\_\_\_\_

意见与建议(Views and suggestions):

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