

CAKJ-XHB-4XS

信号报警装置

Signal alarm device



1. Overview

CAKJ-XHB-4XS signal alarm device is a centralized management microcomputer signal alarm system designed for the signal system of power plants and substations. It has the characteristics of strong anti-interference ability, simple operation, convenient installation and use, and low maintenance. This product is widely used in electric power, petroleum, chemical, metallurgy, coal and other industries, making power and industrial automation monitoring and signal alarming highly intelligent products.

2. Features

2.1 Alarm circuit: 4 passive dry contact signals.

2.2 It has the functions of test (light test), acknowledge (acceptance), ,silence and reset. And comes with function buttons.

2.3 With manual and automatic confirmation functions, the automatic confirmation time is 30s.

2.4 Alarm light plate: the color is red when alarming, and white when not alarming.

2.5 The input signal type can be selected: switch type contact, switch type holding contact. (Note)

2.6 The input signal is normally open and normally closed: for each signal, you can select normally open and normally closed alarms (default),Optional normally closed to normally open alarm.

2.7 The device comes with a buzzer: it sounds "di, di..." when it alarms, and silent when it doesn't alarm.

2.8 The device has 1 alarm output contact, which can start the electric whistle and electric bell to strengthen the sound alarm effect.

2.9 The device has 1 remote signal output contact, which can be connected to other equipment or used as an accident stop signal.

2.10 The device has optional digital communication output, RS485 serial communication interface, MODBUS communication protocol (optional).

Note: Switch-type contact: moving-on contact. When the system fails, the contact is closed and the device alarms. After the fault is removed, the contact opens and the alarm is reset.

Switch-type holding contact: moving and closing contact, when the system fails, the contact is closed, the device will alarm, and the contact will be disconnected after the fault is removed, and the alarm signal will remain, and manual reset is required

3. General technical requirements

3.1 Power supply: DC220V, DC110V, DC125V, AC220V, AC240V optional.

3.2 Signal capacity: 4 circuits.

3.3 Input signal mode: normally open or normally closed passive dry contact or active contact (specify when ordering).

3.4 Light plate: luminous window size 32x22, color: red and green optional.

3.5 Alarm output: light sign flash, buzzer or sound.

3.6 Alarm sound: the buzzer beeps 60DB; the expanded sound can choose our company's CAKJ-DL electric bell, CAKJ-DD electric whistle.

3.7 Contact output: 2 relay contact outputs, corresponding to alarm sound contact and alarm remote signal contact respectively.

3.8 Contact capacity: AC250V, 3A pure resistive load, DC220V, 0.125A inductive load.

3.9 Function setting: press the "silence" and "reset" function keys at the same time for more than 3 seconds, and the buzzer beeps, the setting is completed

3.10 Power consumption: the whole machine is not more than 30W.

3.11 Communication interface (optional): standard RS485 serial communication interface, MODBUS communication protocol

3.12 Insulation resistance: not less than 100MΩ between input-output-power supply-shell

3.13 Power frequency withstand voltage: It can withstand 2kv, 1min, 5mA, 50/60HZ test between input-output-power supply-shell without flashover or breakdown.

3.14 Anti-interference ability: It can withstand high-frequency interference tests of 1MHz and 100kHz attenuated oscillating waves. The first half-wave voltage amplitude is 2.5kV in common mode and 1.0Kv in differential mode. The product should not malfunction or refuse to move.

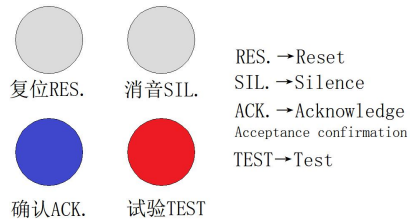
3.15 Environmental conditions: ambient temperature -10°C~60°C; ambient humidity is not more than 90%

3.16 Weight: 1kg

4, device settings

4.1 Signal hold or not hold selection setting: device switch contact and switch hold type contact setting: press the "silence" and "reset" function keys at the same time for more than 3s, hear the buzzer beep, the setting is complete. The device defaults to the switch holding contact (after the alarm contact is turned on and off, the alarm signal is maintained, and you need to press the reset button to return, but when the contact is turned on, pressing the reset button does not return.) This setting can be cyclically operated. The alarm contact is switched between holding and not holding.

4.2 Input signal normally open/normally closed alarm selection setting: press the "acknowledge" and "reset" function keys at the same time for more than 3 seconds, and the buzzer beeps, the setting is completed. This setting can be switched between the alarm when the normally open contact becomes normally closed or the alarm when the normally closed contact becomes normally open. Factory setting normally closed to normally open alarm.



5. Device alarm and inspection

5.1 Power-on self-check, the device is powered on and the power switch on the back is turned on, the light plate on the device panel is all on and then goes out. At the same time, the power indicator on the side of the buzzer lights up to complete the power-on self-check.

5.2 Press the "Test" button, all the light signs flash, the buzzer sounds, and the output audio contact action. Release the test button to return to the monitoring state.

5.3 When the signal alarms, the corresponding light sign flashes, the buzzer sounds, the output audio contact action, starts the electric bell, the horn and the remote signal contact action.

5.4 Press the "acknowledge" button (or automatically confirm within 30s), the light plate will turn from flashing to flat light, the buzzer is silent, the output audio contact returns, and the electric bell and whistle are silent.

5.5 When the signal is reset, the signal input by the switch type contact, the light sign goes out, and the remote signal contact returns. The signal light sign of the keep contact input keeps the alarm, and manual reset is required (press the "reset" button), the light sign goes out and the remote signal contact returns.

一. 概述

CAKJ-XHB-4XS 信号报警装置，是专为发电厂、变电站信号系统设计的一种集中管理的微机信号报警系统。具有抗干扰能力强、操作简便、安装使用方便、维护量小等特点。该产品广泛应用于电力、石油、化工、冶金及煤炭等行业，使电力及工业自动化监测、信号报警的高智能型产品。

二. 功能特点

- 1, 报警回路: 4 路无源干接点信号。
- 2, 具备试验（试灯）、确认（接受）、消音及复位功能。并自带功能按钮。
- 3, 具备手动和自动确认功能，自动确认时间 30s。
- 4, 报警光字牌: 报警时颜色红色, 不报警时为白色。
- 5, 输入信号类型可选择: 开关型接点、开关型保持接点。（注）
- 6, 输入信号常开常闭可选择: 对于每一个信号，可选择常开变常闭报警（默认），可选择常闭变常开报警。
- 7, 装置自带蜂鸣器: 报警时发声“嘀、嘀...”，不报警时无声。
- 8, 装置带 1 路报警输出接点，可启动电笛电铃，加强声音报警效果。
- 9, 装置带 1 路遥信输出接点，连接其他设备或作为事故停钟信号。
- 10, 装置可选数字通讯输出，RS485 串行通讯接口，MODBUS 通讯协议（可选项）。

注: 开关型接点: 动合接点，当系统发生故障时接点闭合，装置报警，故障解除后接点断开，报警复位。

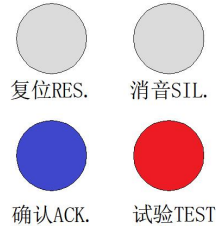
开关型保持接点: 动合接点，当系统发生故障时接点闭合，装置报警，故障解除后接点断开，报警信号保持，需要人工手动复位。

三. 通用技术要求

1. 工作电源: DC220V, DC110V, DC125V, AC220V, AC240V 可选。
2. 信号容量 : 4 回路。
3. 输入信号方式: 常开或常闭无源干接点或有源接点（订货时指明）。
4. 光字牌: 发光窗口尺寸 32x22, 颜色: 红、绿可选。
5. 报警输出: 光字牌闪光、蜂鸣器或音响发声。
6. 报警声音: 蜂鸣器嘀声 60DB; 扩大音响可选我公司 CAKJ-DL 电铃, CAKJ-DD 电笛。
7. 接点输出: 2 个继电器接点输出，分别对应报警音响接点、报警遥信接点。
8. 接点容量: AC250V, 3A 纯阻性负载, DC220V, 0.125A 感性负载。
9. 功能设置: 同时按下“消音”和“复归”功能键 3s 以上，听到蜂鸣器嘀声，设置完成
10. 功率消耗: 整机不大于 30W 。
11. 通讯接口（可选项）: 标准 RS485 串行通讯接口，MODBUS 通讯协议
12. 绝缘电阻: 输入-输出-电源-外壳之间不小于 100M Ω
13. 工频耐压: 输入-输出-电源-外壳之间能承受 2kv, 1min, 5mA, 50/60HZ 的试验，无闪络、击穿现象。
14. 抗干扰能力: 能承受 1MHz 和 100kHz 衰减震荡波的高频干扰试验，第一个半波电压幅值共模为 2.5kV、差模 1.0kV, 产品不应出现误动或拒动现象。
15. 环境条件: 环境温度-10 $^{\circ}$ C~60 $^{\circ}$ C; 环境湿度不大于 90%
16. 重量: 1kg

四、装置设置

- 1, 信号保持不保持选择设置：装置开关接点和开关保持型接点设置：同时按下“消音”和“复归”功能键 3s 以上，听到蜂鸣器响声，设置完成。装置默认开关保持型接点（报警接点接通并断开后，报警信号保持，需按复归按钮返回，但接点在接通情况下，按复归按钮不返回。）该项设置可循环操作，装置在报警接点保持和不保持之间转换。
- 2, 输入信号常开/常闭报警选择设置：同时按下“确认”和“复位”功能键 3s 以上，听到蜂鸣器响声，设置完成。该项设置可在常开接点变常闭时报警或常闭接点变常开时报警之间选择切换。出厂设置常闭转常开报警。



五、装置报警及检验

- 1, 开机自检，装置接通电源并打开背面电源开关，装置面板的光字牌全亮后熄灭。同时位于蜂鸣器侧的电源指示灯点亮，完成开机自检。
- 2, 按下“试验”按钮，所有光字牌闪光，蜂鸣器鸣响，输出音响接点动作。松开试验按钮，返回监测状态。
- 3, 信号报警时，对应光字牌闪光，蜂鸣器发声，输出音响接点动作，启动电铃电笛发声，遥信接点动作。
- 4, 按“确认”按钮（或 30s 自动确认），光字牌由闪光转为平光，蜂鸣器无声，输出音响接点返回，电铃电笛无声。
- 5, 信号复位时，开关型接点输入的信号，光字牌熄灭，遥信接点返回。保持型接点输入的信号光字牌保持报警，需人工手动复位（按“复位”按钮）后，光字牌熄灭，遥信接点返回。

六. 安装及接线

6. Installation and wiring

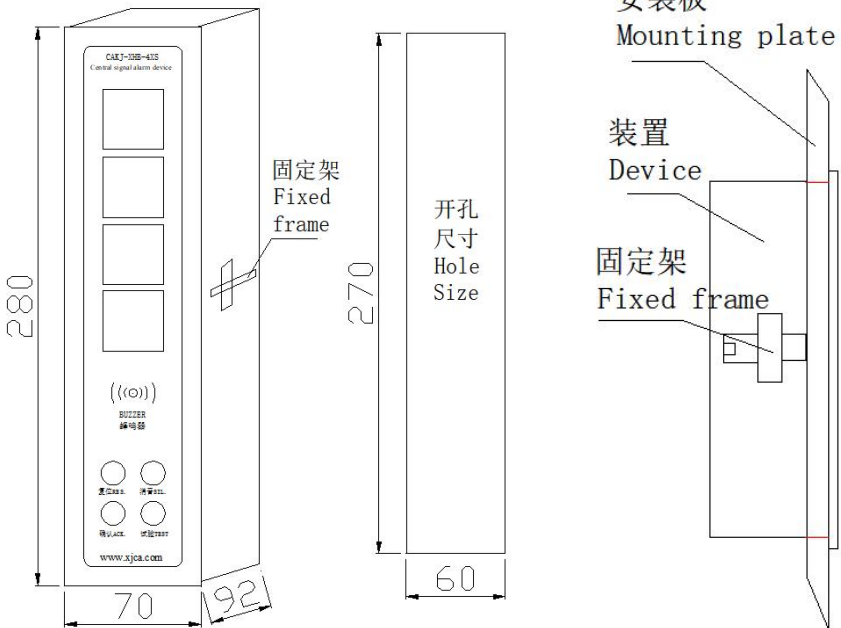
1, 外观图形

1. Appearance graphics



2, 外形及安装开孔尺寸

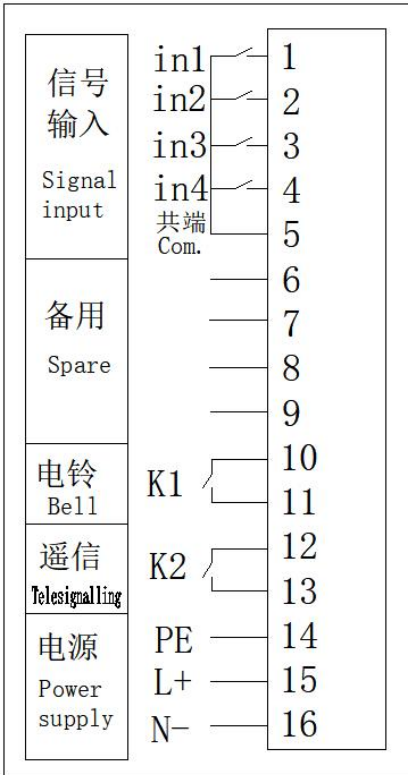
2. Shape and installation hole size



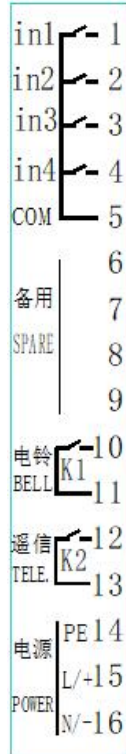
3, 接线及位置图

3. Wiring and location diagram

Wiring diagram



Physical wiring location map



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