

# PZX-2000/192L

## Intelligent Central Signal Screen



March 2023

# CATALOGUE

- 1, Certificate of Conformity
2. Debugging Outline (Factory Inspection Report)
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Special Note: Please read the signal alarm device materials carefully before using this product.

# Certificate of Conformity

Product Model: PZX-2000/192L

Product Name: Central Signal Display

Signal capacity: 192-way passive dry contact

signal alarm Apparatus power: AC/DC220V

Alarm and lighting power supply: AC220V

Inspection Date: March 31, 2023

Inspector: 01

Inspection basis: "State Grid Q/GDW430-2010 Technical Specification for Smart Control Cabinet of Smart Substation", "Signal Alarm and Interlocking System Design Specification HG/T20511-2014", product manual. Inspection result: qualified.

Manufacturer: Xuchang Chang'an Technology Co., Ltd.

2023/03/31

# PZX-2000/192L Central Signal Panel

## Factory Inspection Report

### 1. Completeness and Appearance Inspection:

◆ Integrity inspection: The central signal panel includes the panel body, 192L signal devices, bells and whistles, 6 change over relays, 6 power failure alarms on the top of the panel, UK5N terminal blocks, 2P, 6A power switches, cabinet lighting and other components. 1 set of documents (including internal electrical wiring diagram, signal device instructions, commissioning outline, certificate of conformity).

◆ Appearance inspection: screen size: high \* wide \* deep 2260mm \* 800mm \* 600mm; screen color: RAL7035

Screen case requirements: front glass door, rear opening door, surface smooth, no stains, no scratches, no deformation, etc

Results: Qualified

### 2. System wiring inspection

based on the electrical system wiring diagram of the panel body.

◆ System power supply: AC/DC220V

◆ Alarm drive and lighting power supply: AC220V

◆ Signal lines and various functional lines are connected correctly, and the grounding line is firmly connected.

Result: Qualified.

### 3. Basic Functiona Inspection

#### 1. Power-on self-test

The device is connected to the power supply and turned on the power switch on the back, the digital setting window on the device panel displays the numbers in sequence [0.0.0.0.0] [1.1.1.1.1] ... [7.7.7.7.7] [8.8.8.8.8] The indicator lights all on [9.9.9.9.9] The indicator lights are all on and scroll to display [C192L] (as a power indicator) The indicator lights then go out, and the power-on self-test is completed.

Result: Qualified

#### 2. Test (lighting test) Function Inspection

When the test button is pressed and released, all the warning lights flash, the buzzer built into the device sounds, and the contacts of the (accident and announcement) audio output relay close. When the test button is pressed and released again, the device returns to the normal monitoring state.

Results: Qualified

#### 3. Input signal alarm inspection

The input signal is changed from open point to closed point (short-circuited by a short wire at the common end and each signal input end), the corresponding input signal alarm window should flash, the buzzer should sound, and the accident or warning sound output contact should be closed. The signal disappears and returns to normal state.

Result: qualified

#### 4. Silencing function inspection

With any route of the incoming signals connected, the corresponding signal alarm window shall flash, the buzzer shall sound, and the corresponding audio output contact shall be closed. After pressing the silence button and then releasing it, the signal light shall keep flashing, the buzzer sound shall stop, and the corresponding audio output contact shall be opened (returned to normal state)

Result:Qualified

#### 5. Manual confirmation (acceptance) function inspection

With any route of the incoming signals connected, the corresponding signal light flashes, the buzzer sounds, and the corresponding audio output contact should be closed. After pressing the confirmation button and releasing it, the signal light changes from flashing to steady on, the buzzer stops sounding, and the corresponding audio output contact should be opened (returned to normal). The signal disappears and returns to normal state.

Result: qualified.

#### 6. Automatic confirmation (acceptance) function inspection

With any route of the incoming signals connected, the corresponding signal light flashes, the buzzer sounds, and the corresponding audio output contact should be closed. According to the set automatic confirmation time (e.g., 30s), the signal alarm lasts more than 30s, the signal light changes from flashing to steady, the buzzer stops sounding, and the corresponding audio output contact should be opened (returned to normal state).

Results: Qualified

#### 7. Return Function inspection

For the hold contact, (set a certain contact to hold type during inspection), connect the signal once (connect the common terminal and the pulse signal input Terminal with a short wire and press once), the corresponding signal plate should flash, the buzzer should sound, and the corresponding audio output contact should be closed. Press the silence button, the buzzer sound stops, and the accident or pre-alarm audio output contact should be opened (recovered). Press the confirmation button (the automatic confirmation function is invalid), the signal plate changes from flashing to flat. Press the reset button, the signal plate is extinguished. In the case of not pressing the silence and confirmation buttons, you can directly press the reset button to complete the signal alarm reset (return to normal) of the signal plate and buzzer and contact. After the function inspection, set this contact back to the normal switch contact type.

Results: Qualified

#### 8. Recall function inspection

When the recall button is pressed, all the signals that have been reported will light up in turns on the alarm window according to the principle of LIFO, and the LED displays the reported loop synchronously. Up to 200 signals can be recalled, with alarm priority during recall.

Result: qualified.

#### 9, Inspection of the buzzer and amplified audio output corresponding to accidents, warning signals

According to the setting of the device (such as setting the first signal as the accident signal, setting the second signal as the warning signal, and setting the buzzer and the amplified sound output to be effective) connecting the first signal, the buzzer emits a long sound. At the same time, the accident sound contact is close, emit a simulated electric whistle sound. Connect the second signal, the buzzer emits a short sound. Meanwhile, the warning sound contact is close, emit a simulated electric bell sound. the signal disappears and returns to normal state.

User order alarm window: white when not alarming, red when alarming, no alarm signal name

Result: qualified

### 4, Additional Function Inspection

#### 1, Total output inspection of accident and warning signals

Arbitrarily turn on a signal, and according to the device setting, the corresponding accident or warning signal has a following output contact as the total accident or total warning signal output, to provide a remote signal for external equipment.

Result: qualified

#### 2. Unattended conversion function inspection

The device can be switched between attended (LED scrolling display "C128L") and unattended (LED display "-----") modes via an external self-locking button, changeover switch, or shorting wire. In attended mode, signal alarm methods are automatically completed based on the device's various settings, including flashing alarm window, plant light, sound, and silence. In unattended mode, with alarm signals, the alarm windows do not light, the sound is silent, and the signal hold function is canceled, but the communication interface is used normally, and the warning and accident follow-up contacts work normally as remote signal outputs.

Result: Qualified.

#### 3. Check the remote signaling function of device power disappearance.

The output contact is normally closed when the device power disappears, and the contact is normally closed when the device is normally powered. When the device power disappears or the device fails, and the alarm device cannot play the role of alarm, the normally closed contact is converted into a normally open contact, and the other equipment or duty personnel are notified by remote signaling to deal with the fault of this device in time and check the device power supply.

Results: Qualified.

#### 4. Communication Interface

The device uses a standard 485 communication interface with a baud rate of 9600/4800 and a MODBUS-RTU communication protocol. According to the communication protocol, the host computer can read the signals that the device has alarmed, which are provided for analysis and storage by the background computer.

Result: Qualified.

#### 5. 6-way city power outage alarm inspection

Short 6 lines of city power municipal power alarm signal input end, terminal 1DD-19 to 24 (Note: 19-24 terminals have been short circuited, this terminal is equipped with 220V electricity, pay attention to safety) are short-circuited with 1DD-35, 1DD-36, 1DD-37, 1DD-38, 1DD-39, 1DD-40 separately, and the alarm on the top of the screen and the alarm window will alarm separately.

**Special Note: The 6 alarm points of the on-site mains power supply shall be brought out with 12 wires (2 wires for each alarm point) and shall be brought out separately, not in parallel with other signal alarm points.**

#### ◆ Settings

According to the instructions, set the list, and verify the functions of the device.

Result: qualified

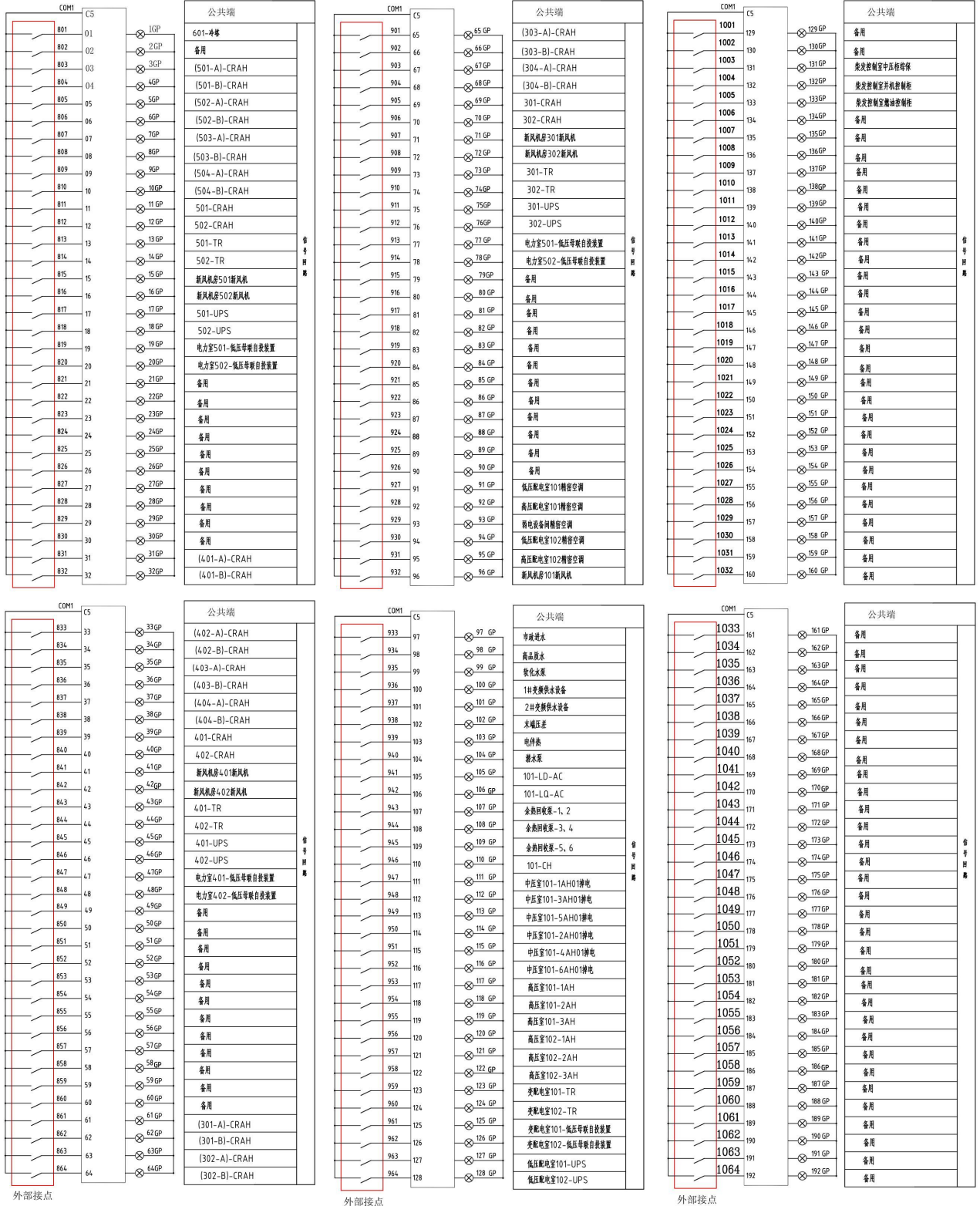
5, After all inspections are completed, set various parameters according to the order requirements, and then test each item again to meet the order requirements.

Inspector: 01





# CAKJ-XHB-192L信号接线

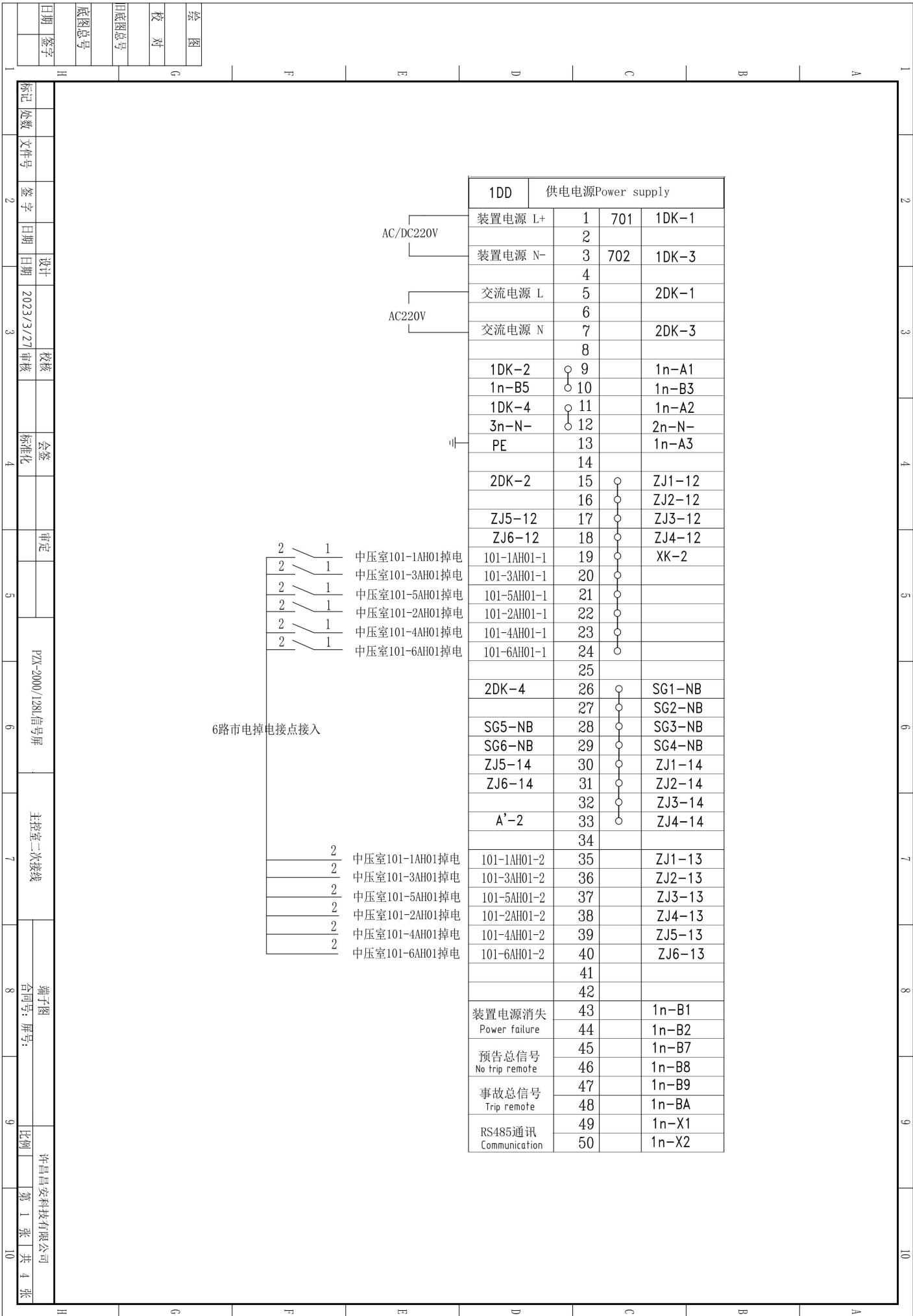


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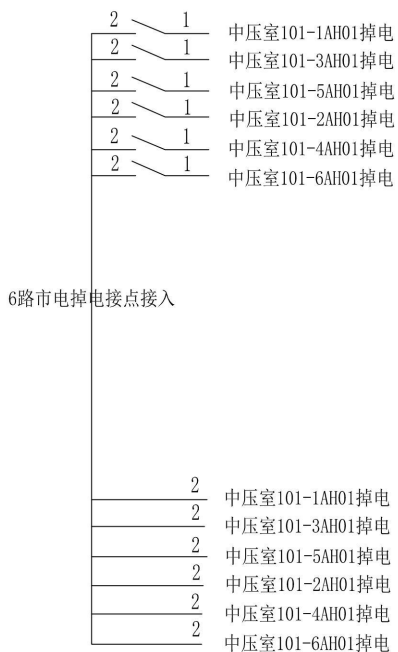
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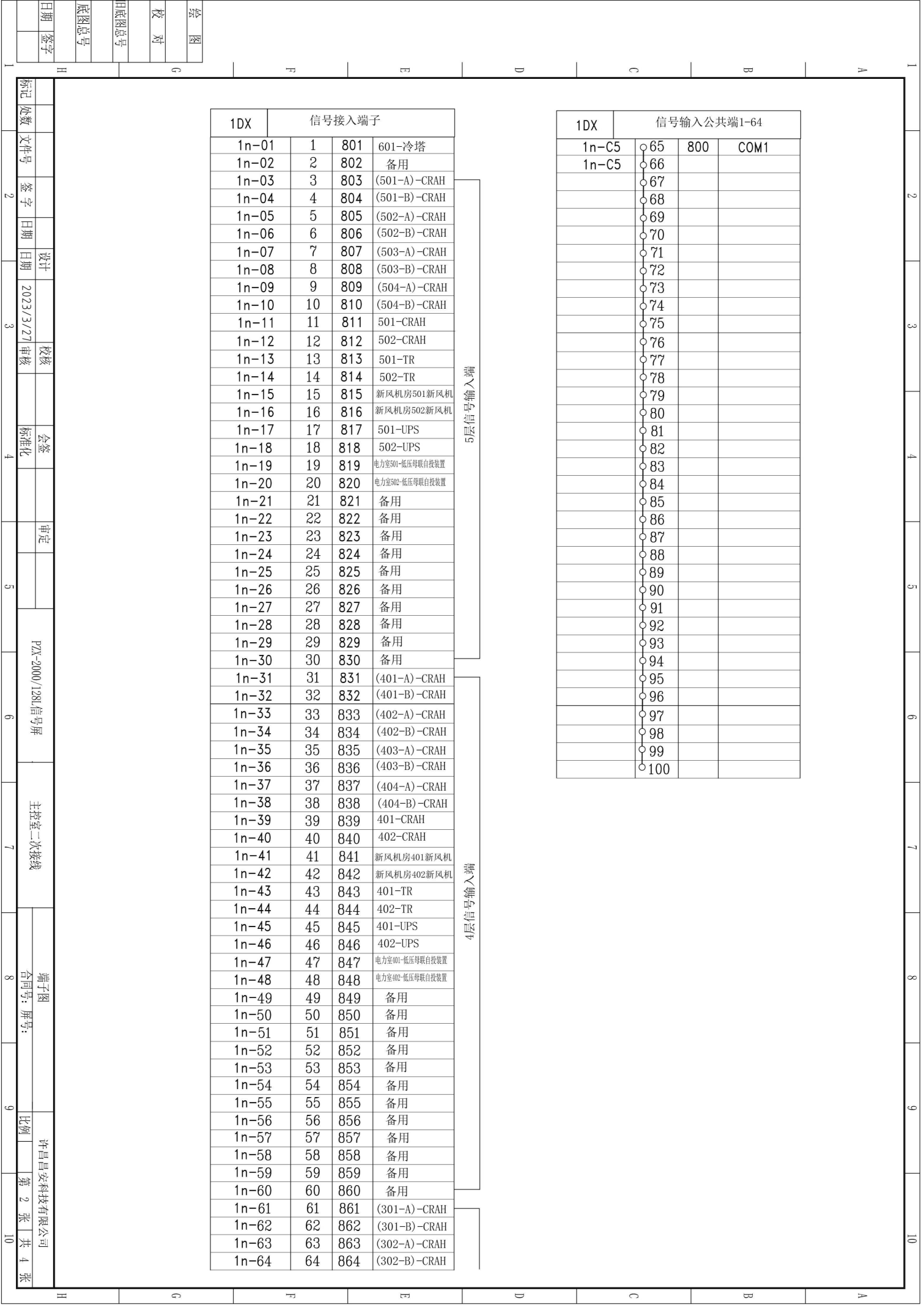


| 1DD            | 供电电源Power supply |     |        |
|----------------|------------------|-----|--------|
| 装置电源 L+        | 1                | 701 | 1DK-1  |
|                | 2                |     |        |
| 装置电源 N-        | 3                | 702 | 1DK-3  |
|                | 4                |     |        |
| 交流电源 L         | 5                |     | 2DK-1  |
|                | 6                |     |        |
| 交流电源 N         | 7                |     | 2DK-3  |
|                | 8                |     |        |
| 1DK-2          | 9                |     | 1n-A1  |
| 1n-B5          | 10               |     | 1n-B3  |
| 1DK-4          | 11               |     | 1n-A2  |
| 3n-N-          | 12               |     | 2n-N-  |
| PE             | 13               |     | 1n-A3  |
|                | 14               |     |        |
| 2DK-2          | 15               |     | ZJ1-12 |
|                | 16               |     | ZJ2-12 |
| ZJ5-12         | 17               |     | ZJ3-12 |
| ZJ6-12         | 18               |     | ZJ4-12 |
| 101-1AH01-1    | 19               |     | XK-2   |
| 101-3AH01-1    | 20               |     |        |
| 101-5AH01-1    | 21               |     |        |
| 101-2AH01-1    | 22               |     |        |
| 101-4AH01-1    | 23               |     |        |
| 101-6AH01-1    | 24               |     |        |
|                | 25               |     |        |
| 2DK-4          | 26               |     | SG1-NB |
|                | 27               |     | SG2-NB |
| SG5-NB         | 28               |     | SG3-NB |
| SG6-NB         | 29               |     | SG4-NB |
| ZJ5-14         | 30               |     | ZJ1-14 |
| ZJ6-14         | 31               |     | ZJ2-14 |
|                | 32               |     | ZJ3-14 |
| A'-2           | 33               |     | ZJ4-14 |
|                | 34               |     |        |
|                | 35               |     | ZJ1-13 |
|                | 36               |     | ZJ2-13 |
|                | 37               |     | ZJ3-13 |
|                | 38               |     | ZJ4-13 |
|                | 39               |     | ZJ5-13 |
|                | 40               |     | ZJ6-13 |
|                | 41               |     |        |
|                | 42               |     |        |
| 装置电源消失         | 43               |     | 1n-B1  |
| Power failure  | 44               |     | 1n-B2  |
| 预告总信号          | 45               |     | 1n-B7  |
| No trip remote | 46               |     | 1n-B8  |
| 事故总信号          | 47               |     | 1n-B9  |
| Trip remote    | 48               |     | 1n-BA  |
| RS485通讯        | 49               |     | 1n-X1  |
| Communication  | 50               |     | 1n-X2  |



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| 1DX   | 信号输入公共端1-64 |     |      |
|-------|-------------|-----|------|
| 1n-C5 | 65          | 800 | COM1 |
| 1n-C5 | 66          |     |      |
|       | 67          |     |      |
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| 1DX   | 信号接入端子 |     |                 |  |
|-------|--------|-----|-----------------|--|
| 1n-01 | 1      | 801 | 601-冷塔          |  |
| 1n-02 | 2      | 802 | 备用              |  |
| 1n-03 | 3      | 803 | (501-A)-CRAH    |  |
| 1n-04 | 4      | 804 | (501-B)-CRAH    |  |
| 1n-05 | 5      | 805 | (502-A)-CRAH    |  |
| 1n-06 | 6      | 806 | (502-B)-CRAH    |  |
| 1n-07 | 7      | 807 | (503-A)-CRAH    |  |
| 1n-08 | 8      | 808 | (503-B)-CRAH    |  |
| 1n-09 | 9      | 809 | (504-A)-CRAH    |  |
| 1n-10 | 10     | 810 | (504-B)-CRAH    |  |
| 1n-11 | 11     | 811 | 501-CRAH        |  |
| 1n-12 | 12     | 812 | 502-CRAH        |  |
| 1n-13 | 13     | 813 | 501-TR          |  |
| 1n-14 | 14     | 814 | 502-TR          |  |
| 1n-15 | 15     | 815 | 新风机房501新风机      |  |
| 1n-16 | 16     | 816 | 新风机房502新风机      |  |
| 1n-17 | 17     | 817 | 501-UPS         |  |
| 1n-18 | 18     | 818 | 502-UPS         |  |
| 1n-19 | 19     | 819 | 电力室501-低压母联自投装置 |  |
| 1n-20 | 20     | 820 | 电力室502-低压母联自投装置 |  |
| 1n-21 | 21     | 821 | 备用              |  |
| 1n-22 | 22     | 822 | 备用              |  |
| 1n-23 | 23     | 823 | 备用              |  |
| 1n-24 | 24     | 824 | 备用              |  |
| 1n-25 | 25     | 825 | 备用              |  |
| 1n-26 | 26     | 826 | 备用              |  |
| 1n-27 | 27     | 827 | 备用              |  |
| 1n-28 | 28     | 828 | 备用              |  |
| 1n-29 | 29     | 829 | 备用              |  |
| 1n-30 | 30     | 830 | 备用              |  |
| 1n-31 | 31     | 831 | (401-A)-CRAH    |  |
| 1n-32 | 32     | 832 | (401-B)-CRAH    |  |
| 1n-33 | 33     | 833 | (402-A)-CRAH    |  |
| 1n-34 | 34     | 834 | (402-B)-CRAH    |  |
| 1n-35 | 35     | 835 | (403-A)-CRAH    |  |
| 1n-36 | 36     | 836 | (403-B)-CRAH    |  |
| 1n-37 | 37     | 837 | (404-A)-CRAH    |  |
| 1n-38 | 38     | 838 | (404-B)-CRAH    |  |
| 1n-39 | 39     | 839 | 401-CRAH        |  |
| 1n-40 | 40     | 840 | 402-CRAH        |  |
| 1n-41 | 41     | 841 | 新风机房401新风机      |  |
| 1n-42 | 42     | 842 | 新风机房402新风机      |  |
| 1n-43 | 43     | 843 | 401-TR          |  |
| 1n-44 | 44     | 844 | 402-TR          |  |
| 1n-45 | 45     | 845 | 401-UPS         |  |
| 1n-46 | 46     | 846 | 402-UPS         |  |
| 1n-47 | 47     | 847 | 电力室401-低压母联自投装置 |  |
| 1n-48 | 48     | 848 | 电力室402-低压母联自投装置 |  |
| 1n-49 | 49     | 849 | 备用              |  |
| 1n-50 | 50     | 850 | 备用              |  |
| 1n-51 | 51     | 851 | 备用              |  |
| 1n-52 | 52     | 852 | 备用              |  |
| 1n-53 | 53     | 853 | 备用              |  |
| 1n-54 | 54     | 854 | 备用              |  |
| 1n-55 | 55     | 855 | 备用              |  |
| 1n-56 | 56     | 856 | 备用              |  |
| 1n-57 | 57     | 857 | 备用              |  |
| 1n-58 | 58     | 858 | 备用              |  |
| 1n-59 | 59     | 859 | 备用              |  |
| 1n-60 | 60     | 860 | 备用              |  |
| 1n-61 | 61     | 861 | (301-A)-CRAH    |  |
| 1n-62 | 62     | 862 | (301-B)-CRAH    |  |
| 1n-63 | 63     | 863 | (302-A)-CRAH    |  |
| 1n-64 | 64     | 864 | (302-B)-CRAH    |  |

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| 日期   | 签字   | 设计 | 日期  | 2023/3/27 | 审核 | 标准 | 审定 | 端子图             | 合同号: 屏号: | 比例         | 第 2 张 | 共 4 张 |
| 底图总号 | 底图总号 | 校对 | 文件号 | 签字        | 日期 | 会签 | 标准 | PX-2000/128L信号屏 | 主控室二次接线  | 许昌昌安科技有限公司 |       |       |
| 绘图   | 校对   | 设计 | 日期  | 2023/3/27 | 审核 | 会签 | 标准 | 端子图             | 合同号: 屏号: | 比例         | 第 2 张 | 共 4 张 |

| 2DX   | 信号输入公共端65-128 |     |       |
|-------|---------------|-----|-------|
| 1n-C5 | 65            | 900 | COM1  |
| 1n-C5 | 66            |     | ZJ1-9 |
|       | 67            |     | ZJ2-9 |
|       | 68            |     | ZJ3-9 |
|       | 69            |     | ZJ4-9 |
|       | 70            |     | ZJ5-9 |
|       | 71            |     | ZJ6-9 |
|       | 72            |     |       |
|       | 73            |     |       |
|       | 74            |     |       |
|       | 75            |     |       |
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|       | 97            |     |       |
|       | 98            |     |       |
|       | 99            |     |       |
|       | 100           |     |       |

3层信号输入端

| 2DX    | 信号输入端子 |     |                  |
|--------|--------|-----|------------------|
| 1n-65  | 1      | 901 | (303-A)-CRAH     |
| 1n-66  | 2      | 902 | (303-B)-CRAH     |
| 1n-67  | 3      | 903 | (304-A)-CRAH     |
| 1n-68  | 4      | 904 | (304-B)-CRAH     |
| 1n-69  | 5      | 905 | 301-CRAH         |
| 1n-70  | 6      | 906 | 302-CRAH         |
| 1n-71  | 7      | 907 | 新风机房301新风机       |
| 1n-72  | 8      | 908 | 新风机房302新风机       |
| 1n-73  | 9      | 909 | 301-TR           |
| 1n-74  | 10     | 910 | 302-TR           |
| 1n-75  | 11     | 911 | 301-UPS          |
| 1n-76  | 12     | 912 | 302-UPS          |
| 1n-77  | 13     | 913 | 电力室501-低压母联自投装置  |
| 1n-78  | 14     | 914 | 电力室502-低压母联自投装置  |
| 1n-79  | 15     | 915 | 备用               |
| 1n-80  | 16     | 916 | 备用               |
| 1n-81  | 17     | 917 | 备用               |
| 1n-82  | 18     | 918 | 备用               |
| 1n-83  | 19     | 919 | 备用               |
| 1n-84  | 20     | 920 | 备用               |
| 1n-85  | 21     | 921 | 备用               |
| 1n-86  | 22     | 922 | 备用               |
| 1n-87  | 23     | 923 | 备用               |
| 1n-88  | 24     | 924 | 备用               |
| 1n-89  | 25     | 925 | 备用               |
| 1n-8   | 26     | 926 | 备用               |
| 1n-91  | 27     | 927 | 低压配电室101精密空调     |
| 1n-92  | 28     | 928 | 高压配电室101精密空调     |
| 1n-93  | 29     | 929 | 弱电设备间精密空调        |
| 1n-94  | 30     | 930 | 低压配电室102精密空调     |
| 1n-95  | 31     | 931 | 高压配电室102精密空调     |
| 1n-96  | 32     | 932 | 新风机房101新风机       |
| 1n-97  | 33     | 933 | 市政进水             |
| 1n-98  | 34     | 934 | 高品质水             |
| 1n-99  | 35     | 935 | 软化水泵             |
| 1n-100 | 36     | 936 | 1#变频供水设备         |
| 1n-101 | 37     | 937 | 2#变频供水设备         |
| 1n-102 | 38     | 938 | 末端压差             |
| 1n-103 | 39     | 939 | 电伴热              |
| 1n-104 | 40     | 940 | 潜水泵              |
| 1n-105 | 41     | 941 | 101-LD-AC        |
| 1n-106 | 42     | 942 | 101-LQ-AC        |
| 1n-107 | 43     | 943 | 余热回收泵-1、2        |
| 1n-108 | 44     | 944 | 余热回收泵-3、4        |
| 1n-109 | 45     | 945 | 余热回收泵-5、6        |
| 1n-110 | 46     | 946 | 101-CH           |
| 1n-111 | 47     | 947 | ZJ1-5            |
| 1n-112 | 48     | 948 | ZJ2-5            |
| 1n-113 | 49     | 949 | ZJ3-5            |
| 1n-114 | 50     | 950 | ZJ4-5            |
| 1n-115 | 51     | 951 | ZJ5-5            |
| 1n-116 | 52     | 952 | ZJ6-5            |
| 1n-117 | 53     | 953 | 高压室101-1AH       |
| 1n-118 | 54     | 954 | 高压室101-2AH       |
| 1n-119 | 55     | 955 | 高压室101-3AH       |
| 1n-120 | 56     | 956 | 高压室102-1AH       |
| 1n-121 | 57     | 957 | 高压室102-2AH       |
| 1n-122 | 58     | 958 | 高压室102-3AH       |
| 1n-123 | 59     | 959 | 变配电室101-TR       |
| 1n-124 | 60     | 960 | 变配电室102-TR       |
| 1n-125 | 61     | 961 | 变配电室101-低压母联自投装置 |
| 1n-126 | 62     | 962 | 变配电室102-低压母联自投装置 |
| 1n-127 | 63     | 963 | 低压配电室101-UPS     |
| 1n-128 | 64     | 964 | 低压配电室102-UPS     |

1层层信号输入端

|      |    |      |    |      |    |      |           |      |    |
|------|----|------|----|------|----|------|-----------|------|----|
| 日期   | 签字 | 日期   | 签字 | 日期   | 签字 | 日期   | 签字        | 日期   | 签字 |
| 日期   | 签字 | 日期   | 签字 | 日期   | 签字 | 日期   | 签字        | 日期   | 签字 |
| 底图总号 |    | 底图总号 |    | 底图总号 |    | 底图总号 |           | 底图总号 |    |
| 校对   |    | 校对   |    | 校对   |    | 校对   |           | 校对   |    |
| 绘图   |    | 绘图   |    | 绘图   |    | 绘图   |           | 绘图   |    |
| 1    | 2  | 3    | 4  | 5    | 6  | 7    | 8         | 9    | 10 |
| 标记   | 次数 | 文件号  | 签字 | 日期   | 设计 | 日期   | 2023/3/27 | 审核   | 会签 |
| 2    |    |      |    |      |    |      |           |      |    |
| 3    |    |      |    |      |    |      |           |      |    |
| 4    |    |      |    |      |    |      |           |      |    |
| 5    |    |      |    |      |    |      |           |      |    |
| 6    |    |      |    |      |    |      |           |      |    |
| 7    |    |      |    |      |    |      |           |      |    |
| 8    |    |      |    |      |    |      |           |      |    |
| 9    |    |      |    |      |    |      |           |      |    |
| 10   |    |      |    |      |    |      |           |      |    |

端子图  
 合同号: 屏号:  
 比例: 第 3 张 共 4 张  
 许昌昌安科技有限公司







# CAKJ-XHB-192L Intelligent Integrated Microcomputer Central Signal Alarm Device

## I. Overview

CAKJ-XHB series integrated microcomputer central signal alarm device is a centralized management microcomputer signal alarm system specially designed for the signal system of power plants and substations. It has strong anti-interference ability, simple operation, convenient installation and use, and small maintenance. It also has special functions such as recall of alarm signals, power-off protection of memory signals, dual-tone and dual-color alarm mode, and automatic and manual silencing of alarm sound. The control part of the product is composed of microprocessor, data memory, input and output interfaces, etc. The display part of the product (alarm window) uses a new type of solid flat tube (cold light source), which has a continuous working life of more than ten thousand hours. This product is widely used in power, petroleum, chemical, metallurgical and coal industries, making it a highly intelligent product for power and industrial automation monitoring and signal alarm.

## 2. Specifications and Models

Version number v3.2.1

| Product model   | Alarm circuit routes | Power supply (optional)    | Input signal type  |
|-----------------|----------------------|----------------------------|--|
| CAKJ-XHB-192L   | 192 routes           | DC220V,DC110V,DC125V,      | Passive dry contact input                                      |
| CAKJ-XHB-192L-A | 192 routes           | AC220V,AC240V,user-defined | Active contact input(signal DC voltage same as supply voltage) |

Plus:when AC power supply, choose active contact input, only use to hold signal, require manual reset. Otherwise, please specified signal DC voltage.

Order model CAKJ-XHB-192L passive signal input

## 3. Function Features

1. The device panel has digital display, setting key, and power-on self-test.
2. It has test (test light), confirm (accept), silence, reset, and recall functions, and comes with function buttons.
3. It has a manned and unmanned conversion function.
4. It has manual and automatic confirmation functions, and the automatic confirmation time (0-200s) is settable.
5. The signal alarm type can be distinguished: accident signal S, warning signal Y, and position signal P can be set.
6. Color of alarm window: Red, white, yellow, or green in optional. According to the signal alarm type, the color distinction is more eye-catching and intuitive.
7. Input signal type settable: switch type contact (h), switch type maintained contact (E), and pulse type maintained contact (C). (Note)8. Selection of normally open and normally closed input signals: For each signal, you can set normally open to normally closed alarm (default), and set normally closed to normally open alarm.
9. Signal delay alarm: 0-9999ms delay alarm time is settable.
10. The device comes with a buzzer. In case of an accident, a long sound "Di---" is issued, and a short sound "Di, Di, Di, Di" is issued for the warning signal. The position signal does not sound.
11. The device has accident and warning signal alarm output contacts, which can start electric whistles and bells to enhance the effect of sound alarm.
12. It has accident and warning remote signal output contacts, which can be connected to other devices or used as an accident stop clock signal.
13. It has a device power loss contact output.
14. It has digital communication output, RS485 serial communication interface, MODBUS communication protocol.

Note: The switch-type contact h: Dynamic closing contact, which closes when the system failure occurs, the device alarms, the contact opens after the fault is eliminated, and the alarm resets.

Switch-type maintain contact E: Dynamic closing contact, which closes when the system failure occurs, the device alarms, the contact opens after the fault is eliminated, alarm signal maintains, requires manual reset.

Pulse switch-type contact C: Pulse dynamic closing contact, when the system fails, the contact is closed for 1s and then disconnected, and the alarm signal is maintained, which requires manual reset when the fault is eliminated.

## 4. General Technical Requirements

1. Working power supply: DC220V, DC110V, DC125V, AC220V, AC240V optional.
2. Signal capacity: 128 circuits.
3. Input signal mode: normally open passive dry contact or active contact.
4. Alarm window: window size 50x25, color: red, green, yellow, white optional.
5. Alarm output: flashing alarm window, buzzer or audio sound.
6. Alarm sound: buzzer beep 60DB; amplified audio optional of CAKJ-DL bell, CAKJ-DD whistle, electronic audio CA-XXS-YX.
7. Contact output: 5 relay contact outputs, corresponding to power failure, warning alarm, accident alarm, pre-remote signal (follow-up opening), accident remote signal (follow-up opening).
8. Contact capacity: AC250V, 3A pure resistive load, DC220V, 0.125A inductive load.
9. Function setting: press key for setting, 5-digit LED display.
10. Power consumption: the whole machine is not more than 50W.



11. Communication interface: Standard RS485 serial communication interface, MODBUS communication protocol
12. Insulation resistance: Between input-output-power supply-case, not less than 100MΩ
13. Working frequency withstand voltage: Between input-output-power supply-case, can withstand 2 kv, 1min, 5mA, 50/60Hz test, no flashover or breakdown
14. Anti-interference capability: Can withstand high frequency interference test of 1MHz and 100kHz attenuated shock wave, the first half-wave voltage amplitude common mode is 2.5kV, differential mode 1.0Kv, the product should not appear false or refusal to move phenomenon.
15. Environmental conditions: Ambient temperature -10°C~60°C; Ambient humidity not more than 90%
16. Weight: 5kg

## 5. Device Setup

Press "SET" button, press " " to shift, press " " to add 1, enter password (8080) enter setting state. according menu indication press "SET" to turn pages and process all the function setup.

| Programming symbol | Set content                     | Operation buttons                         | Setting range                             | Default (description)   |   |
|--------------------|---------------------------------|---|---|---|---|
| C 0                | Enter password                  | "←""↑"                                    | Password                                  | 8080  |   |
| n. 128             | Set total alarm routes          | "SET"                                     | 128 routes                                | 128 as factory setting  |   |
| └. 30              | Set auto confirm time           | "←""↑"                                    | 0~200s                                    | 30s (no auto confirm when "0")  |   |
| d. 20              | Set signal delay alarm time     | "←""↑"                                    | 0-9999ms                                  | 20,20ms   |   |
| y--A               | Alarm audio set                 | "↑"to select                              | A, F, d, n                                | A(A audio all on, F buzzer only, d external speaker only, n audio all off)  |   |
| S. 1               | Device communication add        | "←""↑"                                    | 0~255                                     | 1 (communication add is unique)   |   |
| b. 9600            | Communication baud rate         | "↑"to select                              | 9600/4800                                 | 9600  |   |
| J. 0               | Record signal clear             | "←""↑"                                    | Clear password                            | 1001 (clear record when password correct)   |   |
| L001. y            | Set 01 signal alarm type        | "↑"to select,                             | y, S, P                                   | y (The device defaults all signals to "y" warning signals, according to every signal type, press "↑"to select "S" as accident signal, press "↑"to select "P" as position signal, when selection complete, press "←"turns page, set signal type one by one.) |   |
| L002. y            | Set 02 signal alarm type        | "←"turns page, set signal type one by one |   |   |   |
| L003. y            | Set 03 signal alarm type        |   |   |   |   |
| -----              | -----                           |   |   |   |   |
| L127. y            | Set 127 signal alarm type       |   |   |   |   |
| L128. y            | Set 128 signal alarm type       |   |   |   |   |
| E001. h            | Set 01 signal input state       |   | "↑"to select,                             | h, C, E   | h (h as device default switch-type contact, press "↑"to select "C" as pulse maintain contact, press "↑"to select "E" as switchtype contact, when selection complete, press "←" turns page, set signal type one by one.) |
| E002. h            | Set 02 signal input state       | "←"turns page, set signal type one by one |   |   |   |
| -----              | -----                           |   |   |   |   |
| E127. h            | Set 127 signal input state      |   |   |   |   |
| E128. h            | Set 128 signal input state      |   |   |   |   |
| F001. o            | Set 01 signal open/close alarm  |   | "↑"to select,                             |   |   |
| F002. o            | Set 02 signal open/close alarm  |   | "←"turns page, set signal type one by one |   |   |
| -----              | -----                           |   |   |   |   |
| F127. o            | Set 127 signal open/close alarm |   |   |   |   |
| F128. o            | Set 127 signal open/close alarm |   |   |   |   |
|                    |                                 |   |   |   |   |

When setup complete or without setup press "SET" to maintain and exit setting, and return to normal alarm state.

## 6. Device Alarm and Inspection

1. Power-on self-test, connect the device to the power supply and turn on the power switch on the back of the device, the digital setting window on the device panel displays the numbers in sequence [0.0.0.0.0] [1.1.1.1.1] ... [7.7.7.7.7] [8.8.8.8.8] all alarm windows on [9.9.9.9.9] alarm windows on to scroll display [C128L] (as a power indicator) alarm windows off, the power-on self-test is completed.
2. Press the "Test" button, all alarm windows flash, the buzzer sounds, and the output audio contact acts. Release the test button and return to the monitoring state.
3. When the signal is alarming, the corresponding alarm window is flashing, the buzzer is sounding, the audio output contact acts, the electric bell and electric whistle are sounding, and the remote contact acts. The digital display window displays the corresponding loop number.
4. Press the "Silence" button, the warning light continues to flash, the buzzer is silent, the audio output contact returns, and the bell and whistle are silent.
5. Press the "Confirm" button (or automatic confirmation after 0-200s), the warning light will change from flashing to steady, the buzzer will be silent, the audio output contact will return, and the bell and whistle will be silent.
6. When the signal is reset, the signal input by the switch contact is extinguished, and the remote contact returns. The signal input by the holding contact remains in alarm, and the indicator remains on. It needs to be manually reset (press the "Reset" button) before the indicator goes out and the remote contact returns.

7. Long press the "Recall" button, the signals that have been reported will be displayed on the light plate in the order of their occurrence, following the principle of LIFO (Last In, First Out), and the LED will display the reported loop synchronously. Up to 200 signals can be recalled, with alarm recall taking priority during the recall process.

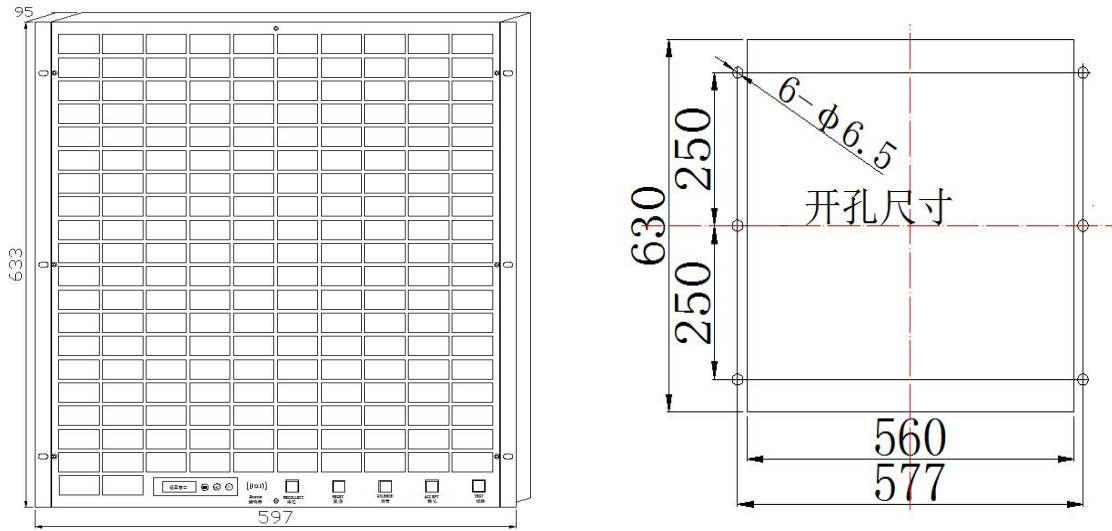
8. Manned/Unmanned conversion, self-locking switch or button is connected at N6 and C4 terminals, the mode is unmanned when N6 and C4 are connected. When unmanned, the digital display shows "----", signal alarm light, sound and other devices do not work, communication interface, remote signal contact output is used normally.

## 7. Appearance and wiring

### 1, 192L outline example



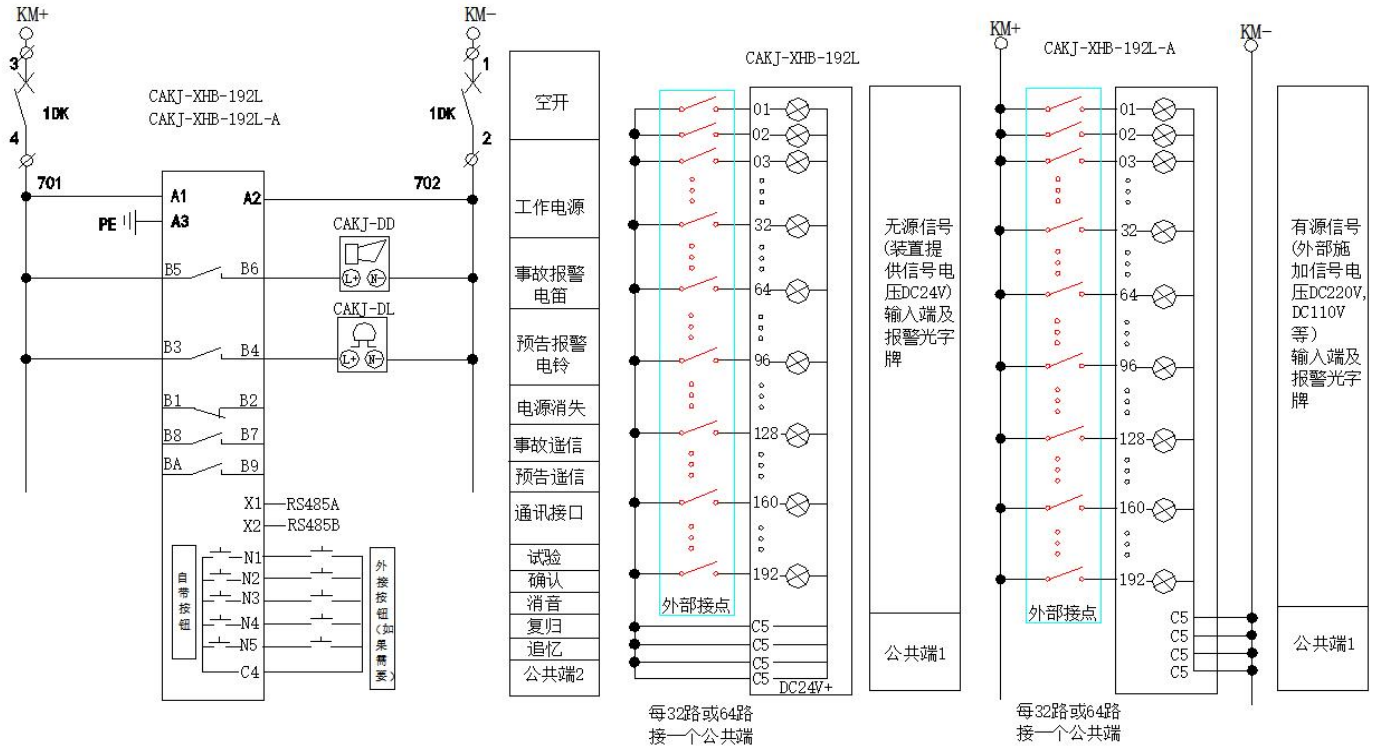
### 2, 192L Dimensions and Installation Size



### 3, 192L Terminal and Location Diagram (Rear View)



## 5,192L Alarm System Wiring Diagram



## Electronic bell and whistle (optional)

### 1、 Overview

CAKJ-DL, DD electronic bell and whistle, is a low-power, non-interference, and high-volume electronic alarm device designed for central signal alarm in the power system. Using a microcontroller to simulate the sound spectrum of an electromagnetic bell and whistle, the similarity between its sound and that of an electromagnetic bell and whistle reaches 98%.

### 2、 Model specifications

CAKJ-DL Electronic Bell

CAKJ-DD Electronic Horn

### 3、 Technical parameters

Working power supply: AC, DC80-265V,  
wide voltage AC/DC universal, DC24V specified when ordering  
Power consumption: not more than 3VA

Sound volume: 120DB

Electric ringtone: beeping ringtone, uninterrupted sound

Electric flute sound: beep, uninterrupted sound

Working mode: Power on sounds, power off sounds silent

Dielectric performance

Isolation voltage: Input terminal to ground 3000V, 1 minute

Insulation resistance: > 100M Ω

Anti interference capability: The product can withstand the electrical fast transient pulse group immunity test with a test level of 4 specified in Chapter 5 of GB/T 17626.4-2008

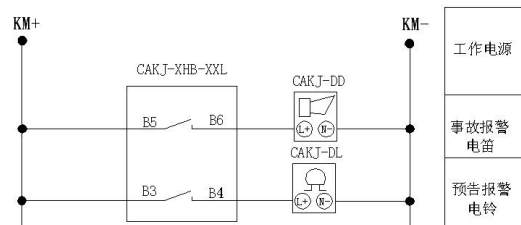
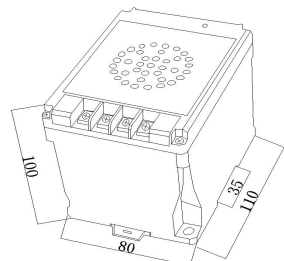
Applicable environment: Temperature -25~55 °C, humidity not exceeding 90% RH

Mean time between failures: not less than 50000h

### 4、 External dimensions and wiring

External dimensions: 80x110x100mm

Installation method: 35mm guide rail installation



PZX-2000/192L  
Central signal panel

Xuchang Chang'an  
Technology Co., Ltd.