HYET3 Series Two-section Type PC-level Automatic Transfer Switching Equipment
Installation and Operation Instruction
Please read the instruction carefully before installing and using the product, and keep it for future reference.

## Product Certificate

This product has passed the inspection and meets the requirements of GB/T14048.11, and therefore is allowed to leave the factory.

07
Date of inspection: See the product or packaging.

## HUANYU HIGH-TECH CO., LTD.

# HYET3 Series Two-section Type Instruction 

## Safety Notification

Please read the instruction carefully before the installation, handling, operation, maintenance and inspection, and install and use this product accurately according to the contents in the instruction.

## A Danger:

- Do not operate the dual-power automatic transfer switch with wet hands;
- Do not touch the conductive parts in use;
- Ensure that the product is not charged during maintenance;
- Do not test the product by short circuit.


## A Attention:

- Installation, maintenance and service shall be carried out by qualified personnel;
- Please confirm whether the working voltage, rated current, frequency and characteristics of the product meet the working requirements before use;
- The product parameters shall be adjusted according to the product instruction and the on-site usage;
- If the manual operation is required during maintenance, you must enter the manual mode and use the matching handle;
- If it's required to test the insulation resistance or power frequency withstand voltage, you must first disconnect the electronic elements (including the controller) between the current circuits, otherwise the product performance will be damaged;
- In the cases of product damage or abnormal voice when unpacking, stop using the product immediately and contact the supplier;
- When the product is scrapped, please dispose of the product waste properly. Thank you for your cooperation.


## I. Overview

- The HYET3 Automatic Transfer Switching Equipment (hereinafter referred to as "switch") is a switch that can continue to supply the power in an emergency. The switch consists of a load switch (ATSE without fuse or current tripping) and an intelligent controller. With the latest microcomputer control system as the core, it adopts electromagnetic compatibility design, which has strong anti-interference and can be stable and reliable during long-term continuous work. Equipped with LEDILCD display, it provides a friendly human-machine interface for users. The intelligent control system has highly intelligent functions such as detection, warning and feedback, which is an ideal mechatronic new automatic transfer switching equipment.
- This product complies with GB/T 14048.11-2016 Low-voltage Switchgear and Controlgear - Part 6-1: Multiple Function Equipment: Automatic Transfer Switching Equipment


## II. Scope of Application

- This switch is suitable for $50 / 60 \mathrm{~Hz}$ automatic transfer switching equipment with rated voltage below AC 400 V and rated current below 1,250 A. The switch can realize automatic or manual transfer between common (I) power supply and standby (II) power supply. The main or standby power supply can be power grid, generator or storage battery, etc., which is determined by the user. When the state of the switch is automatically transferred, unattended automatic operation can be realized. This switch is suitable for users with special or first-class load specified by the state, such as high-rise buildings, posts and telecommunications, coal mines and ships, industrial assembly lines, healthcare, military equipment, airports, fire control, metallurgy, chemical industry, textiles, petroleum and other important places where power failure is not allowed.


## III. Normal Operating Conditions

- The ambient temperature shall be $-5^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$, and the average temperature within 24 hours shall not exceed $+35^{\circ} \mathrm{C}$. The relative humidity at the highest temperature of $+40^{\circ} \mathrm{C}$ shall not exceed $50 \%$, and a higher relative humidity is allowed at a lower temperature. For example, $90 \%$ humidity at $+20^{\circ} \mathrm{C}$, but condensation may occur due to temperature change, which shall be considered.
- The altitude of the installation location shall not exceed $2,000 \mathrm{~m}$, and the category shall be Class IV.
- The inclination shall not be more than $\pm 23^{\circ} \mathrm{C}$.
- The contamination grade shall be Grade 3.
- If the above conditions cannot be met, please consult the manufacturer when ordering.


## IV. Model Description

Number of switch poles: 2P, 3P, 4P

| Type of switch controller display: Type A (LED), Type B |
| :--- |
| (LED digital display tube), Type C (LCD) |
| Type of switch: Type II (two-section), Type III (three-section) |
| Shell frame level current (A): 63, 125, 250, 630, 800, 1, 250 |


| Design number |
| :--- |
| Automatic transfer switching equipment |

Enterprise code

## V. Structural Features and Functions

- For the HYET3 (main and standby) Automatic Transfer Switching Equipment, the switch is driven electromagnetically, the main circuit contacts are of dynamic and static structures, and the moving contacts are of V-shape design. Due to its
superior structure, it can be interlocked electrically and mechanically at the same time, thus ensuring that the main and standby power supplies will not be switched on at the same time, and that the common and standby power supplies work reliably and do not interfere with each other. The control power supply of the switch is from the AC 220 V main and standby power supplies (without additional control current), which has a remarkable energy-saving effect. The switch has the electrical or mechanical closing instruction, and it can also provide customers with normally open and normally closed passive contacts for other purposes.
- The intelligent controller simultaneously provides many functions such as voltage loss, undervoltage, overvoltage, transfer delay control, generator signal control, and feedback signal, and has strong anti-interference ability.
- It has three transfer modes including automatic charge and automatic recovery, automatic charge without automatic recovery, and mutual standby.
- The two-section switch has two stable working positions: common power supply closing, standby power supply opening; and common power supply opening, standby power supply closing.
- Simple and convenient installation.
- Manual transfer can be carried out with special handle in the manual state.
VI. Two-section Product Manual Operation Method
- Common (I) power input method: When the switch is in standby (II) power input, press the handle down in the direction indicated by the arrow, and the common (I) switch status window on the right side is displayed as ON , which is common (I) power input.
- Standby (II) power input method: When the switch is in common (I) power input, press the handle down in the direction indicated by the arrow, and the standby (II) switch status window on the right side is displayed as ON, which is standby (II) power input.
- Attention: Do not operate manually with the handle when the switch is in the automatic state.
VII. Technical Parameters

| Name | Model | $\begin{gathered} \text { HYET3 } \\ -63 \end{gathered}$ | $\begin{gathered} \text { HYET3 } \\ -125 \end{gathered}$ | $\begin{gathered} \text { HYET3 } \\ -250 \end{gathered}$ | $\begin{gathered} \text { HYET3 } \\ -630 \end{gathered}$ | $\begin{gathered} \text { HYET3 } \\ -800 \end{gathered}$ | $\begin{gathered} \text { HYET3 } \\ -1250 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use category |  | AC-33B |  |  |  |  | AC-33iB |
| Rated working voltage $\mathrm{U}_{\mathrm{e}}$ |  | $\begin{gathered} \hline \mathrm{AC} 230 \mathrm{~V}(2 \mathrm{P}) / \mathrm{AC} 400 \\ \mathrm{~V}(3 \mathrm{P} / 4 \mathrm{P}) \end{gathered}$ |  |  | AC 400 V |  |  |
| Rated insulation voltage $\mathrm{U}_{\mathrm{i}}$ |  | AC 800 V |  |  |  |  |  |
| Rated impact withstand voltage $\mathrm{U}_{\mathrm{imp}}$ |  | 8 kV |  |  |  |  |  |
| Rated limited short-circuit current $\mathrm{I}_{\mathrm{q}}$ |  | 100 kA |  |  | 120kA |  |  |
| Service life | Mechanical | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 5,000 |
|  | Electrical | 1,500 | 1,500 | 1,500 | 500 | 500 | 500 |
| Number of poles |  | 2 | 2 | 2 | 1 | 1 | 1 |
|  |  | 3 | 3 | 3 | 3 | 3 | 3 |
|  |  | 4 | 4 | 4 | 4 | 4 | 4 |
| Operation cycle (sec/time) |  | 30 s | 30 s | 30 s | 30 s | 60 s | 60 s |
| Switching time |  | 0-255 s |  |  |  |  |  |

## VIII. Two-section Switch Outline and Installation Dimensions

8.1 Outline and installation dimensions of the HYET3-63~630AF Switch
8.1.1 Type $A$ and $B$ outline and installation dimensions


|  | Outline dimension |  |  |  |  |  | Installation dimension |  |  |  |  | opper bar imension |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | L |  |  | W | W2 | H | L1 |  |  | W1 | 4-Ф | L2 | T | P | $\Phi$ |
|  | 2P | 3P | 4P |  |  |  | 2P | 3P | 4P |  |  |  |  |  |  |
| YET3-63IIA/B | 170 | 194 | 218 | 195 | 168 | 112 | 156 | 180 | 204 | 152 | 7 | 12 | 2 | 24 | 6.5 |
| HYET3-125IIA/B | 180 | 210 | 240 | 195 | 168 | 112 | 166 | 196 | 226 | 152 | 7 | 15 | 2.5 | 30 | 8.5 |
| HYET3-250IIA/B | 192 | 228 | 264 | 195 | 168 | 112 | 178 | 214 | 250 | 152 | 7 | 20 | 4 | 36 | 8.5 |
| HYET3-630IIA/B | 297 | 357 | 417 | 284 | 226 | 138 | 276 | 336 | 396 | 206 | 9 | 40 | 5 | 60 | 13 |

8.1.2 Type C outline and installation dimensions


|  | Outline dimension |  |  |  |  |  |  | Installation dimension |  |  |  |  |  | Copper bar dimension |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | L |  |  | W | W2 | W4 | H | L1 |  |  | W1 | W3 | 4-Ф | L2 | T | P | Ф |
|  | 2P | 3P | 4P |  |  |  |  | 2P | 3P | 4P |  |  |  |  |  |  |  |
| HYET3-63IIC | 256 | 280 | 304 | 195 | 168 | 170 | 112 | 242 | 266 | 290 | 152 | 152 | 7 | 12 | 2 | 24 | 6.5 |
| HYET3-125IIC | 266 | 296 | 326 | 195 | 168 | 170 | 112 | 252 | 282 | 312 | 152 | 152 | 7 | 15 | 2.5 | 30 | 8.5 |
| HYET3-250IIC | 278 | 314 | 350 | 195 | 168 | 170 | 112 | 264 | 300 | 336 | 152 | 152 | 7 | 20 | 4 | 36 | 8.5 |
| HYET3-630IIC | 388 | 449 | 510 | 284 | 226 | 226 | 143 | 368 | 429 | 490 | 206 | 206 | 9 | 40 | 5 | 60 | 13 |

8.2 Outline and installation dimensions of the HYET3-800~1250AF Switch


|  | Outline dimension |  |  |  | Installation dimension |  |  |  |  |  | Copper bar dimension |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | L |  |  |  | L1 |  | W1 |  | In fron of theboard | $\begin{array}{\|c\|c\|c} \text { Behind } \\ \text { the } \\ \text { board } \end{array}$ | A | B | L2 | T | T1 | P |  |
|  | 3P | 4P | W | H | 3P | 4P |  |  |  |  |  |  |  |  |  | A-B phase C-N phase | B-C phase |
|  | 405 | 470 | 390 | 210 | 373 | 438 | 358 | 14 | 164 | 50 | 60 | 117 | 30 | 12 | 15 | 65 | 65 |
| HYET3-1250AF | 450 | 530 | 390 | 250 | 418 | 498 | 358 | 14 | 164 | 90 | 58 | 117 | 50 | 12 | 15 | 80 | 80 |

8.3 Outline and installation dimensions of the HYET3-63~1250AF/C Split Controller


Controller mounting hole: 130*75
IX. Two-section Switch Structure and Function Description of Controller Keys and Indicator Lights
9.1 HYET3-63~630AF/A, B, C controller panels and switch structures


Structure of Type $A$ and $B$ switches

9.2 HYET3-800~1250/A, B, C controller panels and switch structure

Type A Controller

Type B Controller



## Structure of Type A, B, C switches

(6) DIP switch (15) Digital display tube (17) Common (I) power supply opening/closing indicator window (18) Standby (II) power supply opening/closing indicator window 19 Common (I) power supply incoming port (20) Standby (II) power supply incoming port (21) Load outgoing port (22) Arc-extinguishing chamber (23) Grounding screw (24) Handle operating shaft (25) 3P neutral wire access terminal (27) LCD (liquid crystal display) (28) Fuse (29) User external port indicator (30) Controller
9.3 (26) Signal description of Type A and B generators


Signals of the generator: NC: Normally closed wiring port of the generator COM: Common wiring port of the generator NO: Normally open wiring port of the generator
9.4 Function description of the Type A panel indicator light
（1）Iue：Common（I）power indication；（I）power supply is normal when the indicator light is normally on，and（I）power supply fails when the indicator light flashes；
（2）Ion：Common（I）power supply closing instruction；
（3）Ilue：Standby（II）power indication；（II）power supply is normal when the indicator light is normally on，and（II）power supply fails when the indicator light flashes；
（4）Ilon：Standby（II）power supply closing instruction；
（5）Operation／Test indicator light：Normally on light indicates that the switch operates under the automatic control；Flashing light indicates that the switch is in the test transfer state；
（10）Automatic indicator light is on：The switch operates in the automatic control working mode of the controller；
（11）Manual indicator is on：The switch operates in manual（manual handle）operation mode；
（12）Fault indicator light：Normally on light indicates that the switch transfer fails（the switch is not in the same position as the controller，and the switch cannot be transferred normally）．
9．5 Function description of Type A panel keys
（6）DIP switch：Set the transfer mode and the transfer delay time；
（7）Test key：Press the test key each time to perform the test transfer between the common（I）power supply and the standby（II）power supply，and the（operation／test） indicator light on the switch panel flashes；
（8）Reset key：In the test transfer function state，press the reset key to restore the switch to the automatic operation transfer state，and the（operation／test）indicator light does not flash；
（9）Automatic／manual key：Press the（automatic／manual）key each time to select the working mode of the controller，and the corresponding working mode （automatic／manual）indicator light on the switch panel lights up．
9．6 Function description of Type B panel indicator light
（1）Iue：Common（I）power indication；（I）power supply is normal when the indicator light is normally on，and（I）power supply fails when the indicator light flashes；
（2）Ion：Common（I）power supply closing instruction；
（3）Ilue：Standby（II）power indication；（II）power supply is normal when the indicator light is normally on，and（II）power supply fails when the indicator light flashes；
（4）Ilon：Standby（II）power supply closing instruction；
（5）Operation／Test indicator light：Normally on light indicates that the switch operates under the automatic control；Flashing light indicates that the switch is in the test transfer state；
（10）Automatic indicator light is on：The switch operates in the automatic control working mode of the controller；
（11）Manual indicator light is on：The switch operates in manual（manual handle） operation mode；
（12）Setting indicator light：The indicator lights up when the controller is in the setting state．
Transfer fault indication：＂Eトトー＂symbol displayed on the digital display tube indicates that the switch transfer fails（the switch is not in the same position as the controller，and the switch cannot be transferred normally）．
9．7 Function description of Type B panel keys
(7) Test key: Press the test key each time to perform the test transfer between the common (I) power supply and the standby (II) power supply, and the (operation/test) indicator light on the switch panel flashes;
(8) Reset key: In the test transfer function state, press the reset key to restore the switch to the automatic operation transfer state, and the (operation/test) indicator light does not flash; (It is used as the state reset in the normal state and saved as the setting parameter in the setting state);
(9) Manual/automatic (+) key: Press the (manual/automatic) key each time to select the working mode of the controller, and the corresponding working mode (manual/automatic) indicator light on the switch panel lights up; (It is used as the manual or automatic working mode in the normal state, and used as the function key to increase setting parameters in the setting state);
(13) Setting key: Enter the function setting of the controller, and the setting indicator light on the switch panel lights up in the setting state;
(14) Inquiry (-) key: It is used as inquiry in the normal state (and used as the function key to decrease setting parameters in the setting state).
9.8 Function description of Type $C$ panel keys
(7) Test key (ess): Press the test key each time to perform the test transfer between the common (I) power supply and the standby (II) power supply, and the word "Test" is displayed in the working status bar on the LCD screen;
(8) Reset key $\otimes$ : In the test transfer function state, press the reset key to restore the switch to the automatic operation transfer state; (It is used as the state reset in the normal state and saved as the setting parameter in the setting state)
(9) Manual/automatic key $\Psi$ : Press the (manual/automatic) key each time to select the working mode of the controller, and the word "Manual/Automatic" is displayed in the working status bar on the LCD screen; (It is used as the manual or automatic working mode in the normal state, and used as the "Add" function key to set parameters in the setting state.)
(13) Setting key : Enter the function setting of the controller;
(14) Inquiry key -: It is used as inquiry in the normal state (and used as the "Minus" function key to set parameters in the setting state).
9.9 Parameter description of Type C LCD panel

| la 220 V | Ila 220 V |
| :--- | :--- |
| Ib 220 V | llb 220 V |
| Ic 220 V | Ilc 220 V |
| Working state: | Manual |
| Switch position: | I Closed |

9.9.1 la lb Ic: Common power supply voltage indication. The numbers refer to the detected voltages of A, B, C phases respectively.
9.9.2 Ila IIb IIc: Standby power supply voltage indication. The numbers refer to the detected voltages of A, B, C phases respectively.
9.9.3 Switch state: Display the switch state.
(1) "Manual" means that the switch operates in the manual (manual handle) operation mode.
(2) "Automatic" means that the switch is automatically controlled by the controller.
(3) "Test" means that the switch is in the test transfer state.
9.9.4 Switch position: Display the switch closing position and transfer fault.
(1) "(I) Closed" refers to common (I) power supply closing.
(2) "(II) Closed" refers to standby (II) power supply closing.
(3) When "ERROR" is displayed, it means that the switch transfer fails, that is, the switch and the controller are not in the same position, and the switch cannot be transferred normally).
9.10Description of user external ports
9.10.1 (29) HYET3-63~630/Type A, B user external ports


1,2 wiring ports: Common (I) power supply closing instruction, passive contact output 3, 4 wiring ports: Null (two-section products have no fire control feedback function)
5, 6 wiring ports: Standby (II) power supply closing instruction, passive contact output
9.10.2 (29) HYET3-63~630/Type C user external ports


1, 2 wiring ports: Common (I) power supply closing instruction: passive contact output 3, 4 wiring ports: Null (Note: Two-section products have no fire control feedback function)
5, 6 wiring ports: Standby (II) power supply closing instruction, passive contact output 7, 8,9 wiring ports: Generator signal: NC, normally closed wiring port of the generator COM: Common wiring port of the generator
NO: Normally open wiring port of the generator
10, 11 wiring ports: 485 communications A, B
12, 13 wiring ports: Null (Note: Two-section products have no fire control feedback function)
9.10.3 (29) HYET3-800~1250/Type A, B user external ports


1, 2 wiring ports: Common (I) power supply closing instruction, passive contact output 3, 4 wiring ports: Standby (II) power supply closing instruction, passive contact output $5,6,7$ wiring ports: Generator signal: NC, normally closed wiring port of the generator COM: Common wiring port of the generator NO: Normally open wiring port of the generator

### 9.10.4 (29) HYET3-800~1250/Type C user external ports



1, 2 wiring ports: Common (I) power supply closing instruction, passive contact output 3, 4 wiring ports: Standby (II) power supply closing instruction, passive contact output 5 , 6 wiring ports: 485 communications $A$, $B$
7, 8,9 wiring ports: Generator signal: NC, normally closed wiring port of the generator COM: Common wiring port of the generator NO: Normally open wiring port of the generator

## X. Two-section Controller Function Parameter Setting and Query

10.1Function description of the controller:

| Controller | Type A | Type B | Type C |
| :---: | :---: | :---: | :---: |
| Working electric source of controller | AC 220 V |  |  |
| Manual control | Provided |  |  |
| Transfer mode | Automatic charge a and automatic cha | d automatic recovery, e without automatic very | Automatic charge and automatic recovery, automatic charge without automatic recovery, and mutual standby |
| Power supply monitoring: Voltage loss, undervoltage and overvoltage | Common: Phas Ph | A, B, C; standby: A | Common: Phases A, B, C; standby: Phases A, B, C |
| Transfer delay | Fault confirmation delay: 0-5 s Return delay: 0-5 s | Fault confirmation delay: 0-90 s <br> Return delay: 0-90 s | Fault confirmation delay: 0-90 s <br> Return delay: 0-90 s |
| Generator signal | Passive contacts: one opened and one closed |  |  |
| 485 communication | --- |  | Provided |

10.2 Parameter setting of controllers
10.2.1 Parameter setting of the Type A controller

| $O N$ | DIP switch function details |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fault confirmation delay | 1 | OFF | OFF | ON | ON |
|  | 2 | OFF | ON | OFF | ON |
|  | Duration | 1s | 3s | 5s | Os |
| Return confirmation delay | 3 | OFF | OFF | ON | ON |
|  | 4 | OFF | ON | OFF | ON |
|  | Duration | 1s | 3s | 5s | Os |
| Transfer mode settings | 5 | OFF |  | ON |  |
|  | Mode | Automatic charge and automatic recovery |  | Automatic charge and automatic recovery |  |

10.2.2 Parameter setting of the Type B controller
(1) Press the "Set" key to enter the setting menu.
(2) Press the "Set" key to select the functional parameters to be changed.
(3) Press "+/-" key to modify this function data. If other functional parameters need to be reset, repeat steps 2-3.
(4) Press the "Reset" key to save the data and exit the setting interface. Before the setting process data is saved, set the timeout exit time to 30 s . If no system key operation is performed within 30 s , the system will automatically exit the setting according to the timeout operation, and will not save the parameters set this time.
10.2.3 Parameter setting of the Type C controller:
(1) Press and hold the "Set" key for 3 s to enter the setting interface.
(2) Press the "+/-" key to select the setting parameters to be changed.
(3) Press the "Set" key to enter this function parameter setting.
(4) Press "+/-" key to modify the data.
(5) Press the "Set" key to exit this functional parameter setting. If other functional parameters need to be reset, repeat steps $2-5$.
(6) Press the "Reset" key to save the data and exit the setting interface. Before the setting process data is saved, set the timeout exit time to 30 s . If no system key operation is performed within 30 s , the system will automatically exit the setting according to the timeout operation, and will not save the parameters set this time.

| Type B code | Functions | Setting range |  |  | Factory value |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Type A | Type B | Type C | $\begin{gathered} \hline \text { Type } \\ \text { A } \end{gathered}$ | $\begin{gathered} \hline \text { Type } \\ \text { B } \end{gathered}$ | Type C |
| ப | Overvoltage | $\begin{gathered} 265 \mathrm{~V}, \\ \text { nonadjustable } \end{gathered}$ | $250 \mathrm{~V}-300 \mathrm{~V}$, adjustable |  | 265 V |  |  |
| $\Pi$ | Undervoltage | $\begin{gathered} 170 \mathrm{~V}, \\ \text { nonadjustable } \end{gathered}$ | $130 \mathrm{~V}-200 \mathrm{~V}$, adjustable |  | 170V |  |  |
| 相 | Fault confirmation delay (Type C: T1) | The settings below can be available: 0 $\mathrm{s} / 1 \mathrm{~s} / 3 \mathrm{~s} / 5 \mathrm{~s}$ | $0 \mathrm{~s}-90 \mathrm{~s}$, adjustable |  | 1s |  |  |
| ZL | Return confirmation delay (Type C: T3) | The settings below can be available: 0 $\mathrm{s} / 1 \mathrm{~s} / 3 \mathrm{~s} / 5 \mathrm{~s}$ | $0 \mathrm{~s}-90 \mathrm{~s}$, adjustable |  | 1s |  |  |
| FF | Transfer mode | The 5th digit of the DIP switch: OFF means automatic charge and automatic recovery ON means automatic charge without automatic recovery | 0 means automatic charge and automatic recovery 1 means automatic charge without automatic recovery | Automatic charge and automatic recovery Automatic charge without automatic recovery Mutual standby | OFF | 0 | Automatic charge and automatic recovery |

10.3 Parameter query of the controller

When patrolling the parameters set by the controller, the user can directly press the query key on the panel to check the set parameters without entering the system settings.
10.3.1 Type B displays the parameters (as shown in the table below) in turn by pressing the query key each time. You can press the reset key to terminate the
query, and will automatically exit the query interface if you stay in the query state for more than 3 seconds.
10.3.2 Type C displays the parameters (as shown in the table below) by pressing the query key. You can press the reset key again to terminate the query, and the query interface will automatically exit if you stay in the query state for more than 30 seconds.

| Function description |  |  | Display of Type B digital display tube |  | Display of Type C controller LCD |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Measured dynamic value | lue indicator light is on | Phase A voltage of common (I) power supply | $\square$ | 220 V | You can perform query without entering the LCD home page of the query interface. <br> See 9.9.1 and 9.9.2 for details <br> 9.9.1 <br> 9.9.2 |
|  |  | Phase B voltage of common (I) power supply | $\square$ | 220 V |  |
|  |  | Phase C voltage of common (I) power supply | $L$ | 220 V |  |
|  | Ilue indicator light is on | Phase A voltage of standby (II) power supply | П. | 220 V |  |
|  |  | Phase B voltage of standby (II) power supply | 1 | 1 |  |
|  |  | Phase C voltage of standby (II) power supply | 1 | 1 |  |
| Controller program setting parameters |  | Overvoltage | $\sqcup$ | 265 V | Overvoltage: 265 V |
|  |  | Undervoltage | $\Pi$ | 170 V | Undervoltage: 170 V |
|  |  | Fault confirmation delay | IL | 1s | T1: 1 s |
|  |  | Return confirmation delay | コ1 | 1s | T3: 1s |
|  |  | Transfer mode | FF | 0 | Transfer mode: Automatic charge and automatic recovery |

## XI. Considerations in Use and Maintenance

- This product can work reliably at $85 \%-110 \%$ rated working voltage.
- When installing and wiring the product, the user shall pay strict attention to the N -pole sign at the incoming and outgoing line terminals (the neutral wire shall be connected to the neutral wire terminal for the three-pole product). The neutral wire of the four-pole product shall not be shared, and the product shall be well grounded to ensure the safety of power supply and use.
- Check whether the contact parts of all electrical appliances are reliable and pressed, and whether the fuses are in good condition.
- After the power is turned on, the user can set the system based on the needs, and can also put it into use according to the factory default value of the product.
- After the above installation and commissioning, put the controller system in the "Automatic" state and put it into use: When the switch needs to be transferred manually, the controller system shall be placed in the "Manual" state before the manual operation can be carried out with the special handle provided with the product.
- During the use of the product, a general inspection shall be conducted regularly (for example, every three months), and the transfer power supply shall be tested once to check whether the product is running normally.
- In general maintenance or repair of the product, it is necessary to ensure that the product is not charged. After the maintenance and repair, restore the dual power controller to the automatic state.
XII. Transfer Fault Analysis and Elimination

| External environmental conditions | No-transfer fault | Cause for no-transfer fault | Fault elimination |
| :---: | :---: | :---: | :---: |
| The common power supply is abnormal, and the switch is not transferred to the standby power supply side | The manual light is on | The switch is in the manual state | Press the manual and automatic keys to make the switch in the automatic state |
|  | The test/operation light flashes | The switch is in the test state | Press the reset key |
|  | The $I_{u e}$ light is not on, and no standby voltage is provided; Type C II voltage loss | The standby incoming line has no power supply | Check the incoming line power supply |
|  |  | The incoming wire is not connected to the neutral wire | Connect the neutral wire |
|  |  | The incoming screw is not tightened | Tighten the screw |
|  | The Ilue light flashes, and the standby power supply fails; Type C II overvoltage and undervoltage | The overvoltage protection/program setting overvoltage protection value is too low | 1. Check the incoming line power supply <br> 2. Reset the program overvoltage and undervoltage protection values <br> 3. Connect the neutral wire |
|  |  | The undervoltage protection/program setting overvoltage protection value is too high |  |
|  |  | The incoming wire is not connected to the neutral wire |  |
|  | The above conditions are normal | The setting transfer delay time is too long | Adjust the transfer delay time |
|  |  | The fuse is blown | Replace the fuse |
| The common power supply returns to normal, and the switch does not transfer from the standby power supply side to the common power supply side | The manual light is on | The switch is in the manual state | Press the manual and automatic keys to make the switch in the automatic state |
|  | The test/operation light flashes | The switch is in the test state | Press the reset key |
|  | The $I_{\text {ue }}$ light is not on, and no common voltage is provided; Type C I voltage loss | The common incoming wire has no power supply | Check the incoming line power supply |
|  |  | The incoming wire is not connected to the neutral wire | Connect the neutral wire |
|  |  | The incoming screw is not tightened | Tighten the screw |
|  | The $I_{u e}$ light flashes, and the common power supply fails; Type C I overvoltage and undervoltage | The overvoltage protection/program setting overvoltage protection value is too low | 1. Check the incoming line power supply <br> 2. Reset the program overvoltage and undervoltage protection values |
|  |  | The undervoltage protection/program setting overvoltage protection value is too high |  |


| External environmental conditions | No-transfer fault | Cause for no-transfer fault | Fault elimination |
| :---: | :---: | :---: | :---: |
|  |  | The incoming wire is not connected to the neutral wire | 3. Connect the neutral wire |
|  | The above conditions are normal | The transfer mode is set to automatic charge without automatic recovery and mutual standby | Reset the transfer mode <br> Set the mode to automatic charge and automatic recovery |
|  |  | The setting transfer delay time is too long | Adjust the transfer delay time |
|  |  | The fuse is blown | Replace the fuse |
|  | In summary, if the switch fails to transfer normally, notify the after-sales service personnel of the supplier or replace the switch. |  |  |
|  | If the fault light is on, Type B digital display tube displays $E$ - -- , or Type $C$ LCD interface displays ERROR, and the normal transfer cannot be performed by pressing the reset key, inform the after-sales service personnel of the supplier or replace the switch. |  |  |

## XIII. Company Commitment

On the premise that users abide by the use and storage conditions and that the product seals are intact, if the product is damaged or cannot be used normally due to manufacturing quality problems within 24 months from the production date of the product, the company will be responsible for the repairing or replacement free of charge. If the warranty period expires, users shall pay for the repair. However, if the damage is caused by the following circumstances, the fees for repair shall still be charged even within the warranty period:
(1) Improper use, maintenance and safekeeping.
(2) Self-modification and improper maintenance.
(3) Damage caused by falling and installation after purchase.
(4) Force majeure such as earthquake, fire, lightning stroke, abnormal voltage and secondary disasters.
In case of any questions, please contact the dealer or our customer service department.

Address: Wenzhou Bridge Industrial Zone, Yueqing City, Zhejiang Province
Service hotline: 400-887-5757
Switchboard: 0577-62889999
Fax: 0577-62885588
Website: www.huyu.com.cn

