



使用說明書

User's manual

KBL系列穩壓器

KBL series voltage regulator

使用前請仔細閱讀本說明書

Please read this manual carefully before use and keep it properly

前言

Preface

尊敬的用戶：

感謝您選擇和使用金保公司的電源產品!為了您正確使用您的电源产品，請在电源安裝和使用前仔細閱讀本說明書，并妥善保管以供日后參考。

感謝您選擇和使用金保的電源產品，我們承諾您金保电源產品需要安裝或維護時，將為您提供成套增值服務：

1. 7*24小時的諮詢服務
2. 售前及售後服務
3. 提供專業電源解決方案
4. 提供送貨上門與安裝的服務
5. 產品技術培訓，以延長產品壽命，節約能源
6. 預約現場技術救援服務
7. 免費定期巡查保養服務
8. 保外維修改裝服務

歡迎您對我們的服務進行監督，一旦我們的服務承諾未執行到位，請撥打全國統一客服電話400-6480-668進行投訴。

Dear user

Thank you for choosing and using the power products of KingBao company! For your correct use of this regulator Please read this manual carefully before installing and using the product and keep it properly for future reference Test.

Thank you for choosing and using KingBao's power supply products. We promise that you need KingBao's voltage regulator products During installation or maintenance, you will be provided with a complete set of value-added services:

1. 7 * 24-hour consultation service
2. Pre sales and after-sales service
3. Provide professional power solutions
4. Provide door-to-door delivery and installation services
5. Product technical training to prolong product life and save energy
6. Make an appointment for on-site technical rescue service
7. Free regular inspection and maintenance services
8. Warranty repair and modification services

You are welcome to supervise our service. Once our service commitment is not implemented in place, please Call the national unified customer service hotline 400-6480-668 to complain.

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獲取說明書

Obtain instructions

1. 通過產品銘牌上的二維碼掃碼

Scan the code through the QR code on the product nameplate

**工業級全自動交流穩壓器**
KING BAO Industrial automatic AC voltage regulator

型號 (Model):	KBL-15	MADE IN CHINA
容量 (Capacity):	15KVA	JB/T 8749.8-2014
相數 (Phase):	3Φ4W	 說明書掃碼 Manual scanning
頻率 (Frequency):	50/60Hz	
輸入電壓 (Input):	380V±15%	
輸出電壓 (Output):	380V±2%	
絕緣等級 (Class):	F級	
物料編號 (MN):	W. KBL. 002-001	
日期編號 (SN):	DW210708-0004	

金保機電科技有限公司 Hotline: 400-6480-668
KINGBAO ELECTROMECHANICAL TECHNOLOGY CO., LTD Sales line: 188-1908-5550

掃一掃獲取說明書

Scan the instructions

2. 通過網站小程序找到相應產品查看說明書

Find the product specification through the website applet



注意事項

Be careful

▲注意

為了保證使用安全，避免對您和他人造成傷害和財產損失，請您務必遵守以下安全注意事項，不遵守安全警告而錯誤使用可能導致事故發生。

be careful

In order to ensure the safety of use and avoid injury and property loss to you and others, you must abide by the following safety precautions. Improper use without complying with the safety warning may lead to accidents.

⊗ 表示【禁止】的內容

Indicates the content of prohibited



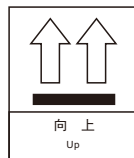
- 電源上方請勿壓置重物，以免造成人體損傷及設備損壞。
- 電源禁止翻轉，請勿置本機於不平或傾斜之處。
- 電源避免放置陽光直射、雨淋或潮濕之處。
- 設備周邊禁止放置易燃易爆及含有腐蝕性的液體和物品，以免造成設備損壞和發生重大火災。
- 遇暴風雨或閃電、打雷時，如無良好的避雷措施，請先將變壓器關掉。
- 請遠離火源及高溫，以防機器溫度過高。
- Do not place heavy objects above the power supply to avoid human injury and equipment damage.
- Do not turn the power supply. Do not place the machine on an uneven or inclined place.
- The power supply shall be kept away from direct sunlight, rain or humidity.
- Flammable, explosive and corrosive liquids and articles are forbidden to be placed around the equipment to avoid equipment damage and major fire.
- In case of storm, lightning or thunder, if there is no good lightning protection measures, please turn off the transformer first.
- Please keep away from fire source and high temperature to prevent the machine from overheating.

注意事項

Be careful

❗ 表示【強制執行】的內容

Indicates the content of enforcement



- 本電源需要強行接地使用。
- 當看到閃電警示標籤時，注意觸電。
- 當看到注意警示標籤時，注意看安全事項說明
- 施工時請按照電工法規實施，需要專業電工安裝。
- 請勿使用非原廠建議之配件，以免發生危險。
- 請勿置本機倒放、置於不平或傾斜之處。
- 為保持電源本身的散熱效果及正常運轉，請勿將散熱通風口堵塞，且機背至少離牆壁300mm以利於進風孔通暢。
- 在接入電源前，應先確定設備與電壓及容量規格，以避免造成貴重機器損壞，安裝輸入及輸出端子時，請按標示正確安裝，並確實鎖緊，避免接觸不良防止發生火災。
- 電源及電纜請勿超載使用，以防止觸電或造成火災。

- the power supply needs to be forcibly grounded.
- pay attention to electric shock when you see the lightning warning label.
- when you see the warning label, pay attention to the instructions of safety precautions
- construction shall be carried out in accordance with electrician regulations, and professional electricians are required for installation.
- do not use accessories not recommended by the original manufacturer to avoid danger.
- do not place the machine upside down, on an uneven or inclined place.
- in order to maintain the heat dissipation effect and normal operation of the power supply itself, do not block the heat dissipation vent, and the back of the machine shall be at least 300 mm away from the wall to facilitate the unobstructed air inlet.
- before connecting the power supply, the equipment, voltage and capacity specifications shall be determined to avoid damage to valuable machines. When installing the input and output terminals, please install them correctly according to the marks and lock them firmly to avoid poor contact and prevent fire.
- do not overload the power supply and cables to prevent electric shock or fire.

產品概述

Product overview

KBL系列工業級全自動交流穩壓器是金保結合國內電壓情況，中小型企業布線不專業的短板，研發的一款無零線輸入的三相穩壓器，當市電網絡電壓波動或者負載變動造成電壓波動時，當企業內部電網不規範時，本系列穩壓器能在不受零線干擾三相火線直接輸入，能自動調節，保持輸出電壓穩定。

本系列穩壓器可用于一切需要穩壓的精密設備，如激光機、數控加工中心、刀具磨床、中慢走絲、火花機、數控彈簧機、進口精密設備、印刷機、醫療器械、科研機構等等。

本穩壓器具有以下特點：

1. 穩壓精度高
2. 效率高
3. 電壓調節平穩
4. 能帶阻性、感性、容性負載
5. 能承受瞬間超載
6. 可長期連續工作
7. 具有輸出電壓過高過低多種報警功能
8. 穩壓器點地空間小

KBL series industrial grade full-automatic AC voltage regulator is a three-phase voltage regulator without zero line input developed by Jinbao in combination with domestic voltage conditions and unprofessional wiring of small and medium-sized enterprises. When voltage fluctuation is caused by voltage fluctuation of municipal power network or load change, and when the internal power grid of the enterprise is not standardized, this series of voltage regulator can directly input three-phase live line without interference of zero line, and can automatically adjust and maintain stable output voltage.

This series of voltage regulators can be used for all precision equipment requiring voltage stabilization, such as laser machine, CNC machining center, tool grinder, medium and slow wire walking, spark machine, CNC spring machine, imported precision equipment, printing press, medical equipment, scientific research institutions, etc.

The voltage regulator has the following characteristics:

1. High voltage stabilization accuracy
2. High efficiency
3. Stable voltage regulation
4. It can carry resistive, inductive and capacitive loads
5. It can withstand instantaneous overload
6. It can work continuously for a long time
7. It has multiple alarm functions of high and low output voltage
8. The space of voltage regulator is small

工作原理

Working principle

KBL系列穩壓器結構它由三相補償變壓器、三相調壓變壓器、傳動機構、電刷接觸系統、控制系統和箱體等組成。三相調壓變壓器圓盤式繞組外表面經磨光加工，去除絕緣，呈光滑的導體面，以便於電刷良好接觸；傳動機構由伺服電機、變速箱、碳刷總成組成；電刷接觸系統由壓力彈與碳刷組成，結構合理可靠；箱體採用封閉櫃式，體積小，散熱好，面板數顯儀錶醒目，精度高；控制系統採用集成電路（微電腦控制），控制功能強，功能完善，調節方便穩定可靠。

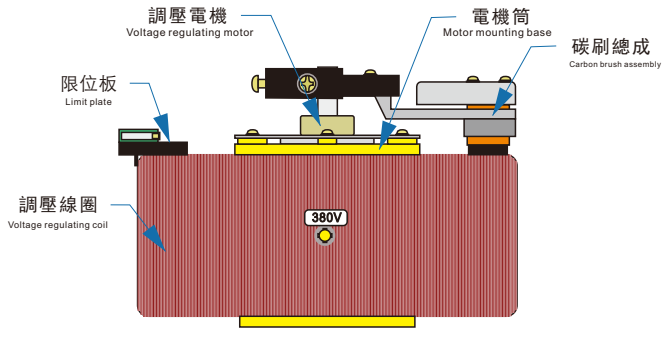
KBL系列穩壓器基本原理是當輸入電壓高于或者低于380V時，控制取樣電路會偵測到輸出電壓過高或者過低，系統會向調壓電機發出補償電壓命令，帶動碳刷改變調壓變壓器的匝數比，從而改變補償變壓器一次側輸入電壓，達到補償變壓器二次側的電壓補償V數，使輸出達到穩定380V的目的。

KBL series voltage regulator structure is composed of three-phase compensation transformer, three-phase voltage regulating transformer, transmission mechanism, brush contact system, control system and box. The outer surface of the disc winding of the three-phase voltage regulating transformer is polished to remove the insulation and form a smooth conductor surface for good contact with the brush; The transmission mechanism is composed of servo motor, gearbox and carbon brush assembly; The brush contact system is composed of pressure spring and carbon brush, with reasonable and reliable structure; The box body adopts closed cabinet type, with small volume, good heat dissipation, eye-catching panel digital display instrument and high precision; The control system adopts integrated circuit (microcomputer control), with strong control function, perfect function, convenient adjustment, stability and reliability.

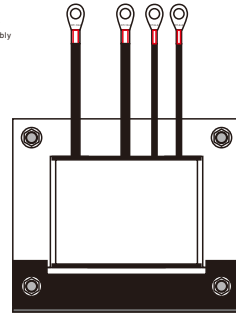
The basic principle of KBL series voltage regulator is that when the input voltage is higher or lower than 380V, the control sampling circuit will detect that the output voltage is too high or too low, and the system will send a compensation voltage command to the voltage regulating motor to drive the carbon brush to change the turn ratio of the voltage regulating transformer, so as to change the input voltage at the primary side of the compensation transformer, so as to compensate the voltage compensation V at the secondary side of the compensation transformer and stabilize the output at 380V.

工作原理圖

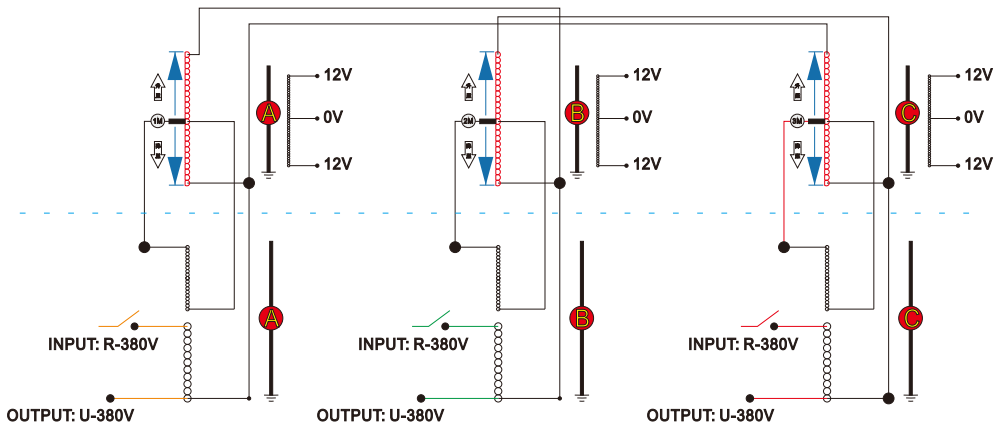
Working principle diagram



調壓變壓器
Regulating transformer



補償變壓器
Compensation transformer



KBL性能指標

KBL Performance index

相 數 (Phase) : AC 3P4W

頻 率 (Frequency) : 50/60Hz

輸入電壓 (Input) : 380V±15%

輸出電壓 (Output) : 380V±1.5%

穩壓精度 (Voltage stabilizing accuracy) : 1-5%可設置Settable

反應時間 (Reaction time) : 1 秒 Second

穩壓方式 (Voltage regulation mode) : 三相分調 Three phase shunting

连接组别 (Connection) : D/y.

功能特點 (Protection function) : 自動穩壓、輸出電壓過高\低報警、過載保護、短路保護

Automatic voltage stabilization, high / low voltage alarm, overload protection, short circuit protection

絕緣等級 (Glass) : F級

負載測試 (Load test) : EN-61558-2-4 , JEC-204.

耐壓測試 (Withstand voltage test) : 線圈與鐵芯之間AC 2500V 1分鐘無異常.

AC 2500V / min between coil and iron core is normal

溫 升 (temperature rise) : 滿負荷連續運轉下繞組與鐵芯在夏天的溫度 $\leq 70^{\circ}\text{C}$

Temperature of winding and iron core in summer under full load continuous operation ≤ 70

絕緣電阻 (Insulation resistance) : $\geq 5\text{M}\Omega$

抗電強度 (Electrical strength) : AC 3000V 1分鐘無異常 AC 3000V 1 minute no abnormality

工作效率 (Work efficiency) : $\geq 98\%$

超載能力 (Overload capacity) : 超額定負載100%運行1分鐘 100% load for 1 minute

波形失真 (Waveform distortion) : 无失真 No distortion

噪 音 (Noise) : 50dB 1米內 Within 1 meter

溫 度 (Temperature) : 存放溫度 $-20\sim 60^{\circ}\text{C}$, 工作溫度 $-10\sim 40^{\circ}\text{C}$

Storage temperature - $20 \sim 60^{\circ}\text{C}$, working temperature - $10 \sim 40^{\circ}\text{C}$

濕 度 (Humidity) : 30-90%无凝結 No condensation

防護等級 (Degree of protection) : Ip20

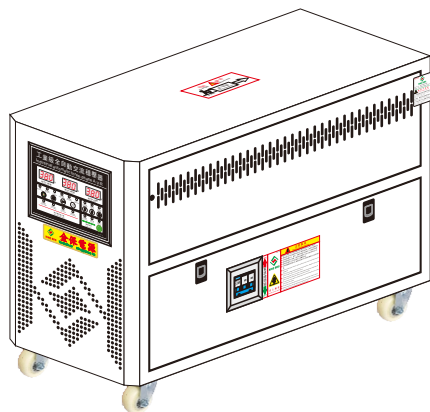
冷卻方式 (Cooling mode) : 干式風冷 Dry air cooling

設計壽命 (Design life) : 20 年 years

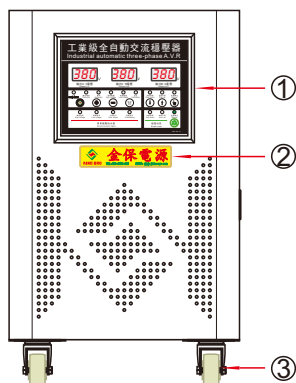
執行標準 (Executive standard) : JB/T 10089;Q/KB 2001;GB 4376-1984.

產品外觀介紹

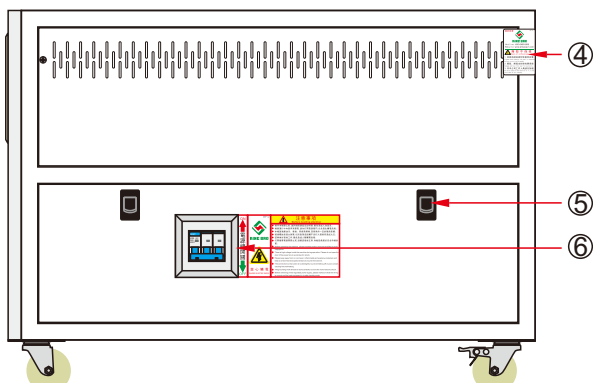
Product appearance introduction



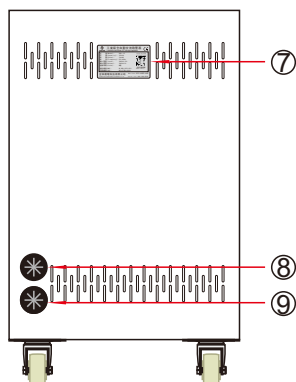
- ① 控制系統顯示區 Control system display area
- ② 品牌標籤 Brand label
- ③ 移動腳輪 Caster movement
- ④ 撕毀不保標籤 Tear up the non protective label
- ⑤ 安裝門板扣鎖 Install door panel buckle lock
- ⑥ 電源總開關 Main power switch
- ⑦ 產品規格銘牌 Product specification nameplate
- ⑧ 輸入電纜進線孔 Input cable hole
- ⑨ 輸出電纜進線孔 Output cable hole
- ⑩ 輸入輸出接線端子 Input and output terminals



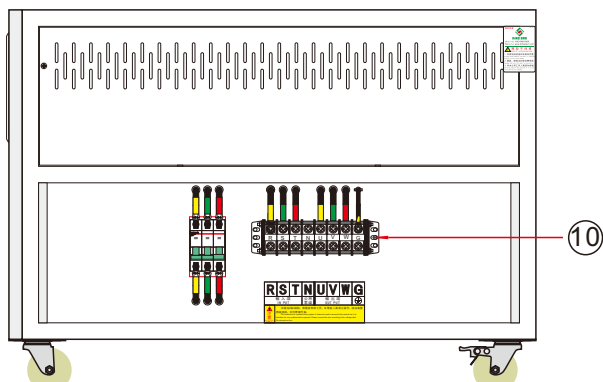
前視圖
Front view



右視圖
Right view



后視圖
Rear view



安裝視圖
Installation view

KBL容量規格參數表

KBL Capacity specification parameter table

容量 Capacity (kVA)	功率 Power (KW)	輸入電壓 Input voltage (V)	輸出電壓 Output voltage (V)	額定電流 Rated current (A)	電纜規格 Cable size mm ²	外觀尺寸 長L*寬W*高H (mm)	淨重 Net weight (Kg)
10kVA	8KW	380V±15	380V±2	15A	4芯 4mm ²	550*350*570	41
15kVA	12KW			22A	4芯 6mm ²		50
20kVA	16KW			30A	4芯 6mm ²	800*350*570	80
30kVA	24KW			45A	4芯 10mm ²		98
40kVA	32KW			60A	4芯 10mm ²		120
50kVA	40KW			75A	4芯 16mm ²	900*400*642	140
60kVA	48KW			91A	4芯 16mm ²		145
80kVA	64KW			121A	4芯 25mm ²		150

注意：外形尺寸、重量等僅供參考，產品更新后沒有及時通知請以實物為準。

Note: the overall dimension and weight are for reference only. If there is no timely notice after the product is updated, please take the real object as the standard.

訂貨須知：

1. 新客戶訂貨時需要說明自己的電網情況，是電壓過高還是過低，高低電壓值具體是多少，我方需要確認電壓範圍。
2. 老客戶訂貨時需要說明產品型號、輸入輸出電壓規格。
3. KBL系列為三相分調系統，如需要統調系統請說明。
4. 電網複雜有特殊要求請提出，可按要求定做。

Ordering instructions:

1. When ordering, new customers need to explain their own power grid situation, whether the voltage is too high or too low, and we need to confirm the voltage range.
2. Regular customers need to specify the product model, input and output voltage specification when ordering.
3. KBL series is a three-phase separate commissioning system. Please specify if a unified commissioning system is required.
4. The power grid is complex. Please put forward special requirements, which can be customized as required.

KBL系統功能

KBL System features

7大系統功能 7 features

自動穩壓 Automatic voltage stabilization

手動調壓 Manual voltage regulation

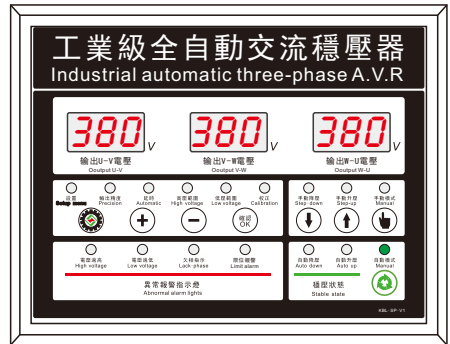
短路保護 Short circuit protection

高壓報警 High voltage protection

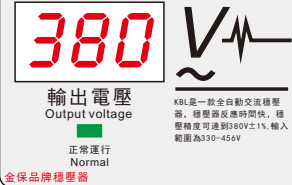
低壓報警 Low voltage protection

欠相報警 Under phase protection

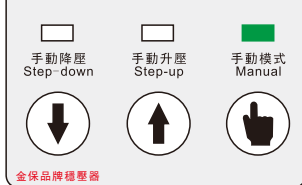
無N線工作 No n-line operation



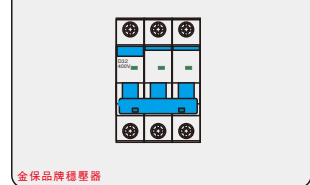
自动稳压功能 Auto voltage stabilizing



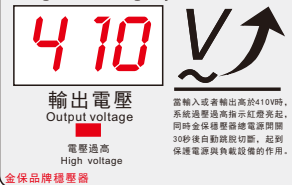
手动调压功能 Manual voltage regulation



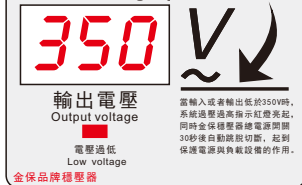
短路保护功能 Protection function



輸出高壓報警 High voltage protection



輸出低壓報警 Low voltage protection



輸出欠相報警 Under phase protection










無零線工作 No zero line operation



KBL系統設置








KBL system settings

系統用戶設置進入方式：

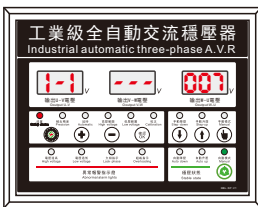
在面板為穩壓狀態時按一下面板上的“”鍵，滴的一聲后表示待輸入密碼進入，此時第一個顯示界面為1-1 --- 000，這是密碼解鎖畫面，這時需要按“”鍵改變右邊000為正確密碼后再緊接著按“”進入設置狀態，此時設置指示燈常亮，第一個設置界面顯示為輸出電壓設置界面2-1 --- 380，設置項目一共有9個界面，分別按“”鍵循序切換設置項目，當有設置項目需要進行修改時，請按“”與“”來進行修改，或者設置完成某個項目后直接按“”保存并退出。

9個設置界面解說如下：

System user setting entry mode:

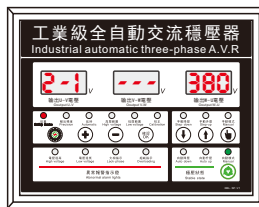
When the panel is in the voltage stabilizing state, press the "" key on the lower panel. After a beep, it indicates that the password is to be entered. At this time, the first display interface is 1-1 --- 000, which is the password unlocking screen. At this time, press the "" key to change the right 000 as the correct password, and then press "" to enter the setting state. At this time, the setting indicator is always on, and the first setting interface is displayed as the output voltage setting interface 2-1 --- 380. There are 9 interfaces for setting items. Press "" to switch setting items in sequence. When there are setting items that need to be modified, press "" and "" to modify them, or press "" to save and exit after setting an item.

The nine setting interfaces are explained as follows:



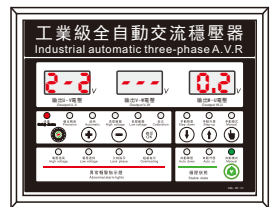
按設置鍵后是輸入正確的用戶密碼，默認出廠為007，可以按“+”“—”進行改變。

After pressing the setting key, enter the correct user password. The default factory password is 007, which can be changed by pressing "+" and "-".



第1個設置界面是修改輸出電壓，默認出廠為380V，可以按“+”“—”進行改變。

The 1 setting interface is to modify the output voltage, which is 380V by default and can be changed by pressing "+" and "-".

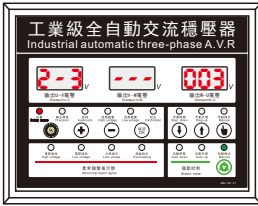


第2個設置界面是設置輸出電壓精度值，默認出廠為2%，可以按“+”“—”進行改變。

The 2 setting interface is to set the output voltage accuracy value, which is 2% by default and can be changed by pressing "+" and "-".

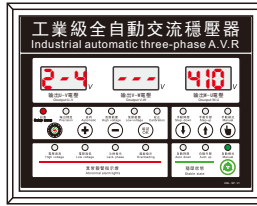
KBL系統設置

KBL system settings



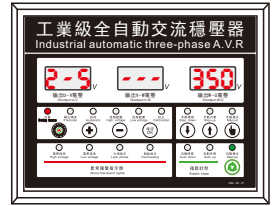
第3個設置界面是設置穩壓延時時間默認出廠為3秒,可以按“+”“-”進行改變。

The 3 setting interface is to set the voltage stabilization delay time, which is 3 seconds by default. You can press "+" and "-"



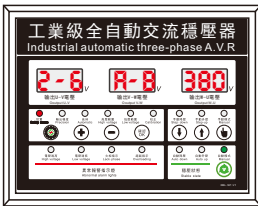
第4個設置界面是設置輸出高壓保護值,默認出廠為410V,可以按“+”“-”進行改變。

The 4 setting interface is to set the output high-voltage protection value, which is 410V by default and can be changed by pressing "+" and "-".



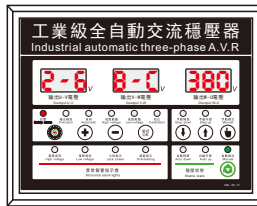
第5個設置界面是設置輸出低壓保護值,默認出廠為350V,可以按“+”“-”進行改變。

The 5 setting interface is to set the output low-voltage protection value. The default factory value is 350V, which can be changed by pressing "+" and "-".



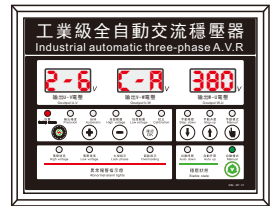
第6個設置界面是校正A-B項輸出電壓表,默認應該是同步實際輸出,可以按“+”“-”進行改變。

The sixth setting interface is to correct the output voltmeter of items a-b. by default, it should synchronize the actual output, which can be changed by pressing "+" and "-".



第7個設置界面是校正輸出B-C項電壓表,默認應該是同步實際輸出,可以按“+”“-”進行改變。

The seventh setting interface is the voltmeter with corrected output items b-c. by default, it should synchronize the actual output, which can be changed by pressing "+" and "-".



第8個設置界面是校正輸出C-A項電壓表,默認應該是同步實際輸出,可以按“+”“-”進行改變。

The eighth setting interface is the voltmeter with correction output c-a. by default, it should synchronize the actual output, which can be changed by pressing "+" and "-".

收貨檢查

Receiving inspection

●收貨流程

1. 請在收貨第一時間請不要直接簽單。
2. 一項檢查：包裝是否損壞。
3. 二項檢查：打開包裝檢查機箱鈹金有沒有變形或者損壞。
4. 三項檢查：核對送貨單與產品銘牌信息是否一致。
5. 以上確認完無誤直接簽收即可完成收貨程序。
6. 如果以上三項檢查有問題，請不要簽收，與物流做退單處理。

Receiving process

1. Please do not sign the bill directly at the first time of receiving the goods.
2. One inspection: whether the package is damaged.
3. Second inspection: open the package and check whether the metal plate of the chassis is deformed or damaged.
4. Three checks: check whether the delivery note is consistent with the information on the product nameplate.
5. After the above confirmation is correct, the receiving procedure can be completed by signing directly.
6. If there are problems in the above three inspections, please do not sign for receipt, and refund with logistics.

●隨機配件與資料

1. 電源主體設備一臺。
2. 產品使用說明書（掃銘牌二維碼）。
3. 產品合格證一張（在安裝板端子處理）。
4. 接線8個線鼻（在安裝板接線端子上）。
5. 送貨單與發票各一份。

Random data and accessories

1. One main power supply equipment.
2. Product instruction manual (scan the nameplate QR code).
3. One product certificate (processed at the terminal of the installation board).
4. Connect 8 lugs (on the terminal block of the mounting plate).
5. One delivery note and one invoice respectively.

安裝環境

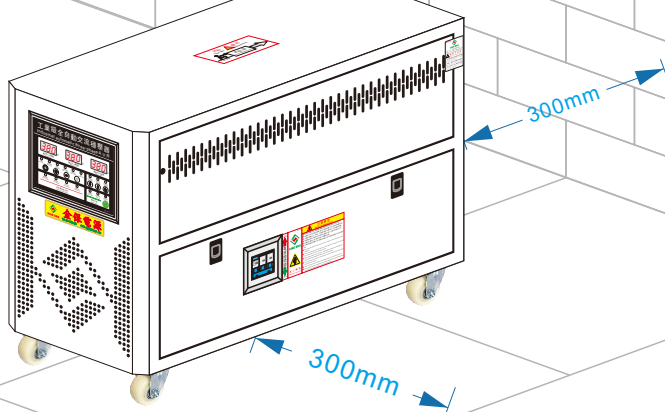
Installation environment

◎ 安裝環境

1. 海拔高度不超過1000m;
2. 環境空氣溫度最高不超40℃，最低不低於-10℃;
3. 空氣相對濕度月平均最大相對為90%;
4. 無劇烈震動和沖擊的地方;
5. 在無爆炸危險的介質中，且介質中無足以腐蝕金屬和破壞絕緣的氣體及導電塵埃的地方;
6. 不受雨雪侵襲的場所;
7. 電源電壓波形近似於正弦波;
8. 安裝箱體請確認與牆壁主體保持300mm的間距，並必須有散熱孔與風扇。

◎ Installation environment

1. The altitude shall not exceed 1000m;
2. The maximum ambient air temperature shall not exceed 40 , and the minimum temperature shall not be less than - 10 ;
3. The monthly average maximum relative humidity of air is 90%;
4. Places without violent vibration and impact;
5. In the medium without explosion hazard, and there is no place in the medium where there is enough gas and conductive dust to corrode metal and damage insulation;
6. Places free from rain and snow;
7. The waveform of power supply voltage is similar to sine wave;
8. When installing the box, please make sure to keep a distance of 300mm from the main body of the wall, and there must be cooling holes and fans.



安裝配線

Installation wiring

◎ 配線注意事項

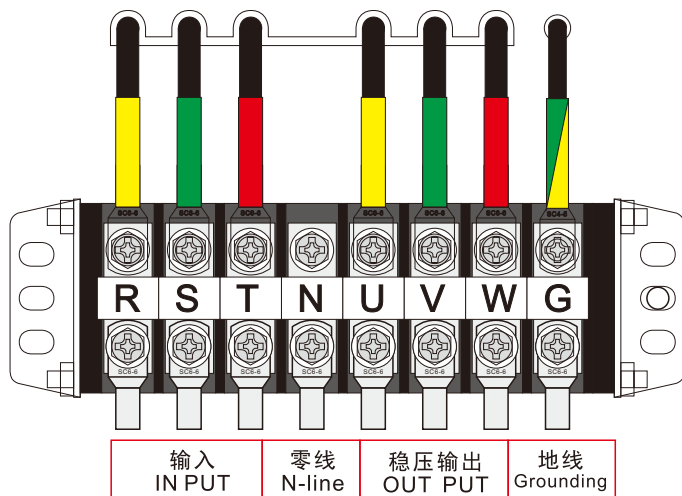
1. 本產品是3相4線或者3相5線系統通用，輸入無需零線工作。
2. 電纜長度建議選用3米，特殊場合請測量實際長度
3. 電源接入市電前，應先確定電源容量、電壓規格是否與負載設備匹配，以避免造成穩壓器損壞害。
4. 穩壓器因容量及電壓不同而有不同的安裝標準，請依照容量規格表選擇適當的配線方案，尤其注意其電線必須合乎規定。
5. 注意穩壓器應避免與其它設備共用一個開關，並儘量接近市電源頭。
6. 輸入及輸出端子盤接線時，務必將電纜線接好，避免接觸不良並防止發生火災。
7. 接線時請關閉電源，嚴禁帶電作業以策安全。
8. 配線時請專業人員參照電工法規施工。
9. 穩壓器的輸入及輸出接線均通過一組合式端子盤作接線之用。端子盤的下緣有一標籤，清楚地標示出配線位置。

Wiring precautions

1. This product is universal for 3-phase 4-wire or 3-phase 5-wire systems, and zero line operation is not required for input.
2. The cable length is recommended to be 3M. Please measure the actual length in special occasions
3. Before the power supply is connected to the mains power supply, determine whether the power capacity and voltage specification match the load equipment to avoid damage to the voltage regulator.
4. The voltage regulator has different installation standards due to different capacity and voltage. Please select the appropriate wiring scheme according to the capacity specification table, and pay special attention to that its wires must meet the regulations.
5. Avoid sharing one power supply with other power supply devices as far as possible.
6. When connecting the input and output terminal blocks, be sure to connect the cables to avoid poor contact and fire.
7. Please turn off the power supply when wiring. Live working is strictly prohibited for safety.
8. When wiring, professional personnel shall refer to electrical regulations for construction.
9. The input and output wiring of the voltage regulator are connected through a combined terminal block. There is a label on the lower edge of the terminal block to clearly mark the wiring position.

安裝步驟

Installation instructions



● 安裝步驟

1. 檢查市電輸入開關的通斷可靠性，保持開關在關閉狀態。
2. 打開穩壓器安裝門板，確認開關為關閉狀態，找到接線端子盤。
3. 輸入電纜一端安裝穩壓器輸入端，一端通過輸入電纜通道安裝到市電開關。
4. 打開市電開關，測試穩壓器輸入端的電壓是否正常。
5. 打開穩壓器電源開關，測試穩壓器處於正常工作狀態，再檢驗一下輸出電壓是否精準
6. 關閉所有開關，將穩壓器輸出電纜連接負載設備。
7. 再打開所有開關，測試負載是否正常運行，如果發生相序錯誤，請及時糾正。
8. 現場客戶確認安裝成功，本次安裝服務即可完成。

Installation instructions

1. Check the on-off reliability of the mains power input switch and keep the switch closed.
2. Open the installation door panel of the voltage regulator, confirm that the switch is closed, and find the terminal block.
3. One end of the input cable is installed with the input end of the voltage regulator, and one end is installed to the mains switch through the input cable channel.
4. Turn on the mains switch and test whether the voltage at the input end of the voltage regulator is normal.
5. Turn on the power switch of the voltage regulator, test that the voltage regulator is in normal working state, and then check whether the output voltage is accurate
6. Turn off all switches and connect the voltage regulator output cable to the load equipment.
7. Turn on all switches again to test whether the load operates normally. If there is a phase sequence error, please correct it in time.
8. After the on-site customer confirms that the installation is successful, the installation service can be completed.

安裝完成

Installation complete



故障自檢

Fault self-test

故障現象 Fault phenomenon	可能原因 Possible causes	排除方法 Exclusion method
控制器無顯示 輸出端子無電壓 No display of controller No voltage at output terminal	電源開關損壞 牆體開關損壞 The power switch is damaged Wall switch damaged	檢查開關通斷性能，更換開關 Check the on-off performance of the switch and replace the switch
手感機箱高溫 Feel the high temperature of the chassis	負載超載 電源工作溫度過高 Load overload The operating temperature of the power supply is too high	檢查穩壓器環境溫度是否在 $\leq 40^{\circ}\text{C}$ ，再檢查負載電流是否與穩壓器額定匹配，請更換大容量穩壓器安裝，或者負載設備運行不正常。 Check whether the ambient temperature of the voltage regulator is $\leq 40^{\circ}\text{C}$, and then check whether the load current matches the rated voltage of the voltage regulator. Please replace the installation of high-capacity voltage regulator, or the load equipment does not operate normally.
內部打火花現象 Internal spark phenomenon	碳刷接觸不良 碳刷已經磨損 內部粉塵污染嚴重 Poor contact of carbon brush The carbon brush is worn Serious internal dust pollution	用干燥氣槍做產品粉塵清潔保養一次；折箱檢查碳刷是否接觸不良，可以用細沙紙打磨平整恢復；如果碳刷已經磨損待盡，請聯系廠家更換。 Clean and maintain the product dust with a dry air gun once; Check whether the carbon brush is in poor contact when folding the box. It can be polished and leveled with fine sandpaper for recovery; If the carbon brush is worn out, please contact the manufacturer for replacement.
內有噪音 Noise inside	電源過載 碳刷震裂 碳刷接觸不良 螺絲松動 Power overload Carbon brush cracking Poor contact of carbon brush Loose screw	折箱檢查碳刷是否接觸不良造成噪音，可以用細沙紙打磨平整恢復；如果碳刷已經損壞，請聯系廠家更換。 Check whether the carbon brush is in poor contact and causes noise. It can be polished and leveled with fine sandpaper for recovery; If the carbon brush is damaged, please contact the manufacturer for replacement.
面板電壓過高報警 Panel over voltage alarm	電機故障 輸入電壓超437V以上 Motor failure The input voltage exceeds 437v	測量輸入電壓是否高于437V以上，如果有，請檢查外部電網問題；如果沒有，調壓電機故障請更換電機。 Measure whether the input voltage is higher than 437v. If yes, please check the external power grid; If not, the voltage regulating motor fails, please replace the motor.
面板電壓過低報警 Panel low voltage alarm	電機故障 輸入電壓低330V以下 Motor failure Input voltage is below 330V	測量輸入電壓是否低于330V以下，如果有，請檢查外部電網問題；如果沒有，調壓電機故障請更換電機。 Measure whether the input voltage is below 330V. If yes, please check the external power grid; If not, the voltage regulating motor fails, please replace the motor.
面板欠相指示報警 Panel under phase alarm	三相電缺相 電纜接觸不良 開關故障 Three phase electric phase failure Poor cable contact Switch failure	測量三相輸入電壓是否正常，測量三相開關是否通斷，檢查電纜是否有鬆動或者斷裂，發現修復。 Measure whether the three-phase input voltage is normal, whether the three-phase switch is on and off, check whether the cable is loose or broken, and repair it if found.
面板限位指示報警 Panel limit indication alarm	電機故障 輸入電壓過高或者過低 Motor failure Input voltage too high or too low	測量輸入電壓是否已經超出穩壓380V $\pm 15\%$ 範圍，如果有，請檢查外部電網問題；如果沒有，電機故障請更換調壓電機。 Measure whether the input voltage has exceeded the regulated 380V $\pm 15\%$. If yes, please check the external power grid; If not, replace the voltage regulating motor.

保修條例

Warranty regulations

尊敬的客戶：

感覺感謝您選用我公司的電源產品，為了使您對我們公司的產品用的更加滿意與放心，請妥善保管好本說明明書與保修卡，以便完善本公司對您後期的產品服務。並希望您提供更寶貴的意見及建議。

本產品自購買日起憑本保修卡享有1年的免費保修服務（也可按合同時間）
產品諮詢及維修專線：400-6480-668

下列因素導致穩壓器故障不會享有免費維修範圍

1. 無法提供任何購買記錄和無法出示本保修卡的用戶。
2. 自行撕掉保修標籤用戶
3. 非正常使用下所發生的故障（人為操作、移機過程、超負載工作）。
4. 自行改裝或是非專業人員折機維修。
5. 市電供電超出穩壓器的過高或者過低範圍。
6. 自然災害，如水災、火災、地震等。

Dear customer

Thank you for choosing our power supply products. In order to make you more satisfied and assured with our products, please keep this instruction and warranty card properly, so as to improve our later product service to you. And I hope you can provide more valuable opinions and suggestions.

This product is entitled to 1-year free warranty service (or according to the contract time) with this warranty card from the date of purchase

Product consultation and maintenance hotline: 400-6480-668

The following factors lead to the failure of the voltage regulator and will not enjoy the free maintenance scope

1. Users who do not show this warranty card.
2. Tear off the warranty label by yourself
3. Faults under abnormal use (manual operation, relocation process, overload work).
4. Self modification or non professional folding machine maintenance.
5. The mains power supply exceeds the range of too high or too low of the voltage regulator.
6. Natural disasters, such as flood, fire, earthquake, etc.

保修卡

Warranty card

用戶信息（用戶填寫）

User information (filled in by the user)

用戶姓名： User name：	聯繫電話： Contact number：
通訊地址： Mailing address：	
產品型號： Product model：	產品編號： Product number：
電壓規格： Voltage specification：	購買日期： Date of purchase：
購買渠道： Purchase channel：	發票號碼： Invoice number：

維修記錄

Maintenance record

報修日期： Repair date：	維修日期： Maintenance date：
故障描述： Fault description：	
處理詳情： Processing details：	
維修單位名稱： Name of maintenance unit：	維修電話： Maintenance Telephone：
維修員簽名： Signature of maintainer：	客戶確認簽名： Customer confirmation signature：

服務網點

Service Network

湖北總部 Headquarters

地址：湖北省麻城市鰲樓小河頭工業區金保產業園
Address: Jinbao Industrial Park, xiaohetou Industrial
Zone, Shilou, Macheng City, Hubei Province
TEL:+86 400-6480-668

華東分公司 East China branch

地址：江蘇省昆山市玉山鎮城北模具城4期23棟29號
No. 29, building 23, phase 4, Chengbei mould City, Yushan
Town, Kunshan City, Jiangsu Province
TEL:+86 150-5160-1058
FAX:+86 0512-5031-3433

地址：山東省濟南市歷城區翡麗公館4—1—302
Address: 4-1-302, Feili residence, Licheng District, Jinan
TEL:+86 159-6261-3781

華南分公司 South China branch

地址：廣東省東莞市長安鎮上沙社區創業橫路5號
Address: No. 5 chuanygeheng Road, Shangsha community,
Chang'an Town, Dongguan City, Guangdong Province
TEL:+86 188-1908-5002
FAX:+86 0769-8188-8995

地址：佛山市順德區北滘鎮順江社區工業園偉業路2號B棟2樓
TEL:+86 135-3902-0941
FAX:+86 0757-2332-8777

華中分公司 Central China branch

地址：河南省許昌市建安區張潘鎮張村桃園路1號
Address: No. 1, Taoyuan Road, Zhangcun, zhangpan Town,
Jian'an District, Xuchang City, Henan Province
TEL:+86 136-0230-3340

西南辦事處 Southwest Office

地址：成都市溫江區江安路739號2棟2205
Address: 2205, building 2, No. 739, Jiang'an Road, Wenjiang
District, Chengdu
TEL:+86 138-2727-8926

東北辦事處 Northeast Office

地址：沈陽市于洪區沈胡路中國機床城A2-14
Address: a2-14, China Machine Tool City, Shenhu Road,
Yuhong District, Shenyang
TEL:+86 133-5240-1088

華北辦事處 Northeast Office

地址：天津市東麗區北方五金城C12-111
Address: c12-111, North Hardware City, Dongli District, Tianjin
TEL:+86 188-1908-5550



管方網站
Management website



管方公眾號
Management public account

400- 6480- 668