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1. Control principle

- 1) Voltage controller is a kind of device that continuously keeps the desired voltage. It mainly detects the output voltage by MUC inside the control card. And changes the triac trigger phase angle by the intelligent computer internal data processing. So as to achieve the purpose of voltage control;

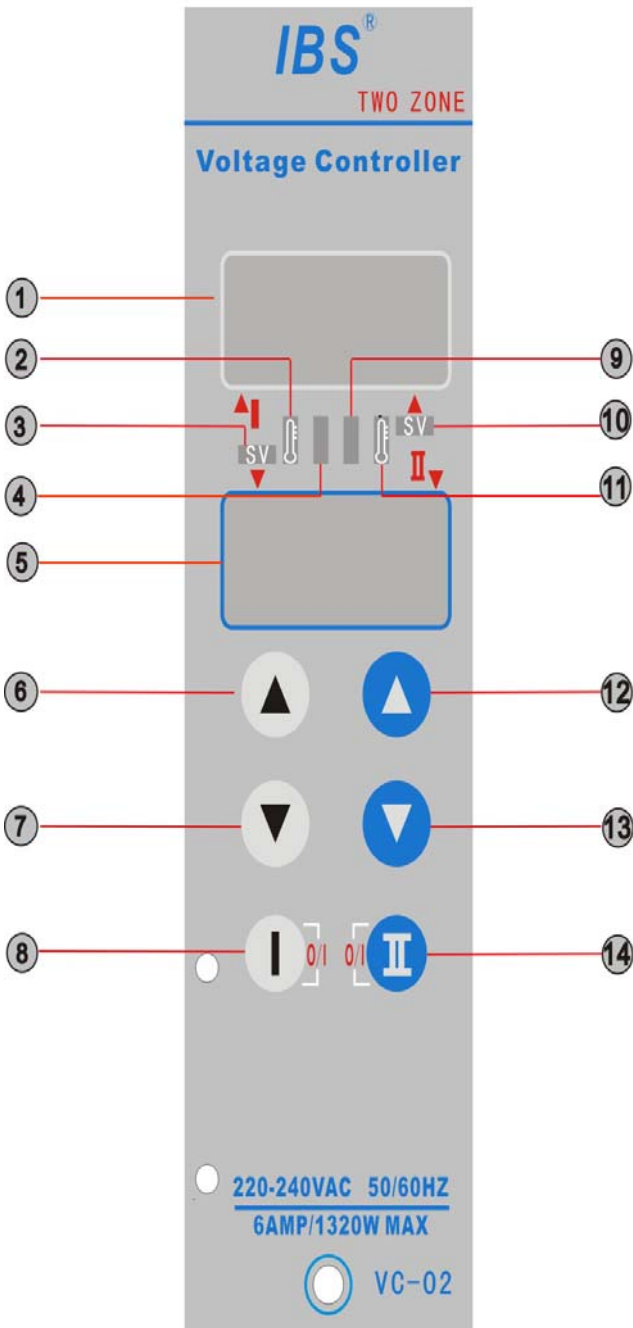
2. Card specification

- 1) Ambient temp: 32°F to 131°F (0°C to 55°C)
- 2) Relative humidity: 10%–95%
- 3) Transmit temp: -40°F to 158°F (-40°C to 70°C)
- 4) System grounding insulation Voltage: 1200VDC.
- 5) Supply power: AC185V–245V, 50/60HZ
- 6) Output voltage Range: 0V to 220V Or supply power voltage
- 7) Voltage test Precision: $\pm 0.5\%$
- 8) Voltage repeat test precision: $\pm 0.1\%$
- 9) Voltage stability precision: $\pm 1\%$
- 10) Noise rejection: CMMRR >100DB,
- 11) Sampling frequency: 10HZ (100mS)
- 12) Point Load: 6A, 1320W/220V or 660W/110V
- 13) F1,F2:250V-6A(Special fuse)

3. Voltage card function specification

- 1) Controller inner testing loop detection;
- 2) Power supply frequency monitoring;
- 3) Output interrupted monitoring;
- 4) Triac short monitoring;



4. Panel description







- (1). Red digital tube: I PV、SV voltage display
- (2). Red LED lamp: Point I output voltage start indicator
- (3). Green LED lamp: Point I setting indicator
- (4). Red LED lamp: Point I error indicator
- (5). Red digital tube: II PV、SV voltage display
- (6). Point I up key
- (7). Point I down key
- (8). Point I : Point I switch On/off 、 check operating parameter
- (9). Red LED lamp: Point I output voltage start indicator
- (10). Green LED lamp: Point I setting indicator
- (11). Red LED lamp: Point I error indicator
- (12). Point II up key
- (13). Point II down key:
- (14). Point II : Point II switch On/Off、 check operating parameter





5. Card basic operation

1) Boot system instruction



- a) Before power on the controller, Please confirm the screw for cards have fixed, Power supply system is correct, Master power switch is closed;
- b) Press  for 0.5 sec, Point I start up, Point I digital tube display software version ; After 1 sec, I will start output voltage and control it in setting vlotage;
- c) Press  for 0.5 sec, Point II start up, Point II digital tube display software version ; After 1 sec, II will start output voltage and control it in setting vlotage;


2) Output voltage setting

When Point I is switched on, press  or  to change the output voltage setting value , Keep pressing the key to boost; When Point II is switched on, press  or  to change the output voltage setting value , Keep pressing the key to boost



Note: When click  or  , The respective digital tube display will change actual output voltage to setting voltage. And SV  light up, The setting value will be saved after 1 sec, and the digital tube display will back to actual output voltage. SV  will off. Card will auto save the setting value.

3) Check card working parameter

In normal working, Click  , I digital tube will exchange display **Actual output voltage – setting output voltage – power supply frequency**; Click  , II digital tube will exchange display **Actual output voltage – setting output voltage – power supply frequency**. No matter what the card display, It will back to display actual output voltage.

Note, When digital tube display setting output voltage, The SV  will light up

4) Turn off the card

In any working mode, Press  for 1 sec, I will be closed. Press  for 1 sec, II will be closed.

6. The issues need to be noticed and Maintenance

- 1) The load of card is 15A, Please don't work over load;
- 2) when Output Voltage is not stable. Please check whether the card parameter of frequency F. XXX is stable or not.
- 3) Please Turn off controller when pull & plug cards, align at the slot when plug cards;
- 5) Please regular clear card, especially PCB ;
- 6) Please regular checking the screw and confirm tight fix, especially the screw for triac;
- 7) Please pay attention to moistureproof and anti Oxidation when save the card;

7. Card normal fault analysis

No.	Fault description	Check reason	Solution and suggestion
1	Cannot switch ON/OFF	Power supply system	A. Check power supply system B. Change the card C. Return back to factory to repair
2	Alarm display ER1	Voltage card	A. Change the card B. Return back to factory to repair
3	Alarm display ER2	Voltage card	A. Change 5A fuse F1 or F2 B. Change the card C. Return back to factory to repair
4	Alarm display ER3	Triac short	A. Change the shorted triac SCR1 or SCR2 B. Change the card C. Return back to factory to repair
5	Unstable of output voltage	Power supply system or voltage card	A. Check power supply system B. Change the card C. Return back to factory to repair