

USER'S MANUAL FOR HV POWER SUPPLY TYPE HVS1

INTRODUCTION:

After the power supply start display shows program version and address for communication. After initialisation display shows measured values of voltages and currents and all outputs are in the off state. There is possible to restore last state which was set before the power supply was switched off last time. Restore is done by main menu command „Restore last state“.

Control of power supply is done by menu and control buttons on the panel of control unit. By pushing ESC button is displayed main menu in the down part of the display. By cursor buttons the menu function can be selected and then confirmed by pushing ENTER button. Generally the cursor buttons (up, down) are used for selection of the command, ENTER button confirms the selection and ESC button is for return to the main menu without any other action.

Indication LEDs on the channel cards display preselected voltage level of the output. In case the green lights are blinking the undercurrent protection is disabled and is not functional. Blinking of red light means that voltage on the output which is off is higher than 60V

- Output voltage setup:

Select in the menu „Select channel“, then confirm by ENTER. By cursor button select channel number which should be steered. Confirm by ENTER. Now is possible to select the on/off or range of selected output. Then confirm the selection by ENTER.

- Switch off all channels / SHUTDOWN

By pushing HVOFF button on front panel, all channels are switched off immediately.

- Restore of the last state of the outputs:

Using cursor buttons select „Restore Last State“ in the main menu. Then confirm it by ENTER. This command switches on all channels which have been switched off by HVOFF button, by interlock, under or overcurrent protection. Command will not restore the channels which have been switched off by menu commands during off state.

- Setup of communication address

Select *Bus Setup*, then confirm it by ENTER. By cursor buttons select the address in range 0 to 15. Confirm by ENTER.

- Setup of remote control terminal characters CR,LF

Select *Bus Setup*, and confirm it by ENTER. Select function *CR / LF setup* and confirm by ENTER. By cursor buttons select required combination of CR/LF characters and confirm by ENTER.

- Remote control disable

Stisknout tlačítko MENU. Zvolit položku *Bus Setup*, potvrdit tlačítkem ENTER. Vybrat funkci *Remote Disable* a potvrdit tlačítkem ENTER. Zákaz dálkového ovládání je indikován červenou svítivou diodou na panelu řídicí jednotky. V tomto režimu nelze zdroj ovládat pomocí dálkového ovládání lze pouze číst údaje. Ve stavovém slově je k dispozici informace o zákazu dálkového ovládání.

- Remote control enable/disable

For some work can be useful to have the possibility to disable the remote control. So push MENU button. Then select *Bus Setup* and confirm it by ENTER. Select function *Remote Enable* and confirm it by ENTER. Remote control disable is indicated by red LED below the buttons.

- Switching on / off of the undercurrent protection:

Using cursor buttons select *Global settings* in the main menu, and confirm it by ENTER. Then select *Undercurrent* and confirm by ENTER. Select *Enabled or Disabled*, to have the undercurrent protection functional or not. In case the undercurrent protection does not work the green LEDs on channel cards are blinking.

- Setup of voltage tolerances

Push MENU button. Select *Global settings*, and confirm it by ENTER. Select *Lower/Upper limits* and confirm it by ENTER. By cursor buttons then select the voltage thresholds and confirm it by ENTER. Then is possible to set next voltage threshold. Values can be in range 700 to 900V. Threshold levels are working for all channels of power supply which are set to proper range. In case the voltage is out of thresholds the value of the voltage on the display starts to blink and small arrow is displayed after last voltage value character. In case the arrow direction is up, it means over threshold (overvoltage) and vice versa.

Menu overview :

1.- Main MENU

MAIN MENU	Select Channel
-----	Restore Last State
Select	Bus Setup
Comand:	Global Settings

- restores last state of all outputs

1.1 - Channel number selection

Select channel number :	Channel number : 1
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1.1.1 - Setup of output voltage.

CHANNEL :1	Output 830V
-----	Output 950V
Set Output	High Voltage ON
Voltage	High Voltage OFF

1.2 - Restore of the last state

1.3 - Setup of communication parameters

BUS SETUP	BUS Address
-----	CR / LF setup
Set Remote	Remote Disable

- address of power supply on the RS422 bus

Control:	Remote Enable
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1.3.1 – Address setup

Setting address for RS422	BUS Address: 1
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1.3.2 – Terminal characters setup CR,LF

CR / LF SETUP	CR LF CR / LF LF / CR
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1.4 – Global settings

GLOBAL SETTINGS Select Command:	Undercurrent Lower/Upper limits
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- Switches on and off the unercurrent protection
- Setups the voltage thresholds

1.4.1 – Undercurrent setup

UNDER CURRENT Protection ON / OFF	ENABLED DISABLED
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- Undercurrent protection will work
- Undercurrent protection will not work

1.4.2 - Nastavení tolerančních mezí

Settings	Low limit 830V: 825
Output	High limit 830V: 835
Voltage	Low limit 950V: 945
Range	High limit 950V: 955

- Low threshold for the range 830V
- High threshold for the range 830V
- Low threshold for the range 950V
- High threshold for the range 950V

List of error messages

NO CHANNEL CARDS !

Warning message in case that no one channel card does not communicate with control unit and next control is impossible.

WARNING !!!

At Least one
channel without
response

Warning message that minimally one channel card does not communicate with control unit (only after reset)

ERROR !!!

HV Power supply
failure

Error message that power supply has some failure . In this case is not possible to control anything.

INTERLOCK OFF !

Check interlock
loop or turn on
Bypass switch

Interlock current loop is broken.

