Manson Engineering Industrial Ltd.

Power Supply Control Software

User manual

(For model HCS Series with USB SDP-2XXX Series SSP-8XXX Series SSP-9081 NTP-65XX series NTP-66XX series)

1. Introduction

This is a PC software which provide remote control panel for Manson power supply with USB or Ethernet connectivity.

For power supply with USB connection, it need a USB driver. The USB driver is included in CDROM comes with your power supply. Or you can download it from <u>www.manson.com.hk</u>.

Supported Power Supply Model

HCS Series with USB SDP-2XXX Series SSP-8XXX Series SSP-9081 NTP-65XX series NTP-66XX series

Supported OS System

Windows 7 (32-bit and 64-bit), Windows 10 (32-bit and 64-bit)

USB driver installation

The USB driver should be installed before the power supply can be connected to PC through USB connection. The USB driver is located in folder start with "USB CP210xDrivers" in CDROM.

For 32-bit Windows run "CP210xVCPInstaller_x86.exe"

For 64-bit Windows run "CP210xVCPInstaller_64.exe"

The bit of Windows can be find in system properties of Computer.



PC software installation

The file start with "pscs_setup" is the installation program for PC software.

a) Run file "pscs_setup.exe" and click ______ to continue.

🔁 Setup - PSCS	
	Welcome to the PSCS Setup Wizard
	This will install PSCS version 2.9 on your computer.
	It is recommended that you close all other applications before continuing.
	Click Next to continue, or Cancel to exit Setup.
	Next > Cancel

b) Select the destination location for software installation and click **Next** > to continue.



c) Select Start Menu Folder and click Next > to continue.



d) Click the check box if you would like to create a desktop icon. Then click Next > to continue.

Select Additional Tasks Which additional tasks should be performed?	
Select the additional tasks you would like Setup to perform while insta click Next.	lling PSCS, then
Additional icons:	
Create a desktop icon	
< Back Next	> Cancel

e) Click Install to start install of PC software.

2. PC software usage

2.1 Main Display

	1. Display panel		(2. Main configure and d	ata log display panel
3. Setting Panel 4. Data Handling panel 5. Customer Description	Current S. II V U SET NOT S. 000 S. 000 S. 000 S. 000 Votinge S. II V U NILS Current S. II V V NILS Current S. II V V V NILS Current S. II V V V V V V V V V V V V V V V V V V	Mercal II Stop 2 3 4 5 6 7 8 9 9 10 11 2 13 12 15 16 17 8 9 20 20 R.	Voltage(%) 1.00 <td>Stem St L ment Lingra ** Lista Ling Listing C 000</td> <td>alertaninn </td>	Stem St L ment Lingra ** Lista Ling Listing C 000	alertaninn
				6. Information	panel

The Main interface divided into 6 panels.

- 1. Display panel use to display real-time information of power supply.
- 2. Main configuration and data log display panel use to change general setting of program and display data log.
- 3. Setting panel use to set incident voltage value, current value and output On/Off.
- 4. Data handling panel use to save, load and print data.
- 5. Description input panel use to enter description for wave form
- 5. Information panel use to display Maximum voltage/ current, sampling time, upper voltage/ current limit and software version.

2.2 Connect to Power supply

Before edit any connection setting, the software will not connect to power supply. It just show following display. The first thing you need to do is to edit correct connection for your system. If there are saved connection setting in software. The software will search power supply and connect automatically.

ERating:					
	External [•]	Timed Program Data Log Setting			
	Step	Voltage(V)	Current(A)	Time	Output
	1	0.0	0.0	0:00:00	
	2	0.0	0.0	0:00:00	
	3	0.0	0.0	0:00:00	\checkmark
	4	0.0	0.0	0:00:00	\checkmark
Voltage: 0.0 V	5	0.0	0.0	0:00:00	\checkmark
	6	0.0	0.0	0:00:00	\checkmark
Current: 0.0 A O	7	0.0	0.0	0:00:00	\checkmark
	8	0.0	0.0	0:00:00	\checkmark
Output: On Off Set	9	0.0	0.0	0:00:00	\checkmark
	10	0.0	0.0	0:00:00	\checkmark
	11	0.0	0.0	0:00:00	\checkmark
	12	0.0	0.0	0:00:00	\checkmark
Wave Form Generator Description:	13	0.0	0.0	0:00:00	\checkmark
	14	0.0	0.0	0:00:00	\checkmark
	15	0.0	0.0	0:00:00	\checkmark
	16	0.0	0.0	0:00:00	\checkmark
	17	0.0	0.0	0:00:00	
	18	0.0	0.0	0:00:00	
	10	0.0	0.0	0.00.00	
	R	un		C	lear Table
		MaxV: 0.0	IV MaxC: 0.00A Sampling: 3S U	VL: 0.0V UC	L: 0.00A Ver: V2.1.7

Connection editing steps

i. Select Setting tab

External Timed Program Data Log Setting	
Language: English	Connection: Edit
Data Log Sampling Time:	38 🔾
Voltage Upper Limit(UVL) Setting:	0.0V
Current Upper Limit(UCL) Setting:	0.00A
	Default OK

ii. Click on Edit to start edit connection. The connection edit panel come up.

■ Rating:									
	External Timed Program Data Log Setting								
	Language: English V Connection: Edit								
	Connection Name Description Connection Type Remote IP Remote Port COMM Port RS4								
Voltage: 0.0 V Current 0.0 A Current 0.0 Off Set		Da Voltage Up	Save ta Log Sampling Tii per Limit(UVL) Sett	Exit Edit me: 38 (ing: 0.07 ()				
		Current Up	per Limit(UCL) Sett	ing: 0.00A C	ault	ок			
			MaxV: 0.0V M	axC: 0.00A Sam	pling: 3S UVL	: 0.0V UCL:	0.00A Ver: V2.1.7		

- iii. Enter connection name for this connection setting and description. e.g. PS-1
- iv. Select connection type for your system. It allow configure for USB, Ethernet and RS485.



v. Enter addition connection parameters.

For Ethernet, enter IP address and remote port number. (It can be check in menu \rightarrow Display Information \rightarrow LAN Information. Please refer to hardware manual).

Remote IP	Remote Port
192.168.1.242	8888

For USB, enter COM port. The COM port can be find in device manager of Windows system after driver installed. For RS485, additional to COM port. Input RS485 ID for your system as well

vi. Then Click Save to save setting then click Exit Edit to exit the edit page.

After save configuration, the power supply connect automatically. You will find different tabs will be shown for different models of power supply connected.

Rating: 36V 11A						
	Internal	Timed Program	External Timed Program	Data Log Se	etting Calibration]
0.000 ocx 5.00V	Step	Voltage(V)	Cu	rrent(A)		Time
0.00H 5.00A	1	0.00	0.0	0		0:00:00
0.01.1	2	0.00	0.0	0		0:00:00
O OUTPUT 0~0	3	0.00	0.0	0		0:00:00
	4	0.00	0.0	0		0:00:00
Voltage: 5.00 V	5	0.00	0.0	0		0:00:00
0 60.5	6	0.00	0.0	0		0:00:00
Current 5.00 A	7	0.00	0.0	0		0:00:00
0 0.5	8	0.00	0.0	0		0:00:00
Output: On O Off Set	9	0.00	0.0	0		0:00:00
	10	0.00	0.0	0		0:00:00
	11	0.00	0.0	0		0:00:00
	12	0.00	0.0	0		0:00:00
nternal Timed Program Description:	13	0.00	0.0	0		0:00:00
	14	0.00	0.0	0		0:00:00
	15	0.00	0.0	0		0:00:00
Run From: 1 To: 20 Cycle: 1	16	0.00	0.0	0		0:00:00
	17	0.00	0.0	0		0:00:00
	18	0.00	0.0	0		0:00:00
	19	0.00	0.0	0		0:00:00
	20	0.00	0.0	0		0:00:00
	F	Run Rea	ad From PS Save T	To PS	mplina: 35 UVL - A	Clear Table

2.3 Display panel



- Output Current value _
- Output Power value _
- Output On/Off status -
- C.V./ C.C. Model -
- Setting values _

2.4 Set output voltage value, current value and ON/OFF status



It allow direct input voltage value and current value in setting area or use slide bar to adjust value. After adjust the value, then click set button to confirm setting.

2.5 Internal Preset Memory

If the power supply models has internal preset memory, this tab will be shown. You can adjust value of memory. Then click set button to save the value back to power supply.

Rating: 36V 5A 80W				
	Wave Form Generator	External Timed Program	Internal Preset Memory	Data Log Setting
00000 OCV. 11.06V	Select	Voltage(V)		Current(A)
0.000H 0.210A	O Preset A	11.32		0.00
0.011 OUTPUT and	O Preset B	3.30		1.00
001001 0-0	O Preset C	0.00		0.00
0.50 16.00 Current 0.210 A 0.000 5.100 Output On Off Set ternal Preset Memory Description:				
	Set Re	ad From PS		Clear Table
		Lini	a: 1 MayD: 2014/ Comp	line 20 101 46 000 100 5 4004 10

You can click Read From PS to read internal preset memory from power supply.

2.6 External Timed Program

Select External Timed Program tab to operate with 20 user define steps program. It can define Voltage, Current, running time and Output ON/OFF for each step. User can setting running cycle for the Timed Program. External Timed Program is completely controlled by PC, PC counts the time and changes voltage and current of power supply.

It has an External Timed Program Description space for user to enter description for the setting. The description will be saved when user select to save setting into CSV file.

Rating: 18V 21A						
	Internal	Timed Program	External Timed Program	Data Log Setting	Calibration	
13.62V ecv. 15.62V	Step	Voltage(V)	Current(A	0	Time	Output
0.00H 12.00A	1	11.62	2.35		0:00:00	✓
a au	2	6.58	0.00		0:00:00	✓
O OW OUTPUT •	3	0.00	0.00		0:00:00	✓
	4	0.00	0.00		0:00:00	\checkmark
oltage: 15.62 V	5	0.00	0.00		0:00:00	\checkmark
0 18.2	6	0.00	0.00		0:00:00	\checkmark
Current: 12.00 A	7	0.00	0.00		0:00:00	✓
0 21.5	8	0.00	0.00		0:00:00	✓
utput: On Off Set	9	0.00	0.00		0:00:00	\checkmark
	10	0.00	0.00		0:00:00	✓
	11	0.00	0.00		0:00:00	✓
	12	0.00	0.00		0:00:00	✓
ternal Timed Program Description:	13	0.00	0.00		0:00:00	✓
	14	0.00	0.00		0:00:00	✓
	15	0.00	0.00		0:00:00	✓
ining Cycle: 1	16	0.00	0.00		0:00:00	✓
	17	0.00	0.00		0:00:00	✓
	18	0.00	0.00		0:00:00	✓
	19	0.00	0.00		0:00:00	\checkmark
	20	0.00	0.00		0:00:00	✓
	F	Run				Clear Table

- Double click on the cell that you would like to set value. For example Step 2 voltage.
- Slide the bar to configure the value.

Step	Voltage(V)	Current(A)	Time	Output
1	22.16	2.00	0:00:04	V
2	11.08	0.00	0:00:00	\checkmark
3	0.00	0.00	0:00:00	\checkmark
1	0.00	0.00	0.00.00	J

- Set time for this step to be running. The time range is between 0 to 9hours 59 minutes 59 seconds. You can click up/ down button to change value or directly input value. If the time value is set to 0, this step will be skipped.

Time		Output	
5:00:00			1
9:59:59	9:59:59	•	1
0:00:00			\checkmark

- Select running cycle between 0-999. You can use slide bar to select or directly input value in text box. Input 0 means run the program forever.

Running Cycle:	1	0
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- Click Run button to start running cycle.
- In between program running cycle, click <u>Stop</u> button to stop program.
- Click Clear Table to clear the setting.

2.7 Set Upper limited of Voltage and Current

Select Setting tab to configure Voltage Upper Limit (UVL) and Current Upper Limit (UCL). If you set the UVL and UCL, all setting in General Output setting, Internal Timed Program and External Timed Program cannot higher than this limit. You will find the setting become red to alert you it is over the UVL or UCL.

In the setting tab,

- Direct input your setting value or using slide bar to configure for the UVL an UCL.

Internal Timed Program External Timed Program Data	Log Setting Calibration
Language: English 🔻	Connection: sdp-3636
Data Log Sampling Time:	35 🔾
Voltage Upper Limit(UVL) Setting:	18.20V 0 18.0
Current Upper Limit(UCL) Setting:	21.50A 0 21.5
	Default

Click or button to save the setting to power supply

2.8 Wave Form Generator

For the SSP-8XXX series and SSP-9081, it has wave form generation support. The Wave Form Generator tab will be shown after connected to these power supply.



2.9 Calibration

If the power supply support calibration, you will find the Calibration tab is shown.

	Internal Timed Program		External Timed Pr	ogram Data	.og Setting	Calibration	
8	Step	Setting(V) Output	S	ep	Setting(A)	Output
	1				1		
	2				2		
	3				3		
	4				4		
	5				6		
0	7				7		
	8				8		

Enter password. The Default password is "password"

	rnal Timed Progra	m 🗍 External Timed Pro	ogram 🛛 Data Log 🗍 Setti	ng Calibration	libration	
Step	Set	ing(V) Output	Step	Setting(A)	Output	
	1		1			
	2		2			
	3		3			
	4		4			
	6		6			
	7		7			
	8		8			

Click "Start calibration" to start calibrate power supply. The system will show setting value for voltage and you input actual output value which measured by multi-meter. After calibrate voltage, it start calibrate the current. It show output current setting and you input actual output value measured by multi-meter.