

存在更勝於完美 **Being** trumps perfect



## GW Instek RBS Series 雙向直流電源供應器

### 特色

電壓輸出範圍：100 V, 500 V, 750 V, 1000 V, 1500 V, 2250 V

電流輸出範圍：0 A to 510 A

功率輸出範圍：高功率密度 5 kW/10 kW/15 kW @ 3U 高度

雙向電源，結合電源與電子負載功能於單一機種

簡易主從並聯，同型號可以並聯達 10 台，最高並聯功率可達 150 kW

具多種通訊介面選擇：RS-232 or RS-485 or LAN or CAN

具序列編程功能、SAS 功能、電池模擬功能、電池充放電功能

內置 DIN40839，ISO16750-2，ISO21848 等多種標準測試曲線，快速調用

具備“黑盒子”功能，異常情形時自動記錄運行參數，便於後續查看及維修

直觀式觸控面板人機操作介面

完善保護機制：包括 OVP、OCP、OPP、OTP 及輸入過欠壓保護。

標配專用 PC 控制軟體

## RBS系列可程式雙向直流電源

RBS 系列雙向直流電源是一款多功能的可編程電源，具備供電與吸收負載之雙向功能。它專為新能源領域的功率轉換裝置和儲能元件測試而設計，廣泛應用於電動車、儲能系統等相關產品的研發和生產測試。RBS 系列支援能量回收功能，有助於節能。

傳統直流電源在馬達驅動器測試時，需於輸出端串接二極體防止逆向電流灌入，並需額外配置電子負載以吸收馬達煞車或下坡運轉時的回灌能量。而 RBS 系列雙向直流電源供應器可作為直流電源輸出，亦可作為直流電子負載操作，具一機雙用，滿足馬達驅動器測試，節省體積空間及簡易配置，並可將回灌能量回饋至電網，實現節能效益。

### 主要特點

- 支援多種模式切換：恒壓(CV)、恒流(CC)、恒功率(CP)，以及自動模式轉換。
- 功能豐富：具光伏陣列和電池模擬功能，支持電壓上升與下降時間測試。
- 節能設計：雙向能量流動，回饋效率高達 95 %。
- 友好操作界面：彩色觸控屏結合實體按鍵，易於使用。
- 智能散熱與穩定性：提升工作效率並適應多場景需求。
- 多段參數設定：模擬動態負載行為，滿足不同測試需求。

型號	輸出功率	輸出電壓	輸出電流	輸入電壓 (3P3W)
RBS05K-100	5 kW	100 V	-170 A to +170 A	342 Vac to 510 Vac
RBS10K-100	10 kW	100 V	-340 A to +340 A	342 Vac to 510 Vac
RBS15K-100	15 kW	100 V	-510 A to +510 A	342 Vac to 510 Vac
RBS05K-500	5 kW	500 V	-40 A to +40 A	342 Vac to 510 Vac
RBS10K-500	10 kW	500 V	-80 A to +80 A	342 Vac to 510 Vac
RBS15K-500	15 kW	500 V	-120 A to +120 A	342 Vac to 510 Vac
RBS05K-750	5 kW	750 V	-25 A to +25 A	342 Vac to 510 Vac
RBS10K-750	10 kW	750 V	-50 A to +50 A	342 Vac to 510 Vac
RBS15K-750	15 kW	750 V	-75 A to +75 A	342 Vac to 510 Vac
RBS10K-1000	10 kW	1000 V	-40 A to +40 A	342 Vac to 510 Vac
RBS15K-1500	15 kW	1500 V	-40 A to +40 A	342 Vac to 510 Vac
RBS15K-2250	15 kW	2250 V	-25 A to +25 A	342 Vac to 510 Vac

RBS 系列產品定位於高效能電力測試解決方案，專為研發及製造過程中的電力設備測試設計。其市場定位集中於新能源應用，如光伏發電系統、電動車充電模組及電池測試等領域。該產品具有高精度雙向電源功能、能量回饋、快速響應等特性，滿足各種高功率密度和綠色節能需求，適用於實驗室測試、產品開發和品質保證等場景，為客戶提供高靈活性和可靠性的測試支持。

## 產品應用

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- 電動車：車載充電器 (BOBC) 測試、DC-DC 轉換器測試、馬達驅動器測試。
- 儲能系統：電池儲能變流器 (PCS) 測試、電池模擬和測試。
- 新能源：光伏逆變器測試、微電網測試。
- 其他：電源供應器測試、元件測試。

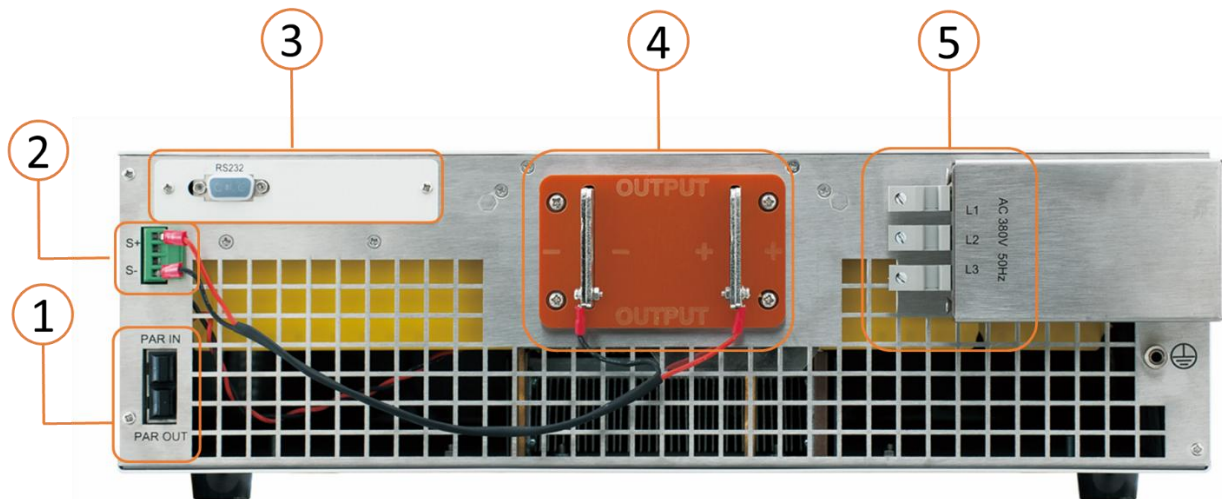
附註：SAS(光伏陣列) 功能適用於 500 V(含)以上機型

## Front Panel



1. 電源開關	5. 功能按鍵區
2. 4.3 吋彩色觸控 LCD	6. 數字鍵區
3. 旋鈕	7. 輸出鍵
4. 方向鍵	

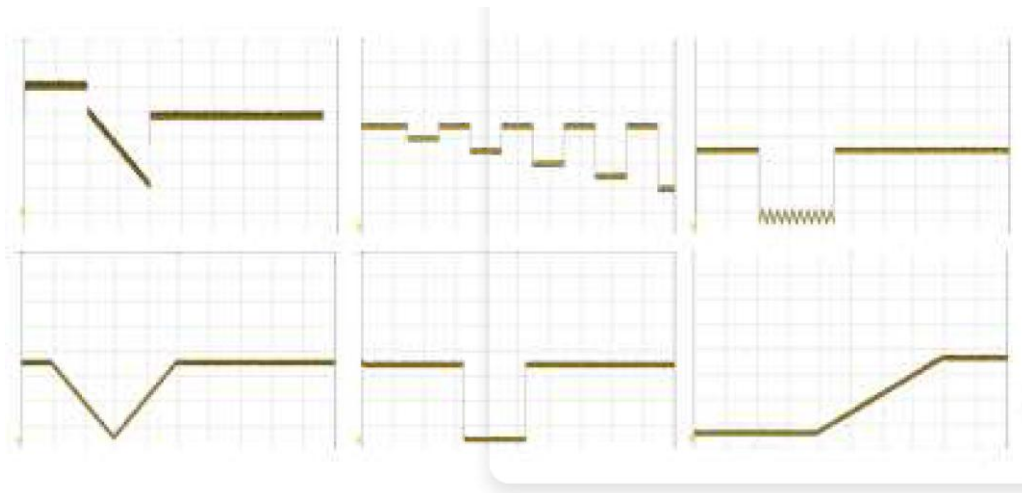
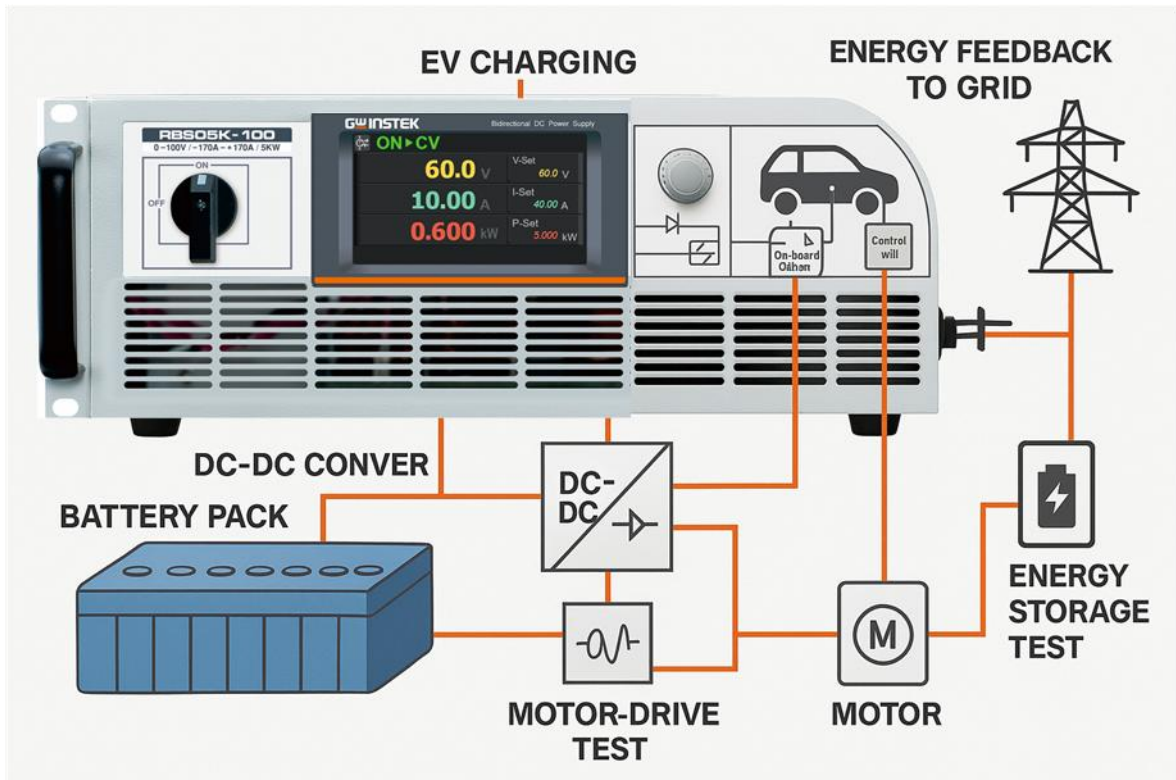
## Rear Panel



1. 並聯介面 Parallel Interface	4. 直流輸出端子
2. Remote Sense	5. 交流輸入端子
3. 通訊介面 4 選 1(工廠安裝) IF-01 RS-232, IF-02 RS-485, IF-03 LAN, IF-04 CAN	

## 內置 DIN40839 · ISO16750-2 · ISO21848 等多種測試規範

汽車電子設備在啟動和運行過程中可能遇到電源瞬變干擾，為確保設備能夠經受考驗，需要在測試時模仿惡劣工況，根據汽車電子測試相關標準，RBS 系列內置了 DIN40839，ISO16750-2 及 ISO21848 等標準曲線，使用者可快速取用瞬間電壓跌落及多種脈衝對電子設備的干擾測試。



## 序列功能



序列編輯

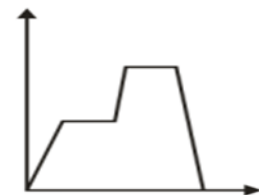


步階編輯



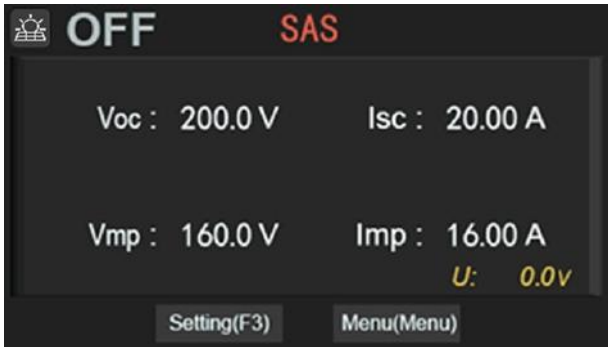
序列運行介面

No.	Mode	Para1	Para2	Para3	Time	Enable	Loop Set	Operation
0	U ramp	0V	40V	510A	2s	Enable	Normal	Next
1	UIP	40V	510A	15kW	3s	Enable	Normal	Next
2	U ramp	40V	70V	510A	1s	Enable	Normal	Next
3	UIP	70V	510A	15kW	3s	Enable	Normal	Next
4	U ramp	70V	0V	510A	2s	Enable	Normal	Stop



範例

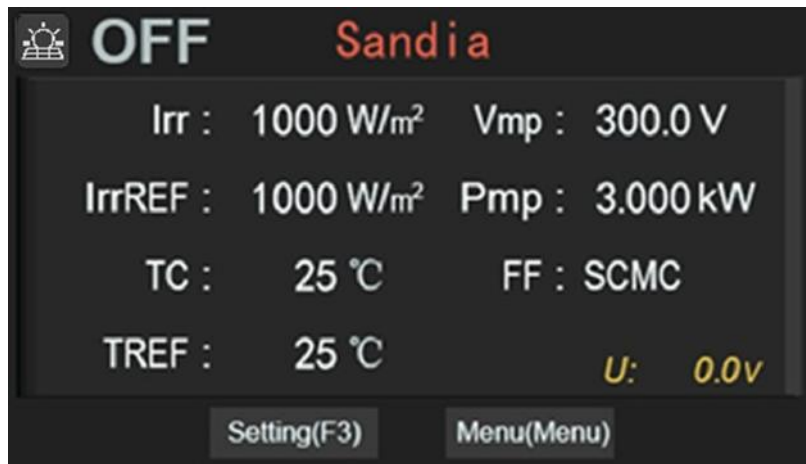
光伏功能：適用 500V (含) 以上機型



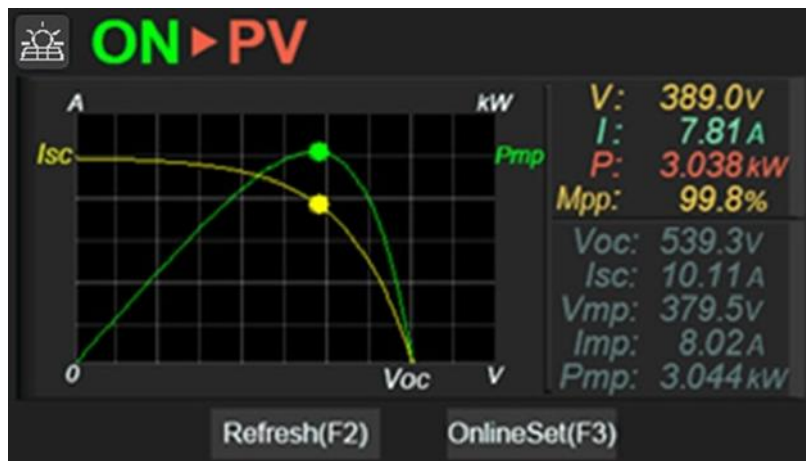
光伏 SAS 模式



光伏 EN50530 模式

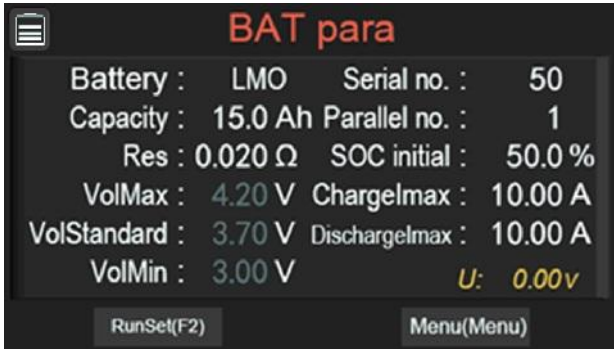


光伏 Sandia 模式



光伏運行介面

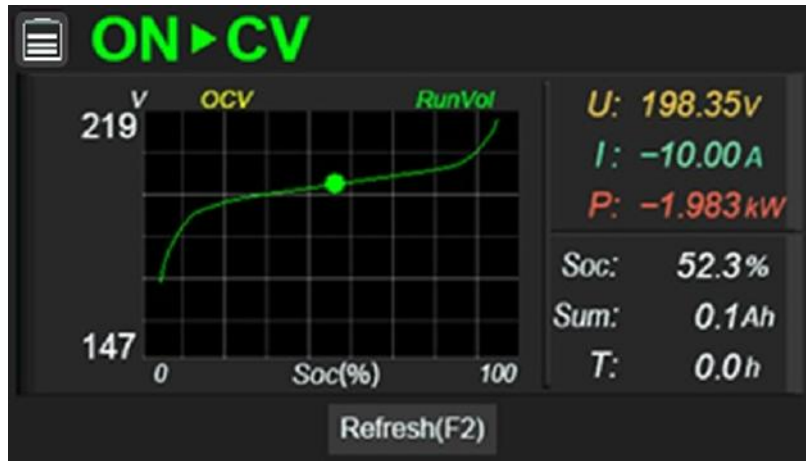
電池模擬功能



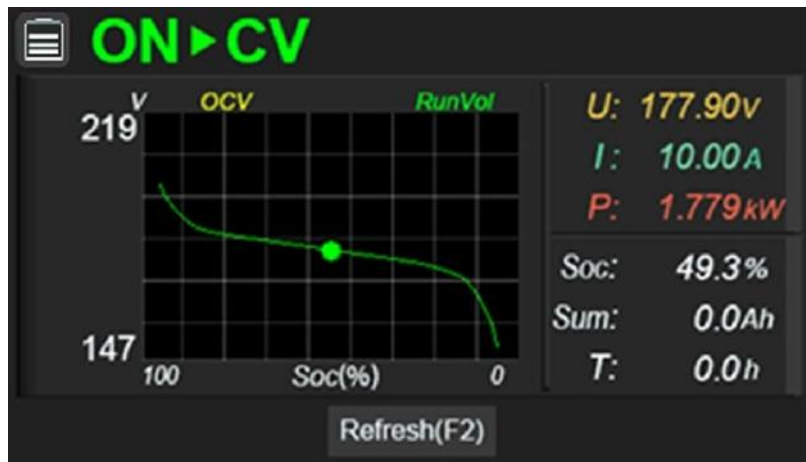
電池參數介面-錳酸鋰電池



SOC 參數介面

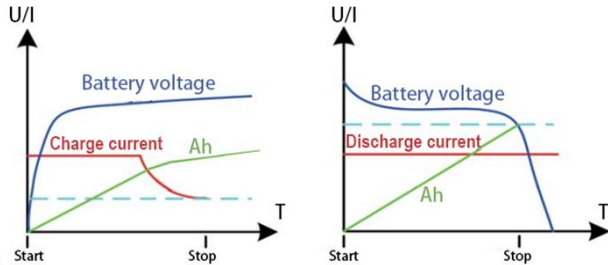


電池模擬運行-充電顯示



電池模擬運行-放電顯示

## 電池充放電模式



電池充放電狀態示意圖



電池充/放電設置介面



電池充/放電運行介面



電池運行結束-放電顯示

## 負載模式



負載待機狀態



負載工作模式運行介面

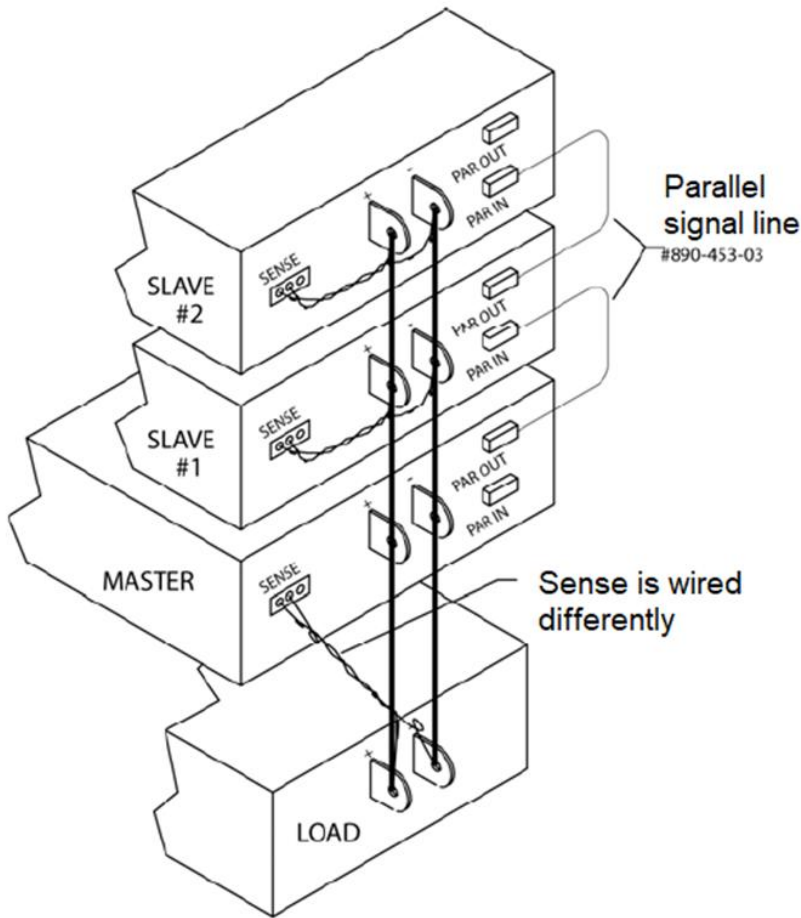


負載快捷組

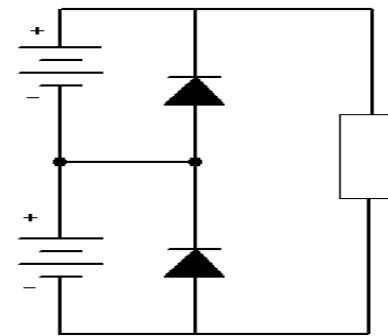
附註：

- 負載模式下，啟動後會有 1 V 左右的輸出電壓，為保證負載模式作正常，外部電源應有 1 V 以上的輸出保證負載模式正常工作。
- 電阻設置為 0 歐姆時，意味著關閉電源 CR 功能，僅 CC 功能和 CP 功能有效。

串並聯

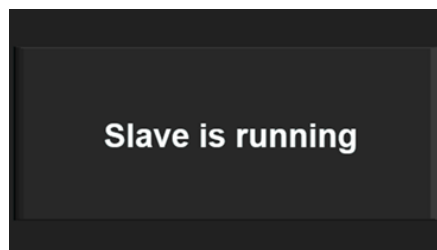


並聯示意圖



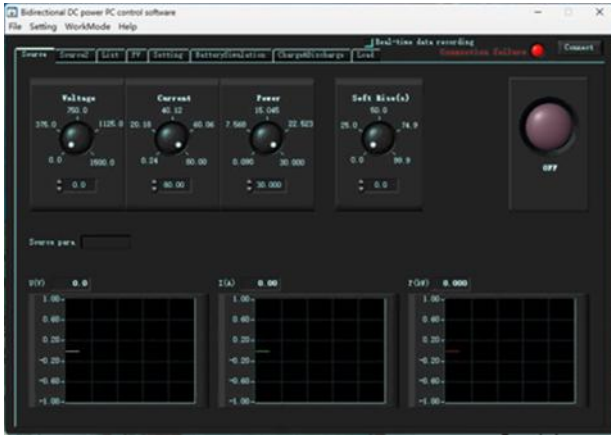
串聯示意圖

- 支援 10 台並聯
  - 超過 10 台的需求請洽 **Gwinstek**
- 支援 2 台串聯
  - 僅適用於 100 V 機型 (因安全規範, 電壓不可超過 300 V)
- 串並聯步驟
  - 連線設置改為主機 or 副機
  - 並聯控制線與輸出線連接



副機面板顯示

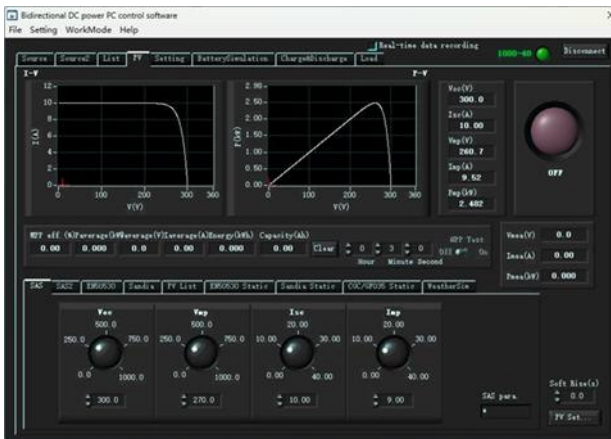
軟體介面



Source Mode



List Mode



PV Mode



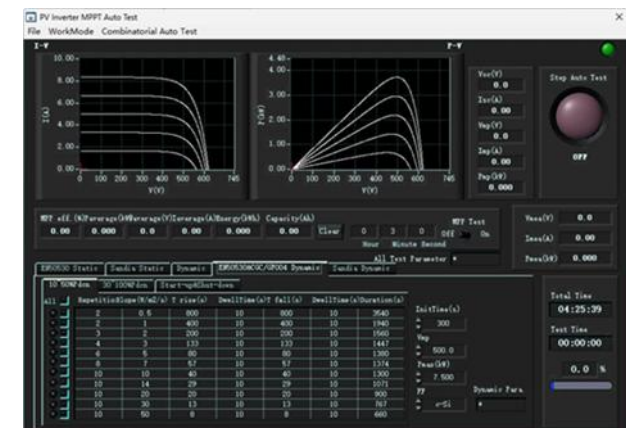
Source Sink Mode

List Edit

List No. 00

No.	Mode	Param.	Value	Param.	Value	Param.	Value	Unit	Min	Max	Sec	Enable	Loop	Count	Operation	Jumping
0	VIZ	Voltage	100.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
1	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
2	I Ramp	StartVal	20.00	StopVal	10.00	Current	40.00	0	0	5.000	Enable	Normal	20	Rest	0	
3	I Ramp	StartDir	10.00	StopDir	20.00	Voltage	0.0	0	0	5.000	Enable	End	0	Rest	0	
4	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Stop	0	
5	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
6	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
7	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
8	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
9	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
10	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
11	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
12	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
13	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
14	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
15	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
16	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
17	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
18	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	
19	VIZ	Voltage	0.0	Current	40.00	Power	15.000	0	0	5.000	Enable	Normal	0	Rest	0	

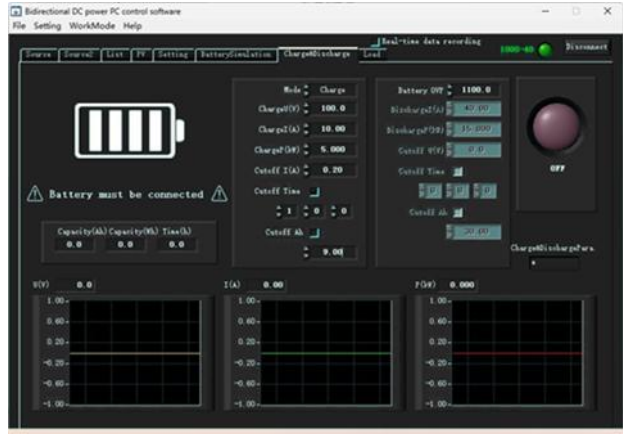
List Edit



PV Inverter MPPT Auto Test



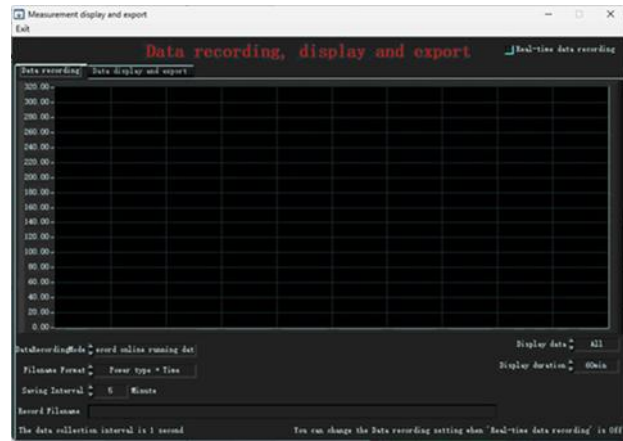
Battery Simulation



Charge Discharge Mode



Load Mode



Data Recording

SPECIFICATIONS			
Model	RBS05K-100	RBS10K-100	RBS15K-100
<b>Output Rating</b>			
Rated power	± 5000 W	± 10000 W	± 15000 W
Rated voltage (source)		0 V to 100 V	
Operating voltage (sink)		5 V to 100 V	
Rated current	±170 A	±340 A	±510 A
<b>Output Voltage</b>			
Maximum settable voltage		100 V	
Setting accuracy		0.05 %+0.05 %FS	
Setting resolution		0.1 V	
Load regulation CV		0.03 %FS	
Line regulation CV		0.015 %FS	
Temperature coefficient CV		100 ppm	
<b>Remote sensing (compensation voltage)</b>			
		5 V	
Source only	Transient response <sup>(*1)</sup>		2 ms
	Ripple noise	P-p <sup>(*2)</sup>	250 mV
		rms <sup>(*3)</sup>	35 mV
	Rise time <sup>(*4)</sup>	Full load	30 ms
		No load	15 ms
Fall time <sup>(*5)</sup>	Full load	15 ms	
	No load	30 ms	
<b>Output Current</b>			
Settable maximum source current	170 A	340 A	510 A
Settable maximum sink current	-170 A	-340 A	-510 A
Setting accuracy		0.1 %+0.1 %FS	
Setting resolution		0.01 A	
Load regulation CC		0.1 %FS	
Line regulation CC		0.05 %FS	
Ripple and noise <sup>(*6)</sup>	rms <sup>(*3)</sup>	0.1 %FS	
Temperature coefficient CC		200 ppm	
<b>Output Power</b>			
Settable maximum source power	5000 W	10000 W	15000 W
Settable maximum sink power	-5000 W	-10000 W	-15000 W
Setting accuracy		0.5 %+0.5 %FS	
Setting resolution		1 W	
<b>DC Output Resistor</b>			
Resistance range	0 Ω to 100 Ω	0 Ω to 100Ω	0 Ω to 100Ω
Setting accuracy <sup>(*7)</sup>		≤ 5 % Rmax(0 % to 10 % Rmax) ; ≤ 10 % Rmax(10 % to Rmax)	
Setting resolution		0.01 Ω	
<b>Protective Functions</b>			
OVP	Range	0 % to 110 %FS	
	Accuracy	0.1 %FS	
OCP	Range	0 % to 110 %FS	
	Accuracy	0.2 %FS	
OTP		✓	✓
Vsense reverse protection		✓	✓
Input voltage protection (OVP, UVVP)		✓	✓
<b>Display Accuracy</b>			
Voltage	Accuracy	0.05 %+0.05 %FS	
	Resolution	0.1 V	
Current	Accuracy	0.1 %+0.1 %FS	
	Resolution	0.01 A	
Power	Accuracy	0.5 %+0.5 %FS	
	Resolution	0.001 kW	
<b>Interfaces Digital</b>			
RS232		Std.	
RS485		Opt.	
LAN		Opt.	
CAN		Opt.	
<b>400V Three-phase Three-wire Input</b>			
Nominal input rating		380 Vac to 460 Vac	
Input voltage range		342 Vac to 510 Vac	
Input frequency range		47 Hz to 63 Hz	
Output Power		5000 W	10000 W
Input current (MAX)	at 342 Vac	9.2 A	18.4 A
Input power (MAX)		5.5 kVA	11 kVA
Power factor (TYP)		0.99	
Leakage current		5 mA	
Efficiency sink/source (up to)		93 %	
<b>General Specifications</b>			
Environmental conditions	Operating temperature	0 °C to 40 °C	
	Operating humidity	20 % to 90 % RH	
	Storage temperature	-10 °C to 70 °C	
	Storage humidity	20 % to 90 % RH	
	Altitude	1000 m	
Withstand voltage	AC input to case (PE)	DC 2300 V	
Insulation resistance	Between output and GND	DC 500 V	
Mechanical construction	Dimensions (W x H x D) mm	482 mm x 133.3 mm x 790 mm	
	Weight	24 kg	32 kg
Parallel operation		✓	✓

(\*1) When the load changes from 50% to 100%, or from 100% to 50%, the voltage returns to within 0.75% of the rating.  
(\*2) Measurement frequency bandwidth is 20 Hz to 20 MHz.  
(\*3) Measurement frequency bandwidth is 20 Hz to 2 MHz.  
(\*4) First set the 0V output, from 10% to 90% of the rated output voltage, with pure resistance.  
(\*5) Rated voltage output, then set to 0V, from 90% to 10% of rated output voltage, with pure resistance.  
(\*6) The ripple is measured at 20% to 100% output voltage and full output current. Source mode is 0.1%FS, Sink and Load mode is 0.2%FS.  
(\*7) When the input voltage is within 10% to 100% of the RBS voltage range and the load current is within 10% to 100% of the RBS current range.

SPECIFICATIONS			
Model	RBS05K-500	RBS10K-500	RBS15K-500
<b>Output Rating</b>			
Rated power	± 5000 W	± 10000 W	± 15000 W
Rated voltage (source)		0 V to 500 V	
Operating voltage (sink)		10 V to 500 V	
Rated current	±40 A	±80 A	±120 A
<b>Output Voltage</b>			
Maximum settable voltage	500 V	500 V	500 V
Setting accuracy		0.05 %+0.05 %FS	
Setting resolution		0.1 V	
Load regulation CV		0.03 %FS	
Line regulation CV		0.015 %FS	
Temperature coefficient CV		100 ppm	
Remote sensing (compensation voltage)		25 V	
Source only	Transient response <sup>(#1)</sup>		2 ms
	Ripple noise	P-p <sup>(#2)</sup>	600 mV
		rms <sup>(#3)</sup>	95 mV
	Rise time <sup>(#4)</sup>	Full load	30 ms
		No load	15 ms
Fall time <sup>(#5)</sup>	Full load	15 ms	
	No load	30 ms	
<b>Output Current</b>			
Settable maximum source current	40 A	80 A	120 A
Settable maximum sink current	-40 A	-80 A	-120 A
Setting accuracy		0.1 %+0.1 %FS	
Setting resolution		0.01 A	
Load regulation CC		0.1 %FS	
Line regulation CC		0.05 %FS	
Ripple and noise <sup>(#6)</sup>	rms <sup>(#3)</sup>	0.1 %FS	
Temperature coefficient CC		200 ppm	
<b>Output Power</b>			
Settable maximum source power	5000 W	10000 W	15000 W
Settable maximum sink power	-5000 W	-10000 W	-15000 W
Setting accuracy		0.5 %+0.5 %FS	
Setting resolution		1 W	
<b>DC Output Resistor</b>			
Resistance range		0 Ω to 500 Ω	
Setting accuracy <sup>(#7)</sup>		≤ 5 % Rmax(0 % to 10 % Rmax) ; ≤ 10 % Rmax(10 % to Rmax)	
Setting resolution		0.01 Ω	
<b>Protective Functions</b>			
OVP	Range	0 % to 110 %FS	
	Accuracy	0.1 %FS	
OCP	Range	0 % to 110 %FS	
	Accuracy	0.2 %FS	
OTP		✓	✓
Vsense reverse protection		✓	✓
Input voltage protection (OVP, UVP)		✓	✓
<b>Display Accuracy</b>			
Voltage	Accuracy	0.05 %+0.05 %FS	
	Resolution	0.1 V	
Current	Accuracy	0.1 %+0.1 %FS	
	Resolution	0.01 A	
Power	Accuracy	0.5 %+0.5 %FS	
	Resolution	0.001 kW	
<b>Interfaces Digital</b>			
RS232		Std.	
RS485		Opt.	
LAN		Opt.	
CAN		Opt.	
<b>400V Three-phase Three-wire Input</b>			
Nominal input rating		380 Vac to 460 Vac	
Input voltage range		342 Vac to 510 Vac	
Input frequency range		47 Hz to 63 Hz	
Output Power		5000 W	10000 W
Input current (MAX)	at 342 Vac	9.2 A	18.4 A
Input power (MAX)		5.5 kVA	11 kVA
Power factor (TYP)		0.99	
Leakage current		5 mA	
Efficiency sink/source (up to)		93 %	
<b>General Specifications</b>			
Environmental conditions	Operating temperature	0 °C to 40 °C	
	Operating humidity	20 % to 90 % RH	
	Storage temperature	-10 °C to 70 °C	
	Storage humidity	20 % to 90 % RH	
	Altitude	1000 m	
Withstand voltage	AC input to case (PE)	DC 2300 V	
Insulation resistance	Between output and GND	DC 500 V	
Mechanical construction	Dimensions (W x H x D) mm	482 mm x 133.3 mm x 790 mm	
	Weight	24 kg	32 kg
Parallel operation		✓	✓

(#1) When the load changes from 50% to 100%, or from 100% to 50%, the voltage returns to within 0.75% of the rating.  
 (#2) Measurement frequency bandwidth is 20 Hz to 20 MHz.  
 (#3) Measurement frequency bandwidth is 20 Hz to 2 MHz.  
 (#4) First set the 0V output, from 10% to 90% of the rated output voltage, with pure resistance.  
 (#5) Rated voltage output, then set to 0V, from 90% to 10% of rated output voltage, with pure resistance.  
 (#6) The ripple is measured at 20% to 100% output voltage and full output current. Source mode is 0.1%FS, Sink and Load mode is 0.2%FS.  
 (#7) When the input voltage is within 10% to 100% of the RBS voltage range and the load current is within 10% to 100% of the RBS current range.

SPECIFICATIONS			
Model	RBS05K-750	RBS10K-750	RBS15K-750
<b>Output Rating</b>			
Rated power	± 5000 W	± 10000 W	± 15000 W
Rated voltage (source)		0 V to 750 V	
Operating voltage (sink)		10 V to 750 V	
Rated current	±25 A	±50 A	±75 A
<b>Output Voltage</b>			
Maximum settable voltage		750 V	
Setting accuracy		0.05 %+0.05 %FS	
Setting resolution		0.1 V	
Load regulation CV		0.03 %FS	
Line regulation CV		0.015 %FS	
Temperature coefficient CV		100 ppm	
Remote sensing (compensation voltage)		37.5 V	
Source only	Transient response <sup>(#1)</sup>		2 ms
	Ripple noise	P-p <sup>(#2)</sup>	900 mV
		rms <sup>(#3)</sup>	100 mV
	Rise time <sup>(#4)</sup>	Full load	30 ms
		No load	15 ms
	Fall time <sup>(#5)</sup>	Full load	15 ms
No load		30 ms	
<b>Output Current</b>			
Settable maximum source current	25 A	50 A	75 A
Settable maximum sink current	-25 A	-50 A	-75 A
Setting accuracy		0.1 %+0.1 %FS	
Setting resolution		0.01 A	
Load regulation CC		0.1 %FS	
Line regulation CC		0.05 %FS	
Ripple and noise <sup>(#6)</sup>	rms <sup>(#3)</sup>	0.1 %FS	
Temperature coefficient CC		200 ppm	
<b>Output Power</b>			
Settable maximum source power	5000 W	10000 W	15000 W
Settable maximum sink power	-5000 W	-10000 W	-15000 W
Setting accuracy		0.5 %+0.5 %FS	
Setting resolution		1 W	
<b>DC Output Resistor</b>			
Resistance range		0 Ω to 750 Ω	
Setting accuracy <sup>(#7)</sup>		≤ 5 % Rmax(0 % to 10 % Rmax) ; ≤ 10 % Rmax(10 % to Rmax)	
Setting resolution		0.01 Ω	
<b>Protective Functions</b>			
OVP	Range	0 to 110 %FS	
	Accuracy	0.1 %FS	
OCP	Range	0 to 110 %FS	
	Accuracy	0.2 %FS	
OTP		✓	✓
Vsense reverse protection		✓	✓
Input voltage protection (OVP, UVVP)		✓	✓
<b>Display Accuracy</b>			
Voltage	Accuracy	0.05 %+0.05 %FS	
	Resolution	0.1 V	
Current	Accuracy	0.1 %+0.1 %FS	
	Resolution	0.01 A	
Power	Accuracy	0.5 %+0.5 %FS	
	Resolution	0.001 kW	
<b>Interfaces Digital</b>			
RS232		Std.	
RS485		Opt.	
LAN		Opt.	
CAN		Opt.	
<b>400V Three-phase Three-wire Input</b>			
Nominal input rating		380 Vac to 460 Vac	
Input voltage range		342 Vac to 510 Vac	
Input frequency range		47 Hz to 63 Hz	
Output Power		5000 W	10000W
Input current (MAX)	at 342 Vac	9.2 A	18.4A
Input power (MAX)		5.5 kVA	11 kVA
Power factor (TYP)			0.99
Leakage current			5 mA
Efficiency sink/source (up to)			93 %
<b>General Specifications</b>			
Environmental conditions	Operating temperature	0 °C to 40 °C	
	Operating humidity	20 % to 90 % RH	
	Storage temperature	-10 °C to 70 °C	
	Storage humidity	20 % to 90 % RH	
	Altitude	1000 m	
Withstand voltage	AC input to case (PE)	DC 2300 V	
Insulation resistance	Between output and GND	DC 500 V	
Mechanical construction	Dimensions (W x H x D) mm	482 mm x 133.3 mm x 790 mm	
	Weight	24 kg	32 kg
Parallel operation		✓	✓

(#1) When the load changes from 50% to 100%, or from 100% to 50%, the voltage returns to within 0.75% of the rating.

(#2) Measurement frequency bandwidth is 20 Hz to 20 MHz.

(#3) Measurement frequency bandwidth is 20 Hz to 2 MHz.

(#4) First set the 0V output, from 10% to 90% of the rated output voltage, with pure resistance.

(#5) Rated voltage output, then set to 0V, from 90% to 10% of rated output voltage, with pure resistance.

(#6) The ripple is measured at 20% to 100% output voltage and full output current. Source mode is 0.1%FS, Sink and Load mode is 0.2%FS.

(#7) When the input voltage is within 10% to 100% of the RBS voltage range and the load current is within 10% to 100% of the RBS current range.

SPECIFICATIONS					
Model	RBS10K-1000	RBS15K-1500	RBS15K-2250		
<b>Output Rating</b>					
Rated power	± 10000 W	± 15000 W	± 15000 W		
Rated voltage (source)	0 V to 1000 V	0 V to 1500 V	0 V to 2250 V		
Operating voltage (sink)	10 V to 1000 V	10 V to 1500 V	10 V to 2250 V		
Rated current	±40 A	±40 A	±25 A		
<b>Output Voltage</b>					
Maximum settable voltage	1000 V	1500 V	2250 V		
Setting accuracy	0.05 %+0.05 %FS				
Setting resolution	0.1 V				
Load regulation CV	0.03 %FS				
Line regulation CV	0.015 %FS				
Temperature coefficient CV	100 ppm				
Remote sensing (compensation voltage)	50 V	75 V	112.5 V		
Source only	Transient response <sup>(#1)</sup>	2 ms			
	Ripple noise	P-p <sup>(#2)</sup>	1700 mV	2000 mV	2100 mV
		rms <sup>(#3)</sup>	295 mV	300 mV	200 mV
	Rise time <sup>(#4)</sup>	Full load	30 ms		
		No load	15 ms		
	Fall time <sup>(#5)</sup>	Full load	15 ms		
No load		30 ms			
<b>Output Current</b>					
Settable maximum source current	40 A	40 A	25 A		
Settable maximum sink current	-40 A	-40 A	-25 A		
Setting accuracy	0.1 %+0.1 %FS				
Setting resolution	0.01 A				
Load regulation CC	0.1 %FS				
Line regulation CC	0.05 %FS				
Ripple and noise <sup>(#6)</sup>	0.1 %FS				
Temperature coefficient CC	200 ppm				
<b>Output Power</b>					
Settable maximum source power	10000 W	15000 W	15000 W		
Settable maximum sink power	-10000 W	-15000 W	-15000 W		
Setting accuracy	0.5 %+0.5 %FS				
Setting resolution	1 W				
<b>DC Output Resistor</b>					
Resistance range	0 Ω to 1000 Ω	0 Ω to 1500 Ω	0 Ω to 2250 Ω		
Setting accuracy <sup>(#7)</sup>	≤ 5 % Rmax(0 % to 10 % Rmax) ; ≤ 10 % Rmax(10 % to Rmax)				
Setting resolution	0.01 Ω				
<b>Protective Functions</b>					
OVP	Range	0 % to 110 %FS			
	Accuracy	0.1 %FS			
OCP	Range	0% to 110 %FS			
	Accuracy	0.2 %FS			
OTP	✓	✓	✓		
Vsense reverse protection	✓	✓	✓		
Input voltage protection (OVP, UVP)	✓	✓	✓		
<b>Display Accuracy</b>					
Voltage	Accuracy	0.05 %+0.05 %FS			
	Resolution	0.1 V			
Current	Accuracy	0.1 %+0.1 %FS			
	Resolution	0.01 A			
Power	Accuracy	0.5 %+0.5 %FS			
	Resolution	0.001 kW			
<b>Interfaces Digital</b>					
RS232	Std.				
RS485	Opt.				
LAN	Opt.				
CAN	Opt.				
<b>400V Three-phase Three-wire Input</b>					
Nominal input rating	380 Vac to 460 Vac				
Input voltage range	342 Vac to 510 Vac				
Input frequency range	47 Hz to 63 Hz				
Output Power	10000 W	15000 W	15000 W		
Input current (MAX)	at 342 Vac	18.4 A	27.6 A	27.6 A	
Input power (MAX)	11 kVA	16.5 kVA	16.5 kVA		
Power factor (TYP)	0.99				
Leakage current	5 mA				
Efficiency sink/source (up to)	93 %				
<b>General Specifications</b>					
Environmental conditions	Operating temperature	0 °C to 40 °C			
	Operating humidity	20 % to 90 % RH			
	Storage temperature	-10 °C to 70 °C			
	Storage humidity	20 % to 90 % RH			
	Altitude	1000 m			
Withstand voltage	AC input to case (PE)	DC 2300 V			
Insulation resistance	Between output and GND	DC 500 V			
Mechanical construction	Dimensions (W x H x D) mm	482 mm x 133.3 mm x 790 mm			
	Weight	32 kg	40 kg	40 kg	
Parallel operation	✓	✓	✓		

(#1) When the load changes from 50% to 100%, or from 100% to 50%, the voltage returns to within 0.75% of the rating.

(#2) Measurement frequency bandwidth is 20 Hz to 20 MHz.

(#3) Measurement frequency bandwidth is 20 Hz to 2 MHz.

(#4) First set the 0V output, from 10% to 90% of the rated output voltage, with pure resistance.

(#5) Rated voltage output, then set to 0V, from 90% to 10% of rated output voltage, with pure resistance.

(#6) The ripple is measured at 20% to 100% output voltage and full output current. Source mode is 0.1%FS, Sink and Load mode is 0.2%FS.

(#7) When the input voltage is within 10% to 100% of the RBS voltage range and the load current is within 10% to 100% of the RBS current range.

Standard Accessories : AC input connector, output terminal cover, power cord, factory test report, M4x10 Screw x 4 Pcs, 3U handle x 2, packing list

Factory Installed with four selectable options Interface 通訊介面四選一工廠安裝出貨		
Part Number	英文名稱	中文名稱
RBS-IF01	RS232 interface	RS232 通訊介面
RBS-IF02	RS485 interface	RS485 通訊介面
RBS-IF03	LAN interface	LAN 通訊介面
RBS-IF04	CAN interface	CAN 通訊介面
Optional Accessories		
Part Number	英文名稱	中文名稱
GTL-133	Load cable, 1.5 m, 100 A	負載線 1.5 m, 100 A
GTL-218	Load cable, 1.5 m, 200 A	負載線 1.5 m, 200 A
GTL-219	Load cable, 3 m, 200 A	負載線 3 m, 200 A
GTL-220	Load cable, 1.5 m, 300 A	負載線 1.5 m, 300 A
GTL-221	Load cable, 3 m, 300 A	負載線 3 m, 300 A
GTL-222	Load cable, 1.5 m, 400 A	負載線 1.5 m, 400 A
GTL-223	Load cable, 3 m, 400 A	負載線 3 m, 400 A
GPW-021	Input power cord, 10 AWG/4C, 3 m, UL/CSA	輸入電源線 10 AWG/4C, 3 m, UL/CSA

## Global Headquarters

**GOOD WILL INSTRUMENT CO., LTD.**  
No. 7-1, Jhongsing Road, Tucheng Dist., New Taipei City 236, Taiwan  
T +886-2-2268-0389 F +886-2-2268-0639  
E-mail: marketing@goodwill.com.tw

## China Subsidiary

**GOOD WILL INSTRUMENT (SUZHOU) CO., LTD.**  
No. 521, Zhujiang Road, Snd, Suzhou Jiangsu 215011 China  
T +86-512-6661-7177 F +86-512-6661-7277

## Malaysia Subsidiary

**GOOD WILL INSTRUMENT (SEA) SDN. BHD.**  
No. 1-3-18, Elit Avenue, Jalan Mayang Pasir 3,  
11950 Bayan Baru, Penang, Malaysia  
T +604-6111122 F +604-6115225

## Europe Subsidiary

**GOOD WILL INSTRUMENT EURO B.V.**  
De Run 5427A, 5504DG Veldhoven, THE NETHERLANDS  
T +31 (0)40-2557790 F +31 (0)40-2541194

## U.S.A. Subsidiary

**INSTEK AMERICA CORP.**  
5198 Brooks Street Montclair, CA 91763, U.S.A.  
T +1-909-399-3535 F +1-909-399-0819

## Japan Subsidiary

**TEXIO TECHNOLOGY CORPORATION.**  
7F Towa Fudosan Shin Yokohama Bldg., 2-18-13 Shin  
Yokohama, Kohoku-ku, Yokohama, Kanagawa,  
222-0033 Japan  
T +81-45-620-2305 F +81-45-534-7181

## Korea Subsidiary

**GOOD WILL INSTRUMENT KOREA CO., LTD.**  
Room No.503, Gyeonginro 775 (Mullae-Dong 3Ga,  
Ace Hightech-City B/D 1Dong), Yeongduengpo-Gu,  
Seoul 150093, Korea.  
T +82-2-3439-2205 F +82-2-3439-2207

## India Subsidiary

**GW INSTEK INDIA LLP.**  
2F, No. 20/1, Salarpuria Galleria Building, Bellary Road, Kashi Nagar,  
Byatarayanapura, Bangalore, Karnataka 560092 India  
T +91-80-4341-8000

