

可编程直流电源供应器

MODEL 62000H 系列

特点:

- 功率输出范围: 5KW / 10KW / 15KW
- 电压输出范围: 0 ~ 1000V
- 电流输出范围: 0 ~ 375A
- 3U/15KW高功率密度
- 简易主/从并联&串联操作模式可达150KW
- 精准的电压及电流量测
- 高速程式控制介面
- 电压及电流斜率控制
- 数位旋钮、键盘及功能按钮操作
- 并联时具有均流操作模式
- 电压渐升/降功能
(时间范围: 10 ms ~ 99 hours)
- 具有10组程式控制及100个步骤设定电压/电流
- 过电压、限电流及过温度保护功能
- 标准的类比编程控制介面
- 标准的USB / RS232 / RS485控制介面
- 可选购 GPIB / Ethernet 控制介面
- 远端输出 ON / OFF (I / P)
- 远端感测线压降补偿
- LabView 及 Labwindows 控制驱动程式
- 太阳能电池阵列模拟功能
- 可模拟太阳能电池遮罩下 I-V 曲线
- 具有100条 I-V 曲线自动程控
- 具有CE认证



可编程直流电源供应器

PROGRAMMABLE DC POWER SUPPLY

MODEL 62000H 系列

Chroma 62000H系列可编程直流电源供应器, 提供许多独特功能供电信、自动测试系统整合、工业、电池充电及模拟、混合动力汽车与太阳能面板模拟使用。这些功能包括3U中的15KW高功率密度、精准的输出电流和电压量测、输出触发信号, 以及可模拟复杂的DC暂态波形以便测试设备的瞬断、压降与其他电压间偏差的能力。

62000H系列包含14个不同的机型, 范围从5KW到15KW, 具有电流范围可达375A及电压范围可达1000V。62000H可简易并联10台仪器, 可均流150KW供大功率应用, 例如, 450V/150A/67.5KW的电池组模拟供电动汽车与国防工业使用。

前面板上有100种使用者可程式输入状态, 供自动测试应用与生命周期ON/OF测试使用。此外, 62000H具备16 bit高解析度的数位控制和可视性佳的真空荧光显示器读出功能。

62000H系列直流电源供应器操作非常简单, 从前面板按键或远端控制器经由标准的USB / RS232 / RS485 / APG控制介面与选购的GPIB & Ethernet控制介面。其具有3U精巧尺寸, 可毫无困难的以标准机架堆叠於机台上。

62000H系列电源供应器另一个独特的功能为可建立复杂的DC暂态波形。此功能可对设备进行电压漏失、瞬断和其他电压变化等测试, 是用于航空设备测试、太阳能逆变器测试和其他会产生电压中断之设备测试的理想选择。其应用的范围包括DC/DC转换器和逆变器、压降测试、引擎启动模拟、电池自动充电、电子产品生命周期测试等等。



Chroma



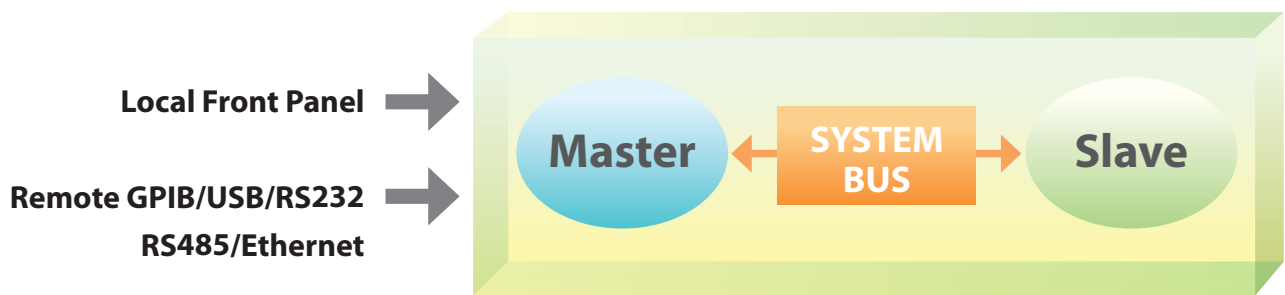
高功率密度3U/15KW可编程直流电源供应器

62000H系列电源供应器提供3U高15KW的高功率密度，具有低输出噪声及涟波、绝佳的市电扰动调节、负载调节与快速暂态回应。其具有大范围的电压30V~1000V，电流375A~25A的组合，适合从设计到产品测试生产流程的每一测试验证用电源。



主/从并联及串联操作模式可达150KW

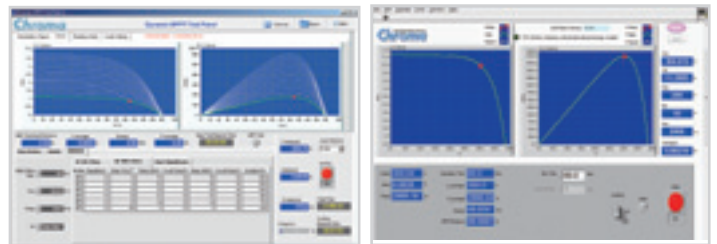
当需要高功率时，一般以并联或串连方式连接二台或多台电源供应器。62000H系列电源供应器具有主/从控制模式，使串连/并联操作模式快速又简易。在此模式中，主单机设定数值并下载资料到从属单机，因此编程是简单的且会自动均流使用。



太阳能电池模拟电源应用

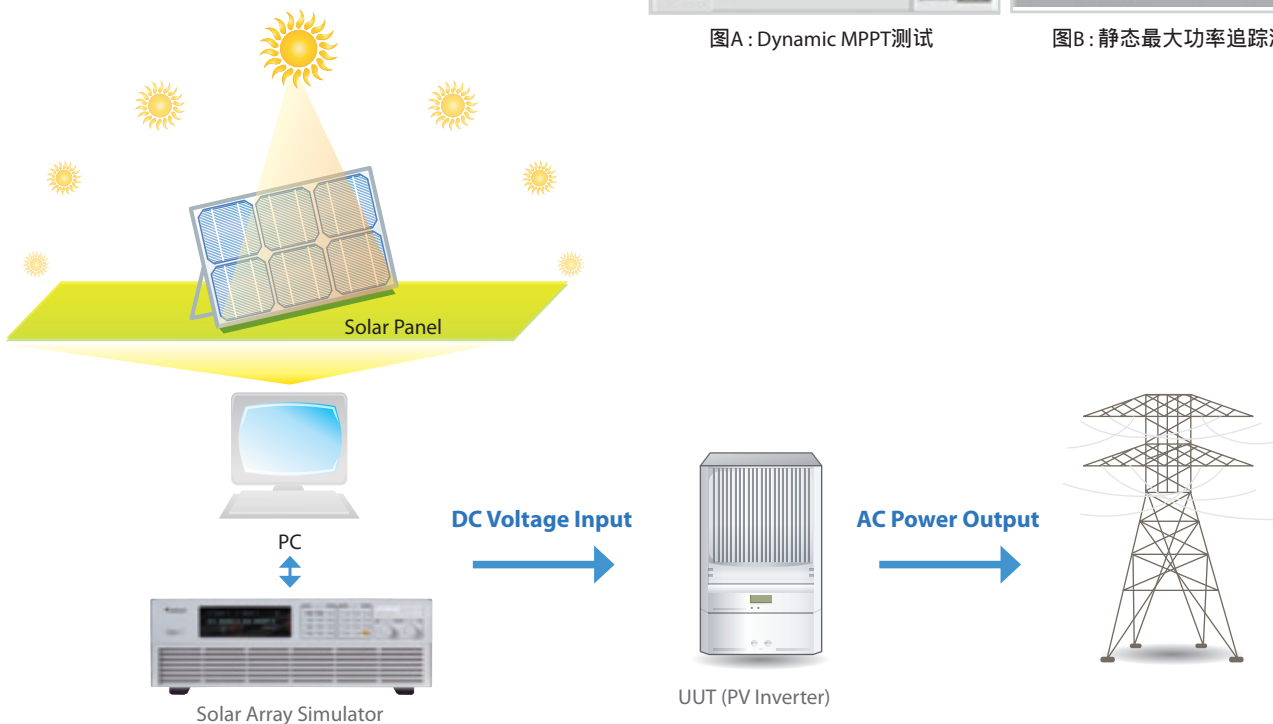
型号62150H-600S/1000S直流电源具有可模拟太阳能板的I-V曲线，使用者可编辑多种不同温度及照度下的I-V曲线及特殊有遮罩下的曲线，此可应用于太阳能逆变器的最大功率追踪(MPPT)效能测试。如右图示A&B，使用者可非常容易地使用SoftPanel软体编辑I-V曲线后下载至单机内记忆体，并且可即时输出&量测显示太阳逆变器的最大功率追踪状况及记录。

*请见Solar Array Simulator型录得到更多资讯。



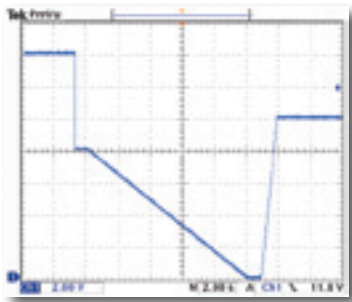
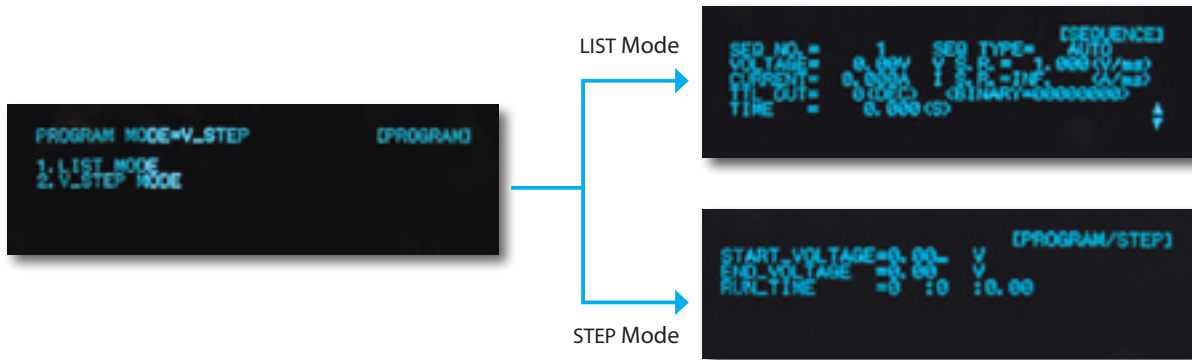
图A: Dynamic MPPT测试

图B: 静态最大功率追踪测试

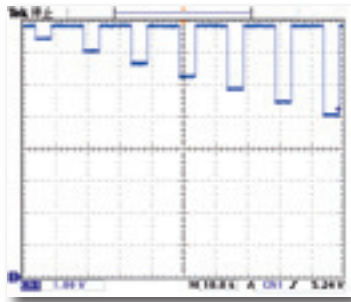


编程自动程序电压变化应用

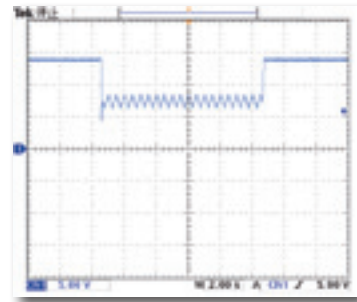
62000H系列电源供应器的LIST和STEP模式提供自动程序功能。LIST模式提供100个使用者可控排序，具有时间设定范围从5ms到15000s，还有电压/电流斜率控制。STEP模式可设定起始、结束电压，且提供10ms到99 hours的运转时间予自动测试应用。应用的范围包括 DC/DC转换器和反用换流器、电压漏失测试、引擎启动模拟、电池自动充电、电池电压漏失模拟、电子产品生命周期测试与航空电子测试。



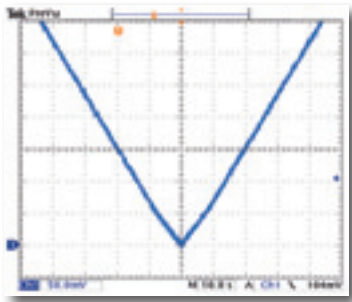
模拟电池供压瞬降试验



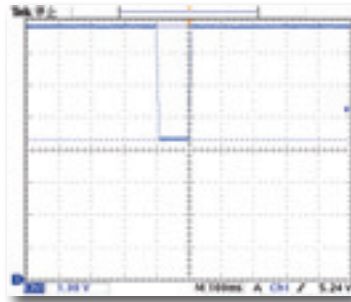
ISO 16750-2降压重置试验曲线



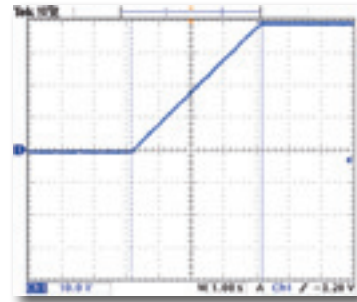
ISO 16750-2启动电压曲线试验



模拟电池缓降及缓升供压试验



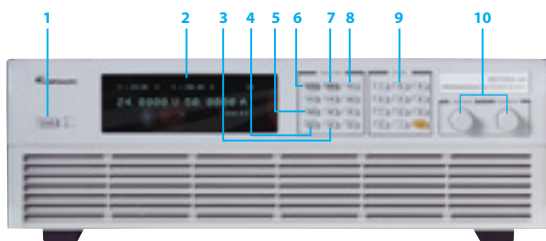
通讯电源输入瞬降测试



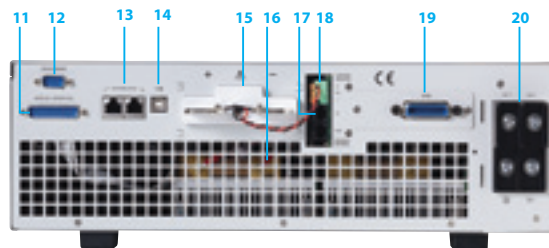
输出电压爬升斜率控制



面板说明



1. AC电源开关
2. VFD显示器
显示设定, 量测及操作状态指示
3. 安全锁键
安全锁启动及失能控制
4. 输出ON/OFF控制键
输出启动及失能控制
5. CONFIG功能键
系统内部参数设定
6. 电压设定键
设定输出电压值
7. 电流设定键
设定输出限电流值
8. PROG功能键
程序步阶电压及电流设定选择
9. 数字键
数字输入
10. 旋钮
旋钮调整设定参数



11. 类比控制介面
类比输入/出控制&监控电压及电流
12. RS-232或RS-485介面 (二选一)
13. 系统控制介面
主从串/并联用数位讯号沟通介面
14. USB介面
15. 後背板直流输出端子
输出连接端子至负载
16. 系统散热风扇
具有温控转速调节
17. 均流端子
主/从并联使用
18. 远端压降补偿端子
远端回授连接端子至负载
19. GPIB或Ethernet介面(二选一,选配)
20. AC输入端子

订购资讯

功率输出范围	62000H 系列可编程直流电源供应器
5KW	62050H-40: 可编程直流电源供应器 40V/125A/5KW
	62050H-450: 可编程直流电源供应器 450V/11.5A/5KW
	62050H-600: 可编程直流电源供应器 600V/8.5A/5KW
	62050H-600S: 可编程直流电源供应器 600V/8.5A/5KW 具有太阳能电池模拟功能
10KW	62075H-30: 可编程直流电源供应器 30V/250A/7.5KW
	62100H-30: 可编程直流电源供应器 30V/375A/11KW
	62100H-40: 可编程直流电源供应器 40V/250A/10KW
	62100H-450: 可编程直流电源供应器 450V/23A/10KW
	62100H-600: 可编程直流电源供应器 600V/17A/10KW
	62100H-600S: 可编程直流电源供应器 600V/17A/10kW 具有太阳能电池模拟功能
15KW	62100H-1000: 可编程直流电源供应器 1000V/10A/10KW
	62150H-40: 可编程直流电源供应器 40V/375A/15KW
	62150H-450: 可编程直流电源供应器 450V/34A/15KW
	62150H-600: 可编程直流电源供应器 600V/25A/15KW
	62150H-600S: 可编程直流电源供应器 600V/25A/15KW 具有太阳能电池模拟功能
选购配件	62150H-1000: 可编程直流电源供应器 1000V/15A/15KW
	62150H-1000S: 可编程直流电源供应器 1000V/15A/15KW 具有太阳能电池模拟功能
	A620024: GPIB 介面卡 (工厂出货安装)
	A620025: Ethernet 介面卡 (工厂出货安装)
	A620026: 19寸机框耳架

注 1: 请於下订单时指定选配GPIB或Ethernet介面, 此为机器上的二选一介面, 工厂制造前须选定

注 2: 所有机型皆可订购使用於市电380/400Vac

注 3: 如需200/220 Vac (30V/40V/450V)机型, 请联络致茂办公室

电气规格 -1

Model	62075H-30	62050H-40	62050H-450	62050H-600	62100H-30	62100H-40	62100H-450
Output Ratings							
Output Voltage	0-30V	0-40V	0-450V	0-600V	0-30V	0-40V	0-450V
Output Current	0-250A	0-125A	0-11.5A	0-8.5A	0-375A	0-250A	0-23A
Output Power	7500W	5000W	5000W	5000W	11250W	10000W	10000W
Line Regulation							
Voltage	±0.01% F.S.						
Current	±0.05% F.S.						
Load Regulation							
Voltage	±0.02% F.S.						
Current	±0.1% F.S.						
Voltage Measurement							
Range	6V / 30V	8V / 40V	90V / 450V	120V / 600V	6V / 30V	8V / 40V	90V/450V
Accuracy	0.05% + 0.05% F.S.						
Current Measurement							
Range	50A / 250A	25A / 125A	2.3A / 11.5A	1.7A / 8.5A	75A / 375A	50A / 250A	4.6A/23A
Accuracy	0.1% + 0.1% F.S.						
Output Noise & Ripple							
Voltage Noise (P-P)	60mV	60mV	300mV	350mV	60mV	60mV	300mV
Voltage Ripple (rms)	15mV	15mV	450mV	600mV	15mV	15mV	450mV
Current Ripple (rms)	100mA	50mA	20mA	15mA	150mA	100mA	40mA
OVP Adjustment Range							
Range	0-110% programmable from front panel, remote digital inputs						
Accuracy	± 1% of full-scale output						
Programming Response Time							
Rise Time: Full Load	6ms	8ms	60ms	60ms	6ms	8ms	60ms
Rise Time: No Load	6ms	8ms	60ms	60ms	6ms	8ms	60ms
Fall Time: Full Load	6ms	8ms	60ms	60ms	6ms	8ms	60ms
Fall Time: 10% Load	100ms	100ms	250ms	250ms	100ms	100ms	250ms
Fall Time: No Load	1s	1s	2.5s	2.5s	1s	1s	2.5s
Slew Rate Control							
Voltage slew rate range	0.001V/ms ~ 5V/ms	0.001V/ms ~ 5V/ms	0.001V/ms ~ 7.5V/ms	0.001V/ms ~ 10V/ms	0.001V/ms ~ 5V/ms	0.001V/ms ~ 5V/ms	0.001V/ms ~ 7.5V/ms
Current slew rate range	0.001A~1A/ms, or INF	0.001A~1A/ms, or INF	0.001A~0.1A/ms, or INF	0.001A~0.1A/ms, or INF	0.001A~1A/ms, or INF	0.001A~1A/ms, or INF	0.001A~0.1A/ms, or INF
Minimum transition time	0.5ms						
Transient Response Time							
	Recovers within 1ms to +/-0.75% of steady-state output for a 50% to 100% or 100% to 50% load change(1A/μs)						
Efficiency	0.87(Typical)						
Drift (30 minutes)							
Voltage	0.04% of Vmax						
Current	0.06% of Imax						
Drift (8 hours)							
Voltage	0.02% of Vmax						
Current	0.04% of Imax						
Temperature Coefficient							
Voltage	0.04% of Vmax/°C						
Current	0.06% of Imax/°C						

电气规格 -2

Model	62100H-600	62100H-1000	62150H-40	62150H-450	62150H-600	62150H-1000
Output Ratings						
Output Voltage	0-600V	0-1000V	0-40V	0-450V	0-600V	0-1000V
Output Current	0-17A	0-10A	0-375A	0-34A	0-25A	0-15A
Output Power	10000W	10000W	15000W	15000W	15000W	15000W
Line Regulation						
Voltage	± 0.01% F.S.					
Current	± 0.05% F.S.					
Load Regulation						
Voltage	± 0.02% F.S.	± 0.05% F.S.	± 0.02% F.S.	± 0.02% F.S.	± 0.02% F.S.	± 0.05% F.S.
Current	± 0.1% F.S.					
Voltage Measurement						
Range	120V/600V	200V/1000V	8V/40V	90V/450V	120V/600V	200V/1000V
Accuracy	0.05% + 0.05%F.S.					
Current Measurement						
Range	3.2A/17A	4A/10A	75A/375A	6.8A/34A	5A/25A	6A/15A
Accuracy	0.1% + 0.1%F.S.					
Output Noise & Ripple						
Voltage Noise(P-P)	350mV	2550mV	60mV	300mV	350mV	2550mV
Voltage Ripple(rms)	600mV	1500mV	15mV	450mV	600mV	1500mV
Current Ripple(rms)	30mA	180mA	150mA	60mA	45mA	270mA
OVP Adjustment Range						
Range	0-110% programmable from front panel, remote digital inputs					
Accuracy	± 1% of full-scale output					
Programming Response Time						
Rise Time:Full Load	60ms	25ms(50% F.S. CC Load)	8ms	60ms	60ms	25ms(50% F.S. CC Load)
Rise Time:No Load	60ms	25ms	8ms	60ms	60ms	25ms
Fall Time: Full Load	60ms	25ms(50% F.S. CC Load)	8ms	60ms	60ms	25ms(50% F.S. CC Load)
Fall Time: 10% Load	250ms	80ms(10% F.S. CC Load)	100ms	250ms	250ms	80ms(10% F.S. CC Load)
Fall Time: No Load	2.5s	3s	1s	2.5s	2.5s	3s
Slew Rate Control						
Voltage slew rate range	0.001V/ms~10V/ms	0.001V/ms~40V/ms	0.001V/ms~5V/ms	0.001V/ms~7.5V/ms	0.001V/ms~10V/ms	0.001V/ms~40V/ms
Current slew rate range	0.001A~0.1A/ms, or INF	0.001A~0.1A/ms, or INF	0.001A~1A/ms, or INF	0.001A~0.1A/ms, or INF	0.001A~0.1A/ms, or INF	0.001A~0.1A/ms, or INF
Minimum transition time	0.5ms					
Transient Response Time	Recovers within 1ms to +/- 0.75% of steady-state output for a 50% to 100% or 100% to 50% load change(1A/μs)					
Efficiency	0.87(Typical)					
Drift (30 minutes)						
Voltage	0.04% of Vmax					
Current	0.06% of Imax					
Drift (8 hours)						
Voltage	0.02% of Vmax					
Current	0.04% of Imax					
Temperature Coefficient						
Voltage	0.04% of Vmax/°C					
Current	0.06% of Imax/°C					

一般规格表

Programming & Measurement Resolution				
Voltage (Front Panel)	10mV / 100mV (Model 62000H-1000)			
Current (Front Panel)	10 mA / 1mA (Model 62000H-1000)			
Voltage (Digital Interface)	0.002% of Vmax			
Current (Digital Interface)	0.002% of Imax			
Voltage (Analog Interface)	0.04% of Vmax			
Current (Analog Interface)	0.04% of Imax			
Remote Interface				
Analog programming	Standard			
USB	Standard			
RS-232	Standard			
RS485	Standard			
GPIB	Optional			
Ethernet	Optional			
System BUS(CAN)	Standard for master/slave control			
Programming Accuracy				
Voltage (Front Panel and Digital Interface)	0.1% of Vmax			
Current (Front Panel and Digital Interface)	0.3% of Imax			
Voltage (Analog Interface)	0.2% of Vmax			
Current (Analog Interface)	0.3% of Imax			
GPIB Command Response Time				
Vout setting	GPIB send command to DC source receiver <20ms			
Measure V & I	Under GPIB command using Measure <25ms			
Analog Interface (I/O)				
Voltage and Current Programming inputs (I/P)	0-10Vdc / 0-5Vdc / 0-5k ohm / 4-20 mA of F.S.			
Voltage and Current monitor output (O/P)	0-10Vdc / 0-5Vdc / 4-20mA of F.S.			
External ON/OFF (I/P)	TTL:Active Low or High(Selective)			
DC_ON Signal (O/P)	Level by user define. (Time delay = 1 ms at voltage slew rate of 10V/ms.)			
CV or CC mode Indicator (O/P)	TTL Level High=CV mode ; TTL Level Low= CC mode			
OTP Indicator (O/P)	TTL: Active Low			
System Fault indicator(O/P)	TTL: Active Low			
Auxiliary power supply(O/P)	Nominal supply voltage : 12Vdc / Maximum current sink capability: 10mA			
Safety interlock(I/P)	Time accuracy: <100ms			
Remote inhibit(I/P)	TTL: Active Low			
Series & Parallel Operation	Master / Slave control via CAN for 10 units up to 150KW. (Series: two units / Parallel: ten units)			
Auto Sequencing(List Mode)				
Number of program	10			
Number of sequence	100			
Dwell time Range	5ms - 15000S			
Trig. Source	Manual / Auto / External			
Auto Sequencing (Step Mode)				
Start voltage	0 to Full scale			
End voltage	0 to Full scale			
Run time	10ms - 99hours			
Input Specification				
AC input voltage 3phase , 3 wire + ground	3Ø 200~220Vac ± 10% V _{LL} *1 ; 3Ø 380~400Vac ± 10% V _{LL}			
AC frequency range	47-63 Hz			
Max Current (each phase)	200/220 Vac	5KW Model : 39A	10KW Model : 69A	15KW Model : 93A
	380/400 Vac	5KW Model : 22A	10KW Model : 37A	15KW Model : 50A
General Specification				
Maximum Remote Sense Line Drop Compensation	<100V model: 5% of full scale voltage per line(10% total) >100V model :2% of full scale voltage per line (4% total)			
Operating Temperature Range	0°C ~ 50°C *2			
Storage Temperature Range	-40°C ~ +85°C			
Dimension (HxWxD)	132.8 x 428 x 610 mm / 5.23 x 16.85 x 24.02 inch			
Weight	5KW Model : Approx. 23 kg / 50.66 lbs 10KW Model : Approx. 29 kg / 63.88 lbs *3 15KW Model : Approx. 35 kg / 77.09 lbs			

Note*1 : Call for availability

Note*2 : The operating temperature range is 0°C ~ 40°C for Model 62100H-1000/62150H-1000

Note*3 : The weight is approx. 35kg/77.09 lbs for Model 62100H-1000

电气规格表-太阳能电池阵列模拟电源机种

MODEL	62020H-150S *1	62050H-600S	62100H-600S	62150H-600S	62150H-1000S
Output Ratings					
Output Voltage	0-150V	0-600V	0-600V	0-600V	0-1000V
Output Current	0-40A	0-8.5A	0-17A	0-25A	0-15A
Output Power	2000W	5000W	10000W	15000W	15000W
Line Regulation					
Voltage	+/- 0.01% F.S.				
Current	+/- 0.05% F.S.				
Load Regulation					
Voltage	+/- 0.05% F.S.				
Current	+/- 0.1% F.S.				
Voltage Measurement					
Range	60V / 150V	120V / 600V	120V / 600V	120V / 600V	200V / 1000V
Accuracy	0.05% + 0.05%F.S.				
Current Measurement					
Range	16A / 40A	3.4A / 8.5A	6.8A / 17A	10A / 25A	6A / 15A
Accuracy	0.1% + 0.1%F.S.				
Output Noise&Ripple					
Voltage Noise(P-P)	150 mV	1500 mV	1500 mV	1500 mV	2550 mV
Voltage Ripple(rms)	15 mV	650 mV	650 mV	650 mV	1950 mV
Current Ripple(rms)	30 mA	150 mA	300 mA	450 mA	270mA
OVP Adjustment Range					
Range	0-110% programmable from front panel, remote digital inputs.				
Accuracy	+/- 1% of full-scale output				
Programming Response Time					
Rise Time: 50%F.S. CC Load	10ms	30ms	30ms	30ms	25ms
Rise Time: No Load	10ms	30ms	30ms	30ms	25ms
Fall Time: 50%F.S. CC Load	10ms	30ms	30ms	30ms	25ms
Fall Time: 10%F.S. CC Load	83ms	100ms	100ms	100ms	80ms
Fall Time: No Load	300ms	1.2s	1.2s	1.2s	3s
Slew Rate Control					
Voltage Slew Rate Range	0.001V/ms - 15V/ms	0.001V/ms - 20V/ms	0.001V/ms - 20V/ms	0.001V/ms - 20V/ms	0.001V/ms - 40V/ms
Current Slew Rate Range	0.001A/ms - 1A/ms, or INF	0.001A/ms - 0.1A/ms, or INF	0.001A/ms - 0.1A/ms, or INF	0.001A/ms - 0.1A/ms, or INF	0.001A/ms - 0.1A/ms, or INF
Minimum Transition Time	0.5ms				
Transient response time	200us	Recovers within 1ms to +/- 0.75% of steady-state output for a 50% to 100% or 100% to 50% load change(1A/us)			
Efficiency	0.87(Typical)				
Programming & Measurement Resolution					
Voltage (Front Panel)	10 mV	10 mV	10 mV	10 mV	100mV
Current (Front Panel)	1mA	1mA	1mA	1mA	1mA
Voltage (Digital Interface)	0.002% of Vmax				
Current (Digital Interface)	0.002% of Imax				
Voltage (Analog Interface)	0.04% of Vmax				
Current (Analog Interface)	0.04% of Imax				
Programming Accuracy					
Voltage (Front Panel and Digital Interface)	0.1% of Vmax				
Current (Front Panel and Digital Interface)	0.3% of Imax				
Voltage (Analog Interface)	0.2% of Vmax				
Current (Analog Interface)	0.3% of Imax				
Parallel Operation*2					
Master / Slave control via CAN for 10 units up to 150KW. (Parallel: ten units)					
Auto Sequencing (I-V program)					
Number of program	10				
Number of sequence	100				
Dwell time Range	1s - 15,000S				
Trig. Source	Manual / Auto				

Note*1 : Preliminary specification for 62020H-150S

Note*2 : There is parallel mode for DC power supply when the I-V curve function is enabled.

All specifications are subject to change without notice. Please visit our website for the most up to date specifications.