



可编程直流电源供应器 MODEL 62000P 系列 PROGRAMMABLE DC POWER SUPPLY

Chroma 62000P 系列可程式控制直流电流供应器，提供许多独特功能供ATE整合与测试使用。这些功能包括定功率操作范围、精准的输出电流和电压量测、提供输出触发信号，以及可类比复杂的DC暂态波形以便测试产品的瞬断、上升与其他电压间偏差的能力。62000P是高准确度可程式控制直流电源供应器的新标准，专门设计于自动化测试D2D转换器和类似产品使用。

62000P系列包含12个不同的机型，从600W到5000W以及0-120A到0-600V。由于单一仪器可提供的定功率操作范围包含高电压/低电流和低电压/高电流，因此可减少一般ATE应用所需的直流电源供应器数量。

62000P系列同时具备16 bit高解析度的准确电压和电流读值回读功能，这表示系统不再需要额外复杂的分流器/电压表，就能测量准确的待测物输入参数读值。62000P 电源供应器也具有 I/O介面可提供 8 bit TTLs、DC-ON、保护输出信号、远端抑制保护功能以及系统时序量测的输出触发信号。

62000P系列电源供应器另一个独特的功能为可编辑复杂的 DC 暂态波形。此功能可对设备进行输入电压漏失瞬断和其他电压变化等测试，是用于飞机设备测试、反用换流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 转换器和逆变器的压降测试、引擎启动类比、电池自动充电、电子产品寿命测试等等。

MODEL 62000P 系列

特点：

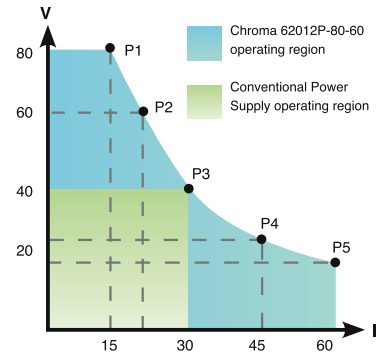
- 定功率操作下允许多种电压和电流组合输出
- 电压输出范围：0 ~ 600V；
电流输出范围：0 ~ 120A；
功率输出范围：600W, 1200W, 2400W, 5000W
- 数位旋钮、按键及功能按钮操作
- 高功率因素到 0.95
- 高速可程式控制介面
- 精准的电压及电流量测
- 具有主/从控制介面于并联操作模式下达到均流
- 电压渐升/降功能:时间(10ms~99hours)
- 具有 10 组程式及 100 个步骤设定电压/电流 / 8 bit TTL 讯号输出
- 电压及电流斜率控制
- 过电压、限电流及过温度保护功能
- 电压补偿可达5V
- APG (Analog Programmable Interface) 类比讯号控制介面
- 可选购 GPIB 或乙太网路控制介面
- 标准的 RS-232 & USB 控制介面
- LabView 及 Labwindows 控制驱动程式
- 具有 CE 认证



Chroma

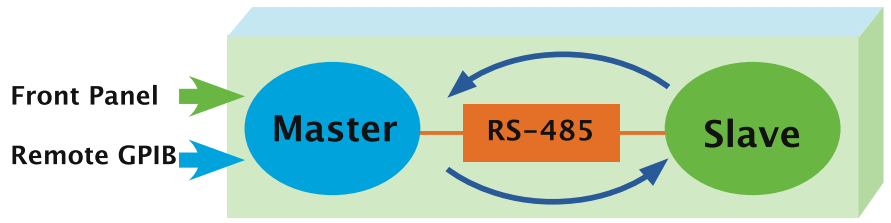
定功率范围下提供宽广操作

62000P系列直流电源供应器提供宽广的操作范围。例如，62012P-80-60的输出规格为1200W/80V/60A可於不同的组合中灵活操作如图右侧所示。如普通的直流电源供应器显示提供所有的输出电压相同的额定电流，而62000P於低输出电压时提供较大的电流。这表示低电压/高电流及高电压/低电流两者的待测物可使用单台直流电源供应器测试输入稳定度，於一般的ATE系统内部避免多台直流电源供应器以节省成本与空间。



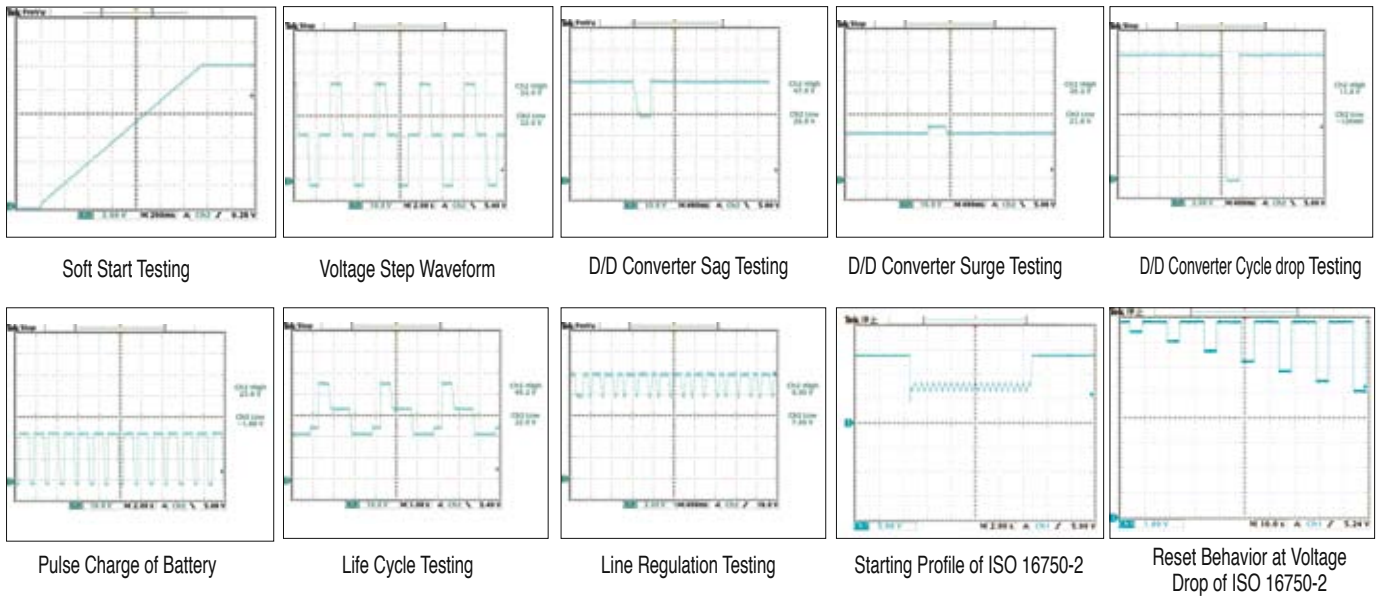
主/从并联&串联控制

当需要高功率时，一般以并联或串联连接两台或多台直流电源供应器。62000P系列直流电源供应器具有智慧型主/从式控制模式使串联/并联能快速并简单操作。於此模式中，主机测量数值并可下传资料至从属仪器，因此，可简易编程并自动均流。

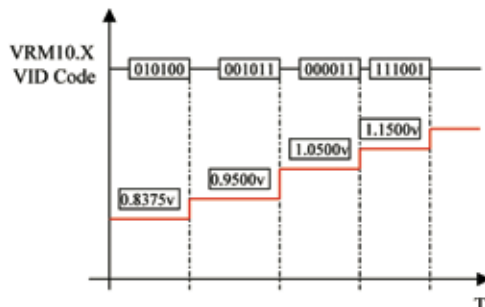


编程序列功能及应用

62000P系列直流电源供应器提供100个步阶，使用者可程式控制序列具有时间设定值，范围为5ms~15000s，电压及电流斜率控制与自动化测试应用的8bit TTL 讯号输出。其应用的范围包括 DC/DC 转换器和逆变器的压降测试、引擎启动类比、电池自动充电、产品寿命周期测试及飞机航空测试等等。



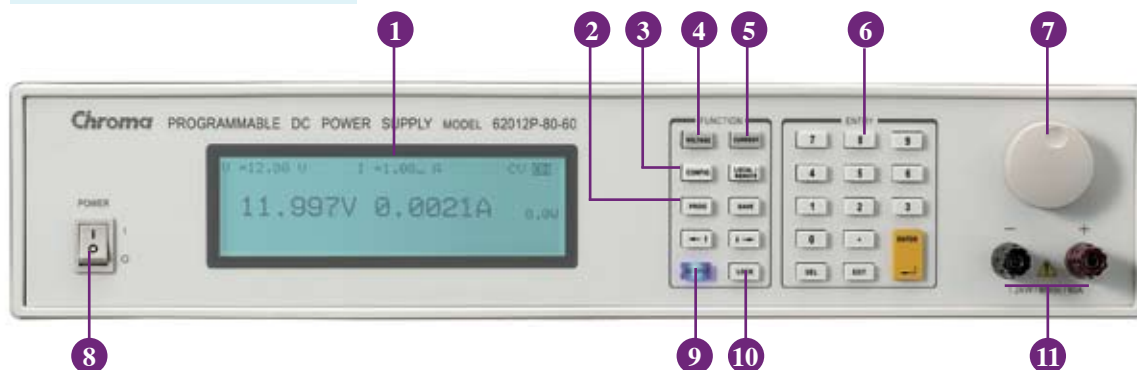
VID code Simulation for VRM/VRD



62000P供应器提供8个时序控制输出TTL位元。这些控制线可使用於VRM的VID控制或控制其他个别的信号。

面板说明

Model : 62012P-80-60



1. LCD 显示幕 显示设定, 量测及操作状态

2. PROG 功能键 程式步阶电压及电流设定选择

3. CONFIG功能键 系统内部参数设定

4. 电压设定键 设定输出电压值

5. 电流设定键 设定输出限电流值

6. 数位键 数位输入

7. 旋钮 旋钮调整设定

8. AC电源开关 开关机控制

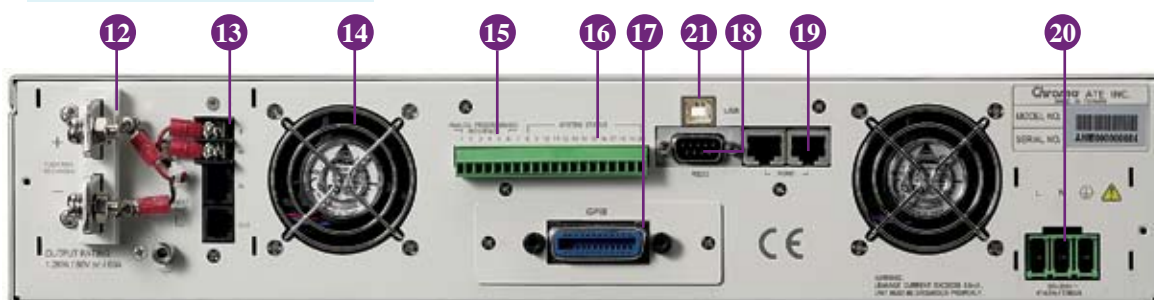
9. 输出ON/OFF控制键 输出启动及停止控制

10. 安全锁键 安全锁启动及停止控制

11. 前面板直流输出端子 输出连接端子至负载

附注: 40V, 300V及600V机种无前面板输出端子

Model : 62012P-80-60



12. 後背板直流输出端子 输出连接端子至负载

13. 远端回馈端子 远端回馈连接端子至负载

14. 系统散热风扇

15. 类比控制介面 类比输入/出控制&检测电压及电流

16. 系统输入/出埠 系统输入/出讯号, 如 8 bit TTL, DC-ON, 错误讯号输出及控制ON/OFF

17. GPIB介面(选配) GPIB & Ethernet (二选一)

18. RS-232介面

19. RS-485介面 主从串/并联用数位讯号沟通介面

20. AC输入端子

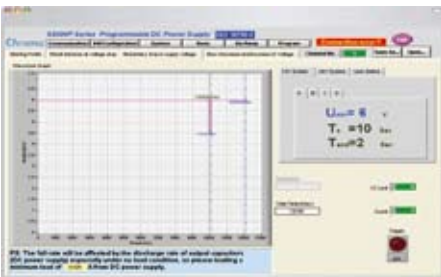
21. USB介面

规格表 - 1

| Model | 62006P-30-80 | 62006P-100-25 | 62006P-300-8 | 62012P-40-120 | 62012P-80-60 | 62012P-100-50 |
|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Output Ratings | | | | | | |
| Output Voltage | 0~30V | 0~100V | 0~300V | 0~40V | 0~80V | 0~100V |
| Output Current | 0~80A | 0~25A | 0~8A | 0~120A | 0~60A | 0~50A |
| Output Power | 600W | 600W | 600W | 1200W | 1200W | 1200W |
| Line Regulation | | | | | | |
| Voltage | 0.01%+2mV | 0.01%+6mV | 0.01%+18mV | 0.01%+2mV | 0.01%+8mV | 0.01%+10mV |
| Current | 0.01%+25mA | 0.01%+5mA | 0.03%+20mA | 0.01%+25mA | 0.01%+10mA | 0.01%+12mA |
| Load Regulation | | | | | | |
| Voltage | 0.01%+3mV | 0.01%+10mV | 0.01%+50mV | 0.01%+3mV | 0.01%+12mV | 0.01%+18mV |
| Current | 0.01%+10mA | 0.01%+5mA | 0.03%+40mA | 0.01%+10mA | 0.01%+20mA | 0.01%+28mA |
| Voltage Measurement | | | | | | |
| Range | 6V/30V | 20V/100V | 60V/300V | 8V/40V | 16V/80V | 20V/100V |
| Accuracy | 0.05% + 0.05%F.S. | 0.05% + 0.05%F.S. | 0.05% + 0.05%F.S. | 0.05% + 0.05%F.S. | 0.05% + 0.05%F.S. | 0.05% + 0.05%F.S. |
| Current Measurement | | | | | | |
| Range | 16A/80A | 5A/25A | 1.6A/8A | 24A / 120A | 12A/60A | 10A/50A |
| Accuracy | 0.1% + 0.2%F.S. | 0.1% + 0.2%F.S. | 0.1% + 0.1%F.S. | 0.1% + 0.1%F.S. | 0.1% + 0.1%F.S. | 0.1% + 0.1%F.S. |
| Output Noise (0 ~ 20MHz) | | | | | | |
| Voltage Ripple (P-P) | 60 mV | 85 mV | 180 mV | 90 mV | 100 mV | 100 mV |
| Voltage Ripple (rms) | 8 mV | 10 mV | 90 mV | 10 mV | 10 mV | 15 mV |
| Current Ripple (rms) | 60 mA | 10 mA | 60 mA | 120 mA | 30 mA | 20 mA |
| OVP Adjustment Range | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax |
| Slew Rate Range | | | | | | |
| Voltage (with USB) | 0.001V - 5V/ms | 0.001V - 10V/ms | 0.01V - 10V/ms | 0.001V - 5V/ms | 0.001V - 10V/ms | 0.001V - 10V/ms |
| Current (with USB) | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 1A/ms |
| Programming Response Time (Typical) | | | | | | |
| Rise Time (Full & No Load) | 6 ms | 10 ms | 30 ms | 8 ms | 8 ms | 10 ms |
| Fall Time | 350ms(max) | 300 ms(max) | 2.5 s(max) | 460 ms(max) | 240 ms(max) | 300 ms(max) |
| Efficiency | 0.75 | 0.75 | 0.75 | 0.8 | 0.8 | 0.8 |
| Drift (8 hours) | | | | | | |
| Voltage | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax |
| Current | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax |
| Temperature Coefficient | | | | | | |
| Voltage | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C |
| Current | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C |
| Transient Response Time | | | | | | |
| 10 % step change | 3 mS | 3 mS | 3mS | 3mS | 3 mS | 3 mS |
| Voltage limit @ Series Mode | 150V | 500V | 800V | 200V | 400V | 500V |
| AC Input Voltage Ranges | 95 to 250Vac | 95 to 250Vac | 95 to 250Vac | 95 to 250Vac | 95 to 250Vac | 95 to 250Vac |
| Operating Temperature | 0~40°C | 0~40°C | 0~40°C | 0~40°C | 0~40°C | 0~40°C |
| Dimension (H x W x D) | | | | | | |
| Weight | 12kg / 26.43 lbs | 12.1 kg / 26.65 lbs | 11.2 kg / 24.67 lbs | 12kg / 26.43 lbs | 13 kg / 28.63 lbs | 12.1 kg / 26.65 lbs |

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

图形化操作介面



ISO 16750-2 4.5.1 电压瞬间中断试验曲线



ISO 16750-2 4.5.3 启动电压试验曲线



62050P-100-100

规格表 -2

| Model | 62012P-600-8 | 62024P-40-120 | 62024P-80-60 | 62024P-100-50 | 62024P-600-8 | 62050P-100-100 |
|--|--|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--|
| Output Ratings | | | | | | |
| Output Voltage | 0~600V | 0~40V | 0~80V | 0~100V | 0~600V | 0~100V |
| Output Current | 0~8A | 0~120A*1 | 0~60A | 0~50A | 0~8A | 0~100A |
| Output Power | 1200W | 1200~2400W*1 | 2400W | 2400W | 2400W | 5000W |
| Line Regulation | | | | | | |
| Voltage | 0.01%+18mV | 0.01%+2mV | 0.01%+8mV | 0.01%+10mV | 0.01%+18mV | 0.01%+8mV |
| Current | 0.03%+20mA | 0.01%+25mA | 0.01%+10mA | 0.01%+12mA | 0.03%+20mA | 0.01%+24mA |
| Load Regulation | | | | | | |
| Voltage | 0.01%+50mV | 0.01%+3mV | 0.01%+12mV | 0.01%+18mV | 0.01%+50mV | 0.01%+12mV |
| Current | 0.03%+40mA | 0.01%+10mA | 0.01%+20mA | 0.01%+28mA | 0.03%+40mA | 0.01%+56mA |
| Voltage Measurement | | | | | | |
| Range | 120V/600V | 8V / 40V | 16V/80V | 20V/100V | 120V / 600V | 20V/100V |
| Accuracy | 0.05%+0.05%F.S. | 0.05%+0.05%F.S. | 0.05%+0.05%F.S. | 0.05%+0.05%F.S. | 0.05%+0.05%F.S. | 0.05%+0.05%F.S. |
| Current Measurement | | | | | | |
| Range | 1.6A/8A | 24A / 120A | 12A/60A | 10A/50A | 1.6A / 8A | 20A/100A |
| Accuracy | 0.1%+0.1%F.S. | 0.1%+0.1%F.S. | 0.1%+0.1%F.S. | 0.1%+0.1%F.S. | 0.1%+0.1%F.S. | 0.1%+0.1%F.S. |
| Output Noise (0 ~ 20MHz) | | | | | | |
| Voltage Ripple (P-P) | 180 mV | 90 mV | 100 mV | 100 mV | 780 mV | 50 mV |
| Voltage Ripple (rms) | 90 mV | 10 mV | 10 mV | 15 mV | 200 mV | 15 mV |
| Current Ripple (rms) | 60 mA | 120 mA | 30 mA | 20 mA | 120 mA | 40 mA |
| OVP Adjustment Range | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax | 110% of Vset to 110% of Vmax |
| Slew Rate Range | | | | | | |
| Voltage (with USB) | 0.01V - 10V/ms | 0.001V - 5V/ms | 0.001V - 10V/ms | 0.001V - 10V/ms | 0.01V - 10V/ms | 0.001V - 10V/ms |
| Current (with USB) | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 1A/ms | 0.001A - 2A/ms |
| Programming Response Time (Typical) | | | | | | |
| Rise Time (Full & No Load) | 60 ms | 8 ms | 8 ms | 10 ms | 60 ms | 10 ms |
| Fall Time | 5 s(max) | 460ms(max) | 240 ms(max) | 300 ms(max) | 5 s(max) | 850 ms(max) |
| Efficiency | 0.8 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Drift (8 hours) | | | | | | |
| Voltage | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax | 0.02% of Vmax |
| Current | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax | 0.04% of Imax |
| Temperature Coefficient | | | | | | |
| Voltage | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C | 0.02% of Vmax/°C |
| Current | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C | 0.04% of Imax/°C |
| Transient Response Time | | | | | | |
| 10 % step change | 3mS | 3mS | 3mS | 3mS | 3mS | 3mS |
| Voltage limit @ Series Mode | 800V | 200V | 400V | 500V | 800V | 500V |
| AC Input Voltage Ranges | 95 to 250Vac | 190 to 250Vac (single phase) | 190 to 250Vac (single phase) | 190 to 250Vac (single phase) | 190 to 250Vac (single phase) | 190 to 250Vac (3 phase 4 wire, Delta connection) or 342 to 440Vac(3phase 5 wire, Y connection) |
| Operating Temperature | 0~40°C | 0~40°C | 0~40°C | 0~40°C | 0~40°C | 0~40°C |
| Dimensions (H x W x D) | 89 x 430 x 425 mm / 3.5 x 16.93 x 16.73 inch | | | | | 176 x 428 x 566 mm / 6.93 x 16.85 x 22.28 inch |
| Weight | 11.2 kg / 24.67lbs | 13 kg / 28.63 lbs | 12.2 kg / 26.87 lbs | 13 kg / 28.63 lbs | 13 kg / 28.63 lbs | 28 kg / 61.67 lbs |

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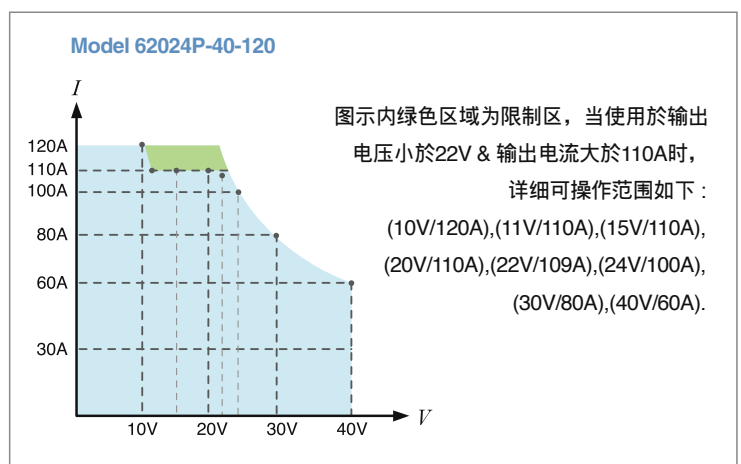
Note *1 : 可最大输出功率2400W於输出电压范围22V至40V, 参考如下图示详细操作范围。

订购资讯

- 62006P-30-8 : 可编程直流电源供应器, 30V/80A/600W
- 62006P-100-25 : 可编程直流电源供应器, 100V/25A/600W
- 62006P-300-8 : 可编程直流电源供应器, 300V/8A/600W
- 62012P-40-120 : 可编程直流电源供应器, 40V/120A/1200W
- 62012P-80-60 : 可编程直流电源供应器, 80V/60A/1200W
- 62012P-100-50 : 可编程直流电源供应器, 100V/50A/1200W
- 62012P-600-8 : 可编程直流电源供应器, 600V/8A/1200W
- 62024P-40-120 : 可编程直流电源供应器, 40V/120A/2400W
- 62024P-80-60 : 可编程直流电源供应器, 80V/60A/2400W
- 62024P-100-50 : 可编程直流电源供应器, 100V/50A/2400W
- 62024P-600-8 : 可编程直流电源供应器, 600V/8A/2400W
- 62050P-100-100 : 可编程直流电源供应器, 100V/100A/5000W
- A620004 : 62000P系列GPIB 控制介面
- A620006 : 62000P 2U系列19"机框耳架
- A620009 : 62000P系列电脑图形化操作介面Softpanel
- A620015 : 62050P-100-100专用之19"机框耳架

* A620023 : 以太网路控制介面

* 请洽Chroma业务办公室



规格表-3

| Programming & Measurement Resolution | |
|--|------------------------------|
| Voltage (Front Panel) | 10 mV |
| Current (Front Panel) | 10 mA |
| Voltage (Remote Interface) | 0.003% of Vmax |
| Current (Remote Interface) | 0.002% of Imax |
| Voltage (Analog Programming Interface) | 0.04% of Vmax |
| Current (Analog Programming Interface) | 0.04% of Imax |
| Programming Accuracy | |
| Voltage Programming (Front Panel and Remote Interface) | 0.1% of Vmax |
| Voltage Programming (Analog Programming Interface) | 0.2% of Vmax |
| Current Programming (Front Panel and Remote Interface) | 0.3% of Imax |
| Current Programming (Analog Programming Interface) | 0.3% of Imax |
| Programming Response Time | |
| Rise Time : For a programmed 5% to 95% step in output voltage.(Full & No Load) | See Electrical Specification |
| Fall Time : For a programmed 95% to 5% step in output voltage. | |
| (The fall time will be affected by the external loading from UUT.) | |
| Vout setting (USB send command to DC source receiver) | 10ms |
| ?Volt , ? Current (under USB command using Fetch) | 10ms |
| ?Volt , ? Current (under USB command using Measure) | 70ms |
| Analog Programming Interface | |
| Voltage and Current Programming inputs | 0~10Vdc or 0~5Vdc of F.S. |
| Voltage and Current monitor | 0~10Vdc or 0~5Vdc of F.S. |
| Isolation : Maximum working voltage of any analog programming signal with respect to chassis potential. | 70Vdc |
| Auxiliary Power Supply | |
| Output Voltage | 12Vdc |
| Maximum Current Source Capability | 10mA |
| Remote inhibit function (I/O) | |
| Use to disable the output of DC power supply; Active Low | TTL |
| DC-ON Output Signal | |
| Indicate the output status; Active High | TTL |
| Fault output signal | |
| Indicate if there is a fault/protection occurred; Active Low | TTL |
| Series & Parallel operation function with Master / Slave control | |
| Voltage limit @ Series Mode | See Electrical Specification |
| Number of DC Power Supplies allowed @ Master / Slave control mode | 5 |
| Auto Sequencing Programmable Function | |
| Number of program | 10 |
| Number of sequence | 100 |
| Time Range | 5ms - 15,000S |
| TTL signal out | 8 bits |
| TTL source capability | 7 mA |
| Voltage Step Mode Programmable Function | |
| Start Voltage Range | 0~full scale |
| End Voltage Range | 0~full scale |
| Total Run Time Range (hhh:mm:ss.sss) | 10ms - 99 hours |
| Slew Rate Control Function | |
| Voltage slew rate range | See Electrical Specification |
| (The fall slew rate will be affected by the discharge rate of the output capacitors especially under no load condition.) | |
| Current slew rate range | See Electrical Specification |
| Minimum transition time. | 0.5 ms |
| Remote Sense | |
| Line loss compensation | 5V |

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

Developed and Manufactured by :

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