

PROGRAMMABLE DC POWER SUPPLY MODEL 62000H SERIES

Chroma's new 62000H Series of programmable DC power supplies offer many unique advantages for telecom, automated test system & integration, industrial, battery charge & simulation for hybrid cars and solar panel simulation. These advantages include high power density of 18KW in 3U, precision readback of output current and voltage, output trigger signals as well as the ability to create complex DC transient waveforms to test device behavior for spikes, drops, and other voltage deviations.

The 62000H Series includes different models ranging from 5KW to 18KW, with current range up to 375A and voltage range up to 1800V. The 62000H can easily parallel up to 11 units capable of 198KW with current sharing for bulk power applications, for example, battery bank simulation of 450V/150A/67.5KW for electric vehicle and military use.

There are 100 user programmable input status on the front panel for automated test

application and life cycle ON/OFF test. In addition, the 62000H has a 16 bit digital control with bright vacuum fluorescent display readout.

The 62000H series DC power supplies are very easy to operate either from the front panel keypad or from the remote controller via CAN/Ethernet/USB/RS232/RS485/GPIB/ APG. Its compact size with 3U only can be stacked on a bench in a standard rack without any difficulty.

Another unique capability of the 62000H supplies is their ability to create complex DC transient waveforms. This capability allows devices to be tested to DC voltage dropouts, spikes and other voltage variations making them an ideal choice for aerospace device testing, inverter testing and other devices which will experience voltage interrupts. Applications include DC/DC Converter & Inverter voltage drop test, engine startup simulation, battery automated charging, electronic product life cycle test, etc.

APG

GPIB

R HS2

KEY FEATURES

Power range : 5KW/10KW/15KW/18KW

MODEL 62000H SERIES

- Current range : 0~375A
- Voltage range : 0~1800V/2000V(series)
 - AC input voltage range : 200/220Vac, 380/400Vac , 440/480Vac
- High power density (18KW in 3U)
- Easy master/slave parallel & series operation
- Precision V&I measurements
- High-speed programming
- Voltage & current slew rate control
- Digital encoder knobs, keypad and function keys
- Current sharing operation
- Voltage ramp function (time range: 5 ms ~ 99 hours)
- Auto sequencing programming: 10 programs/100 sequences
- OVP, current limit, thermal protection
- Standard analog programming interface
- Support CAN/Ethernet/USB/RS232/RS485/ GPIB/APG interfaces
- Remote output ON/OFF (I/P)
- Remote sense line drop compensation
- LabView and Labwindows
- Solar array simulation function
- Shade I-V curve simulation
- I-V curve programming:
- 10 program/100 I-V files
- CE Certified



Chroma





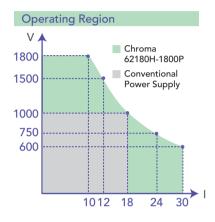
HIGH POWER DENSITY 18KW IN 3U PROGRAMMABLE DC POWER SUPPLY

The 62000H Series supplies offer a high power density envelop of maximum 18KW in 3U, deliver low output noise and ripple, excellent line and load regulation, and fast transient response. With wide range of voltage (30V~1800V), current (30A), suitable for every part of your manufacturing process from design to production testing.



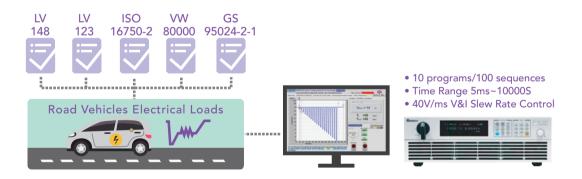
WIDE OPERATING REGION FOR OUTPUT (62000H-P SERIES)

The 62000H-P Series are equipped with active PFC low-current harmonic feed to grid, which can save power consumption and power system configuration under high-power testing. The 62000H-P has a wide operating region of output for users to operate in a broad voltage and current range at rated power that is not limited to a single operating point of full power. It is suitable for testing the products with diverse specifications such as electronic components, server power, battery application products, and automotive electronic components, etc. For instance, the model 62180H-1800P with 1800V/30A/18kW output can be operated flexibly in various combinations as shown in the figure.



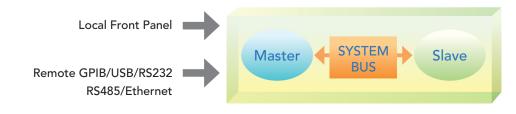
AUTOMOTIVE ELECTRICAL CHARACTERISTICS SIMULATION

The 62000H Series DC power supply has a high-speed CV dynamic response with controllable slew rate up to 40V/ms. It can be applied to many automotive regulations for electrical characteristics testing, including LV148, LV123, ISO 16750-2, VW 80000, GS 95024-2-1, etc., to perform dynamic voltage testing on automotive components and electrical systems during start-up and operation. Moreover, the graphical softpanel allows users to test with one click to quickly verifying the product stability, and saves the development timeline. (For detailed support items, please refer to Chroma's official website - Chroma Softpanel for Model 62000P & 62000H Series).



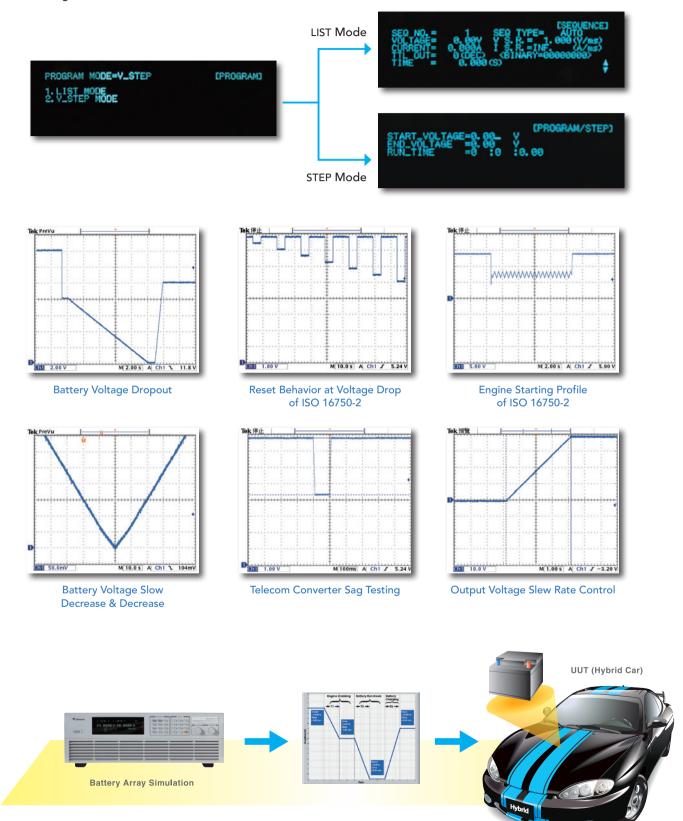
MASTER / SLAVE PARALLEL & SERIES OPERATION

When high power is required, it is common to connect two or more power supplies in parallel or series. The 62000H Series supplies have a smart Master / Slave control mode making series/parallel operation fast and simple. In this mode, the master scales values and downloads data to slave units so programming is simple and current sharing automatic.



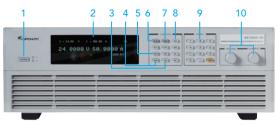
PROGRAMMING SEQUENCES APPLICATIONS

The 62000H Series supplies' LIST and STEP modes allows for auto sequencing function. The LIST mode allows for 100 user programmable sequences with time settings ranging from 5ms to 15000s and voltage / current slew rate control. The STEP mode allows for setting start, end voltage and run time of 10ms to 99 hours for automated test applications. Applications include DC/DC Converter & Inverter voltage dropout testing, engine start-up simulation, battery automated charging, battery voltage dropout simulation, product life cycle testing and avionics testing.

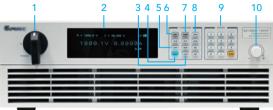


PANEL DESCRIPTION

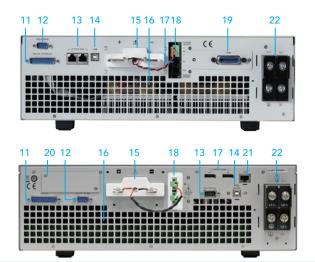
5KW/10KW/15KW MODEL



18KW MODEL



- 1. POWER Switch
- 2. VFD Display
 - Display setting, readings and operating status
- 3. LOCK Key
- Lock all settings
- OUTPUT Key Enable or disable the output
 CONFIG Key
- Set the system configuration
- 6. VOLTAGÉ Key
- Set the output voltage 7. CURRENT Key
- Set the output current
- 8. PROG Key Program the sequence
- 9. NUMERIC Key Set the data
- 10.ROTARY Key
 - Adjust the V&I and set the parameter



- 11. Analog programming interface For analog level to program and monitor output voltage & current
- 12. RS-232 or RS-485 Interface (alternative)
- 13. System Bus
 - For master/slave parallel and series control
- 14. USB Interface 15. OUTPUT Terminal
 - Connect the output cable to a UUT
- 16. System Fan With fan speed control
- 17. Current Sharing Terminal
 - Connect the cable to slave unit
- 18. Sense TerminalConnect the UUT for voltage compensation19. GPIB or ETHERNET Interface
- (Option for 2kW/5kW/10kW/15kW models)
- 20. GPIB Interface (Option for18kW model)
- 21. Ethernet Interface (Standard for 18kW model)
- 22. AC Input Terminal

ORDERING INFORMATION

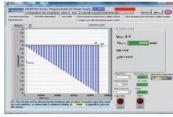
Power Rating	62000H Series Programmable DC Power Supply					
2KW	62020H-150S : Programmable DC Power Supply 150V/40A/2KW with Solar Array Simulation					
5KW	62050H-40 : Programmable DC Power Supply 40V/125A/5KW					
	62050H-450 : Programmable DC Power Supply 450V/11.5A/5KW					
	62050H-600 : Programmable DC Power Supply 600V/8.5A/5KW					
	62050H-600S : Programmable DC Power Supply 600V/8.5A/5KW with Solar Array Simulation					
	62075H-30 : Programmable DC Power Supply 30V/250A/7.5KW					
	62100H-30 : Programmable DC Power Supply 30V/375A/11KW					
	62100H-40 : Programmable DC Power Supply 40V/250A/10KW					
10KW	62100H-100P*3 : Programmable DC Power Supply 100V/250A/10KW					
IUKVV	62100H-450 : Programmable DC Power Supply 450V/23A/10KW					
	62100H-600 : Programmable DC Power Supply 600V/17A/10KW					
	62100H-600S : Programmable DC Power Supply 600V/17A/10kW with Solar Array Simulation					
	62100H-1000 : Programmable DC Power Supply 1000V/10A/10KW					
	62150H-40 : Programmable DC Power Supply 40V/375A/15KW					
	62150H-100P*3 : Programmable DC Power Supply 100V/375A/15KW					
	62150H-450 : Programmable DC Power Supply 450V/34A/15KW					
15KW	62150H-600 : Programmable DC Power Supply 600V/25A/15KW					
	62150H-600S : Programmable DC Power Supply 600V/25A/15KW with Solar Array Simulation					
	62150H-1000 : Programmable DC Power Supply 1000V/15A/15KW					
	62150H-1000S : Programmable DC Power Supply 1000V/15A/15kW with Solar Array Simulation					
18KW	62180H-1800P : Programmable DC Power Supply 1800V/30A/18KW					
	62180H-1800S : Programmable DC Power Supply 1800V/30A/18KW with Solar Array Simulation					
Options	A620024 : GPIB Interface for 2kW/5kW/10kW/15kW models (Factory installed)					
	A620025 : Ethernet Interface for 62000H series (Factory installed)					
	A620026 : Rack Mounting kit for 62000H series					
	A6200039 : GPIB Interface for 12kW/18kW models					
	A632013*4 : CAN interface for 62180H-1800P					

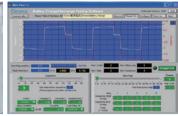
Note *1 : All models output power are available for 200/220Vac, 380/400Vac and 440/480Vac (600V/1000V models) line voltage.

Note *2 : Call for availability. (30V/40V/100V/450V for 200/220 Vac and 440/480 Vac line voltage)

Note *3 : 62000H-P models include active PFC and constant power envelop operation. Note *4 : Call for availability.







Program Sequences Function

ELECTRICAL SPECIFICATIONS -1

ISO 16750-2 Standard for Voltage Transient Test

rd for Voltage GS-95024 Star Transient Test

GS-95024 Standard for Voltage Transient Test Battery Charge Test

Model 62075H-30 62050H-40 62050H-450 62050H-600 62100H-30 62100H-40 62100H-100P 62100H-450 62100H-600 **Output Ratings** Output Voltage 0-30V 0-40V 0-450V 0-600V 0-30V 0-40V 0-100V 0-450V 0-600V **Output Current** 0-250A 0-125A 0-11.5A 0-8.5A 0-375A 0-250A 0-250A 0-23A 0-17A **Output Power** 7500W 5000W 5000W 5000W 11250W 10000W 10000W 10000W 10000W Line Regulation ±0.01% F.S. Voltage Current ±0.05% F.S. Load Regulation ±0.02% F.S. Voltage Current ±0.1% F.S. Voltage Measurement Range 6V / 30V 8V / 40V 90V / 450V 120V/600V 6V / 30V 8V / 40V 20V/100V 90V/450V 120V/600V 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 50A / 250A 4.6A/23A 3.2A/17A Accuracy 0.1% + 0.1% F.S. Output Noise & Ripple Voltage Noise (P-P) 300mV 100mV 300mV 60mV 60mV 350mV 60mV 60mV 350mV Voltage Ripple (rms) 15mV 15mV 450mV 600mV 15mV 15mV 20mV 450mV 600mV 30mA 100mA 50mA 15mA 150mA 100mA 100mA 40mA Current Ripple (rms) 20mA **OVP** Adjustment Range Range 0-110% programmable from front panel, remote digital inputs \pm 1% of full-scale output Accuracy **Programming Response Time** Rise Time: Full Load 6ms 8ms 60ms 60ms 6ms 8ms 20ms 60ms 60ms Rise Time: No Load 6ms 8ms 60ms 60ms 6ms 8ms 20ms 60ms 60ms Fall Time: Full Load 60ms 6ms 8ms 60ms 60ms 6ms 8ms 20ms 60ms Fall Time: 10% Load 100ms 100ms 250ms 250ms 100ms 100ms 625ms 250ms 250ms Fall Time: No Load 1s 1s 2.5s 2.5s 1s 1s 2.5s 2.5s 2.5s Slew Rate Control 0.001V/ms ~ 0.001V/ms 0.001V/ms Voltage slew rate range 5V/ms 5V/ms 7.5V/ms 10V/ms 5V/ms 5V/ms 5V/ms ~7.5V/ms ~10V/ms Current slew rate range 0.001A~1A/ms, or INF Min. transition time 0.5ms **Transient Response** Recovers within 1ms to +/- 0.75% of steady-state output for a 50% to 100% or 100% to 50% load change(1A/µs) Time Efficiency (Typical) 0.87 0.87 0.87 0.87 0.87 0.87 0.91 0.87 0.87 Drift (30 minutes) Voltage 0.04% of Vmax 0.01% of Vmax 0.04% of Vmax Current 0.06% of Imax 0.06% of Imax 0.06% of Imax Drift (8 hours) Voltage 0.02% of Vmax 0.005% of Vmax 0.02% of Vmax Current 0.04% of Imax 0.005% of Imax 0.04% of Imax **Temperature Coefficient** 0.005% of Voltage 0.04% of Vmax/°C 0.04% of Vmax/°C Vmax/°C 0.01% of 0.06% of Imax/°C 0.06% of Imax/°C Current Imax/°C

ELECTRICAL SPECIFICATIONS -2

Model	62100H-1000	62150H-40	62150H-100P	62150H-450	62150H-600	62150H-1000	62180H-1800P		
Output Ratings	Output Ratings								
Output Voltage	0-1000V	0-40V	0-100V	0-450V	0-600V	0-1000V	0~1800V		
Output Current	0-10A	0-375A	0-375A	0-34A	0-25A	0-15A	0~30A		
Output Power	10000W	15000W	15000W	15000W	15000W	15000W	18000W		
Line Regulation									
Voltage				\pm 0.01% F.S.					
Current				\pm 0.05% F.S.					
Load Regulation									
Voltage	±0.05% F.S.	\pm 0.02% F.S.	±0.02% F.S.	\pm 0.02% F.S.	\pm 0.02% F.S.	±0.05% F.S.	\pm 0.05% F.S.		
Current			±0.1%	F.S.			\pm 0.2% F.S.		
Voltage Measurement									
Range	200V/1000V	8V/40V	20V/100V	90V/450V	120V/600V	200V/1000V	1100V / 1800V		
Accuracy			0	.05% + 0.05%F.S	5.				
Current Measurement									
Range	4A/10A	75A/375A	75A/375A	6.8A/34A	5A/25A	6A/15A	15A / 30A		
Accuracy				0.1% + 0.1%F.S.	·	·			
Output Noise & Ripple									
Voltage Noise(P-P)	2550mV	60mV	100mV	300mV	350mV	2550mV	3500 mV		
Voltage Ripple(rms)	1500mV	15mV	20mV	450mV	600mV	1500mV	750 mV		
Current Ripple(rms)	180mA	150mA	100mA	60mA	45mA	270mA	250mA		
OVP Adjustment Range									
Range			0-110% pro	ogrammable fro	om front panel,	remote digital inputs			
Accuracy				±1% o	f full-scale outp	ut			
Programming Response T	īme								
Rise Time:Full Load	25ms (30% F.S. CC Load)	8ms	20ms	60ms	60ms	25ms (50% F.S. CC Load)	90ms		
Rise Time:No Load	25ms	8ms	20ms	60ms	60ms	25ms	90ms		
Fall Time: Full Load	25ms (50% F.S. CC Load)	8ms	20ms	60ms	60ms	25ms (50% F.S. CC Load)	90ms		
Fall Time: 10% Load	120ms (10% F.S. CC Load)	100ms	625ms	250ms	250ms	80ms (10% F.S. CC Load)	625ms		
Fall Time: No Load	3s	1s	2.5s	2.5s	2.5s	3s	2.5s		
Slew Rate Control									
Voltage slew rate range	0.001Vms~ 40V/ms	0.001V/ms ~5V/ms	0.001V/ms ~5V/ms	0.001V/ms ~7.5V/ms	0.001V/ms ~10V/ms	0.001V/ms ~40V/ms	0.001V/ms ~ 20V/ms		
Current slew rate range			0.00	1A~0.1A/ms, or	INF				
Min. transition time				0.5ms					
Transient Response Time	Recovers within 1ms to	o +/- 0.75% of s	teady-state output fo	or a 50% to 1009	% or 100% to 50)% load change (1A/µs)	1.5ms *6		
Efficiency (Typical)	0.85	0.87	0.92	0.87	0.87	0.87	0.9		
Drift (30 minutes)									
Voltage	0.04% of Vm	ax	0.01% of Vmax			0.04% of Vmax			
Current	0.06% of Ima		0.06% of Imax	0.06% of Imax					
Drift (8 hours)									
Voltage	0.02% of Vm	ax	0.005% of Vmax	0.02% of Vmax					
Current	0.04% of Imax		0.005% of Imax	0.04% of Imax					
Temperature Coefficient									
Voltage	0.04% of Vmax	0.005% of Vmax/°C	0.04% of Vmax/°C						
Current	0.06% of Imax/°C		0.01% of Vmax/°C	0.06% of Imax/°C					
	5.0070 0.1110								

Note *1 : Please specify GPIB or Ethernet Interface (alternative) at time of order. Note *2 : All models output power are available for 200/220Vac, 380/400Vac and 440/480Vac (600V/1000V models) line voltage.

Note *3 : Call for availability. (30V/40V/100V/450V for 200/220 Vac and 440/480 Vac line voltage)

GENERAL SPECIFICATIONS

Programming & Measurem Voltage (Front Panel)	enenesonation	0	.1mV / 1mV / 10mV / 100mV (V0	0 < 10V / 40V / 600V / 1800V			
Current (Front Panel)		0.	0.1mA / 1mA / 10 mA (IO				
Voltage (Digital Interface)			0.002% of	,			
Current (Digital Interface)			0.002% of	-			
			0.002% of				
Voltage (Analog Interface) Current (Analog Interface)							
			0.04% of	Imax			
Remote Interface			<u> </u>	<u>.</u>			
Analog programming			Standa				
USB			Standa				
RS-232			Standa	-			
RS485		Standard					
GPIB		Optional					
Ethernet		Optional (Standard for 62180H-1800P)					
System BUS(CAN)			Standard for maste	er/slave control			
Programming Accuracy							
Voltage (Front Panel and D			0.1% of Vmax / 0.05% of Vma	x (62000H-100P models)			
Current (Front Panel and Di	igital Interface)		0.3% of Imax / 0.2% of Imax (62	000H-100P/1800P models)			
Voltage (Analog Interface)			0.2% of \	/max			
Current (Analog Interface)			0.3% of I	max			
GPIB Command Response	Гime						
Vout setting			GPIB send command to DC	source receiver <20ms			
Measure V & I			Under GPIB command u				
Analog Interface (I/O)							
Voltage and Current Progra	mming inputs						
(I/P)		0-10Vdc / 0-5Vdc / 0-5k ohm / 4-20 mA of F.S.					
Voltage and Current monit	or output (O/P)		0-10Vdc / 0-5Vdc /	4-20mA of F.S.			
External ON/OFF (I/P)							
DC_ON Signal (O/P)		TTL:Active Low or High(Selective) Level by user define. (Time delay = 1 ms at voltage slew rate of 10V/ms.)					
CV or CC mode Indicator (C)/P)	Level by user define. (Time delay = 1 ms at voltage slew rate of T0V/ms.) TTL Level High=CV mode ; TTL Level Low= CC mode					
OTP Indicator (O/P)		TTL: Active Low					
. ,		TTL: Active Low					
System Fault indicator(O/P) Auxiliary power supply(O/P)							
Safety interlock(I/P))	Nominal supply voltage : 12Vdc / Maximum current sink capability: 10mA					
Remote inhibit(I/P)		Time accuracy: <100ms TTL: Active Low					
Series & Parallel Operation		Master / Slave control for 10 units (Series: two units / Parallel: ten units)					
Auto Sequencing(List Mod		Master		les. two units / Faranei. ten uni			
Number of program	e)		10				
Number of sequence		10					
		100					
Dwell time Range		5ms - 15000S Manual / Auto / External					
Trig. Source			Manual / Auto	/ External			
Auto Sequencing (Step Mo	de)						
Start voltage		0 to Full scale					
End voltage		0 to Full scale					
Run time			10ms - 99	hours			
Input Specification							
AC input voltage 3phase , 3	8 wire + ground	3Ø 200~220V	ac \pm 10% VLL ; 3Ø 380~400Vac	± 10% VLL; 3Ø 440~480Vac =	± 10% VLL		
AC frequency range			47-63	Hz			
Max Current	200/220 Vac	5KW Model : 39A	10KW Model : 69A	15KW Model : 93A			
(each phase)	380/400 Vac	5KW Model : 22A	10KW Model : 37A/30A *5	15KW Model : 50A/30A *5	18KW Model : 37A		
(cach phase)	440/480 Vac	5KW Model : 19A	10KW Model : 32A	15KW Model : 44A			
General Specification							
			30V/40V model : 5% of full scale	e voltage per line(10% total)			
Maximum Remote Sense Line Drop Compensation		100V model : 2.5% of full scale voltage per line (5% total) ; >100V model : 2% of full scale voltage per line (4% total)					
					1800V model : 0.5% of full scale		
Operating Temperature Range		0°C ~ 50°C *1					
Storage Temperature Range		-40°C ~ +85°C *7					
Dimension (HxWxD)		132.8 x 428 x 610 mm / 5.23 x 16.85 x 24.02 inch ; 18KW model : 132.8 x 428 x 660 mm / 5.23 x 16.85 x 25.99 inch					
		5KW Model : Approx. 23 kg / 50.66 lbs ; 10KW Model : Approx. 29 kg / 63.88 lbs *2 *3					
Weight		15KW Model : Approx. 35 kg / 77.09 lbs *4 ; 18KW Model : Approx. 40 kg / 88.19 lbs					
weight			21. Applox. 55 kg / 77.09 lbs 4,	TOKW MOUEL. Applox. 40 ku / C	0.12103		

Note*4 : The max. input current (each phase) is 20A for Model 62100H-100P.

Note*5 : The max. input current (each phase) is 30A for Model 62100H-100P/62150H-100P.

Note*6 : Recovers within 1.5ms to \pm 1.5% of steady-state output for a 50% to 75% or 75% to 50% load change (0.1A/ms)

Note*7 : Storage temperature range is -25°C \sim 70°C $\,$ for Model 62180H-1800P.

Model 62020H-150S 62050H-600S 62150H-600S 62150H-600S 62150H-1600S 62150H-160S 62150H-160S	ELECTRICAL SPECIFI	CATIONS WITH S	SOLAR ARRAY SI	MULATION				
Output Voltage 0 - 150V 0 - 600V 0 - 600V 0 - 600V 0 - 150V 0 - 150V 0 - 150V 0 - 30A Output Forwer 2000W \$500W 10000W 15000W 1001% FS. ± 0.03% FS. ± 0		62020H-150S	62050H-600S	62100H-600S	62150H-600S	62150H-1000S	62180H-1800S	
Output Current 0 - 40A 0 - 4.5.A 0 - 17A 0 25A 0 - 13A 0 - 30A Line Regulation 5000W 15000W 1600% FS. 1 0.05% FS. 1 0.07% FS. 0 1.00 V 1 0.07 V		0 (= 0) (0 (00)/	0 (00)/	0 (00)(0 40001 <i>(</i>	
Output Power Line Regulation 2000W 5000W 10000W 15000W 1000//100W 1500 mV								
Line Regulation Vertage Line Regulation Line Regulation Line Regulation Load Load Load Load Load Load Load Load								
Voltage ± 0.01% FS. ± 0.05% FS. ± 0.05% FS. Load Regulation ± 0.05% FS. ± 0.05% FS. ± 0.05% FS. Current Measurement ± 0.1% FS. ± 0.05% FS. ± 0.05% FS. Range 60V / 150V 120V / 600V 120V / 600V 200V / 100V / 100V / 800V Accuracy 0.05% + 0.05% FS. 100 / 78.00 100V / 1800V Accuracy 0.01% + 0.1% FS. 100 / 78.00 100V / 1800V Current Measurement 0.05% + 0.05% FS. 100 / 78.00 150.0 mV 1500 mV 1500 mV 1500 mV 2550 mV 3500 mV Voltage NoiseRippie 0.01% + 0.1% FS. 0.01% + 0.1% FS. 270mA 250mA		2000W	5000W	10000W	15000W	15000W	18000W	
Current ± 0.05% F.S. ± 0.05% F.S. ± 0.05% F.S. Voltage ± 0.05% F.S. ± 0.05% F.S. ± 0.05% F.S. ± 0.05% F.S. Voltage Maasurement ± 0.15% F.S. ± 0.05% F.S. ± 0.05% F.S. ± 0.05% F.S. Current Measurement ± 0.15% F.S. ± 0.05% F.S. ± 0.05% F.S. ± 0.05% F.S. Current Measurement 66V / 150V 120V / 600V 120V / 600V 200V / 100V 1100V / 1800V Current Measurement 66V / 150V 120V / 600V 100 mV 2500 mV 3500 mV Voltage Rippletrems 65 mV 650 mV 1500 mV 2500 mV 2500 mV 2500 mV Voltage Rippletrems 65 mV 650 mV 1500 mV 2500 mV 2500 mV 250 mV <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
Lack Regulation Voltage Lack Regulation Lack R								
Voltage ± 0.05% FS. ± 0.05% CS. ± 0.05% CS. Voltage Measurement ± 0.02% AS. ± 0.02% FS. ± 0.02% FS. Current Measurement 0.05% FS. 200V / 1500 200V / 100V 1100V / 1800V Current Measurement 0.03% FS. 0.03% FS. 6A/ 15A 15A / 30A Accuracy 0.05% FS. 0.1% + 0.1%FS. 0.07% FS. 500 mV Voltage Ripple 0.1% + 0.1%FS. 0.1% + 0.1%FS. 500 mV 750 mV Voltage Ripple(rms) 650 mV 650 mV 650 mV 750 mV 750 mV Voltage Ripple(rms) 80 mA 150 mA 300 mA 450 mV 750 mV 750 mV Voltage Ripple(rms) 80 mA 150 mA 300 mA 450 mA 270 mA 250 mA Voltage Ripple(rms) 80 mA 150 mS 30 mS 30 mS 30 mS 25 mS 90 ms Reg Time 10ms 30 mS 30 mS 30 mS 25 mS 90 ms Rise Time: 10ms 30 mS 30 mS 30 mS 25 m				± 0.05% F.S.			± 0.05% F.S.	
Current ± 0.1% FS. ± 0.2% FS. Voltage Messurement 60V / 150V 120V / 600V 120V / 600V 200V / 100V / 1100V / 110V / 100V		1						
Voltage Measurement 20V / 600V 120V / 600V 120V / 600V 120V / 600V 200V / 100V 1100V / 1800V Accuracy 0.05% + 0.05% FS. 0.01% + 0.1% FS. 0.01% + 0.1% FS. 0.01% + 0.1% FS. Current Measurement 16A / 40A 3.4A / 8.5A 6.8A / 17A 10A / 25A 6A / 15A 15A / 30A Accuracy 0.1% + 0.1% FS. 0.1% + 0.1% FS. 0.1% + 0.1% FS. 0.1% + 0.1% FS. Output Noise&Ripple(TmS) 65 mV 150 mV 1500 mV 250 mV								
Range 60V / 150V 120V / 600V 120V / 600V 200V / 100V / 100				± 0.1% F.S.			± 0.2% F.S.	
Acciracy 0.05% + 0.05% FS. Range 16A / 40A 3.4A / 8.5A 6.8A / 17A 10A / 25A 6A / 15A 15A / 30A Accuracy 0.1% + 0.5% FS. 0.1% + 0.5% FS. 0.1% + 0.5% FS. 0.1% + 0.5% FS. Output Noise&Ripple 450 mV 1500 mV 650 mV 650 mV 2550 mV 3500 mV Voltage Noise(P-P) 450 mV 650 mV 650 mV 650 mV 2550 mV 2500 mV	Voltage Measurement							
Current Measurement IOA / 40A 3.4A / 8.5A 6.8A / 17A 10A / 25A 6A / 15A 15A / 30A Accuracy 0.1% + 0.1% F.S. 0.1% + 0.1% F.S. 55A / 30A Voltage Ripple 450 mV 1500 mV 650 mV 650 mV 250 mV <t< td=""><td>Range</td><td>60V / 150V</td><td>120V / 600V</td><td></td><td></td><td>200V / 1000V</td><td>1100V / 1800V</td></t<>	Range	60V / 150V	120V / 600V			200V / 1000V	1100V / 1800V	
Range 16A / 40A 3.4A / 8.5A 6.8A / 17A 10A / 25A 6A / 15A 15A / 30A Accuracy 0.1% + 0.1%F5. 0.1% + 0.1%F5. 0.1% + 0.1%F5. 0.1% + 0.1%F5. Output Noise&Ripple 450 mV 1500 mV 1500 mV 2550 mV 2550 mV 750 mV Voltage Noise(P.P.) 80 mA 1500 mV 650 mV 650 mV 250 mA 250 mA 250 mA OVP Adjustment Range 0 110% programmable from front panel, remote digital inputs. 270mA 250mA Range 0 110% programmable from front panel, remote digital inputs. 25ms 90ms Range 10ms 30ms 30ms 30ms 25ms 90ms Range 10ms 30ms 30ms 30ms 25ms 90ms SWFS. CC Load (6.66A leading) 30ms 30ms 30ms 30ms 25ms 90ms Fall Time: 0.001 //ms - 0.0001 //ms - 0.001 //ms - 0.001 //ms - 0.001 //ms - 0.001 //ms - 0.	Accuracy			0.05% +	0.05%F.S.			
Accuracy 0.1% + 0.1% FS. Voltage Noise(P-P) 450 mV 1500 mV 1500 mV 2500 mV 3500 mV Voltage Noise(P-P) 65 mV 650 mV 650 mV 650 mV 250 mV 3500 mV Current Ripple(ms) 80 mA 150 mA 300 mA 450 mA 270mA 250mA Current Ripple(ms) 80 mA 150 mA 300 mA 450 mA 270mA 250mA CVP Adjustmer Range 0 ~ 110% programmable from front panel, remote digital inputs. Accuracy ±1% of full-scale output Programming Response Time 10ms 30ms 30ms 30ms 25ms 90ms Rise Time: 10ms 30ms 30ms 30ms 25ms 90ms Fall Time: 10ms 30ms 30ms 30ms 25ms 90ms Solf-S, CC Load (6.66A loading) 30ms 100ms 100ms 80ms 625ms Fall Time: 10ms 0.001V/ms-20V/ms 0.001V/ms-40V/ms 0.001V/ms-40V/ms 0.001V/ms-40V/ms Current Slew Rat	Current Measurement							
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Voltage Ripel(ms) 450 mV 1500 mV 1500 mV 2550 mV 3500 mV Ovitage Ripel(ms) 80 mA 150 mA 300 mA 450 mA 270mA 250mA OVP Adjustmer Range 0 - 110% programmable from front panel, remote digital inputs. 250mA 250mA Accuracy ±1% of full-scale output 150m S 30ms 30ms 25ms 90ms Rise Time: 10ms 30ms 30ms 30ms 25ms 90ms Rise Time: 10ms 30ms 30ms 30ms 25ms 90ms Solk-S, CC Load (6.66A loading) 30ms 30ms 30ms 25ms 90ms Fall Time: 10ms 30ms 30ms 30ms 25ms 90ms Solk-S, CC Load (1.33A loading) 100ms 100ms 80ms 625ms Fall Time: 0.001V/ms-15V/ms 0.001V/ms-20V/ms 0.001V/ms-40V/ms 0.001V/ms-20V/ms 0.001V/ms-20V/ms 0.001V/ms-20V/ms 0.001V/ms-20V/ms 0.001V/ms-20V/ms 0.001V/ms-40V/ms 0.001V/ms-20V/ms								
Voltage Ripple(ms) 65 mV 650 mV 650 mV 1950 mV 750 mV OVP Adjustment Range 80 mA 150 mA 300 mA 450 mA 250 mA Range 0 ~ 110% programmable from front panel, remote digital inputs. ±1% of full-scale output ************************************	Voltage Noise(P-P)	450 mV	1500 mV	1500 mV	1500 mV	2550 mV	3500 mV	
Current Ripple(rms) 80 mA 150 mA 300 mA 450 mA 270mA 250mA Range 0 - 110% programmable from front panel, remote digital inputs. -	Voltage Ripple(rms)							
OVP Adjustment Range 0 ~ 110% programmable from front panel, remote digital inputs. Accuracy ±1% of full-scale output Programming Response Time ±1% of full-scale output Rise Time: 10ms 30ms 30ms 25ms 90ms SolvES, CC Load (6.66A loading) 30ms 30ms 30ms 25ms 90ms Fail Time: 10ms 30ms 30ms 30ms 25ms 90ms Fail Time: (6.66A loading) 30ms 30ms 30ms 25ms 90ms Fail Time: (6.66A loading) 30ms 100ms 100ms 80ms 625ms Fail Time: No Load 300ms 1.2s 1.2s 3.s 2.5s Stew Rate Control 0.0014/ms ~ 0.0014/ms ~ </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
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10%5.3.02 Load (1.33A loading) 1.2s 1.2s 3s 2.5s Slew Rate Control 5 5 5 3s 2.5s Voltage Slew Rate Range 0.0011//ms -15//ms 0.0011//ms -201//ms 0.0011//ms -201//ms 0.0011//ms -201/ms 0.0011//ms -201/ms Minimum Transition Time 0.101/ms, or INF 0.101/ms, or INF 0.101/ms, or INF 0.101/ms - 0.001A/ms ~ 0.01A/ms ~ 0.01A/ms ~ 0.01A/ms ~ 0.01A/ms ~ 0.01A/ms ~ 0.01A/m	Fall Time:	83ms	100	100ma	100	90ma	42Ema	
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Voltage Slew Rate Range 0.001V/ms~15V/ms 0.001V/ms~20V/ms 0.001A/ms ~ 0.01A/ms ~	Fall Time: No Load	300ms	1.2s	1.2s	1.2s	3s	2.5s	
Current Slew Rate Range 0.001A/ms ~ 1A/ms, or INF 0.001A/ms ~ 0.1A/ms, or INF 0.01A/ms ~ 0.1A/ms, or INF 0.01A/ms ~ 0.1A/ms, or INF 0.01A/ms ~ 0.1A/ms, or INF 0.01A/ms ~ 0.1A/ms, or INF 0.1A/ms, or INF	Slew Rate Control							
Current Slew Rate Range 0.001A/ms ~ 1A/ms, or INF 0.001A/ms ~ 0.1A/ms, or INF 0.01A/ms, or INF 0.1A/ms, or INF	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	0.001V/ms~20V/m	
IAVms, or INP 0.1AVms, or INP 0.9(Typical) 0.9(Typical) 0.9(Typi	-	0.001A/ms ~	0.001A/ms ~	0.001A/ms ~	0.001A/ms ~	0.001A/ms ~	0.001A/ms ~	
Minimum Transition Time 0.5ms Transient response time Recovers within 1ms to ± 0.75% of steady-state output for a 50% to 100% to 100% to 50% load change (1A/us) 1.5ms *4 Efficiency 0.77(Typical) 0.87(Typical) 0.9(Typical) Programming & Measurement Resolution 0.87(Typical) 0.9(Typical) Voltage (Front Panel) 10 mV 10 mV 10 mV 100mV Current (Front Panel) 1mA 1mA 10mA 10mA Voltage (Digital Interface) 0.002% of Vmax 0.002% of Vmax 0.002% of Vmax Current (Front Panel) 1mA 1mA 10mA 10mA Voltage (Analog Interface) 0.04% of Vmax 0.002% of Vmax 0.002% of Imax Voltage (Front Panel and Digital Interface) 0.1% of Vmax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.2% of Vmax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.2% of Imax <t< td=""><td>Current Slew Rate Range</td><td></td><td></td><td></td><td>0.1A/ms, or INF</td><td>0.1A/ms, or INF</td><td>0.1A/ms, or INF</td></t<>	Current Slew Rate Range				0.1A/ms, or INF	0.1A/ms, or INF	0.1A/ms, or INF	
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/us) 1.5ms *4 Efficiency 0.77(Typical) 0.87(Typical) 0.9(Typical) Programming & Measurement Resolution 0.87(Typical) 0.9(Typical) 0.9(Typical) Voltage (Front Panel) 10 mV 10 mV 10 mV 100mV 100mV Voltage (Digital Interface) 0.002% of Vmax 0.002% of Imax 0.002% of Imax 0.002% of Imax Voltage (Analog Interface) 0.04% of Vmax 0.04% of Imax 0.2% of Imax 0.2% of Imax Voltage (Front Panel and Digital Interface) 0.1% of Vmax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.2% of Vmax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.2% of Vmax 0.2% of Imax 0.2% of Imax Voltage (Analog Interface) 0.2% of Vmax 0.2% of Imax 0.2% of Imax Parallel Operation*2 Master / Slave control via CAN for 10 units up to 150kW *1 (Parallel: ten units) up to 198kW *3	Minimum Transition Time						0111 (1110) 01 11 11	
Transient response time for a 50% to 100% or 100% to 50% load change (1A/us) 1.3ms *4 Efficiency 0.77(Typical) 0.87(Typical) 0.9(Typical) Programming & Measurement Resolution 0.9(Typical) 0.9(Typical) 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 0.002% of Imax 0.002% of Imax Voltage (Analog Interface) 0.04% of Vmax 0.04% of Vmax 0.04% of Imax Programming Accuracy 0.1% of Vmax 0.1% of Vmax 0.2% of Imax Voltage (Front Panel and Digital Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Inte			Recovers within					
Efficiency 0.77(Typical) 0.87(Typical) 0.9(Typical) Programming & Measurement Resolution	Transient response time				1.5ms *4			
Programming & Measurement Resolution Normalian Voltage (Front Panel) 10 mV 10 mV 10 mV 10 mV 100mV Current (Front Panel) 1mA 1mA 1mA 1mA 1mA 10mA Voltage (Digital Interface) 0.002% of Vmax 0.002% of Imax 100mV 10 mV Current (Digital Interface) 0.002% of Vmax 0.002% of Imax 100mV 100mV Voltage (Analog Interface) 0.002% of Imax 0.002% of Imax 0.002% of Imax Voltage (Front Panel and Digital Interface) 0.04% of Vmax 0.04% of Vmax Current (Front Panel and Digital Interface) 0.1% of Vmax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.2% of Vmax 0.2% of Imax Current (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Analog Interface) 0.3% of Imax 0.2% of Imax Current (Analog Interface) 0.3% of Imax 0.2% of Imax Voltage (Interface) 0.3% of Imax 0.2% of Imax Current (Analog Interface) 0.3% of Imax 0.2% of Imax Parallel Operation*2 Master / Slave control via CAN for 10 units up to 150kW *1 (Parallel: ten units) up to 198kW *3 Auto Sequencing (I-V program) <	Efficiency							
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	Note*1 : Max. Power is 20k	W for 62020H-150S.		Get n	nore product & distrik	outor information in C	hroma ATE APP	

Note*2 : There is parallel mode for DC power supply when the I-V curve function is enabled. Note*3 : For higher power > 198kW, please call for availability. Note*4 : Recovers within 1.5ms to \pm 1.5% of steady-state output

for a 50% to 75% or 75% to 50% load change (0.1A/ms)

CHROMA SYSTEMS

SOLUTIONS, INC.

T +1-949-600-6400

F +1-949-600-6401

www.chromausa.com

19772 Pauling,

Foothill Ranch,

CA 92610

U.S.A.

HEADQUARTERS

CHROMA ATE INC.

66 Huaya 1st Road,

T +886-3-327-9999

F +886-3-327-8898

www.chromaate.com

info@chromaate.com

Guishan, Taoyuan

33383, Taiwan





SOUTHEAST ASIA (A company of Chroma Group) 46 Lorong 17 Geylang # 05-02 Enterprise Industrial Building, Singapore 388568 T +65-6745-3200 F +65-6745-9764 www.quantel-global.com sales@quantel-global.com

Search Keyword

62000H

sales@chromaeu.com sales@chromausa.com CHROMA GERMANY GMBH Südtiroler Str. 9, 86165, Augsburg, Germany T +49-821-790967-0 F +49-821-790967-600 www.chromaeu.com sales@chromaeu.com

CHROMA ATE EUROPE B.V.

Morsestraat 32, 6716 AH

Ede, The Netherlands

T+31-318-648282

F+31-318-648288

www.chromaeu.com

EUROPE

CORP. 888 Nippa-cho, Kouhoku-ku, Yokohama-shi, Kanagawa. 223-0057 Japan T +81-45-542-1118 F +81-45-542-1080 www.chroma.co.jp info@chroma.co.jp

CHROMA JAPAN

JAPAN

KOREA CHROMA ATE KOREA BRANCH **3F** Richtogether Center, 14, Pangyoyeok-ro 192, Bundang-gu, Seongnam-si, Gyeonggi-do 13524, Korea T +82-31-781-1025 F +82-31-8017-6614 www.chromaate.com erica.shih@chromaate.co.kr

(SHENZHEN) CO., LTD. 8F, No.4, Nanyou Tian An Industrial Estate, Shenzhen, China T +86-755-2664-4598 F +86-755-2641-9620 www.chroma.com.cn info@chromaate.com