Agilent Models 6690A-6692A
System dc Power Supply

Data Sheet

Minimize your testing downtime with this reliable, high power dc supply

- Low ripple & noise

- Fast up-and-down programming

- High accuracy current programming and read back

- Industry standard SCPI programming commands

- Analog programming

- Analog monitoring

- Parallel connection for more current output

- Full protection from overcurrent, overvoltage overtemperature

- Remote sense

- Electronic calibration

- Standard 1-year warranty

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You have better things to worry about than dc power.

Will failure of your dc power supply delay your testing?

Will failure of your dc power supply damage your DUT?

Will failure of your dc power supply keep you from meeting your customers' needs?

The 6690A Series is dc power you can depend on.
At the 6600 watt power level, it's not easy to design a reliable dc power supply. Agilent Technologies builds in ruggedness and durability, to meet even the grueling needs of continuous stress testing in harsh environments. During the development phase, Agilent power supplies undergo a battery of environmental tests such as 8-days temperature profile. Other tests include humidity, altitude, shock and vibration, ESD, ac line tests, EMC and RFI. The power supplies are designed with built-in margin so that they can meet their specifications over time, under all conditions, and withstand peak stress.

Protect your DUT
At these high power levels, you want to protect your expensive DUT. Whether your DUT is a rack of data storage control units, or a base station ready for deployment, it is quite valuable and well worth recovery. The 6690 Series has a wide range of protection features available to protect your DUT from damaging conditions.

• Overvoltage protection
• Overcurrent protection
• Overtemperature protection
• Programmable shut-down
• Error status reporting
• DFI-RI
• External TTL shut-down input
• Linked power supply shutdown

Easy GPIB Programming
All Agilent system power supplies have SCPI (Standard Commands for Programmable Instruments) based command sets. This means that the same function would have the same command for any instrument. For example, to program the output voltage on two power supplies, the command would be the same, and to measure the output voltage the command would be the same for the Agilent system power supply as any SCPI voltmeter. Using SCPI instruments makes your software simpler and quicker to design.

Easy System Configuration and Enhancement
The 6600 watt dc power supplies of the Agilent 6690 Series are the same size as the 5000 watt power supplies of the Agilent 6680 Series. This means that system power can be upgraded without needing more rack space. All programming commands and

features are 100% compatible between both series. Also, up to three same model 6690 Series power supplies can be connected in parallel, to provide additional power as your needs expand.

Manual Power Supply Control
Non-automated testing in R&D, or power for the repair bench in manufacturing, are no problem for the 6690 Series. The front panel has everything that is needed to control both the power supply output and the associated protection features. Both the output voltage and current can be easily monitored on the front panel meters.

Analog Programming and Monitoring
Analog signals can be used to program the output voltage and current. This allows custom waveforms to be generated, and is also useful for process control applications. The output current and voltage can be monitored via analog signals on the rear panel, for custom interface applications, and process control implementations.

Specifications

Parameter		Agilent Model Number		
		6690A	**6691A**	**6692A**
Output Ratings				
Voltage:		0-15 V	0-30 V	0-60 V
Current:* *Derated linearly 1%/°C from 40°C to 55°C		0-440 A	0-220 A	0-110 A
Programming Accuracy (@ 25 ±5°C)				
Voltage:	0.04% +	15 mV	30 mV	60 mV
Current:	0. I % +	230 mA	125 mA	65 mA
Ripple & Noise (from 20 Hz to 20 MHz with outputs ungrounded, or with either output terminal grounded)				
Constant Voltage:	rms	2.5 mV	2.5 mV	1.5 mV
Constant Voltage:	p-p	15 mV	25 mV	25 mV
Constant Current:** **With load inductance >5 µH.	rms	200 mA	50 mA	30 mA
Readback Accuracy (from front panel or over GPIB with respect to actual output @ 25 ±5°C)				
Voltage:	0.05% +	22.5 mV	45 mV	90 mV
±Current:	0.1% +	300 mA	165 mA	80 mA
Load Regulation (change in output voltage or current for any load change within ratings)				
Voltage	0.002% +	650 µV	1.1 mV	2.2 mV
Current:	0.005% +	40 mA	17 mA	9 mA
Line Regulation (change in output voltage or current for any line change within ratings)				
Voltage:	0.002% +	650 µV	650 µV	650 µV
Current:	0.005% +	40 mA	17 mA	9 mA
Transient Response Time (for the output voltage to recover to within 150 mV following any step change from 100% to 50% or 50% to 100% of the rated output current): <900 µs				

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