GFK-1448B
August 1997

Power Supply Module, 100W, 120/240 VAC or 125 VDC

–This data sheet describes version H (IC697PWR711H/713H), or later versions of this power supply.
–For a description of version G (IC697PWR711G/713G), and earlier versions – see data sheet GFK-0392G.

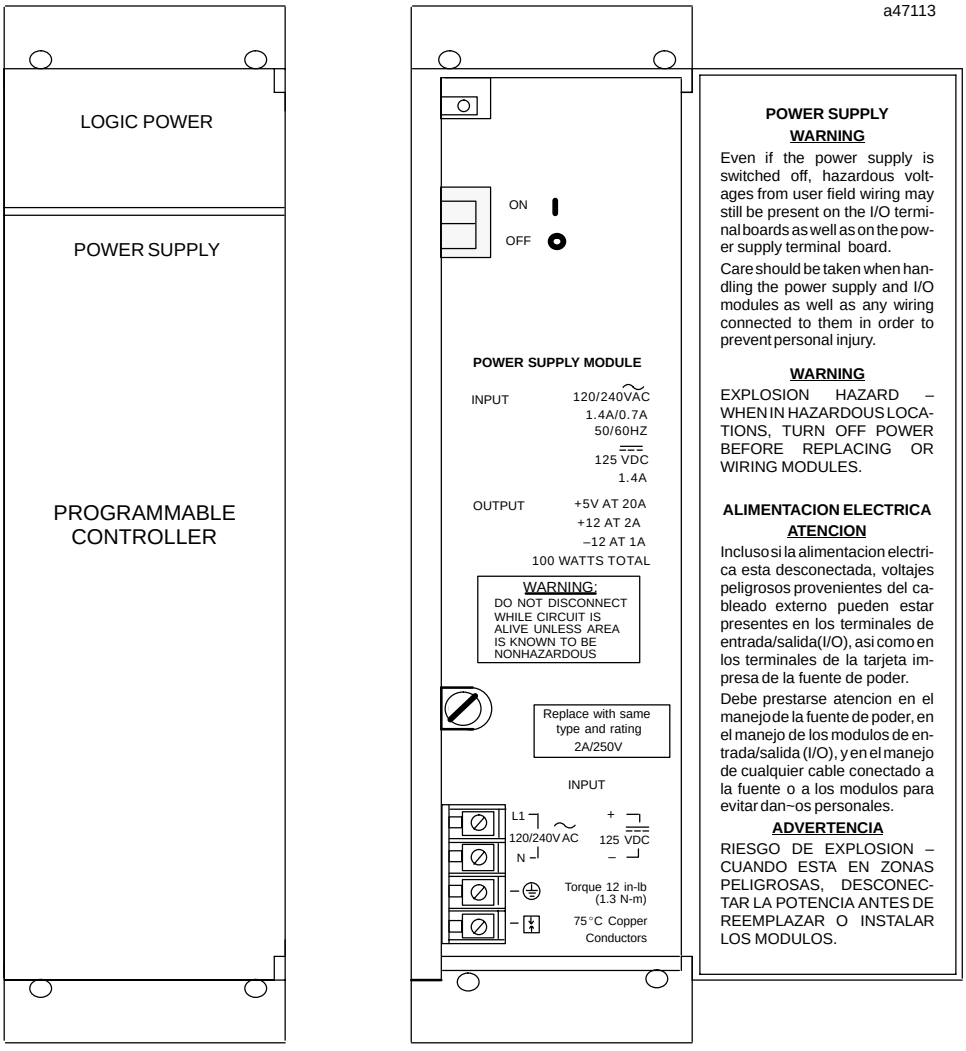
Features

- Operation from 120 VAC, 240 VAC, or 125 VDC
- Three output voltages, 100 watts total
  +5 VDC output up to 20 amps
  +12 VDC output up to 2 amps
  -12 VDC output up to 1 amp
- Slide-in rack mount construction
- Electronic short circuit overcurrent protection
- Two rack operation from a single power supply
- Power Factor correction for AC operation
- Jumper for overvoltage protection devices

Functions

The **100 Watt Power Supply Module** is a rack-mounted unit that plugs directly into a 48-pin backplane-mounted connector in the leftmost slot in the rack. It provides +5 volt, +12 volt and -12 volt power, and logic level sequencing signals to the backplane.

This power supply may be used either in a single rack application, or may also be used to provide power to a second rack if the total load is within the supply rating. Interconnection to the second rack is through a pre-wired cable (see the ordering instructions on the last page of this data sheet).



The power supply output will ride through at least one input line cycle with a total loss of input power at full load. Protection is provided for overcurrent and overvoltage fault conditions.

Operation of the Power Supply

This Power Supply module can operate from either 120 VAC or 240 VAC nominal inputs. It will also operate from a nominal 125 VDC source. The specified range of operation is from 90 VAC to 264 VAC, and from 100 VDC to 150 VDC.

For continuous operation (greater than one hour) at low line voltages and high temperatures, some power derating must be applied. Refer to the following figure to determine the normal operating range for specific applications. Normal operating range is shown by the shaded area of the graph for 60°C (140°F) installations. Operation in the non-shaded region for specific applications must be limited to <1 hour. Reducing the maximum operating temperature to 55°C (131°F) will increase the normal operating range as indicated on the graph.

Active power factor correction circuits in this supply maintain a near unity power factor for AC inputs, which eliminates the need for oversized circuit breakers and wiring. This circuitry also limits the half cycle peak inrush currents to a low value.

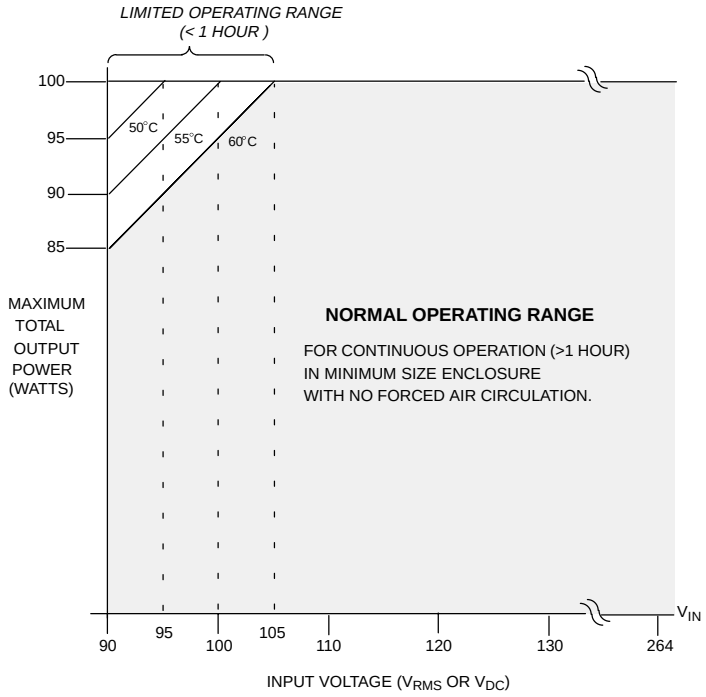


Figure 1. Power Derating for Low Line Voltages

Overvoltage Protection

An electronic shutdown circuit protects against voltages exceeding 6.2 volts. A back-up voltage clamp is provided to protect against sustained overvoltage conditions due to either external influences or internal faults. Overvoltage due to internal faults may cause the fuse to open. For short term overvoltage conditions, normal operation will resume when the cause is removed.

Overcurrent Protection

An electronic current limit is provided on each of the three outputs. An overload on any output will cause the voltage to collapse and may cause the other output voltages to collapse.

Normal operation will resume after removal of the overload. Some component cooling time may be required before normal operation resumes.

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Table 1. Specifications FOR IC697PWR711/713 (Version H and Later) †

Nominal Rated Voltage:	120/240 VAC, or 125 VDC
Input Voltage Range:	
AC Input	90 to 264 VAC, 47 to 63 Hz
DC Input	100 to 150 VDC
Input Power:	135 watts (typical), 160 watts (maximum)
Input Half Cycle Peak Inrush	3 amps (typical)
Power Factor	> .93
Output Power: ††	100 watts maximum (total for all 3 outputs)
Output Voltage:	+5 VDC: 4.90 to 5.25 volts (5.07 volts nominal)
	+12 VDC: 11.75 to 12.6 volts
	-12 VDC: -12.6 to -11.75 volts
Protective Limits -	
Overvoltage Limit:	+5 VDC Output: 5.7 to 6.7 volts
Overcurrent Limit:	+5 VDC output: 21A (typical)
	+12 VDC output: 3.5A (typical)
	-12 VDC output: 1.6A (typical)
Holdup Time:	21 milliseconds minimum (from loss of AC input)
Environmental -	
Operating Temperature:	0°C to 60°C (32° to 140°F) operating ††
	–40°C to +85°C (-40° to +185°F) storage

† Refer to data sheet GFK-0867B, or later for product standards and general specifications.

†† Derate for continuous low input voltage, (see Figure 1)

Table 2. Ordering Information

Description	Catalog Number
Power Supply,120 / 240Volts AC, or 125 Volts DC 100 Watts (with jumper for overvoltage protection devices – version H, or later version)	IC697PWR711 / 713
Power Supply Extension Cable (includes cable and faceplate for empty power supply slot in second rack).	IC697CBL700

Note: For Low Temperature Testing option please consult the factory for price and availability.