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USER'S GUIDE

±15 V Current-Limited Power Supply

Model 0901

New Focus™
A Newport Corporation Brand

Newport Corporation
3635 Peterson Way
Santa Clara, CA 95054
www.newport.com/newfocus

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Warranty

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Document Number 90061076 Rev. A

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Contents

Warranty **2**
Important User Safety Information **4**
General Warnings 4
Definitions and Symbols 5
Environmental Specifications 5
Contact Information 6

Introduction **7**
Getting Started 8
Voltage and Fuse Selection 8

Operation **10**
Output Characteristics 10
Cables 11

Customer Service **12**
Technical Support 12
Service 12

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IMPORTANT USER SAFETY INFORMATION –DO NOT DISCARD

General warning in the event of a hazard

- Do not position this device in such a manner that would make it difficult to disconnect the power cord from the device or the power source.
- Position the equipment so that access to the mains disconnect ON/OFF switch on the front panel readily available.
- Push the power ON/OFF switch in the front of the device to OFF position to turn OFF the power to the internal electronics. The OFF position: push the actuator or switch rocker arm so the "O" depressed. (To connect power to device, push the actuator or switch rocker arm so the "1" depressed).
- Fully disconnect the power cord of the device from MAIN power.

Grounding and Powering the device

- Verify that the line voltage setting on the rear of the Power Supply Model 0901 matches the local Main Power from the power cord.
- Verify that proper fuses installed for amps and time delay.
- To avoid electronic shock, connect the instrument to properly earth-ground, 3-prong receptacles by using the supplied power cord only. Failure to observe this precaution can reduce equipment performance.

General warning and precaution

- Do not attempt to operate this equipment if there is evidence of shipping damage or you suspect the unit is damaged.
- The user should not attempt any maintenance or service of the device beyond the procedures outlined in this manual. Any problem that cannot be resolved should be referred to NEW FOCUS Technical Support.

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Definitions and Symbols

The following terms and symbols are used in this documentation and appear on the Model 0901 Power Supply where safety-related issues occur.



Electronic shock – This symbol indicates a hazard arising from dangerous voltage. Any mishandling could result in irreparable damage to the equipment and personnel injury.

I **ON Symbol –** This symbol represents Power On

O **OFF Symbol –** This symbol represents Power Off



Attention – Refer to the operator instructions of manual before operating equipment.

Environment Specification

Voltage Requirements	100/120/220/240 ~VAC, 47.5-66Hz
Electrical Ratings	100-120~VAC, 0.5A; and 220-240~VAC, 0.25A (47.5-660Hz)
Size (H x W x D) [in. (mm)]	3.5 (90.0) x 7.65 (195.0) x 8.0 (200.0)
Mainframe Weight [lb (Kg)]	6.5 (2.8)
Operating Temperature	10°C to 40°C (<90% humidity non-condensing)
Storage Temperature	0°C to + 50°C (<90% humidity non-condensing)
Relative Humidity, Storage	<90% humidity non-condensing
Altitude	<3000 meters (10000 feet)
Installation Category	II
Pollution Degree	2
Use Location	Indoor use only

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The power entry module requires two 5x20 mm, Slo-Blo fuses. The table below identifies the correct voltage selector switch setting and fuse rating for several common AC power.

Input Power (47.5 to 66 Hz)	Voltage Switch Setting	Fuses (250~VAC Slo-Blo)
100 VAC	100	0.5AT
120 VAC	120	0.5AT
220 VAC	220	0.25AT
240 VAC	240	0.25AT

Contact Information

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Introduction

The New Focus Model 0901 Power Supply is a triple output, low-noise, ±15-V DC power supply. It is intended for use with all New Focus brand products which require ±15-V DC, and can also serve as a general purpose supply for laboratory use. It is capable of simultaneously powering three devices, each requiring ±15 V and up to 300 mA. Two of the outputs are provided via three-pin M8 style connectors (compatible with other New Focus products), while the third uses banana jacks. (See Figure 1.)

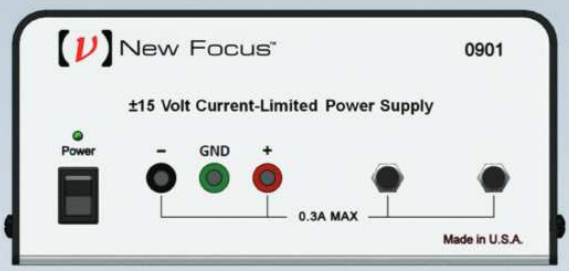


Figure 1: Model 0901 front panel.

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Voltage and Fuse Selection

The Model 0901 can operate with an input of 100, 120, 220, or 240 V AC with AC frequencies of 47–63 Hz.

The unit is configured for 120 V AC at the factory; if it will be used with a different AC voltage, this will need to be selected on the power module on the back panel. The fuses may also need to be changed. See below.

To check the voltage setting, look at the voltage indicator on the AC power module on the back of the power supply. (See Figure 2.)

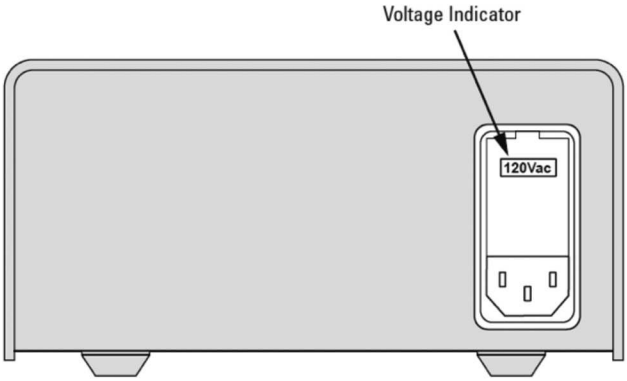


Figure 2: Model 0901 rear panel showing AC power module & voltage indicator.

To change the voltage/fuses:

1. Make sure the power supply is turned off.
2. Disconnect the AC power cord.
3. Open the cover of the power module using a small blade screwdriver or similar tool.

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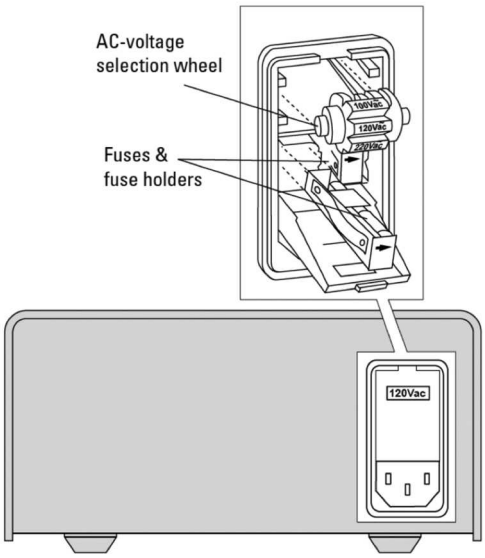


Figure 3: Power module with the cover open

4. Remove the AC-voltage selection wheel from the unit. Do not attempt to rotate the wheel while it is still in the power module; the wheel must be removed, turned, and then reinserted for proper operation. (See Figure 3.)
5. Reinsert the wheel in the module so the desired AC voltage can be viewed in the power-module window.
6. Ensure the proper fuses for the new AC voltage are installed (see Table 1). Pull out fuse holders to replace if needed.
7. Close the power-module cover.
8. Verify the proper voltage is showing through the module window.
9. Reconnect the AC power cord.

Input Power (47.5 to 66 Hz)	Voltage Setting	Switch Fuses (250~VAC Slo-Blo
100 VAC	100	0.5AT
120 VAC	120	0.5AT
220 VAC	220	0.25AT
240 VAC	240	0.25AT

Table 1: The AC power module requires two 5x20-mm, 250-V, Slo-Blo fuses. The current ratings of the fuses should be as shown.

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Operation

Output Characteristics

The outputs (three pairs of ±15 V) of the Model 0901 are all derived from a common linear supply, but each incorporates independent current-limiting protection as shown in Figure 4. As a result, the voltage on each output differs slightly. The impedance of each output is approximately 2 ohms, so an output will be reduced by 0.6 V when providing the full 300 mA. With no load, outputs should be ±15 V ±3%.

When a load attempts to draw in excess of 300 – 330 mA the protection is activated. It is accomplished via fast foldback current limiting (the value of the current limit is lower for loads which attempt to draw a greater current). In the extreme case of a short-circuited output, the current through the short will be less than 100 mA.

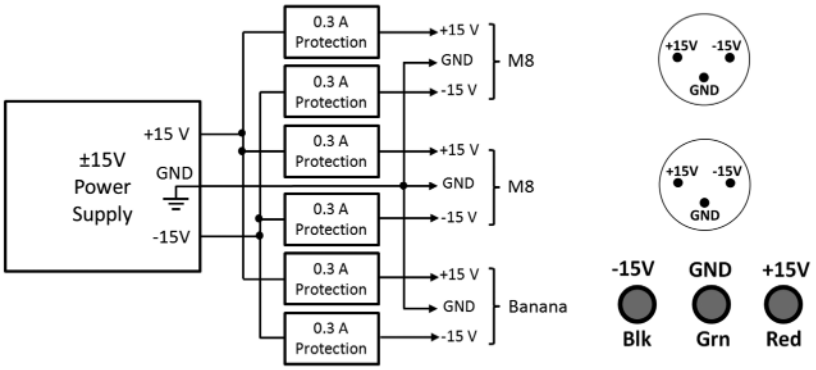


Figure 4: Block diagram and pin assignments (as seen on front panel) of the Model 0901 power supply.

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Cables

New Focus offers three types of cables for use with the Model 0901:

Model #	Description
0923	cable, M8 connector (male) to M8 connector (male), 1 meter
0923-2	cable, M8 connector (male) to M8 connector (male), 2 meter
0924	cable, 3 banana plugs (male) to M8 connector (male), 1 meter

Models 0923 and 0923-2 are used to connect from the M8 connectors on the front panel of the Model 0901 to New Focus brand products.

Model 0924 can be used for the following:

- to connect from the banana jacks on the front panel of the 0901 to New Focus brand products
- to connect New Focus brand products to a supply other than an 0901 which has banana jack outputs
- to connect to the M8 connectors on the Model 0901 front panel so as to provide ±15 V on the banana plugs for general lab use.

When connecting cable Model 0924 to the Model 0901, note that the colored male-banana plugs on the cable should follow the color-coding for the Model 0901 banana jacks: red is +15 V, green is ground, and black is -15 V.

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Customer Service

Technical Support

Information and advice about the operation of any New Focus product is available from our technical support engineers.

Engineers are on duty from 8:00–5:00 PST, Monday through Friday (excluding holidays). For quickest response, ask for "Technical Support" and know the model number for your product. The model number is usually found on the front panel.

Phone: USA (408) 980-5903

Support is also available by email.

Email: techsupport@newfocus.com

We typically respond to email within one business day.

Service

In the event that your product malfunctions or becomes damaged, please contact your local Newport Sales office or agent for a return authorization number and instructions on returning the unit

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