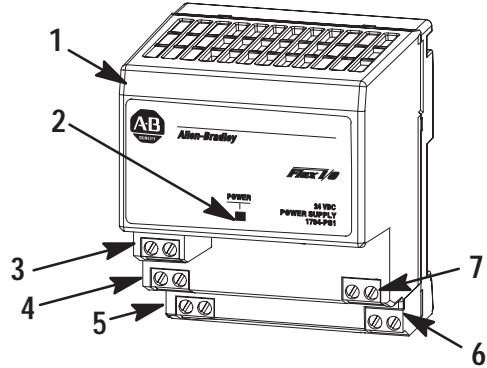




# Installation Instructions

## FLEX I/O Power Supply

(Cat. No. 1794-PS1)



### Component Identification

1	Power Supply module 1794-PS1
2	Indicator
3	120/230V ac ground
4	120/230V ac common L2/N connections
5	120/230V ac power L1 connections
6	+24V dc connections
7	24V common connections



**ATTENTION:** The 1794-PS1 power supply provides sufficient 24V dc power to operate 3 adapter modules. Do not attempt to operate an entire Flex I/O system with this power supply.

### **European Union Directive Compliance**

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

#### **EMC Directive**

This product is tested to meet Council Directive 89/336/EEC Electromagnetic Compatibility (EMC) and the following standards, in whole or in part, documented in a technical construction file:

- EN 50081-2EMC – Generic Emission Standard, Part 2 – Industrial Environment
- EN 50082-2EMC – Generic Immunity Standard, Part 2 – Industrial Environment

This product is intended for use in an industrial environment.

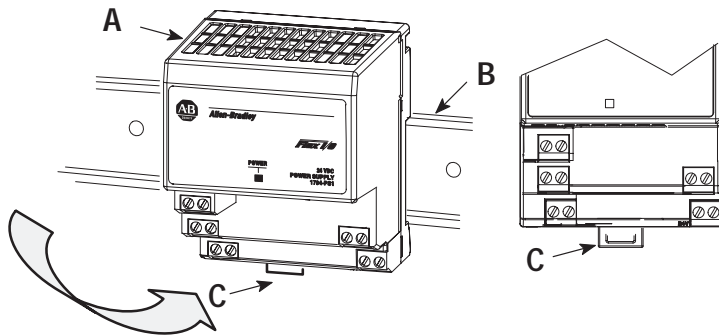
#### **Low Voltage Directive**

This product is tested to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 – Equipment Requirements and Tests.

For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the following Allen-Bradley publications:

- Industrial Automation Wiring and Grounding Guidelines For Noise Immunity, publication 1770-4.1
- Guidelines for Handling Lithium Batteries, publication AG-5.4
- Automation Systems Catalog, publication B111

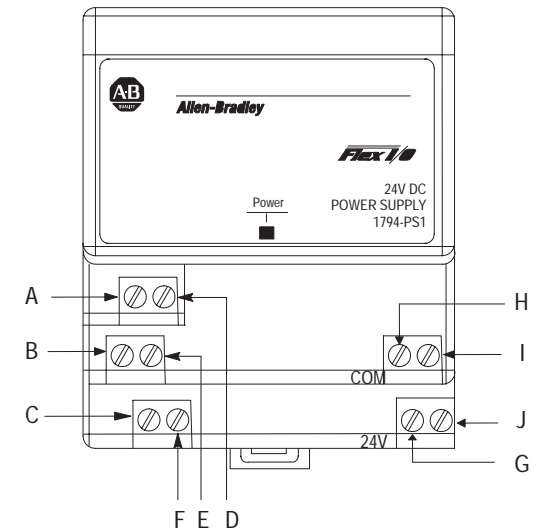
### Mounting on the DIN Rail



1. Position the power supply module **A** on a 35 x 7.5mm DIN rail **B** (A-B pt. no. 199-DR1; 46277-3; EN 50022) at 30° angle.
2. Rotate the power supply module onto the DIN rail with the top of the rail hooked under the lip on the rear of the adapter module.
3. Press the power supply module down onto the DIN rail until flush. Locking tab (**C**) will snap into position and lock the adapter module to the DIN rail.
4. If the power supply module does not lock in place, use a screwdriver or similar device to move the locking tab down while pressing the adapter module flush onto the DIN rail and release the locking tab to lock the adapter module in place. If necessary, push up on the locking tab to lock.
5. Connect the power supply wiring as shown under “Wiring.”

**NOTE:** For Panel/Wall mounting, refer to publication 1794-5.13, “Panel Mounting Kit, Cat. No. 1794-NM1.”

Wiring



**ATTENTION:** The 1794-PS1 power supply provides sufficient 24V dc power to operate 3 adapter modules. Do not attempt to operate an entire Flex I/O system with this power supply.

Terminals A, B and C are 120/230V supply terminals. Terminals D, E and F are available to daisychain this 120/230V power to other 1794-PS1 power supplies. If supplying 120V ac to the power supply, you can also power the ac modules in the adjacent system.

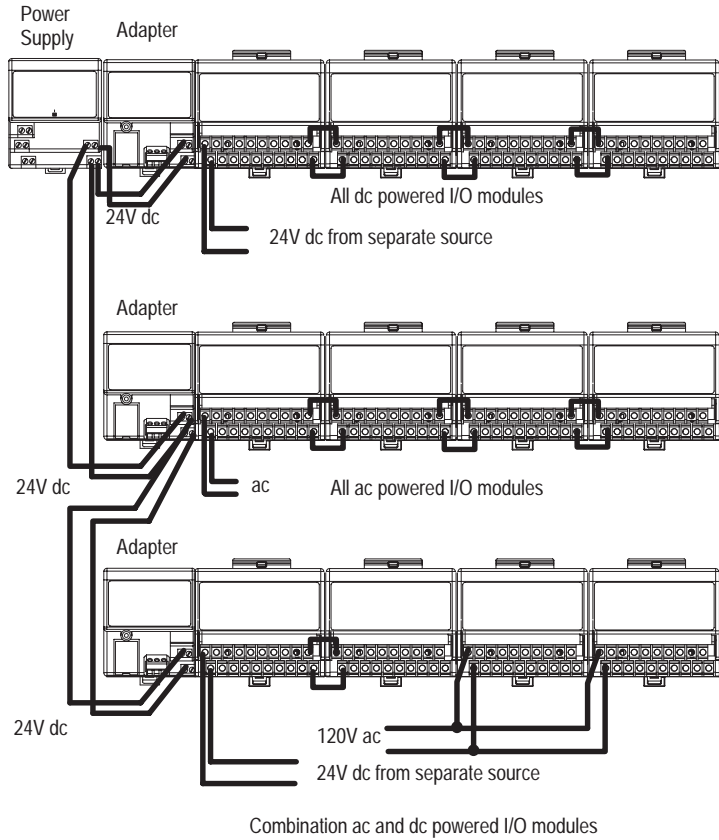
1. Connect the 120/230V ac power to the left side terminals on the connectors on the left side of the module as follows:

Connect		To
ac Ground	GND	A
120/230V ac common	L2/N	B
120/230V ac power	L1	C

2. Connect terminal **G** (+24V dc) to the +24V dc terminal on the first adapter.

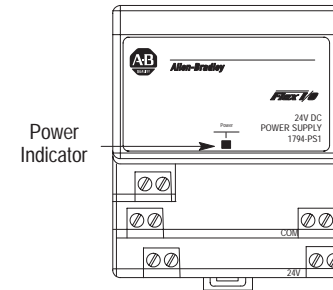
3. Connect terminal **H** (+24V dc common) to the +24V dc common terminal on the first adapter.
4. Repeat steps 3 and 4 using terminals **I** and **J** for the second adapter.
5. Connections **D**, **E** and **F** are used to pass 120/230V ac power to adjacent 1794-PS1 power supplies.

**Example of Using a 1794-PS1 Power Supply to Power 3 Adapter Modules**



**Diagnostic Indicator**

The power supply has 1 indicator.



The power indicator is on (green) when voltage at the output is between 20.4V dc and 35V dc.

Indicator	Description
ON (green)	Output voltage is greater than 20.4V dc, but less than 35V dc
OFF	No power applied to power supply.
	Output voltage exceeded 35V dc, and overvoltage protection shut down unit.
	Output current is below 0.1A.
	Output current is above 1.0A.

**Specifications – Power Supply Module Cat. No. 1794-PS1**

**Note:** This power supply complies with the CE Low Voltage Directive.

**Input Specifications**

Nominal Supply Voltage	120V ac, 47–63Hz; 0.7A maximum 230V ac, 47–63Hz; 0.4A maximum
Voltage Range	85-265V ac
Inrush Current	30A for 1 ac cycle
Interruption	Output voltage will stay within specification when input drops out for 1/2 cycle @ 47Hz, 85V ac with maximum load

**Specifications continued on next page.**

**Specifications – Power Supply Module Cat. No. 1794-PS1****Output Specifications**

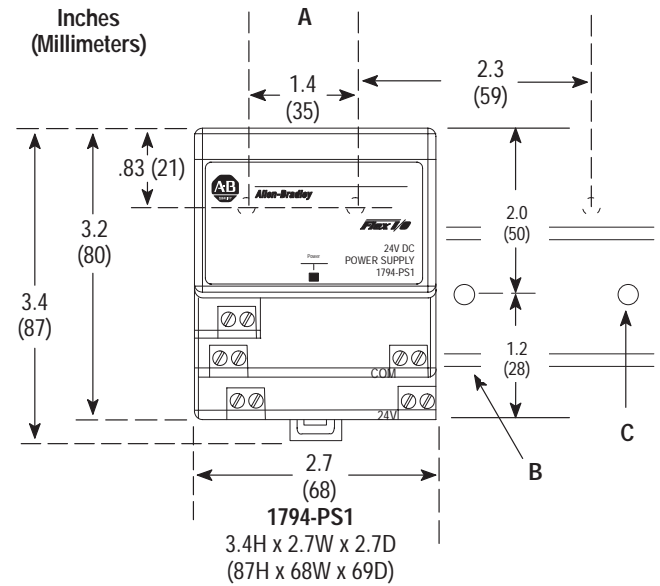
Nominal Output Voltage	+24V dc
Voltage Range	22.8–25.2V dc (includes noise and 5% ac ripple)
Output Current	1A maximum
Minimum Load	100mA
Output Surge	Sufficient to drive 3 adapters ( surge of 23A for 2ms each)
Overvoltage Protection	Output internally limited to 35V dc. Cycle power to reenergize.
Isolation Voltage	1500V ac for 1 minute 2500V dc for 1 second

**General Specifications**

Mounting	Horizontal or vertical on a DIN rail, wall or panel
Dimensions	Inches 3.4H x 2.7W x 2.7D Millimeters 87H x 68W x 69D
Environmental Conditions	
Operational Temperature	0 to 55°C (32 to 131°F)
Storage Temperature	–40 to 85°C (–40 to 185°F)
Relative Humidity	5 to 95% noncondensing
Shock	Operating 30 g peak acceleration, 11(±1)ms pulse width Non-operating 50 g peak acceleration, 11(±1)ms pulse width
Vibration	Tested 5 g @ 10–500Hz per IEC 68-2-6
Conductors	Wire Size 12 gauge (4mm <sup>2</sup> ) stranded maximum 3/64 inch (1.2mm) insulation maximum Category 1 <sup>1</sup>
Agency Certification (when product or packaging is marked)	<ul style="list-style-type: none"> <li>• CSA certified</li> <li>• CSA Class I, Division 2, Groups A, B, C, D certified</li> <li>• UL listed</li> <li>• CE marked for all applicable directives</li> </ul>

<sup>1</sup> You use this category information for planning conductor routing as described in publication 1770-4.1, "Industrial Automation Wiring and Grounding Guidelines."

## Mounting Dimensions



A = Mounting hole dimensions for optional mounting kit

B = DIN rail

C = Secure DIN rail approximately every 200mm



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