ATTENTION

Environment and Enclosure

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC publication 60664–1), at altitudes up to 2000 meters without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR Publication 11. Without appropriate precautions, there may be potential difficulties ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbance.

This equipment is supplied as "open type" equipment. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present, and appropriately designed to prevent personal injury resulting from accessibility to live parts. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

See NEMA Standards publication 250 and IEC publication 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosures. Also, see the appropriate sections in this publication, as well as the Allen–Bradley publication 1770–4.1, ("Industrial Automation Wiring and Grounding Guidelines"), for additional installation requirements pertaining to this equipment.

Prepare for Installation

The 1771-P7 power supply can power one 1771-A1B, -A2B, -A3B, -A3B1, or -A4B I/O chassis when used with any adapter module or programmable controller (Mini-PLC-2/02®, Mini-PLC-2/05®, Mini-PLC-2/16®, Mini-PLC-2/17®, or PLC-5™ family processor) that does not have an internal power supply.

IMPORTANT The power supply is **not compatible** with the 1771-A1, -A2, or -A4 I/O chassis.

ATTENTION

The 1771-P7 is a stand-alone power supply. Do not connect it in parallel with any other power supply. Connecting it in parallel could result in processor memory loss or injury due to unexpected machine operation.

WARNING

When used in a Class I Division 2 hazardous location, this equipment must be mounted in a suitable enclosure with a proper wiring method that complies with governing electrical codes.

ATTENTION

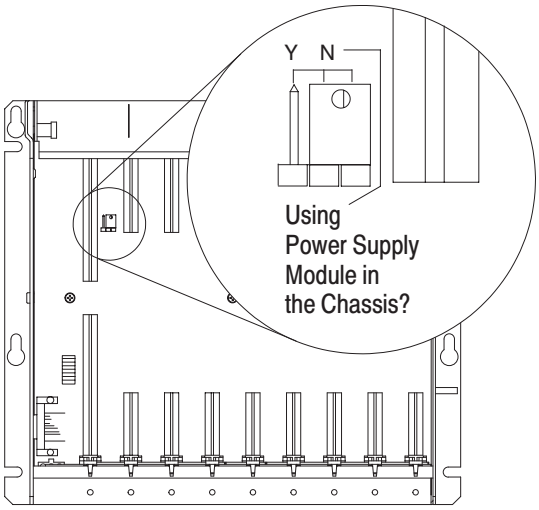
Preventing Electrostatic Discharge

This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
- Wear an approved grounding wriststrap.
- Do not touch connectors or pins on component boards.
- Do not touch circuit components inside the equipment.
- If available, use a static–safe workstation.
- When not in use, keep modules in appropriate static–safe packaging.

Before installing the power supply, you should:

- mount the I/O chassis that the power supply will be connected to. See the Universal I/O Chassis Installation Data (1771-2.210) for information on mounting the I/O chassis.
- set the power supply configuration jumper on the I/O chassis. The 1771-P7 is an external power supply. Set the configuration jumper to the N position.



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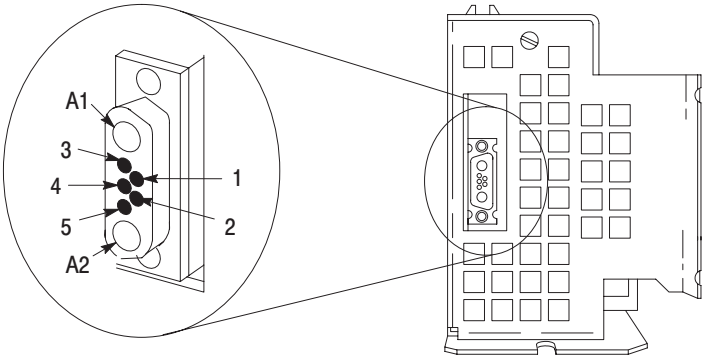
Install the 1771-P7 and Connect Backplane Power

The power supply has a D-shell power connector that provides power to the I/O chassis backplane.

A1 backplane common
A2 backplane +5V dc
1 no connection
2 backplane processor enable
3 backplane +5V dc sense
4 backplane signal ground sense
5 no connection



bottom view of power supply

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If you have this I/O chassis	Use this power cable[1]	To connect a 1771-P7 mounted
1771-A3B	1771-CP2	within 1.52m (5ft) of the I/O chassis
1771-A1B, -A2B, -A3B1, or -A4B	1771-CP1	within 0.32m (1.04ft) on the left-side of the I/O chassis
	1771-CP2	within 1.52m (5ft) of the I/O chassis
	1771-CP3 (right angle connector)	within 1.68m (5.5ft) of the I/O chassis

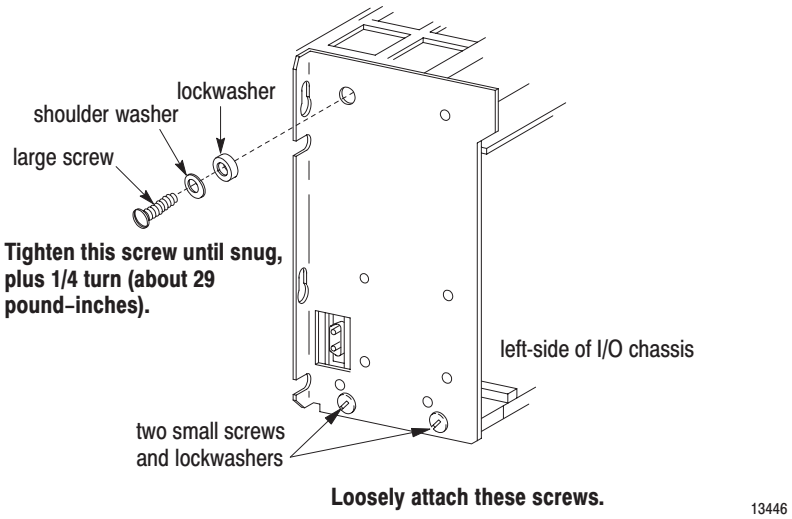
[1] Power supply cable is not shipped with the power supply.

If you are mounting the power supply	Go to
on the left side of a panel-mounted I/O chassis	next section
separately from an I/O chassis	page 9

Attaching to a Panel-mounted I/O Chassis

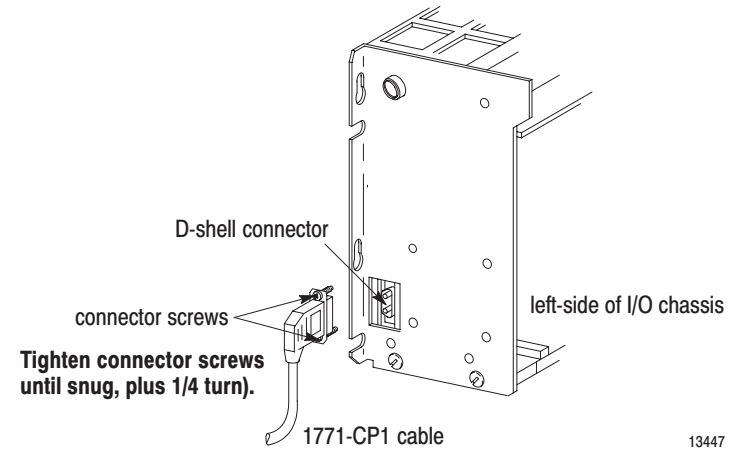
1. Attach the mounting screws to the side of the I/O chassis:

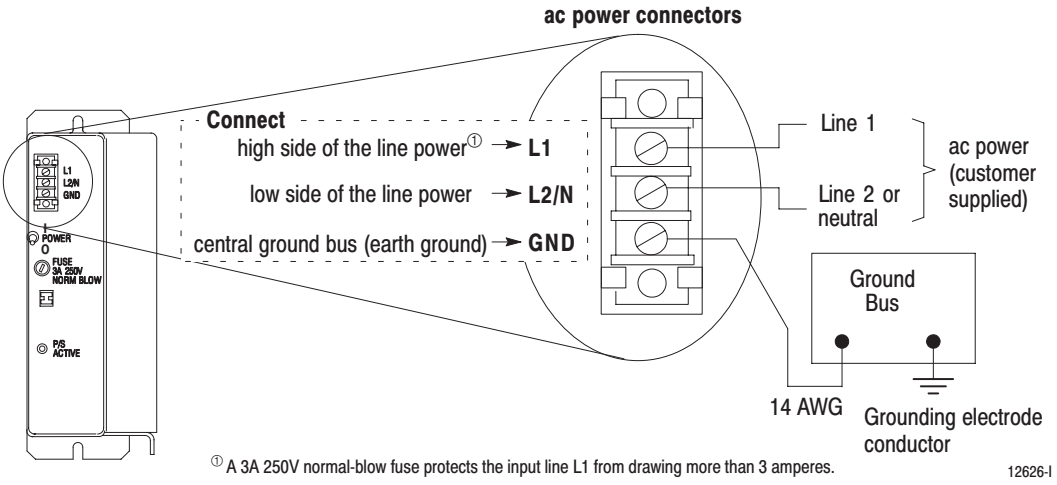
ATTENTION Use the mounting screws provided with the 1771-P7. Longer screws may intrude into the I/O chassis and interfere with module insertion.



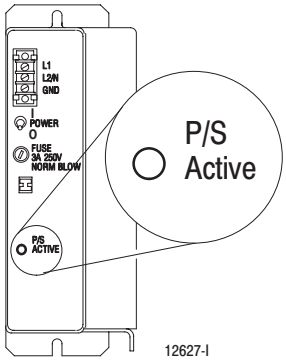
2. Connect the power cable (ordered separately) to the D-shell connector on the I/O chassis and tighten the connector screws.

WARNING If you connect or disconnect the power supply cable with power applied an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure power is removed or the area is nonhazardous before proceeding.





Troubleshooting



The power supply has a green P/S ACTIVE LED that provides status indication during power supply operation.

Normal operation	If indicator is	Then
on	off	it may be due to:
		input voltage not within specified range
		blown fuse
		overcurrent

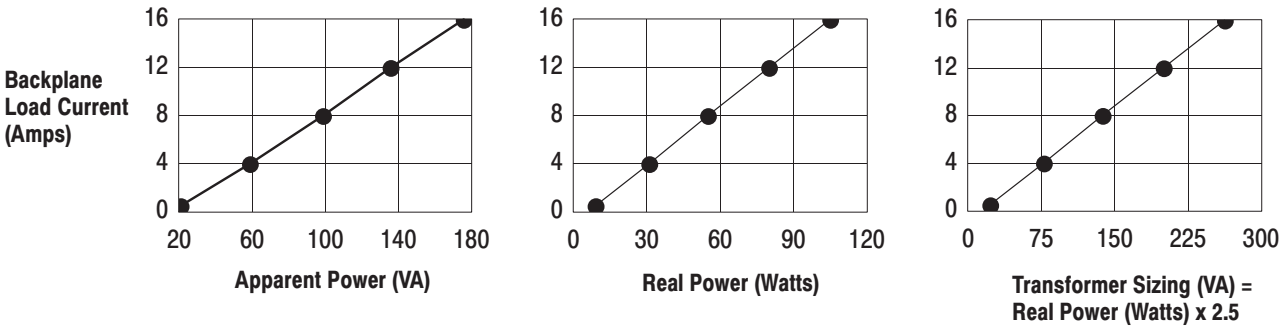
Important: If a shutdown condition occurs, wait 15 seconds before attempting to apply power.

For additional assistance, contact your local Allen-Bradley representative.

Power Ratings

Use these graphs to determine your:

- cooling requirements
- power cost
- transformer size (unless the transformer manufacturer has a recommended multiplier for sizing a transformer for an ac-to-dc power supply)



Specifications

Supply Voltage Range	120V ac: 97-132V ac 50/60Hz 2.0A 220V ac: 195-264V ac 50/60Hz 1.3A
Input Power (Real/Apparent)	108 Watts/176VA maximum (see charts)
External Transformer	270VA at full load
Isolation Voltage	Tested to 1200V ac for 1s
Output Voltage	5.06V dc ±3.8%
Output Current	16A max @ 5V dc
Power Loss Time Delay — Input Power to Processor Disable	13.6ms ±2.9ms
Maximum User-supplied Overcurrent Protection[1]	15A
Fuse[2]	3A, 250V 3AG normal blow (Bussmann AGC 3 — Littelfuse 312003)
Conductor Wire Size Category	14AWG (2.5mm^2) stranded copper wire rated at 75ºC or greater 1[3]
Terminal Strip Screw Torque	12 pound-inches
Weight	1.95kg (4.3 lbs.)
Dimensions (H x W x D)	315mm x 115mm x 159mm (12.40" x 4.53" x 6.25")
Environmental Conditions Operating Temperature	IEC 60068-2-1 (Test Ad, Operating Cold) IEC 60068-2-2 (Test Bd, Operating Dry Heat) IEC 60068-2-14 (Test Nb, Operating Thermal Shock) 32 to 140°F (0 to 60°C)
Storage Temperature	IEC 60068-2-1 (Test Ab, Unpackaged, Nonoperating Cold) IEC 60068-2-2 (Test Bc, Unpackaged, Nonoperating Dry Heat) IEC 60068-2-14 (Test Na, Unpackaged, Nonoperating Thermal Shock) -40 to 185°F (-40 to 85°C)
Relative Humidity	IEC 60068-2-30 (Test Db, Unpackaged, Nonoperating Damp Heat) 5 to 95%, noncondensing
Shock Operating Nonoperating	IEC 60068-2-27;1987 (Test Ea, Unpackaged Shock, ES#002) 15g 30g
Vibration	IEC 60068-2-6 (Test Fc, Operating) 2g @ 10-500Hz
Emissions	CISPR 11 Group 1, Class A
ESD Immunity	IEC 61000-4-2 4KV Contact Discharges
Radiated RF Immunity	IEC 61000-4-3 10V/m, 3V/m Broadcast bands, with 1kHz sine-wave 80% AM from 30MHz to 1000MHz
EFT/B Immunity	IEC 61000-4-4 ±2kV @ 2.5kHz on power ports
Surge Transient Immunity	IEC 61000-4-5 ±1kV line-line (DM) and ±2kV line-earth (CM) on ac power ports
Conducted RF Immunity	IEC 61000-4-6 10V rms with 1kHz sine wave 80% AM from 150kHz to 30MHz
Enclosure Type Rating	None (open style)