Power Supplies

P2-01DCAC

The P2-01DCAC Input Power Supply provides isolated power to the Productivity®2000 base from an external 24VAC or 12–24 VDC source.

No power budgeting is required. Any combination of I/O modules may be installed in any slots without power budget considerations.

AC/DC Input Power Supply

IMPORTANT!

Hot-Swapping Information
NOTE: This device cannot be Hot Swapped.

P2-01DCAC Specifications

User Specifications		
Input Voltage Range (Tolerance)	24VAC (-10% / +20%)	12–24 VDC (-10% / +20%)
Maximum Input Power	72VA	45W
Maximum Input Ripple	Less than ±5%	
Cold Start Inrush Current	45A, 4µS @ 24VDC	
Maximum Inrush Current (Hot Start)	Same as Cold Start Inrush Current	
Rated Operating Frequency	50 to 60 Hz with ±5% tolerance	
Input Fuse Protection (Internal)	Micro Fuse 250V, 6.3 A Slow Blow Non-replaceable	
Input Fuse Protection (External)	6A Slow Blow (Recommended)	
Input Reverse Polarity Protection	Yes	
Output Voltages	24VDC, 0.85 A 3.3 VDC, 3.81 A	
Maximum Output Power	32W Combined	
Isolated User 24VDC Output	None	
Output Protection for Over Current, Over Voltage, and Over Temperature	Self resetting for both voltage outputs to base	
Under Input Voltage Lock-out	Yes, <10VDC	
Over Input Voltage Lock-out	No	
Input Transient Protection	Transorb Plus Input Choke/Filter	
Operating Design Life	10 years at full load at 40°C ambient and 5 years at 60°C ambient	

General Specifications	
Operating Temperature	0º to 60ºC (32º to 140ºF)
Storage Temperature	-20º to 70ºC (-4º to 158ºF)
Humidity	5 to 95% (non-condensing)
Altitude	2,000 meters, max.
Pollution Degree	2
Environmental Air	No corrosive gases permitted
Vibration	IEC60068-2-6 (Test Fc)
Shock	IEC60068-2-27 (Test Ea)
Overvoltage Category	II
Enclosure Type	Open equipment
Voltage Withstand (dielectric)	750VDC applied for 2 seconds
Insulation Resistance	>10MΩ @ 500VDC
Module Location	Power Supply slot in a Productivity2000 system.
Weight	284g (10 oz)
Agency Approvals	UL 61010-1 and UL 61010-2-201 File E139594, Canada and USA CE (EN 61131-2 EMC, EN 61010-1 and EN 61010-2-201 Safety)*

**Meets EMC and Safety requirements. See the Declaration of Conformity for details.*
***To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific component part number web page.*

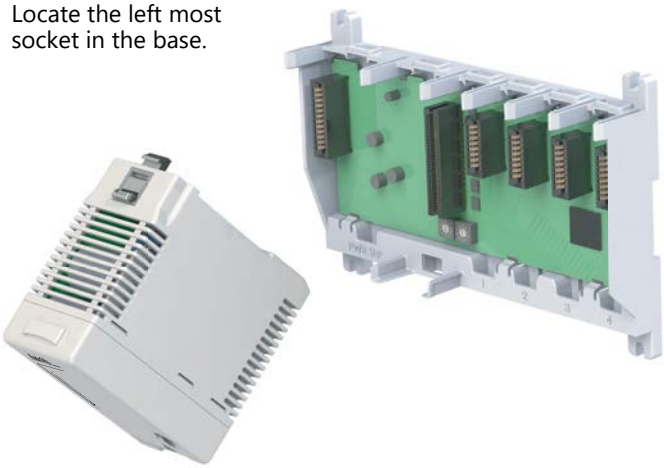
Terminal Block Specifications	
Number of Positions	4 Screw Terminals
Wire Range	22–12 AWG (0.324 to 2.08 sq. mm) Solid/Stranded Conductor 3/64 inch (1.2 mm) insulation maximum Use copper conductors, 75°C or equivalent
Screw Driver Width	1/4 inch (6.5 mm) maximum
Screw Size	M3 size
Screw Torque	7–9 inch-pounds (0.882 - 1.02 N·m)

Power Supply

Power Supply Installation

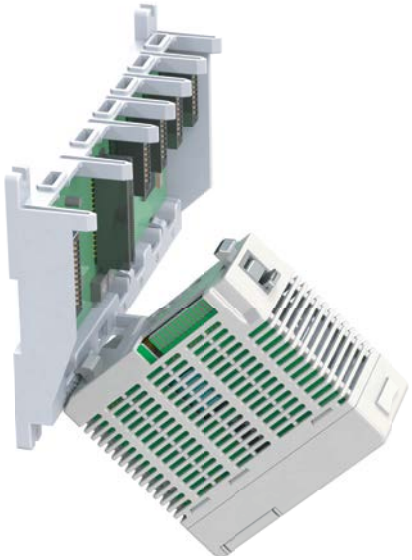
Step One:

Locate the left most socket in the base.



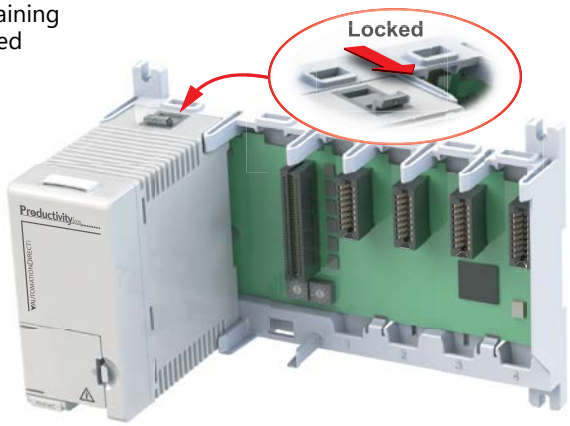
Step Two:

Insert the Power Supply at a 30° angle into the notch located at the bottom of the base and rotate up until seated in socket.



Step Three:

Snap the top retaining tab into the locked position.

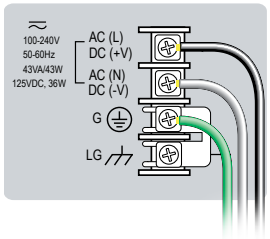


Power Supplies

Power Connections

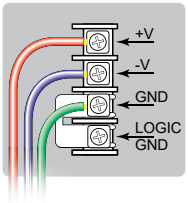
P2-01DC

100-240 VAC, 125VDC

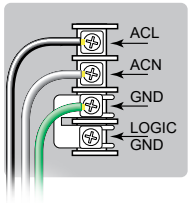


P2-01DCAC

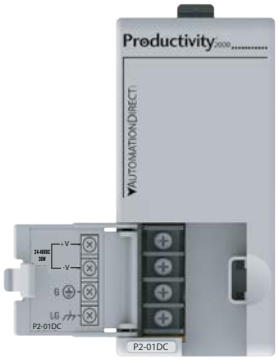
12–24 VDC

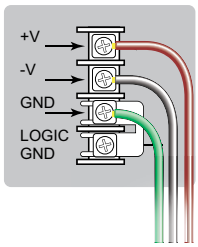


24VAC



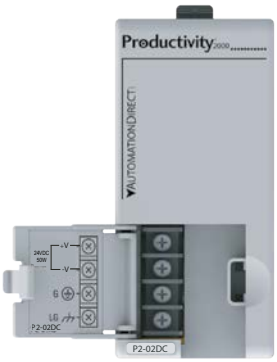
P2-01DC

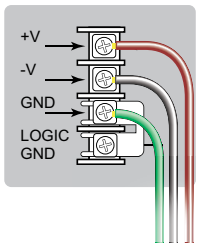




24–48 VDC

P2-02DC





24VDC

Grounding

A good common ground reference (earth ground) is essential for proper operation of the Productivity®2000 system. One side of all control circuits, power circuits and the ground lead must be properly connected to earth ground by either installing a ground rod in close proximity to the enclosure or by connecting to the incoming power system ground. There must be a single-point ground (i.e. copper bus bar) for all devices in the enclosure that require an earth ground.

Terminal Block Specifications	
Number of Positions	4 screw terminals
Wire Range	22–12 AWG (0.324 to 3.31 sq. mm) Solid / stranded vonductor 3/64 inch (1.2 mm) insulation maximum (Use copper conductor, 75°C or equivalent)
Conductors	USE COPPER CONDUCTORS, 75°C or equivalent 1/4 in. (6-7 mm) strip length
Screw Driver Width	1/4 inch (6.5 mm) maximum
Screw Size	M3
Screw Torque	7–9 inch-pounds (0.882–1.02 N·m)