

# Power Supply

## P2-01AC <--->

The P2-01AC Input Power Supply provides isolated power to the Productivity2000 base from an external 100-240 VAC source.

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



**P2-01AC**

## P2-01AC Specifications

| P2-01AC User Specifications                                            |                                                                   |
|------------------------------------------------------------------------|-------------------------------------------------------------------|
| Input Voltage Range (Tolerance)                                        | 100 to 240 VAC (-15% / +10%)                                      |
| Rated Operating Frequency                                              | 50 to 60 Hz with $\pm 5\%$ tolerance                              |
| Maximum Input Power                                                    | 37.4 W                                                            |
| Cold Start Inrush Current                                              | 23.6 A                                                            |
| Maximum Inrush Current (Hot Start)                                     | 25.6 A                                                            |
| Input Fuse Protection (Internal)                                       | Micro fuse 250V, 1A, Non-replaceable                              |
| Efficiency                                                             | 75%                                                               |
| Output                                                                 | 24VDC, 0.85 A<br>3.3 VDC, 3.81 A                                  |
| Maximum Output Power                                                   | 29W Combined                                                      |
| Heat Dissipation                                                       | 8.4 W                                                             |
| 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                                           | 55-65 VAC                                                         |
| Over Input Voltage Lock-out                                            | 265-280 VAC                                                       |
| Input Transient Protection                                             | Varistor, plus input choke and filter                             |
| Operating Design Life                                                  | 10 years at full load at 40°C ambient and 5 years at 60°C ambient |

| P2-01AC General Specifications |                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature          | 0° to 60°C (32° to 140°F),                                                                                                                                                    |
| Storage Temperature            | -20° to 70°C (-4° to 158°F)                                                                                                                                                   |
| Humidity                       | 5 to 95% (non-condensing)                                                                                                                                                     |
| Environmental Air              | No corrosive gases permitted                                                                                                                                                  |
| Vibration                      | IEC60068-2-6 (Test Fc)                                                                                                                                                        |
| Shock                          | IEC60068-2-27 (Test Ea)                                                                                                                                                       |
| Enclosure Type                 | Open Equipment                                                                                                                                                                |
| Voltage Withstand (dielectric) | 2100 VDC applied for 2 seconds                                                                                                                                                |
| Insulation Resistance          | >10M $\Omega$ @ 500VDC                                                                                                                                                        |
| Module Location                | Power Supply slot in a Productivity2000 System.                                                                                                                               |
| EU Directive                   | See the "EU Directive" topic in the Productivity Suite Help File. Information can also be obtained at: <a href="http://www.productivity2000.com">www.productivity2000.com</a> |
| Weight                         | 90g (3.2 oz)                                                                                                                                                                  |
| Agency Approvals**             | UL508 file E139594, Canada & USA<br>CE (EN61131-2*)                                                                                                                           |

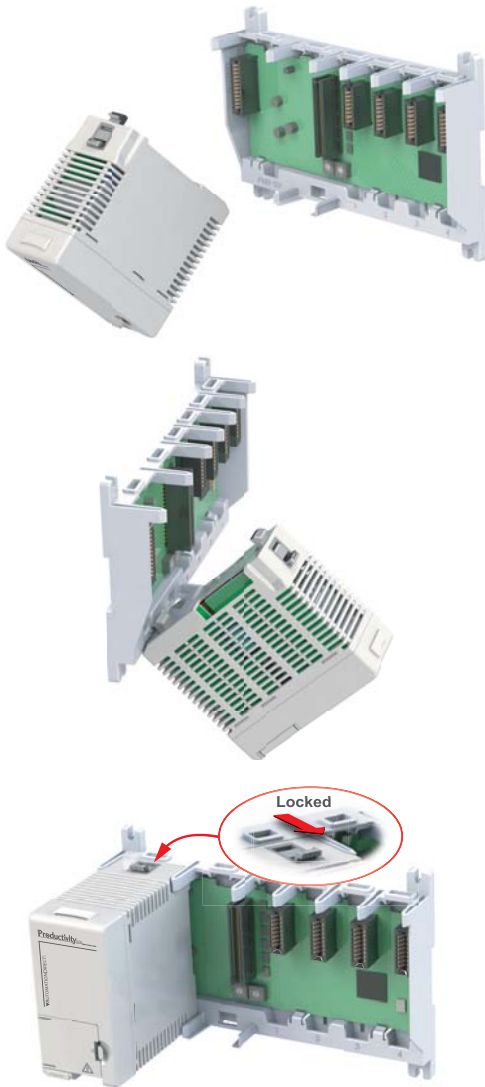
\*Meets EMC and Safety requirements. See the Declaration of Conformity for details.

\*\*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                    | 22-14 AWG (0.324 to 2.08 sq. mm) Solid Conductor<br>22-14 AWG (0.324 to 2.08 sq. mm) Stranded Conductor<br>3/64 inch (1.2 mm) insulation maximum |
| Screw Driver Width            | 1/4 inch (6.5 mm) maximum                                                                                                                        |
| Screw Size                    | M3 size                                                                                                                                          |
| Screw Torque                  | 7- 9 inch-pounds (0.882 - 1.02 Nm)                                                                                                               |

# Power Supply

## Power Supply Installation



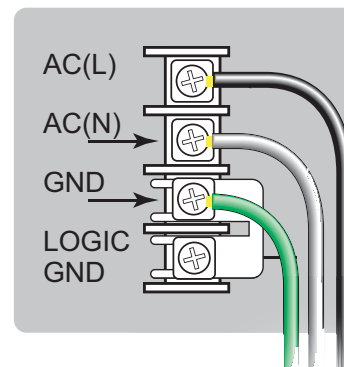
**Step One:**  
Locate the left most  
socket in the base.

**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 posi-  
tion.

## Power Connections

### P2-01AC



## Grounding

A good common ground reference (earth ground) is essential for proper operation of the Productivity2000 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.