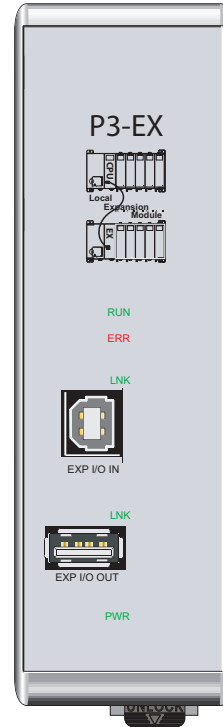


## Module Specifications

Mounting Location	Controller slot of expansion base
Expansion Connectors	1 USB 2.0 Type A, 1 USB 2.0 Type B
Maximum Number of Expansion Modules per CPU or Remote Slave	4
Maximum Distance Between Modules	15 feet
Status Indicators	PWR - Green LED is illuminated when power is on. RUN - Green LED is illuminated when not in reset. Reset occurs during power-up, a watchdog timeout, or if an expansion cable is disconnected. ERR - Red LED is illuminated when a USB fault is detected. LINK - Green LED is illuminated when a USB link is established.
<b>I/O Capabilities</b>	
Max. Number of I/O per CPU System	116,160 (CPU Base with 4 Expansion Bases plus 32 Remote Bases with 4 Expansion Bases per Remote, with 11 64-point I/O modules per base)
Max. Number of Expansion I/O Bases	132 (4 per CPU, 4 per Remote Base)
Module Setup	Automatic hardware verification
Expansion I/O Addressing	Automatic via Tag Names
USB Cables	6 foot: P3-EX-CBL6 (USB Type A to USB Type B)

Document Name	Edition/Revision	Date
P3-EX-M	1st Ed.	10/26/2009

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## P3-EX Expansion Module

The P3-EX high-performance expansion module provides local I/O expansion to a CPU or Remote I/O for the Productivity3000 Programmable Automation Controller system. Includes 6-foot USB expansion cable.

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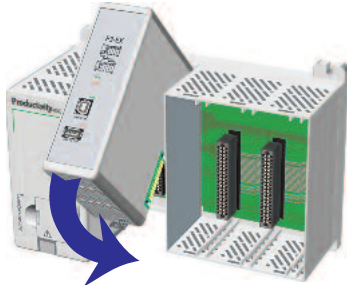


Warranty: Thirty-day money-back guarantee. Two-year limited replacement. (See [www.productivitypac.com](http://www.productivitypac.com) for details).

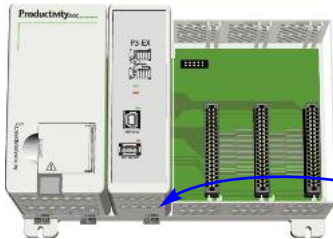
# Installation Procedure



**Step One:**  
Locate the two sockets next to the Power Supply.



**Step Two:**  
Insert P3-EX at a 45° angle into the notch located at the top of the base and rotate down until seated.



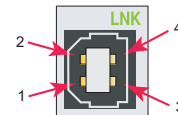
**Step Three:**  
Snap retaining tab into the locked position.

**WARNING:** Explosion hazard – Do not connect or disconnect connectors or operate switches while circuit is live unless the area is known to be non-hazardous. Do not hot swap.

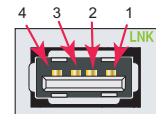
## Exp I/O Port Specifications

Port Name	EXP I/O IN	EXP I/O OUT
Description	Proprietary USB 2.0 Slave input for connection with a CPU, Remote Slave, or preceding P3-EX expansion base.	Proprietary USB 2.0 Master output for connection with the next P3-EX expansion base. Includes built-in surge protection.
Transfer Rate	480 Mbps	
Port Status LED	Green LED is illuminated when LINK is established to connected device	
Cables	USB Type A to USB Type B:* 6 ft. cable part # P3-EX-CBL6.	

\*The P3-EX Expansion Module includes the 6-foot USB cable P3-EX-CBL6.



Mating face of USB type B female

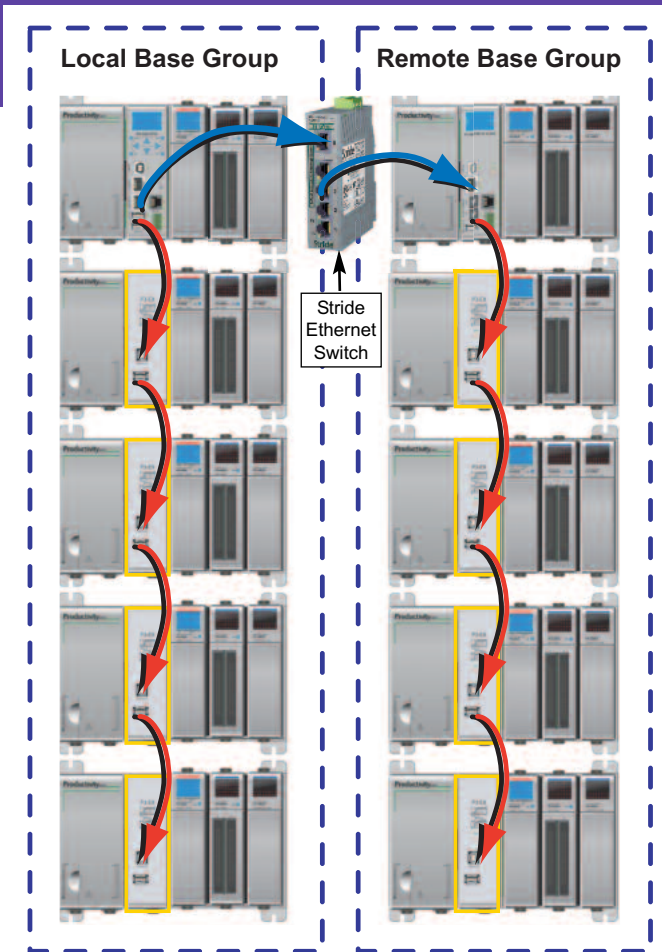


Mating face of USB type A female

Pin #	Signal
1	Reset
2	- Data
3	+ Data
4	GND

# Typical Expansion Configuration

The PAC system can have up to 132 expansion bases by adding 4 expansion bases at the CPU base and 4 expansion bases per Remote I/O Slave (up to 32 slaves). Each expansion base uses the P3-EX expansion module for USB connectivity. Use a P3-EX-CBL6 which is included with the P3-EX.



**WARNING:** To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

***Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.***

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call Technical Support at 770-844-4200.

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## 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)
Heat Dissipation	1W
Enclosure Type	Open Equipment
Agency Approvals	UL508 file E157382, Canada & USA UL1604 file E200031, Canada & USA CE (EN61131-2*) This equipment is suitable for use in Class 1, Division 2, Groups A, B, C and D or non-hazardous locations only.
Module Location	Controller slot in a local expansion base in a Productivity3000 System
EU Directive	See the "EU Directive" topic in the Productivity3000 Help File. Information can also be obtained at: <a href="http://www.productivitypac.com">www.productivitypac.com</a>
Weight	194g (6.24 oz)

\*Meets EMC and Safety requirements. See the D.O.C. for details.

## IMPORTANT!



### Hot-Swapping Information

**Note: This device cannot be Hot Swapped.**

## Expansion Module Status Indicators

PWR	Green LED is illuminated when power is on.
RUN	Green LED is illuminated when not in reset. Reset occurs during power-up, a watchdog timeout, or an expansion cable is disconnected.
ERR	Red LED is illuminated when a USB fault is detected.
LNK	Green LED is illuminated when a USB link is established.

**WARNING:** Explosion hazard – Substitution of components may impair suitability for Class I, Division 2.