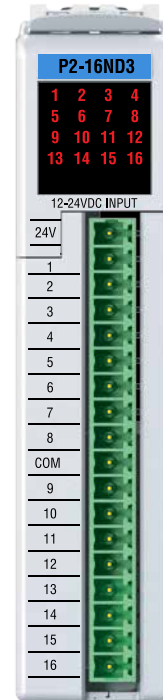


Input Specifications

Inputs per Module	16 (Any input can be wired to sink or source current)
External 24VDC Power Required	24VDC (-20% / +25%), 100mA
Input Voltage Range	12-24VDC ($\pm 10\%$) \leq External Voltage
Peak Voltage Range	26.4VDC
Input Current (typical)	2.5mA @ 12VDC 5mA @ 24VDC
Maximum Input Current @ Temp	6mA @ 60°C (26.4VDC)
Input Impedance	4.7k Ω @ 24VDC
ON Voltage Level	\leq 4VDC sourcing \geq 12.5VDC sinking *See external power requirements for 12VDC inputs below.
OFF Voltage Level	$>$ 6VDC sourcing $<$ 8.5VDC sinking
Minimum ON Current	2mA
Maximum OFF Current	1.5mA
OFF to ON Response	Max. 2ms Typical 1ms
ON to OFF Response	Max. 2ms Typical 1ms
Status Indicators	Logic Side (16 Points)
Commons	1 Isolated (16 points/common)

*External Supply Voltage On Voltage Level

19.2 VDC	>9.0 VDC
24.0 VDC	>11.3 VDC
26.4 VDC	>12.5 VDC



P2-16ND3 Discrete Input

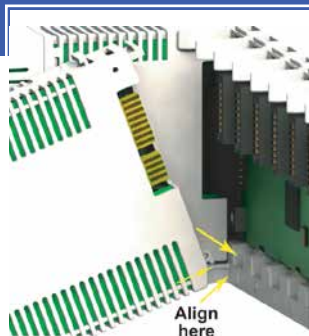
The P2-16ND3 DC Input Module provides sixteen 12-24 VDC sinking/sourcing inputs for use with the Productivity2000 System.

Input Specifications	1
Module Installation Procedure	2
Wiring Options	2
Wiring Diagram and Schematic	3
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Warning	4
Removable Terminal Block Specifications	4
General Specifications	4

Terminal Block sold separately, (see wiring options on page 3).

Warranty: Thirty-day money-back guarantee. Two-year limited replacement.
(See www.productivity2000.com for details).

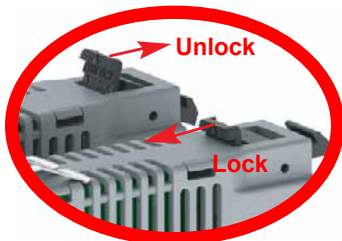
Module Installation



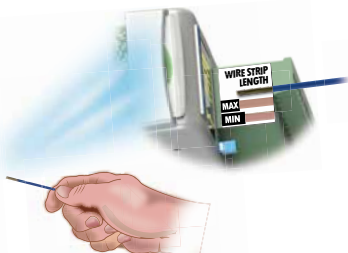
WARNING: Do not apply field power until the following steps are completed. See hot-swapping procedure for exceptions.

Step One: Align module catch with base slot and rotate module into connector.

Step Two: Pull top locking tab toward module face. Click indicates lock is engaged.



Step Three: Attach field wiring using optional terminal block or ZIPLink wiring system.



QR Code



Use any QR Code reader application to display the module's product insert.

Caution: If possible, remove field power prior to proceeding. If not, then **EXTREME** care **MUST** be taken to prevent damage to the module, or even personal injury due to a short circuit from the live terminal block.

Important Hot-Swap Information

The Productivity 2000 supports hot-swap! Individual modules can be taken offline, removed, and replaced while the rest of the system continues controlling your process. Before attempting to use the hot-swap feature, be sure to read the hot-swap topic in the programming software's help file or our online documentation at AutomationDirect.com for details on how to plan your installation for use of this powerful feature.

Wiring Options

1 ZIPLink Connection System

Cable + ZIPLink Module = Complete System
 ZIPLink pre-wired terminal block cables



0.5m (1.6FT) cable
 1.0m (3.3FT) cable
 2.0m (6.6FT) cable

ZL-P2-CBL18
 ZL-P2-CBL18-1
 ZL-P2-CBL18-2



ZIPLink Modules

Feed through

ZL-RTB20



2 Terminal Block with pigtail cable

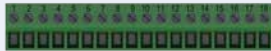


1.0m (3.3FT) cable
 2.0m (6.6FT) cable

ZL-P2-CBL18-1P
 ZL-P2-CBL18-2P



3 Screw Terminal Block only



P2-RTB
 (Quantity 1)

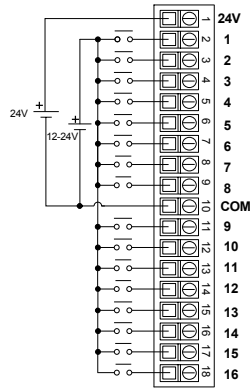
4 Spring Clamp Terminal Block only



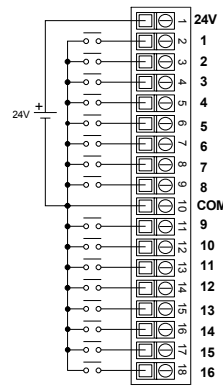
P2-RTB-1
 (Quantity 1)

Wiring Diagram and Schematic

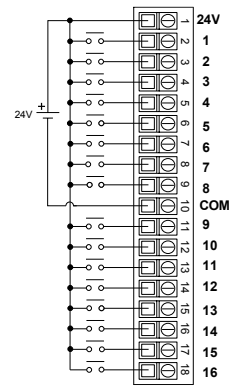
Dual Supply Sinking



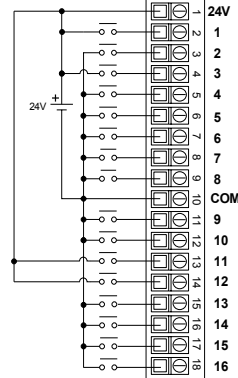
Single Supply Sourcing



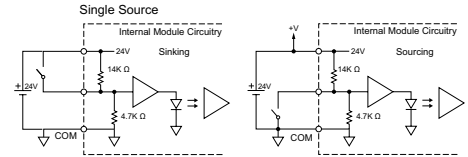
Single Supply Sinking



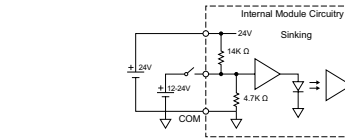
Single Supply Sinking and Sourcing



Equivalent Input Circuit



Dual Source



1, 3, 11, & 12 Sinking Inputs
 Remaining are Sourcing Inputs

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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Removable Terminal Block Specifications

Part Number	P2-RTB	P2-RTB-1
Number of Positions	18 Screw Terminals	18 Spring Clamp Terminals
Wire Range	30-16 AWG (0.051 - 1.31 mm ²) Solid / Stranded Conductor 3/64 in. (1.2 mm) Insulation Maximum 1/4 in. (6-7 mm) Strip Length	28-16 AWG (0.081 - 1.31 mm ²) Solid / Stranded Conductor 3/64 in. (1.2 mm) Insulation Maximum 19/64 in. (7-8 mm) Strip Length
Conductors	"USE COPPER CONDUCTORS, 75°C" or Equivalent.	
Screw Driver Width	1/8 inch (3.8 mm) Maximum	
Screw Size	M2	N/A
Screw Torque	2.5 lb in (0.28 N m)	N/A

General Specifications

Surrounding Air 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)
Field to Logic Side Isolation	1800VAC applied for 1 second
Insulation Resistance	>10MΩ @ 500VDC
Heat Dissipation	3500mW
Enclosure Type	Open Equipment
Agency Approvals	UL508 file E139594, Canada & USA CE (EN61131-2*)
Module Keying to Backplane	Electronic
Module Location	Any I/O slot in a Productivity2000 System.
Field Wiring	Use ZIPLink Wiring System or removable terminal block (not included). See "Wiring Options" on page 3.
EU Directive	See the "EU Directive" topic in the Productivity Suite Help File. Information can also be obtained at: www.productivity2000.com
Weight	100g (3.5 oz)

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

Document Name	Edition/Revision	Date
P2-16ND3-DS	1st Ed, Rev A	11/23/2015

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