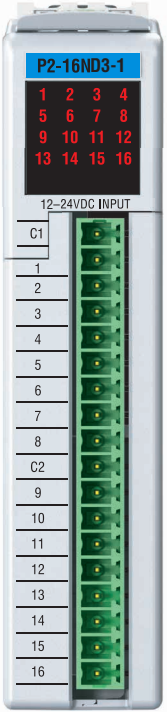
Input Specifications

Inputs per Module	16 (Sink/Source)
Operating Voltage Range	12–24 VDC
Input Voltage Range	10.2–26.4 VDC
Peak Voltage Range	30VDC
Input Current (typical)	3.5 mA @ 12VDC 7.5 mA @ 24VDC
Maximum Input Current	10mA @ 26.4 VDC
ON Voltage Level	> 9.5 VDC
OFF Voltage Level	< 7VDC
Minimum ON Current	2mA
Maximum OFF Current	1.6 mA
OFF to ON Response	2ms Maximum, 1ms Typical
ON to OFF Response	2ms Maximum, 1ms Typical
Status Indicators	Logic Side (16 Points)
Commons per Module	2 (8 points/common) Isolated



P2-16ND3-1 DC Input

The P2-16ND3-1 DC Input Module provides sixteen 12–24 VDC sink/source inputs for use with the Productivity2000 system.

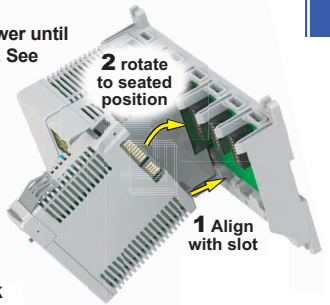
Document Name	Edition/Revision	Date
P2-16ND3-1-DS	2nd Edition	9/6/2019

Terminal Block sold separately, (see wiring options on page 2).

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

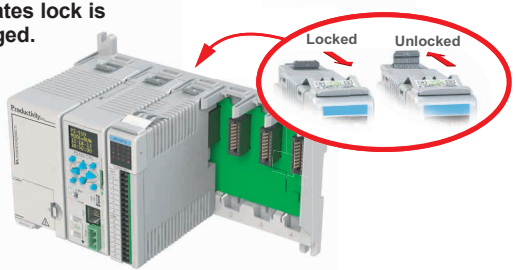
Module Installation

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

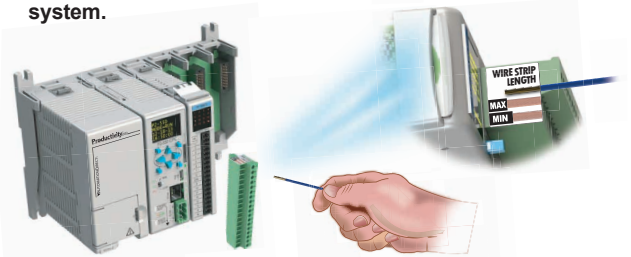


Step One: Align module catch with base slot and rotate module into connector.

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

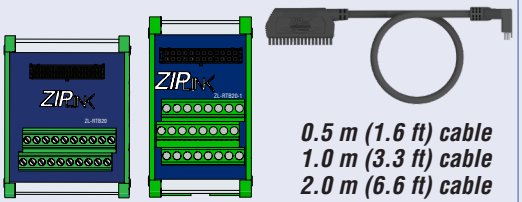


Step Three: Attach field wiring using the removable terminal block or *ZIP*Link wiring system.



Wiring Options

1 ***ZIP*Link Feed Through *Modules and Cables*[1]**

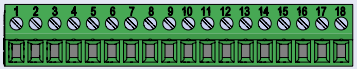


	ZL-RTB20
	ZL-RTB20-1
0.5 m (1.6 ft) cable	ZL-P2-CBL18
1.0 m (3.3 ft) cable	ZL-P2-CBL18-1
2.0 m (6.6 ft) cable	ZL-P2-CBL18-2

2 ***Terminal Block with pigtail cable***

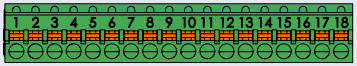
1.0 m (3.3 ft) cable	ZL-P2-CBL18-1P
2.0 m (6.6 ft) cable	ZL-P2-CBL18-2P

3 ***Screw Terminal Block only***



P2-RTB (Quantity 1)

4 ***Spring Clamp Terminal Block only***



P2-RTB-1 (Quantity 1)

5 ***Accessories*[2]**

ZL-RTB-COM

TW-SD-SL-1

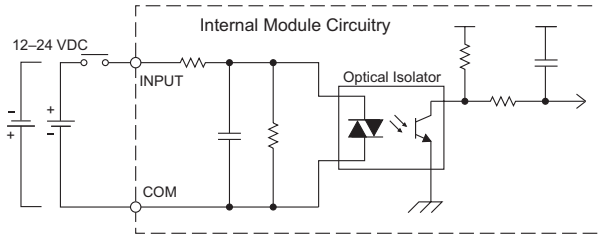
TW-SD-MSL-1

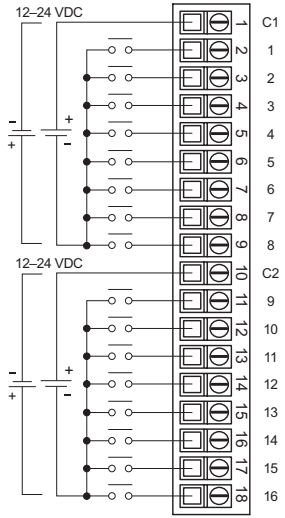
1.Cable + ***ZIP***Link Module = Complete System

2. ZL-RTB-COM provides a common connection point for power or ground

Wiring Diagram and Schematic

Equivalent Input Circuit





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.

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.

This publication is based on information that was available at the time it was printed. At AutomationDirect.com® we constantly strive to improve our products and services, so we reserve the right to make changes to the products and/or publications at any time without notice and without any obligation. This publication may also discuss features that may not be available in certain revisions of the product.

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	0.1 inch (2.5 mm) Maximum*	
Screw Size	M2	N/A
Screw Torque	2.5 lb·in (0.28 N·m)	N/A

*Recommended Screwdriver TW-SD-MSL-1

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)
Field to Logic Side Isolation	1800VAC applied for 1 second
Insulation Resistance	>10MΩ @ 500VDC
Heat Dissipation	400mW
Enclosure Type	Open Equipment
Module Keying to Backplane	Electronic
Module Location	Any I/O slot in a Productivity2000 System.
Field Wiring	Use ***ZIP***Link Wiring System or removable terminal block (not included). See "Wiring Options" on page 2.
EU Directive	See the "EU Directive" topic in the Productivity 2000 Help File. Information can also be obtained at: www.productivity2000.com
Connector Type (not included)	18-position removable terminal block
Weight	90g (3.2 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 D.O.C. for details.