# Input Specifications

| | |
|---|---|
| Inputs per Module | 8 (Sink/Source) |
| Voltage Rating | 12–24 VDC |
| Input Voltage Range | 10.2–26.4 VDC |
| Peak Voltage Range | 30VDC |
| Input Current (typical) | 3.5 mA @ 12VDC<br>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 (8 Points) |
| Commons | 2 (4 points/common) Isolated |

AUTOMATIONDIRECT.com

Productivity 2000



P2-08ND3-1

| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |

12–24VDC INPUT

C1
1
2
3
4

C2
5
6
7
8
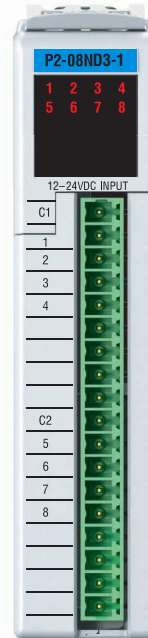
# P2-08ND3-1 DC Input

**The P2-08ND3-1 DC Input Module provides eight 12–24 VDC sink/source inputs for use with the Productivity2000 system.**

| Document Name | Edition/Revision | Date |
|---|---|---|
| P2-08ND3-1-DS | 2nd Edition | 9/4/2019 |

**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.

**2** rotate to seated position

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

**1** Align with slot
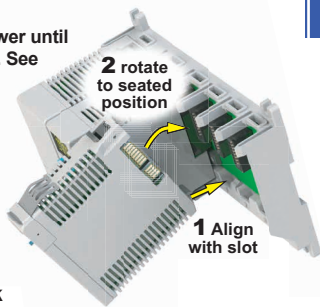
**Step Two:** Pull top locking tab toward module face. Click indicates lock is engaged.

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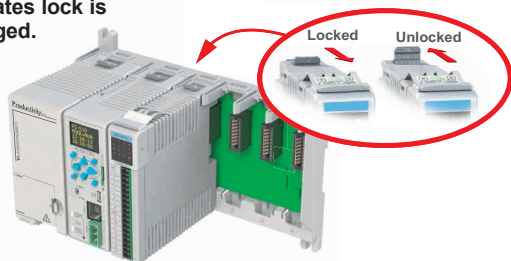
**Step Three:** Attach field wiring using the removable terminal block or *ZIP*Link wiring system.

WIRE STRIP LENGTH
MAX
MIN

# Wiring Options

| | | |
|---|---|---|
| **1** *ZIP*Link Feed Through *Modules and Cables[1]* | | **ZIP**LINK AUTOMATIONDIRECT® |
| | | ZL-RTB20 ZL-RTB20-1 |
| | *0.5 m (1.6 ft) cable* *1.0 m (3.3 ft) cable* *2.0 m (6.6 ft) cable* | ZL-P2-CBL18 ZL-P2-CBL18-1 ZL-P2-CBL18-2 |
| **2** *Terminal Block with pigtail cable* | *1.0 m (3.3 ft) cable* *2.0 m (6.6 ft) 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) |
| **5** *Accessories[2]* | | ZL-RTB-COM TW-SD-SL-1 TW-SD-MSL-1 |
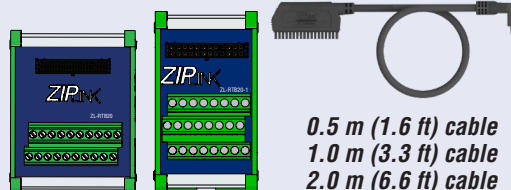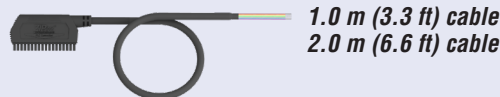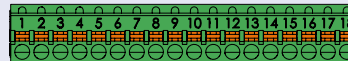
1. Cable + *ZIP*Link Module = Complete System
2. ZL-RTB-COM provides a common connection point for power or ground

## Equivalent Input Circuit
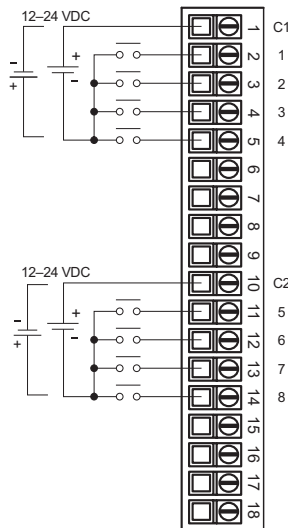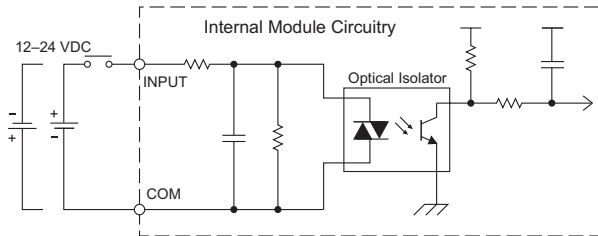


## Use any QR Code reader application to display the module's product insert.

**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 Productivity2000 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 | 325mW |
| 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 Productivity2000 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.