

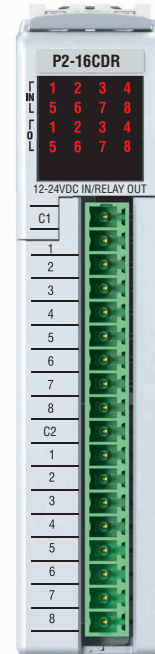
Input Specifications

Inputs per Module	8 (sink/source)
Operating Voltage Range	24 VAC/VDC
Input Voltage Range	20.4–27.6 VAC/VDC, Max 27.6 VAC, 30 VDC
Peak Voltage Range	27.6 VAC, 30 VDC
AC Frequency	47–63 Hz
Input Current	8 mA @ 24 VAC/VDC ¹
Maximum Input Current	10 mA @ 27.6 VAC, 30 VDC
Input Impedance	3K
ON Voltage Level	> 9.5 VDC, >8 VAC
OFF Voltage Level	< 4.5 VDC, <4 VAC
Minimum ON Current	2.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	AC: 10 ms DC: 6 ms
ON to OFF Response	AC: 20 ms DC: 10 ms
Status Indicators	Logic Side (8 points)
Commons	1 (8 points/common)

Output Specifications

Outputs per Module	8
Output Type	Relays Form A (SPST)
Rated Voltage	30 VDC, 100–240 VAC
Operating Voltage Range	5–30 VDC, 5–264 VAC
Maximum Output Current	2A per point, 8A per common ¹ 1A per point, 8A per common 1A per point, 4A per common for both if used with ZPLink cable
Minimum Load Current	5 mA @ 5 VDC
Maximum Inrush Current	5A for 10 ms
OFF to ON, ON to OFF Response	≤10 ms
Status Indicators	Logic Side (8 points)
Commons	1 (8 points/common)
Protection Circuit	Not built into module - Install protection elements such as external fuse - 8A

1. See P2000 User Manual for Temperature Derating Chart for Inputs and Outputs.



P2-16CDR Discrete Input / Relay Output

The P2-16CDR Discrete Input / Relay Output Module provides eight 24 VAC/VDC inputs eight relay outputs for use with the Productivity2000 System.

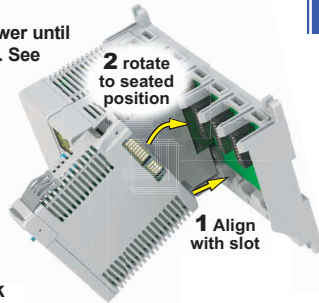
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Terminal Block sold separately, (see wiring options on page 3).

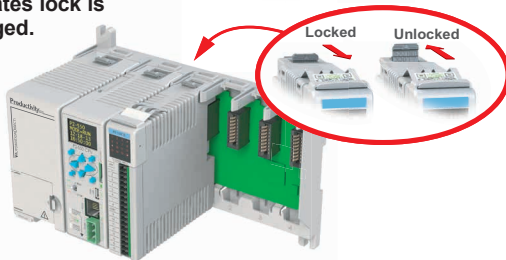
Module Installation

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

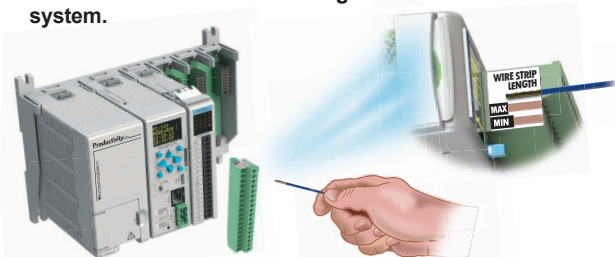
Step One: Align module catch with base slot and rotate module into connector.



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 ZIPLink wiring system.



QR Code



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

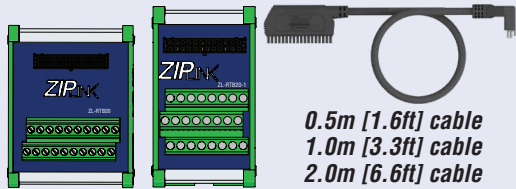
Caution: If possible, remove field power prior to proceeding. If not, then **EXTREME** care **MUST** be taken to prevent damage to the module, or even personal injury due to a short circuit from the live terminal block.

Important Hot-Swap Information

The 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.

Wiring Options

1 ZIPLink Feed Through Modules and Cables¹



ZIPLINK
AUTOMATIONDIRECT

ZL-RTB20
ZL-RTB20-1

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

0.5m [1.6ft] cable
1.0m [3.3ft] cable
2.0m [6.6ft] cable

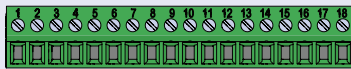
2 Terminal Block with pigtail cable



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

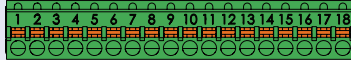
1.0m [3.3ft] cable
2.0m [6.6ft] cable

3 Screw Terminal Block only



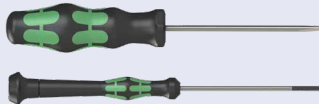
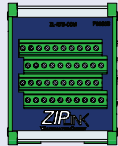
P2-RTB
(Quantity 1)

4 Spring Clamp Terminal Block only



P2-RTB-1
(Quantity 1)

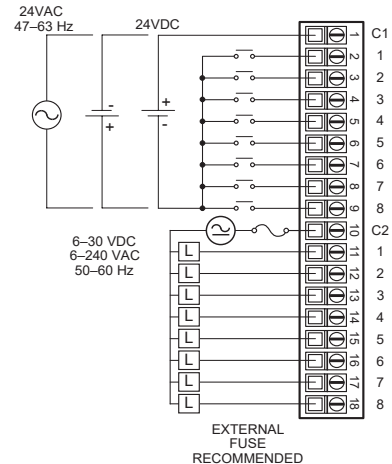
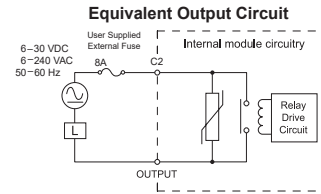
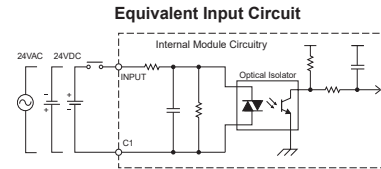
5 Accessories²



ZL-RTB-COM
TW-SD-SL-1
TW-SD-MSL-1

1. Cable + ZIPLink Module = Complete System
2. ZL-RTB-COM provides a common connection point for power or ground

Wiring Diagram and Schematic



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 [0.051–1.31mm ²] Solid / Stranded Conductor 3/64in [1.2mm] Insulation Maximum 1/4in [6–7mm] Strip Length	28–16 AWG [0.081–1.31mm ²] Solid / Stranded Conductor 3/64in [1.2mm] Insulation Maximum 19/64in [7–8mm] Strip Length
Conductors	*USE COPPER CONDUCTORS, 75°C* or Equivalent.	
Screw Driver Width	0.1 inch [2.5mm] Maximum*	
Screw Size	M2	N/A
Screw Torque	2.5 lb-in (0.28 N-m)	N/A

*Recommend Screw Driver 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)
Altitude	2,000 meters max
Pollution Degree	2
Environmental Air	No corrosive gases permitted
Vibration	IEC60068-2-6 (Test Fc)
Shock	IEC60068-2-27 (Test Ea)
Overvoltage Category	II
Field to Logic Side Isolation	Relays to Backplane 3k VAC for 5s or 1.1k VAC for 1 min Discrete Input to Backplane 1.25k VAC for 5s or 300 VAC for 1 Min
Field to Field Isolation	Discrete Input 8 to Relay Output C2 1.5k VAC for 5s or 550 VAC for 1 Min
Insulation Resistance	>10 MΩ @ 500 VDC
Heat Dissipation	3500 mW
Enclosure Type	Open Equipment
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 (sold separately). See "Wiring Options" on page 3.
Connector Type (sold separately)	18 Position Removable Terminal Block
Weight	119g [4.2 oz]
Agency Approvals	UL 61010-1 and UL 61010-2-201 File E139594, Canada and USA ¹ CE (EN 61131-2 EMC, EN 61010-1 and EN 61010-2-201 Safety)*

*See CE Declaration of Conformity for details.

1. See P2000 User manual for Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (section 6.5 and 6.7)

Document Name	Edition/Revision	Date
P2-16CDR-DS	1st Edition	2/19/2026

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