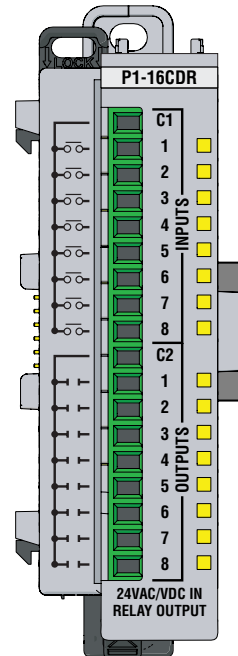


Input Specifications	
<b>Inputs per Module</b>	8 (sink/source)
<b>Rated Voltage</b>	24VAC/VDC
<b>Operating Voltage Range</b>	20.4–27.6 VAC/VDC, Max 27.6 VAC, 30VDC
<b>AC Frequency</b>	47–63 Hz
<b>Input Current</b>	8mA @ 24VAC/VDC
<b>Maximum Input Current</b>	10mA @ 27.6 VAC, 30VDC
<b>Minimum ON Current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

Output Specifications	
<b>Outputs per Module</b>	8
<b>Rated Voltage</b>	6–30 VDC 6–120 VAC
<b>Operating Voltage Range</b>	5–30 VDC 5–144 VAC
<b>Output Type</b>	Relay, Form A (SPST)
<b>AC Frequency</b>	47–63 Hz
<b>Maximum Output Current</b>	1A / point, 8A / common for both AC and DC 1A / point, 4A / common for both if used with ZIPLink Cable
<b>Minimum Load Current</b>	5mA @ 5VDC
<b>Maximum Inrush Current</b>	5A for 10ms
<b>OFF to ON, ON to OFF Response</b>	≤ 10 ms
<b>Status Indicators</b>	Logic Side (8 points)
<b>Commons</b>	1 (8 points/common)
<b>Maximum Applicable Fuse</b>	8A



## P1-16CDR Discrete Input / Relay Output

The P1-16CDR Discrete Input / Relay Output Module provides eight 24VAC/VDC inputs and eight relay outputs for use with the Productivity1000 system.

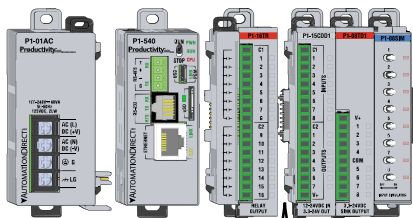
Output Specifications .....	1
Module Installation .....	2
QR Code .....	2
Wiring Options .....	3
Schematic & Wiring Diagram .....	3
General Specifications .....	4
Terminal Block Specifications .....	4
Warning .....	4

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

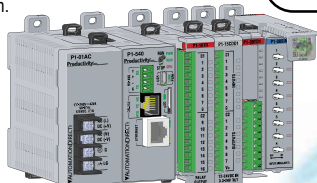
# Module Installation

**WARNING:** Do not add or remove modules with field power applied.

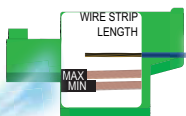
**Step One:** With latch in "locked" position, align connectors on the side of each module and stack together by pressing together. Click indicates lock is engaged.



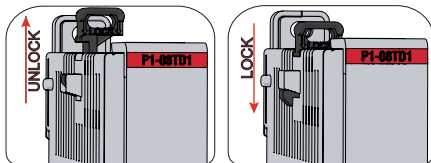
**Step Two:** Attach field wiring using the removable terminal block or ZIPLink wiring system.



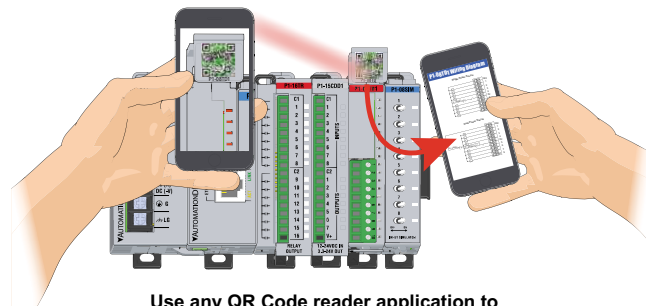
Check all latches are secure after modules are connected.



**Step Three:** To unstack modules, pull locking latch up into the unlocked position and then pull modules apart.



# QR Code

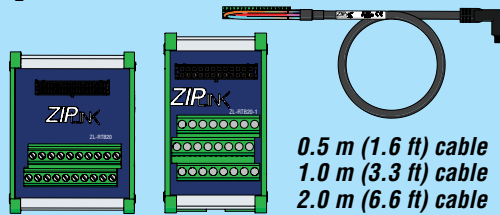


Use any QR Code reader application to display the module's product insert.

# P1-16CDR Schematic and Wiring Diagram

## Wiring Options

### 1 ZIPLink Feed Through Modules and Cables<sup>1</sup>

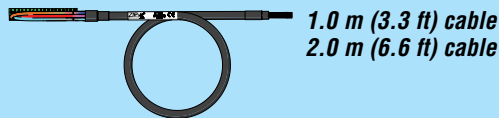


**ZIPLINK**  
AUTOMATIONDIRECT

ZL-RTB20  
ZL-RTB20-1

ZL-P1-CBL18  
ZL-P1-CBL18-1  
ZL-P1-CBL18-2

### 2 Terminal Block with pigtail cable



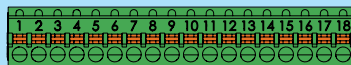
ZL-P1-CBL18-1P  
ZL-P1-CBL18-2P

### 3 Screw Terminal Block only



P2-RTB  
(Quantity 1)

### 4 Spring Clamp Terminal Block only



P2-RTB-1  
(Quantity 1)

### 5 Accessories<sup>2</sup>



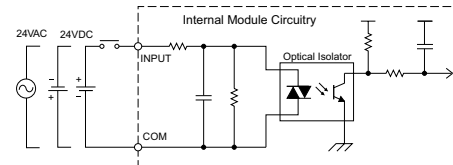
ZL-RTB-COM

TW-SD-SL-1

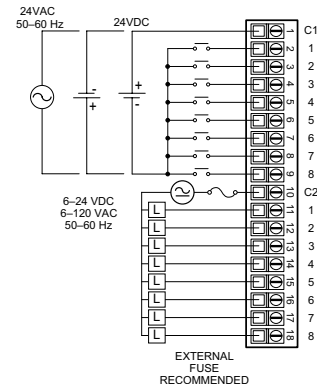
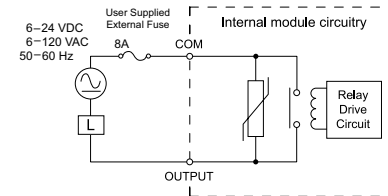
TW-SD-MSL-1

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

## Equivalent Input Circuit



## Equivalent Output Circuit



**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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### Terminal Block Specifications

Part Number	P2-RTB	P2-RTB-1
<b>Positions</b>	18 Screw Terminals	18 Spring Clamp Terminals
<b>Wire Range</b>	30–16 AWG (0.051–1.31 mm²) Solid / Stranded Conductor 3/64 in (1.2 mm) Insulation Max. 1/4 in (6–7 mm) Strip Length	28–16 AWG (0.081–1.31 mm²) Solid / Stranded Conductor 3/64 in (1.2 mm) Insulation Max. 19/64 in (7–8 mm) Strip Length
<b>Conductors</b>	*USE COPPER CONDUCTORS, 75°C* or equivalent.	
<b>Screw Driver</b>	0.1 in (2.5 mm) Maximum*	
<b>Screw Size</b>	M2	N/A
<b>Screw Torque</b>	2.5 lb-in (0.28 N-m)	N/A

\*Recommended Screw Driver TW-SD-MSL-1

### General Specifications

<b>Operating Temperature</b>	0° to 60°C (32° to 140°F)
<b>Storage Temperature</b>	-20° to 70°C (-4° to 158°F)
<b>Humidity</b>	5 to 95% (non-condensing)
<b>Environmental Air</b>	No corrosive gases permitted
<b>Vibration</b>	IEC60068-2-6 (Test Fc)
<b>Shock</b>	IEC60068-2-27 (Test Ea)
<b>Field to Logic Side Isolation</b>	1800VAC applied for 1 second
<b>Insulation Resistance</b>	>10MΩ @ 500VDC
<b>Heat Dissipation</b>	2730mW
<b>Enclosure Type</b>	Open Equipment
<b>Module Location</b>	Any I/O position in a Productivity1000 System.
<b>Field Wiring</b>	Use <b>ZIP</b> Link Wiring System or removable terminal block (sold separately). See "Wiring Options" on page 3.
<b>EU Directive</b>	See the "EU Directive" topic in the Productivity Suite Help File. Information can also be obtained at: <a href="http://www.productivity1000.com">www.productivity1000.com</a>
<b>Connector Type (sold separately)</b>	18-Position Removable Terminal Block
<b>Weight</b>	88g (3.2 oz)
<b>Agency Approvals</b>	UL 61010-1 and UL 61010-2-201 File E139594, Canada & USA CE (EN 61131-2 EMC, EN 61010-1 and EN 61010-2-201 Safety)*

\*See CE Declaration of Conformance for details.

Document Name	Edition/Revision	Date
P1-16CDR-DS	4th Edition	7/31/2024

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