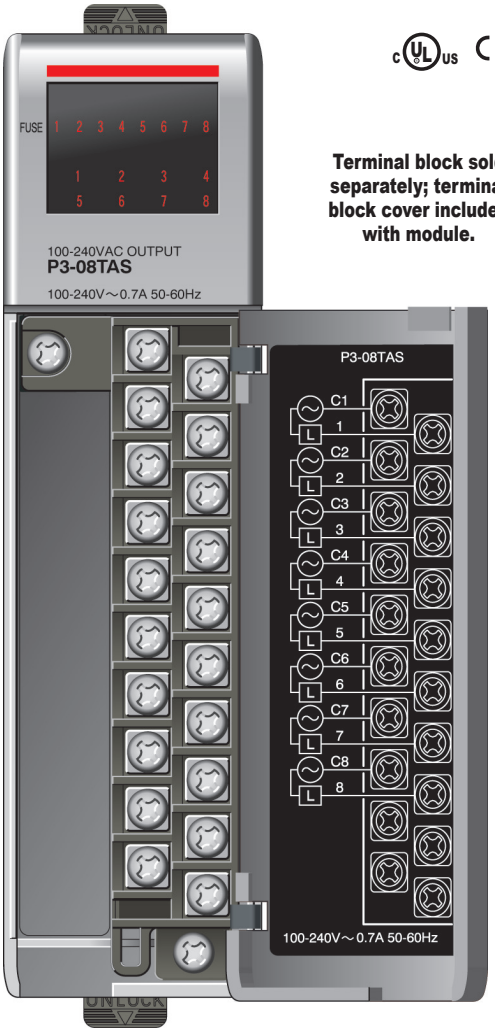
# AC Output Modules

For the latest prices, please check AutomationDirect.com.

**Please note: $US prices shown**
**For current $AUD visit www.directautomation.com.au**

## P3-08TAS $177.00

***Isolated Output***
The P3-08TAS AC Output Module provides eight
100-240 VAC isolated outputs with eight fused commons.




**Terminal block sold separately; terminal block cover included with module.**

We recommend using prewired ***ZIP***Link cables and connection modules. See Wiring Solutions.

Terminal block cover included. If you wish to hand-wire your module, a removable terminal block is sold separately. Order part number P3-RTB.

***WARNING:*** *EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.*

| Output Specifications | | |
|---|---|---|
| ***Outputs per Module*** | | 8 |
| ***Operating Voltage Range (Tolerance)*** | (CE) | 100–240 VAC (-15% / +10%) |
| | (UL) | 100–240 VAC (-20% / +20%) |
| ***Maximum Output Current @ Temp*** | | 1A / point @ 40°C<br>0.7 A / point @ 60°C |
| ***AC Frequency*** | | 47–63 Hz |
| ***Minimum Load (TYPE 2)*** | | 10mA |
| ***Maximum Leakage Current (TYPE 2)*** | | 4mA @ 264VDC |
| ***On Voltage Drop*** | | 1.5 VAC @ > 50mA<br>4.0 VAC @ < 50mA |
| ***Maximum Inrush Current*** | | 10A for 10ms |
| ***OFF to ON Response*** | | 1ms + 1/2 cycle |
| ***ON to OFF Response*** | | 1ms + 1/2 cycle |
| ***Status Indicators*** | | Logic Side (8 points) |
| ***Error Status Indicator*** | | Blown Fuse (one for each point) |
| ***Terminal Type (not included)*** | | 20-position removable terminal block |
| ***Commons*** | | 8 Isolated (1 point / common) |
| ***Fuses*** | | 3.15 A user replaceable fuse per common<br>For replacement, order P3-FUSE-1.<br>(Qty. 5/pkg.) |

| General Specifications | |
|---|---|
| ***Operating Temperature*** | 0°C– 60°C (32°F–140°F), |
| ***Storage Temperature*** | -20ºC–70ºC (-4ºF–158ºF) |
| ***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*** | 1500VAC applied for 1 minute |
| ***Insulation Resistance*** | >10MΩ @ 500VDC |
| ***Heat Dissipation*** | 12.46 W |
| ***Enclosure Type*** | Open equipment |
| ***Module Keying to Backplane*** | Electronic |
| ***Module Location*** | Any I/O slot in any local, expansion, or remote base in a Productivity3000 system. |
| ***Field Wiring*** | Removable terminal block (not included). Use ***ZIP***Link wiring system or optional terminal block. See Wiring Solutions. |
| ***Weight*** | 125g (4.41 oz) |
| ***Agency Approvals*** | UL508 file E157382, Canada & USA<br>UL1604 file E200031, Canada & USA<br>CE (EN61131-2*)<br>This equipment is suitable for use in Class 1, Division 2, Groups A, B, C and D or non-hazardous locations only. |

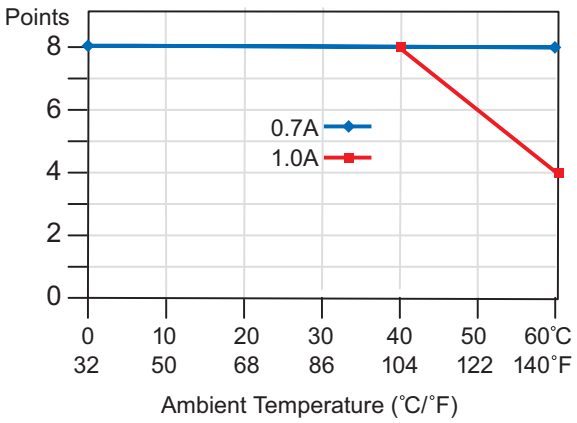
***Meets EMC and Safety requirements. See the Declaration of Conformity for details.**

| Removable Terminal Block Specifications | |
|---|---|
| ***Description*** | Part No. P3-RTB; 20 screw terminals |
| ***Wire Range*** | 22–14 AWG (0.324 to 2.08 sq. mm)<br>Solid / stranded conductor<br>3/64 in. (1.2 mm) insulation maximum<br>USE COPPER CONDUCTORS , 60°C or equivalent. |
| ***Screw Driver Width*** | 1/4 inch (6.5 mm) maximum |
| ***Screw Size*** | M3 size |
| ***Screw Torque*** | Field terminals - 7–9 in·lb (0.882–1.02 N·m)<br>Self-jacking screws - 2.7–3.6 in·lb (0.3–0.4 N·m).<br>Do not overtighten screws when installing terminal block. |

# AC Output Modules

## P3-08TAS (cont'd)

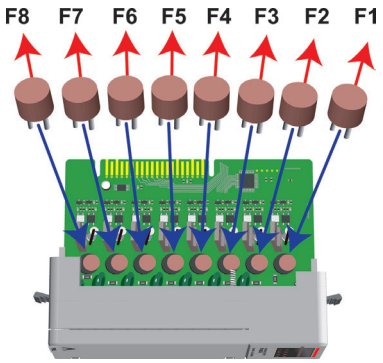
Derating Chart



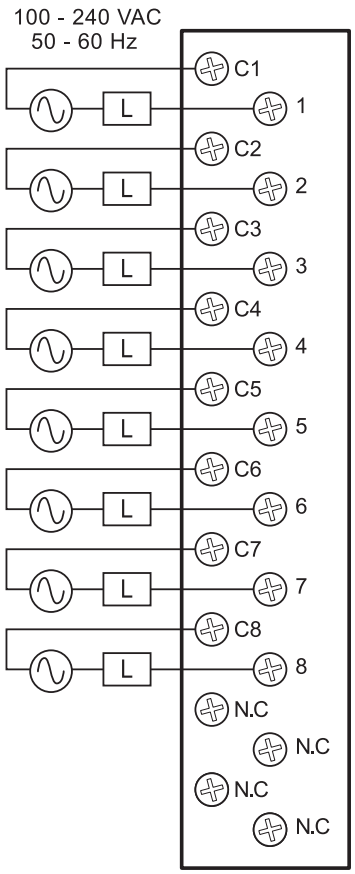

| | | Current | |
|---|---|---|---|
| | | 1.0A | 0.7A |
| Temp | 0 | 8 | 8 |
| | 40 | 8 | 8 |
| | 60 | 4 | 8 |

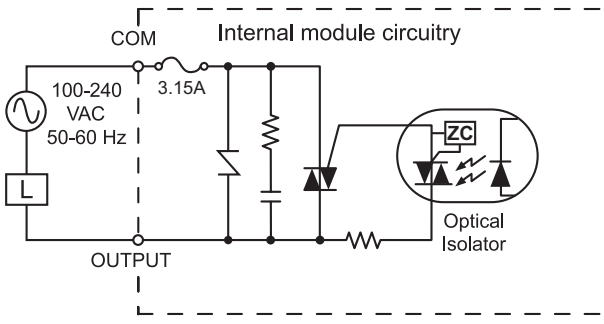
### Replaceable Fuses

**Order Part Number P3-FUSE-1**
**(Qty. 5 per pkg.) One spare included with module.**




***Wiring Diagrams***



# Wiring Solutions

## Wiring Solutions using the *ZIP*Link wiring system

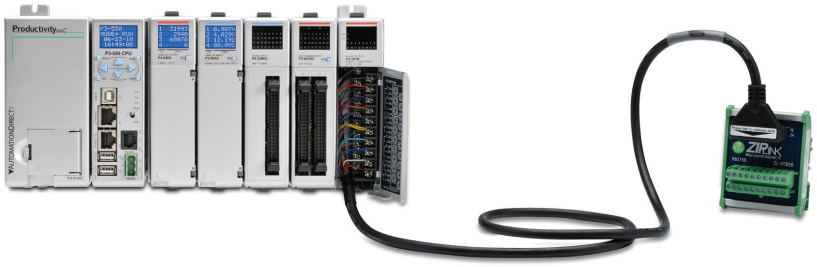
***ZIP***Links eliminate the normally tedious process of wiring between devices by utilizing prewired cables and DIN rail mount connector modules. It's as simple as plugging in a cable connector at either end or terminating wires at only one end. Prewired cables keep installation clean and efficient, using half the space at a fraction of the cost of standard terminal blocks. There are several wiring solutions available when using the ***ZIP***Link System ranging from PLC I/O-to-***ZIP***Link Connector Modules that are ready for field termination, options for connecting to third party devices, GS, DuraPulse and SureServo Drives, and specialty relay, transorb and communications modules. Pre-printed I/O-specific adhesive label strips for quick marking of ***ZIP***Link modules are provided with ***ZIP***Link cables. See the following solutions to help determine the best ***ZIP***Link system for your application.

***Solution 1: Productivity Series I/O Modules to ZIPLink Connector Modules***

When looking for quick and easy I/O-to-field termination, a ***ZIP***Link connector module used in conjunction with a prewired ***ZIP***Link cable, consisting of an I/O terminal block at one end and a multi-pin connector at the other end, is the best solution.

Using the PLC I/O Modules to ***ZIP***Link Connector Modules selector tables located in this section,

1. Locate your I/O module/PLC.
2. Select a ***ZIP***Link Module.
3. Select a corresponding ***ZIP***Link Cable.

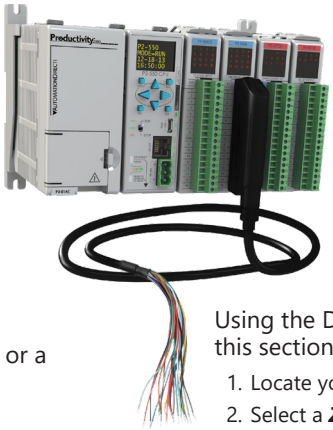


***Solution 2: Productivity Series I/O Modules to ZIPLink Connector Modules***

When wanting to connect I/O to another device within close proximity of the I/O modules, no extra terminal blocks are necessary when using the ***ZIP***Link Pigtail Cables. ***ZIP***Link Pigtail Cables are prewired to an I/O terminal block with color-coded pigtail with soldered-tip wires on the other end.

Using the I/O Modules to 3rd Party Devices selector tables located in this section,

1. Locate your PLC I/O module.
2. Select a ***ZIP***Link Pigtail Cable that is compatible with your 3rd party device.



***Solution 3: GS Series and DuraPulse Drives Communication Cables***

Need to communicate via Modbus RTU to a drive or a network of drives?

***ZIP***Link cables are available in a wide range of configurations for connecting to PLCs and SureServo, SureStep, Stellar Soft Starter and AC drives. Add a ***ZIP***Link communications module to quickly and easily set up a multi-device network.

Using the Drives Communication selector tables located in this section,

1. Locate your Drive and type of communications.
2. Select a ***ZIP***Link cable and other associated hardware.

# Wiring Solutions

***Solution 4: Serial Communications Cables***

***ZIP***Link offers communications cables for use with DirectLOGIC, CLICK, and Productivity3000 CPUs, that can also be used with other communications devices. Connections include a 6-pin RJ12 or 9-pin, 15-pin and 25-pin D-sub connectors which can be used in conjunction with the RJ12 or D-Sub Feedthrough modules.

Using the Serial Communications Cables selector table located in this section,

1. Locate your connector type
2. Select a cable.

***Solution 5: Specialty ZIPLink Modules***

For additional application solutions, ***ZIP***Link modules are available in a variety of configurations including stand-alone relays, 24VDC and 120VAC transorb modules, D-sub and RJ12 feedthrough modules, communication port adapter and distribution modules, and SureServo 50-pin I/O interface connection.

Using the ***ZIP***Link Specialty Modules selector table located in this section,

1. Locate the type of application.
2. Select a ***ZIP***Link module.


***Solution 6: ZIPLink Connector Modules to 3rd Party Devices***

If you need a way to connect your device to terminal blocks without all that wiring time, then our pigtail cables with color-coded soldered-tip wires are a good solution. Used in conjunction with any compatible ***ZIP***Link Connector Modules, a pigtail cable keeps wiring clean and easy and reduces troubleshooting time.

Using the Universal Connector Modules and Pigtail Cables table located in this section,

1. Select module type.
2. Select the number of pins.
3. Select cable.

# CPU I/O Modules to ZIPLink Connector Modules - Productivity3000®

## Productivity3000 CPU Input Module *ZIP*Link Selector

| CPU | | ZIPLink | | |
|---|---|---|---|---|
| Input Module | # of Terms | Component | Module Part No. | Cable Part No. |
| P3-08NAS | 20 | Feedthrough | ZL-RTB20 | ZL-P3-CBL20 * |
| P3-08ND3S | 20 | Feedthrough | | |
| P3-16NA | 20 | Feedthrough | | ZL-P3-CBL20-1L<br>ZL-P3-CBL20-2L |
| P3-16ND3 | 20 | Feedthrough | | |
| | | Sensor | ZL-LTB16-24-1 | |
| P3-32ND3 | 40 | Feedthrough | ZL-RTB40 | ZL-CBL40<br>ZL-CBL40-1<br>ZL-CBL40-2 |
| | | Sensor | ZL-LTB32-24-1 | |
| P3-64ND31 | 40 | Feedthrough | ZL-RTB40 | |
| | | Sensor | ZL-LTB32-24-1 | |

## Productivity3000 CPU Analog In Module *ZIP*Link Selector

| CPU | | ZIPLink | | |
|---|---|---|---|---|
| Analog Module | # of Terms | Component | Module | Cable |
| P3-04ADS | 20 | Feedthrough | ZL-RTB20 | ZL-P3-CBL20<br>ZL-P3-CBL20-1L |
| P3-08AD | 20 | Feedthrough | | |
| P3-16AD-1 | 20 | Feedthrough | | |
| P3-16AD-2 | 20 | Feedthrough | | |
| P3-08RTD[2] | Matched Only | See Note 2 | | |
| P3-08THM[2] | T/C Wire Only | See Note 2 | | |
| P3-04DA | 20 | Feedthrough | ZL-RTB20 | ZL-P3-CBL20-1L<br>ZL-P3-CBL20-2L |
| P3-08DA-1 | 20 | Feedthrough | | |
| P3-08DA-2 | 20 | Feedthrough | | |
| P3-16DA-1 | 20 | Feedthrough | | |
| P3-16DA-2 | 20 | Feedthrough | | |
| P3-8AD4DA-1 | 20 | Feedthrough | | |
| P3-8AD4DA-2 | 20 | Feedthrough | | |

## Productivity3000 CPU Specialty Module *ZIP*Link Selector

| CPU | | ZIPLink | | |
|---|---|---|---|---|
| Input Module | # of Terms | Component | Module Part No. | Cable Part No. |
| P3-HSI | 40 | Feedthrough | ZL-RTB40 | ZL-CBL40-S<br>ZL-CBL40-1S<br>ZL-CBL40-2S |
| P3-HSO | | | | |

Note: ***ZIP***Link Connector Modules specifications follow the Compatibility Matrix tables. ***ZIP***Link Cables specifications are at the end of this ***ZIP***Link section.

## Productivity3000 CPU Output Module *ZIP*Link Selector

| CPU | | ZIPLink | | |
|---|---|---|---|---|
| Output Module | # of Terms | Component | Module Part No. | Cable Part No. |
| P3-08TAS | 20 | Feedthrough | ZL-RTB20 | ZL-P3-CBL20 * |
| P3-08TD1S | 20 | Feedthrough | | ZL-P3-CBL20-1L<br>ZL-P3-CBL20-2L |
| P3-08TD2S | 20 | Feedthrough | | |
| P3-08TRS | 20 | Feedthrough | | ZL-P3-CBL20<br>ZL-P3-CBL20-1<br>ZL-P3-CBL20-2 |
| P3-16TA | 20 | Feedthrough | | |
| | | Fuse | | |
| P3-16TD1 | 20 | Feedthrough | | |
| | | Fuse | ZL-RFU20[4] | |
| | | Relay (sinking) | ZL-RRL16-24-1 | |
| P3-16TD2 | 20 | Feedthrough | ZL-RTB20 | |
| | | Fuse | ZL-RFU20[4] | |
| | | Relay (sourcing) | ZL-RRL16-24-2 | |
| P3-16TR | 20 | Feedthrough | ZL-RTB20 | |
| | | Fuse | ZL-RFU20[4] | |
| P3-08TRS-1[3] | 20 | Feedthrough | ZL-RTB20 | |
| | | Fuse | ZL-RFU20[4] | |
| P3-32TD1 | 40 | Feedthrough | ZL-RTB40 | ZL-CBL40<br>ZL-CBL40-1<br>ZL-CBL40-2 |
| | | Fuse | ZL-RFU40[4] | |
| P3-32TD2 | 40 | Feedthrough | ZL-RTB40 | |
| | | Fuse | ZL-RFU40[4] | |
| P3-64TD1[1] | 40 | Feedthrough | ZL-RTB40 | |
| | | Fuse | ZL-RFU40[4] | |
| P3-64TD2[1] | 40 | Feedthrough | ZL-RTB40 | |
| | | Fuse | ZL-RFU40[4] | |

** Select the cable length by replacing the * with: Blank = 0.5m, -1 = 1.0m, or -2 = 2.0m.*

*1 The P3-64ND3, P3-64TD1 and P3-64TD2 modules have two 32-point connectors and require two ZIPLink cables and two ZIPLink connector modules.*

*2 These modules are not supported by the ZIPLink wiring system.*

*3 The P3-08TRS-1 output module is derated not to exceed 2A per point maxiumum when used with the ZIPLink wiring system.*

*4 Note: Fuses (5 x 20 mm) are not included. See Edison Electronic Fuse section for (5 x 20 mm) fuse. S500 and GMA electronic circuit protection for fast-acting maximum protection. S506 and GMC electronic circuit protection for time-delay performance. Ideal for inductive circuits.*
*To ensure proper operation, do not exceed the voltage and current rating of ZIPLink module. ZL-RFU20 = 2A per circuit; ZL-RFU40 = 400 mA per circuit.*

# I/O Modules

A variety of discrete, analog and specialty I/O modules are available for use in local, expansion, and remote I/O bases. Specifications for each module are on the following pages.

A filler module is available for unused I/O module slots (part number P3-FILL).

## Discrete Input Modules

| Productivity3000 Discrete Input Modules | | | |
|---|---|---|---|
| **Part Number** | **Number of Inputs** | **Description** | **Price** |
| P3-16SIM | 16 | Input Simulator Module | $197.00 |
| P3-08ND3S | 8 | Isolated Sinking/Sourcing DC Input | $99.00 |
| P3-16ND3 | 16 | Sinking/Sourcing DC Input | $152.00 |
| P3-32ND3 | 32 | Sinking/Sourcing DC Input | $208.00 |
| P3-64ND3 | 64 | Sinking/Sourcing DC Input | $260.00 |
| P3-08NAS | 8 | Isolated AC Input | $126.00 |
| P3-16NA | 16 | AC Input | $159.00 |

*ZIPLink required.

## Analog I/O Modules

| Productivity3000 Analog Input Modules | | | |
|---|---|---|---|
| **Part Number** | **Number of Channels** | **Description** | **Price** |
| P3-04ADS | 4 | Isolated Analog Input | $724.00 |
| P3-08AD | 8 | Analog Input | $393.00 |
| P3-16AD-1 | 16 | Analog Input (Current) | $535.00 |
| P3-16AD-2 | 16 | Analog Input (Voltage) | $524.00 |
| P3-08RTD | 8 | Analog RTD Input | $581.00 |
| P3-08THM | 8 | Analog Thermocouple Input | $736.00 |

| Productivity3000 Analog Output Modules | | | |
|---|---|---|---|
| **Part Number** | **Number of Channels** | **Description** | **Price** |
| P3-04DA | 4 | Analog Output | $449.00 |
| P3-08DA-1 | 8 | Analog Output (Current) | $779.00 |
| P3-08DA-2 | 8 | Analog Output (Voltage) | $725.00 |
| P3-16DA-1 | 16 | Analog Output (Current) | $929.00 |
| P3-16DA-2 | 16 | Analog Output (Voltage) | $911.00 |

| Productivity3000 Analog Input/Output Modules | | | |
|---|---|---|---|
| **Part Number** | **Number of Channels** | **Description** | **Price** |
| P3-8AD4DA-1 | 8/4 | Analog Input/Output (Current) | $598.00 |
| P3-8AD4DA-2 | 8/4 | Analog Input/Output (Voltage) | $617.00 |

## Specialty Modules

| Productivity3000 Specialty Modules | | | |
|---|---|---|---|
| **Part Number** | **Number of Channels** | **Description** | **Price** |
| P3-HSI | 2 | High-Speed Pulse Input | $563.00 |
| P3-HSO* | 2 | High-Speed Output | $587.00 |
| P3-SCM | 4 ports | Serial Communications Module | $475.00 |

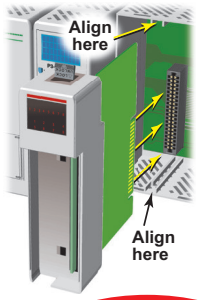
*ZIPLink required.

## Discrete Output Modules

| Productivity3000 Discrete Output Modules | | | |
|---|---|---|---|
| **Part Number** | **Number of Outputs** | **Description** | **Price** |
| P3-08TD1S | 8 | Isolated Sinking Output | $135.00 |
| P3-08TD2S | 8 | Isolated Sourcing Output | $141.00 |
| P3-16TD1 | 16 | Sinking Output | $162.00 |
| P3-16TD2 | 16 | Sourcing Output | $167.00 |
| P3-32TD1* | 32 | Sinking Output | $208.00 |
| P3-32TD2* | 32 | Sourcing Output | $208.00 |
| P3-64TD1* | *64 | Sinking Output | $280.00 |
| P3-64TD2* | *64 | Sourcing Output | $265.00 |
| P3-08TAS | 8 | Isolated AC Output | $177.00 |
| P3-16TA | 16 | AC Output | $210.00 |
| P3-08TRS | 8 | Isolated Relay Output | $159.00 |
| P3-08TRS-1 | 8 | Isolated Relay Output | $194.00 |
| P3-16TR | 16 | Relay Output | $177.00 |

*ZIPLink required.

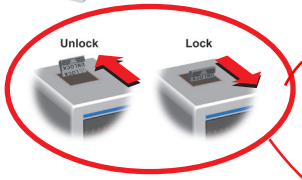
## Module Installation Procedure

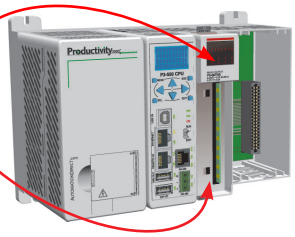



***WARNING:*** *DO NOT APPLY FIELD POWER UNTIL THE FOLLOWING STEPS ARE COMPLETED. SEE HOT-SWAPPING PROCEDURE FOR EXCEPTIONS.*

**Step One:** Align circuit card with slot and press firmly to seat module into connector.

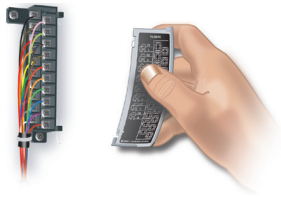
**Step Two:** Pull top and bottom locking tabs toward module face. Click indicates lock is engaged.



**Step Three:** Attach field wiring using optional terminal block or ***ZIP***Link wiring system and install cover.

To install or remove terminal block cover, press middle to flex cover.



***WARNING:*** *EXPLOSION HAZARD – DO NOT CONNECT OR DISCONNECT CONNECTORS OR OPERATE SWITCHES WHILE CIRCUIT IS LIVE UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS. DO NOT HOT-SWAP MODULES UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS.*