

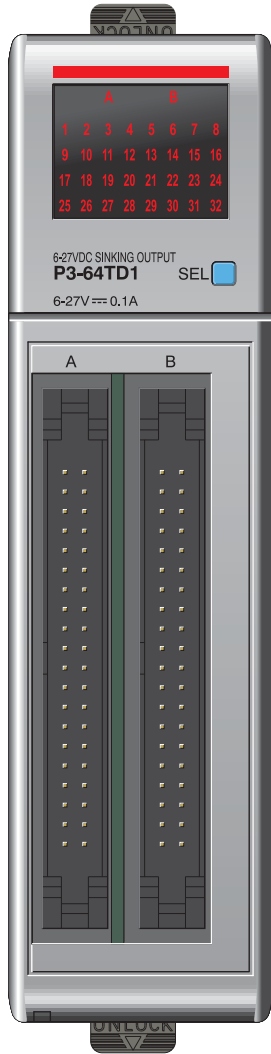
# DC Output Modules

## P3-64TD1



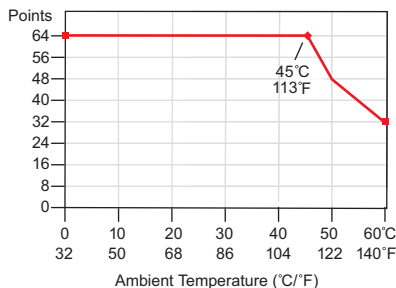
### Sinking Output

The P3-64TD1 DC Output Module provides sixty-four 6-27 VDC sinking outputs with eight isolated commons.



**No terminal block sold for this module; ZIPLink required.**

Derating Chart



| Output Specifications               |                                    |                              |
|-------------------------------------|------------------------------------|------------------------------|
| Outputs per Module                  | 64 (sinking)                       |                              |
| Operating Voltage Range (Tolerance) | CE                                 | 6.25 – 24 VDC (-15% / + 20%) |
|                                     | UL                                 | 6 – 27 VDC (-15% / +10%)     |
| Maximum Output Current @ Temp       | 0.1A / point, 0.8A / common @ 60°C |                              |
| Minimum Output Current              | 0.4 mA                             |                              |
| Maximum Leakage Current             | 0.3 mA @ 30 VDC                    |                              |
| On Voltage Drop                     | 0.3 VDC @ 0.1A                     |                              |
| Maximum Inrush Current              | 0.5A for 10 ms                     |                              |
| OFF to ON Response                  | ≤ 0.2 ms                           |                              |
| ON to OFF Response                  | ≤ 0.3 ms                           |                              |
| Connector Type                      | Two 40-pin IDC                     |                              |
| Status Indicators                   | Logic Side (32 points x 2)         |                              |
| Commons                             | 8 Isolated (8 points / common)     |                              |
| External DC Power Required          | 24VDC ± 10% @ 210mA                |                              |

| 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 | 1500VAC applied for 1 minute   |
| Insulation Resistance         | >10MΩ @ 500 VDC  |
| Heat Dissipation              | 11.35W   |
| Enclosure Type                | Open Equipment   |
| 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. |
| Module Keying to Backplane    | Electronic   |
| Module Location               | Any I/O slot in any local, expansion, or remote base in a Productivity3000 System.   |
| Field Wiring                  | Use ZIPLink wiring system. See "Wiring I/O Modules".   |
| EU Directive                  | See the "EU Directive" topic in the Productivity3000 Help File. Information can also be obtained at: <a href="http://www.productivitypac.com">www.productivitypac.com</a>                                    |
| Weight                        | 160g (5.64 oz)   |

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

| Connector Specifications |  |
|--------------------------|--|
| Connector Type           | IDC style header with latch, Omron XG4A-4034 |
| Number of Pins           | 40 point x 2                                 |
| Pitch                    | 0.1 in. (2.54 mm)                            |

**WARNING: Explosion hazard – Substitution of components may impair suitability for Class I, Division 2.**

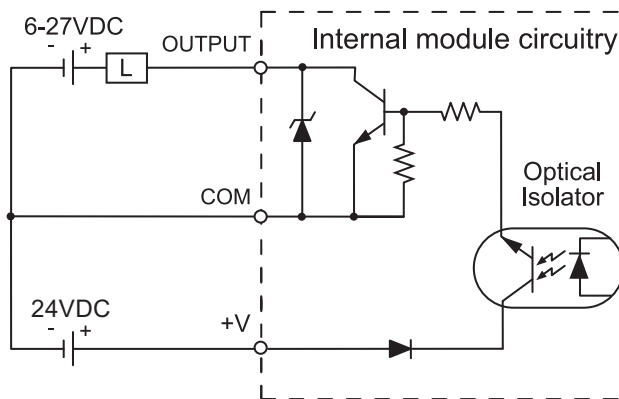
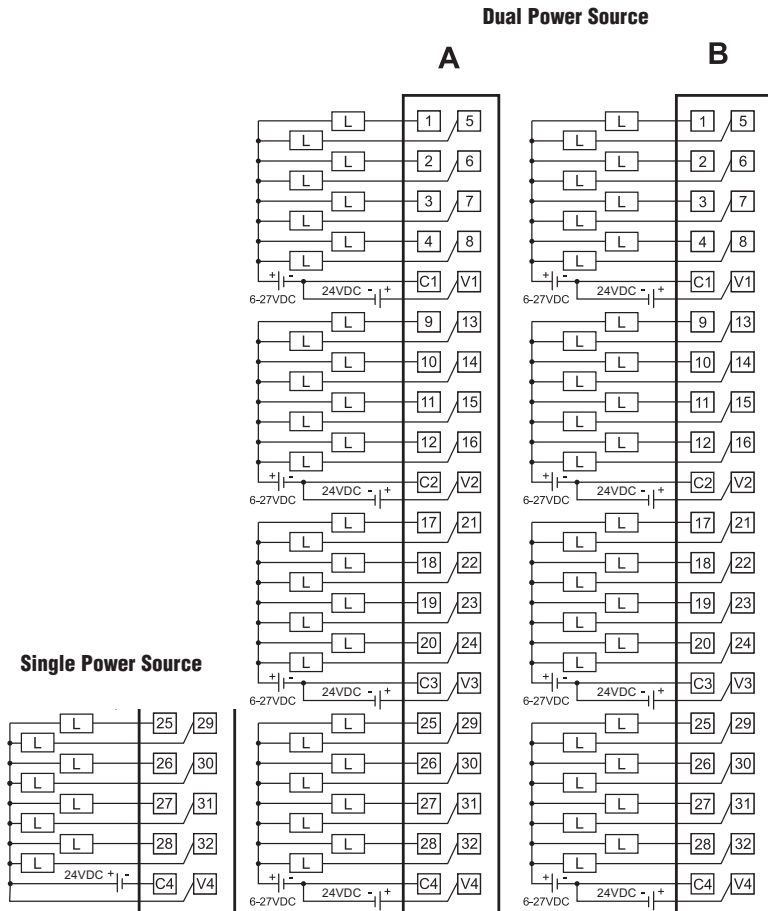
See "Wiring Systems" for part numbers of ZIPLink cables and connection modules required with this I/O module.



# DC Output Modules

## P3-64TD1 (cont'd)

### Wiring Diagrams





## Specify your ZIPLink system

Use the Compatibility Matrix table below.

|  |   |
|--|---|
| <b>Step 1</b>  | Locate the I/O module part number.  |
| <b>Step 2</b>  | Locate Connector Module Type. (Feedthrough Module, Fuse Module, etc...)                                 |
| <b>Step 3</b>  | Select the cable length by replacing the # symbol with: Blank = 0.5m, -1 = 1.0m, -2 = 2.0m <sup>1</sup> |
| <sup>1</sup> Note: Cable part number denotes compatibility between Connector Module and I/O Modules. |   |

| Productivity3000 ZIPLink Wiring System Compatibility Matrix |                     |                     |           |               |           |              |                   |                |
|---|---------------------|---------------------|-----------|---------------|-----------|--------------|-------------------|----------------|
| Step 2: Connector Module Type                               |                     | Feedthrough Modules |           | Fuse Modules  |           | Relay Module | Sensor Input Mod. | Pigtail Cable  |
| Step 1: I/O Module  | Number of Terminals | ZL-RTB20            | ZL-RTB40  | ZL-RFU20      | ZL-RFU40  | ZL-RRL16-24  | ZL-LTB16-24       |                |
|   |                     | Step 3: Cables      |           |               |           |              |                   |                |
| <b>Inputs</b>   |                     |                     |           |               |           |              |                   |                |
| P3-08NAS  | 20                  | ZL-P3-CBL20#        |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08ND3S   | 20                  | ZL-P3-CBL20#        |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-16NA   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-16ND3  | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-32ND3  | 40                  |                     | ZL-CBL40# |               |           |              | ZL-P3-CBL40#      |                |
| P3-64ND3*   | 40                  |                     | ZL-CBL40# |               |           |              | ZL-P3-CBL40#      |                |
| <b>Outputs</b>  |                     |                     |           |               |           |              |                   |                |
| P3-08TAS  | 20                  | ZL-P3-CBL20#        |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08TD1S   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08TD2S   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08TRS  | 20                  | ZL-P3-CBL20#        |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-16TA   | 20                  | ZL-P3-CBL20#        |           | ZL-P3-CBL20L# |           |              |                   | ZL-P3-CBL20-#P |
| P3-16TD1  | 20                  | ZL-P3-CBL20#        |           | ZL-P3-CBL20#  |           | ZL-P3-CBL20# |                   | ZL-P3-CBL20-#P |
| P3-16TD2  | 20                  | ZL-P3-CBL20#        |           | ZL-P3-CBL20#  |           |              |                   | ZL-P3-CBL20-#P |
| P3-16TR   | 20                  | ZL-P3-CBL20#        |           | ZL-P3-CBL20#  |           |              |                   | ZL-P3-CBL20-#P |
| P3-08TRS-1***   | 20                  | ZL-P3-CBL20#        |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-32TD1  | 40                  |                     | ZL-CBL40# |               | ZL-CBL40# |              |                   |                |
| P3-32TD2  | 40                  |                     | ZL-CBL40# |               | ZL-CBL40# |              |                   |                |
| P3-64TD1*   | 40                  |                     | ZL-CBL40# |               | ZL-CBL40# |              |                   |                |
| P3-64TD2*   | 40                  |                     | ZL-CBL40# |               | ZL-CBL40# |              |                   |                |
| <b>Analog In</b>  |                     |                     |           |               |           |              |                   |                |
| P3-04ADS  | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08AD   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-16AD-1   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-16AD-2   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08RTD**  | Matched Only        |                     |           |               |           |              |                   |                |
| P3-08THM**  | T/C Wire Only       |                     |           |               |           |              |                   |                |
| <b>Analog Out</b>   |                     |                     |           |               |           |              |                   |                |
| P3-04DA   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08DA-1   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-08DA-2   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-06DAS-1  | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-06DAS-2  | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-16DA-1   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-16DA-2   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| <b>Analog Combo</b>   |                     |                     |           |               |           |              |                   |                |
| P3-8AD4DA-1   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |
| P3-8AD4DA-2   | 20                  | ZL-P3-CBL20L#       |           |               |           |              |                   | ZL-P3-CBL20-#P |

\*The P3-64ND3, P3-64TD1, and P3-64TD2 modules have two 32-point connectors and require 2 ZIPLink cables and 2 ZIPLink connector modules.

\*\*These modules are not supported by the ZIPLink wiring system. Removable terminal block P3-RTB included.

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

# I/O Modules

A variety of discrete and analog 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             | <-->  |
| P3-08ND3S                               | 8                | Isolated Sinking/Sourcing DC Input | <-->  |
| P3-16ND3                                | 16               | Sinking/Sourcing DC Input          | <-->  |
| P3-32ND3*                               | 32               | Sinking/Sourcing DC Input          | <-->  |
| P3-64ND3*                               | 64               | Sinking/Sourcing DC Input          | <-->  |
| P3-08NAS                                | 8                | Isolated AC Input                  | <-->  |
| P3-16NA                                 | 16               | AC Input                           | <-->  |

\*ZIPLink required.

## Analog I/O Modules

| Productivity3000 Analog Input Modules |                    |                           |       |
|---------------------------------------|--------------------|---------------------------|-------|
| Part Number                           | Number of Channels | Description               | Price |
| P3-04ADS                              | 4                  | Isolated Analog Input     | <-->  |
| P3-08AD                               | 8                  | Analog Input              | <-->  |
| P3-16AD-1                             | 16                 | Analog Input (Current)    | <-->  |
| P3-16AD-2                             | 16                 | Analog Input (Voltage)    | <-->  |
| P3-08RTD                              | 8                  | Analog RTD Input          | <-->  |
| P3-08THM                              | 8                  | Analog Thermocouple Input | <-->  |

| Productivity3000 Analog Output Modules |                    |                                  |       |
|--|--------------------|----------------------------------|-------|
| Part Number                            | Number of Channels | Description                      | Price |
| P3-04DA                                | 4                  | Analog Output                    | <-->  |
| P3-08DA-1                              | 8                  | Analog Output (Current)          | <-->  |
| P3-08DA-2                              | 8                  | Analog Output (Voltage)          | <-->  |
| P3-06DAS-1                             | 6                  | Isolated Analog Output (Current) | <-->  |
| P3-06DAS-2                             | 6                  | Isolated Analog Output (Voltage) | <-->  |
| P3-16DA-1                              | 16                 | Analog Output (Current)          | <-->  |
| P3-16DA-2                              | 16                 | Analog Output (Voltage)          | <-->  |

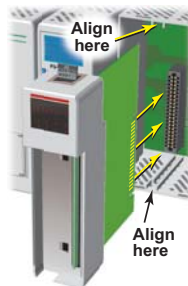
| Productivity3000 Analog Input/Output Modules |                    |                               |       |
|--|--------------------|-------------------------------|-------|
| Part Number                                  | Number of Channels | Description                   | Price |
| P3-8AD4DA-1 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

## Discrete Output Modules

| Productivity3000 Discrete Output Modules |                   |                          |       |
|--|-------------------|--------------------------|-------|
| Part Number                              | Number of Outputs | Description              | Price |
| P3-08TD1S                                | 8                 | Isolated Sinking Output  | <-->  |
| P3-08TD2S                                | 8                 | Isolated Sourcing Output | <-->  |
| P3-16TD1                                 | 16                | Sinking Output           | <-->  |
| P3-16TD2                                 | 16                | Sourcing Output          | <-->  |
| P3-32TD1*                                | 32                | Sinking Output           | <-->  |
| P3-32TD2*                                | 32                | Sourcing Output          | <-->  |
| P3-64TD1*                                | 64                | Sinking Output           | <-->  |
| P3-64TD2*                                | 64                | Sourcing Output          | <-->  |
| P3-08TAS                                 | 8                 | Isolated AC Output       | <-->  |
| P3-16TA                                  | 16                | AC Output                | <-->  |
| P3-08TRS                                 | 8                 | Isolated Relay Output    | <-->  |
| P3-16TR                                  | 16                | Relay Output             | <-->  |
| P3-08TRS-1                               | 8                 | Isolated Relay Output    | <-->  |

\*ZIPLink required.

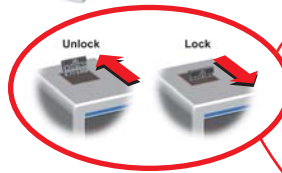
## Module Installation Procedure



**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 ZIPLink 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.