



- Industry Standard 2" x 1" Footprint
- Six Sided Shielding
- Agency Approved
- 12V, 24V and 48V Inputs

## PXD Series

Single and Dual Output 10 to 20W  
DC-DC Converters

### Key Market Segments & Applications

Telecom  
Datacom  
Point of Load

### PXD Features and Benefits

#### Features

- UL, CSA, EN, CE Approvals
- Wide Range Input
- Six Sided Shielding

#### Benefits

- Easier System Approvals
- Less Parts to Inventory
- Reduced Radiated Noise

### Specifications

| ITEMS                                     | PXD10                                                                                                               | PXD15                                  | PXD20                   |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------|
| Max Output Power                          | 10W                                                                                                                 | 15W                                    | 20W                     |
| Voltage Accuracy                          | ±2%                                                                                                                 | ±1%                                    | ±1%                     |
| Voltage Adjustment (Single O/P Only)      | None                                                                                                                | None                                   | ±10%                    |
| Minimum Load, each output (1)             | 10%                                                                                                                 | 10%                                    | Single 0%; Dual 10%     |
| Line Regulation                           | ±1%                                                                                                                 | ±1%                                    | ±0.2%                   |
| Load Regulation (10% to 100%)             | Single Output: ±1%<br>Dual Output: ±2%                                                                              | Single Output: ±1%<br>Dual Output: ±2% | ±0.5%<br>–              |
| Cross Regulation (25% to 100%)            | ±5%                                                                                                                 |                                        | –                       |
| Ripple and Noise                          | Single 50mV, Dual 75mV                                                                                              |                                        | Single 75mV, Dual 100mV |
| Start up time                             | 20ms                                                                                                                |                                        | 10ms                    |
| Remote on/off (3)                         | Positive Logic: ON: Open or 3.5-12V, OFF Short or <1.2V<br>Negative Logic: ON: Short or <1.2V, OFF: Open or 3.5-12V |                                        |                         |
| Temperature Coefficient                   | <±0.02%/°C                                                                                                          |                                        |                         |
| Operating Temperature                     | -40°C to +85°C (model dependent - see derating curves)                                                              |                                        |                         |
| Maximum Case Temperature                  | +100°C                                                                                                              |                                        |                         |
| Storage Temperature                       | -55°C to +105°C                                                                                                     |                                        |                         |
| Thermal Shock                             | MIL-STD-810D                                                                                                        |                                        |                         |
| Relative Humidity                         | 5 to 95% (non condensing)                                                                                           |                                        |                         |
| Transient Response (25% step load chg.)   | 500µS recovery                                                                                                      | 500µS recovery                         | 300µS recovery          |
| Overvoltage Protection (Zener clamp)      | 1.5-3.3V: 3.9V, 5V: 6.2V, 12V: 15V, 15V: 18V                                                                        |                                        |                         |
| Overcurrent & Short Circuit Protection    | Typically at 150%, hiccup with self recovery                                                                        |                                        |                         |
| Input Surge Voltage (Max. for 100ms)      | 12V input: 36V, 24V input: 50V, 48V input: 100V                                                                     |                                        |                         |
| Reflected input ripple (peak to peak) (2) | 30mA                                                                                                                | 20mA                                   | 20mA                    |
| Isolation Voltage                         | 1600VDC minimum                                                                                                     |                                        |                         |
| Isolation Resistance                      | 10 <sup>9</sup> Ohms minimum                                                                                        |                                        |                         |
| Isolation Capacitance (max)               | 300pF                                                                                                               |                                        | 1000pF                  |
| Typical Switching Frequency (Fixed)       | 300kHz                                                                                                              | Single: 500kHz<br>Dual: 300kHz         | 500kHz                  |
| MTBF (BELLCORE TR-NWT-000332)             | 1,976,000 hours                                                                                                     | 2,041,000 hours                        | 1,791,000 hours         |
| Vibration                                 | 10 - 55Hz, 2G, 30 minutes each X, Y, Z axis                                                                         |                                        |                         |
| Conducted and Radiated Emissions          | EN55022 Level A                                                                                                     |                                        |                         |
| Immunity                                  | EN61000-4-2, -3, -4, -5, -6 Pref Criteria 2                                                                         |                                        |                         |
| Safety Agency Approval                    | IEC/UL/CSA/EN 62368-1, 60950-1, CE Mark                                                                             |                                        |                         |
| Size mm (L x W x H)                       | 50.8 x 25.4 x 10.2                                                                                                  |                                        |                         |
| Weight (g)                                | 27                                                                                                                  |                                        |                         |
| Warranty (yrs)                            | 3                                                                                                                   |                                        |                         |

**Specification Notes:** (1) To meet regulation & noise specifications. Operation at zero load will not damage the device.

(2) 12 $\mu$ H source impedance in series with + input (3) Positive logic standard on 20W (see options table). Input current 2.5mA

### Model Selector

| Output Volt (V) | Output Current (A) | Output Power (W) | Input Volt (V) | Model        | Efficiency (%) |
|-----------------|--------------------|------------------|----------------|--------------|----------------|
| 3.3             | 2.0                | 6.6              | 9 - 18VDC      | PXD10-12S3P3 | 80             |
| 3.3             | 2.0                | 6.6              | 18 - 36VDC     | PXD10-24S3P3 | 80             |
| 3.3             | 2.0                | 6.6              | 36 - 75VDC     | PXD10-48S3P3 | 79             |
| 3.3             | 5.0                | 16.5             | 9 - 18VDC      | PXD20-12S3P3 | 84             |
| 3.3             | 5.0                | 16.5             | 18 - 36VDC     | PXD20-24S3P3 | 86             |
| 3.3             | 5.0                | 16.5             | 36 - 75VDC     | PXD20-48S3P3 | 87             |
| 5               | 2.0                | 10               | 9 - 36VDC      | PXD10-24WS05 | 80             |
| 5               | 2.0                | 10               | 18 - 75VDC     | PXD10-48WS05 | 80             |
| 5               | 4.0                | 20               | 9 - 18VDC      | PXD20-12S05  | 87             |
| 5               | 4.0                | 20               | 18 - 36VDC     | PXD20-24S05  | 89             |
| 5               | 4.0                | 20               | 36 - 75VDC     | PXD20-48S05  | 89             |
| 12              | 0.83               | 10               | 9 - 36VDC      | PXD10-24WS12 | 82             |
| 12              | 0.83               | 10               | 18 - 75VDC     | PXD10-48WS12 | 84             |
| 12              | 1.67               | 20               | 9 - 18VDC      | PXD20-12S12  | 85             |
| 12              | 1.67               | 20               | 18 - 36VDC     | PXD20-24S12  | 87             |
| 12              | 1.67               | 20               | 36 - 75VDC     | PXD20-48S12  | 88             |
| 15              | 0.67               | 10               | 9 - 36VDC      | PXD10-24WS15 | 80             |
| 15              | 0.67               | 10               | 18 - 75VDC     | PXD10-48WS15 | 84             |
| 15              | 1.33               | 20               | 9 - 18VDC      | PXD20-12S15  | 85             |
| 15              | 1.33               | 20               | 18 - 36VDC     | PXD20-24S15  | 87             |
| 15              | 1.33               | 20               | 36 - 75VDC     | PXD20-48S15  | 87             |

### Dual Outputs

|     |        |    |            |              |    |
|-----|--------|----|------------|--------------|----|
| ±5  | ±1.0   | 10 | 18 - 75VDC | PXD10-48WD05 | 82 |
| ±5  | ±1.0   | 10 | 9 - 36VDC  | PXD10-24WD05 | 82 |
| ±5  | ±1.5   | 15 | 9 - 18VDC  | PXD15-12D05  | 83 |
| ±5  | ±1.5   | 15 | 18 - 36VDC | PXD15-24D05  | 84 |
| ±5  | ±1.5   | 15 | 36 - 75VDC | PXD15-48D05  | 85 |
| ±12 | ±0.416 | 10 | 9 - 36VDC  | PXD10-24WD12 | 80 |
| ±12 | ±0.416 | 10 | 18 - 75VDC | PXD10-48WD12 | 78 |
| ±12 | ±0.833 | 20 | 9 - 18VDC  | PXD20-12D12  | 86 |
| ±12 | ±0.833 | 20 | 18 - 36VDC | PXD20-24D12  | 87 |
| ±12 | ±0.833 | 20 | 36 - 75VDC | PXD20-48D12  | 88 |
| ±15 | ±0.333 | 10 | 9 - 36VDC  | PXD10-24WD15 | 80 |
| ±15 | ±0.333 | 10 | 18 - 75VDC | PXD10-48WD15 | 81 |
| ±15 | ±0.667 | 20 | 9 - 18VDC  | PXD20-12D15  | 86 |
| ±15 | ±0.667 | 20 | 18 - 36VDC | PXD20-24D15  | 87 |
| ±15 | ±0.667 | 20 | 36 - 75VDC | PXD20-48D15  | 87 |

\* OTHER MODELS AVAILABLE ON REQUEST \*

### Pinout

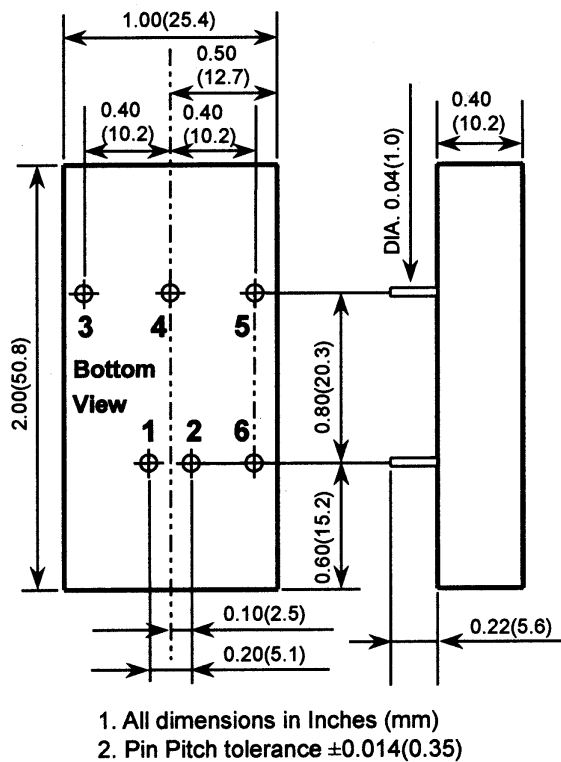
| Pin# | Function        |               |
|------|-----------------|---------------|
|      | Single Output   | Dual Output   |
| 1    | + Input         | + Input       |
| 2    | - Input         | - Input       |
| 3    | + Output        | + Output      |
| 4    | Trim (20W only) | Common        |
| 5    | - Output        | - Output      |
| 6    | Remote On/Off   | Remote On/Off |

#### Notes:

(1) With external ceramic capacitor (24V: 4.7 $\mu$ F, 48V: 2.2 $\mu$ F) connected across input pins

(2) For EN61000-4-4 & -5 compliance fit external electrolytic capacitor (24V: 330 $\mu$ F, 48V: 220 $\mu$ F) connected across input pins

## Outline Drawing PXD Series



## PXD10 & 15 Series

| Options   | Single Output                        | Dual Output                          |
|-----------|--------------------------------------|--------------------------------------|
| Suffix    | Function                             | Function                             |
| No Suffix | No Logic & No Trim                   | No Logic & No Trim                   |
| P         | Positive Logic<br>(No Trim Function) | Positive Logic<br>(No Trim Function) |
| N         | Negative Logic<br>(No Trim Function) | Negative Logic<br>(No Trim Function) |

Add suffix for required options, Example PXD15-48S12-N

## PXD20 Series

| Options   | Single Output                | Dual Output                          |
|-----------|------------------------------|--------------------------------------|
| Suffix    | Function                     | Function                             |
| No Suffix | Positive Logic & Output Trim | Positive Logic<br>(No Trim Function) |
| N         | Negative Logic & Output Trim | Negative Logic<br>(No Trim Function) |

*Add suffix for N option, Example PXD20-48S12-N*

## Derating Curves PXD Series

