



Single & Dual Output 15W DC-DC Converters

- ◆ Industry Standard 1" x 1" Footprint
- ◆ Through Hole
- ◆ Agency Approved

RoHS

Key Market Segments & Applications

| | |
|--------------------------|----------------------------|
| Telecom Point of Load | Datacom Process Control |
|--------------------------|----------------------------|

Features and Benefits

| Feature | Benefit |
|--------------------------------|---------------------------------|
| ◆ 1" x 1" footprint | ◆ Can replace older 2x1" models |
| ◆ Wide range input (PXB15-xxW) | ◆ Less parts to inventory |
| ◆ Six sided shielding | ◆ Reduced radiated noise |

Specifications

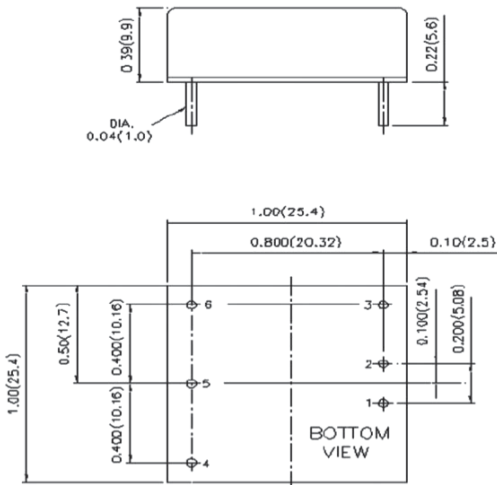
| ITEMS | | PXB15-xxS | PXB15-xxWS | PXB15-xxD | PXB15-xxWD |
|---|--------|---|------------|-----------------|------------|
| Max Output Power | W | 15W | | | |
| Voltage Accuracy | % | ±1% | | | |
| Voltage Adjustment (T Suffix) | % | ±10% | | n/a | |
| Minimum Load | - | None | | 25% each output | |
| Line Regulation | % | ±0.2% | | ±0.5% | |
| Load Regulation (0% to 100%) | % | ±0.2% | | ±1.0% | |
| Start up time | ms | 30ms | | | |
| Remote on/off | - | Negative Logic /N (standard): ON: Short or <1.2V, OFF: Open or 3-15V Positive Logic /P (optional): ON: Open or 3-15V, OFF Short or <1.2V | | | |
| Temperature Coefficient | °C | <±0.02%/°C | | | |
| Operating Temperature | °C | -40 to +85oC (See derating curves) | | | |
| Maximum Case Temperature | °C | 105°C | | | |
| Storage Temperature | °C | -55 to 125°C | | | |
| Thermal Shock | - | MIL-STD-810F | | | |
| Relative Humidity (non condensing) | % | 5 to 95% | | | |
| Transient Response (25% step load change) | µs | 250µs recovery | | | |
| Overvoltage Protection (Zener clamp) | VDC | 3.3V (3.7-5.4); 5V (5.6-7.0); 12V (13.5-19.6); 15V (16.8-20.5) | | | |
| Overcurrent and Short Circuit Protection | - | Typically at 150%, hiccup with self recovery | | | |
| Input Surge Voltage (Maximum for 100ms) | VDC | 12V input: 36V, 24V input: 50V, 48V input: 100V | | | |
| Reflected input ripple (peak to peak) | mA | 30mA | | | |
| Isolation Voltage (Input to Output) | VDC | 1600VDC minimum | | | |
| Isolation Voltage I/P to Case , O/P to Case | VDC | 1000VDC minimum | | | |
| Isolation Resistance | Ω | 109 Ohms minimum | | | |
| Isolation Capacitance (max) | pF | 1000pF | | | |
| Typical Switching Frequency (Fixed) | Hz | 400kHz | | | |
| MTBF (BELLCORE TR-NWT-000332) | Hours | 1,330,000 | | | |
| Vibration | - | MIL-STD-810F | | | |
| Conducted and Radiated Emissions | - | EN55022 Level A | | | |
| Immunity | - | EN61000-4-2,-3,-4,-5,-6 | | | |
| Safety Agency Approval | - | IEC60950-1, UL60950-1, EN60950-1, CE Mark | | | |
| Size (L x W x H) | inches | 1 x 1 x 0.39" | | | |
| Mounting | - | Through Hole | | | |
| Weight | g | 15 | | | |
| Warranty | yrs | Two Years | | | |

Notes:
See installation manual

Model Selector

| Output Voltage (VDC) | Output Current (A) | Output Power (W) | Input Voltage (VDC) | Model | Ripple & Noise (Pk-Pk mV) | Nominal Input Current (mA) | Efficiency (%) | Maximum Load Capacitance (uF) |
|----------------------|--------------------|------------------|---------------------|------------------|---------------------------|----------------------------|----------------|-------------------------------|
| 3.3 | 4 | 13.2 | 9 - 18 | PXB15-12S3P3/NT | 75 | 1375 | 84 | 1000 |
| 3.3 | 4 | 13.2 | 9 - 36 | PXB15-24WS3P3/NT | 75 | 688 | 86 | 1000 |
| 3.3 | 4 | 13.2 | 18 - 36 | PXB15-24S3P3/NT | 75 | 671 | 86 | 1000 |
| 3.3 | 4 | 13.2 | 18 - 75 | PXB15-48WS3P3/NT | 75 | 336 | 86 | 1000 |
| 3.3 | 4 | 13.2 | 36 - 75 | PXB15-48S3P3/NT | 75 | 336 | 86 | 1000 |
| 5 | 3 | 15 | 9 - 18 | PXB15-12S05/NT | 75 | 1524 | 86 | 1000 |
| 5 | 3 | 15 | 9 - 36 | PXB15-24WS05/NT | 75 | 762 | 86 | 1000 |
| 5 | 3 | 15 | 18 - 36 | PXB15-24S05/NT | 75 | 763 | 86 | 1000 |
| 5 | 3 | 15 | 18 - 75 | PXB15-48WS05/NT | 75 | 382 | 86 | 1000 |
| 5 | 3 | 15 | 36 - 75 | PXB15-48S05/NT | 75 | 372 | 88 | 1000 |
| 12 | 1.3 | 15.6 | 9 - 18 | PXB15-12S12/NT | 100 | 1605 | 85 | 330 |
| 12 | 1.3 | 15.6 | 9 - 36 | PXB15-24WS12/NT | 100 | 783 | 87 | 330 |
| 12 | 1.3 | 15.6 | 18 - 36 | PXB15-24S12/NT | 100 | 783 | 87 | 330 |
| 12 | 1.3 | 15.6 | 18 - 75 | PXB15-48WS12/NT | 100 | 392 | 87 | 330 |
| 12 | 1.3 | 15.6 | 36 - 75 | PXB15-48S12/NT | 100 | 387 | 88 | 330 |
| 15 | 1 | 15 | 9 - 18 | PXB15-12S15/NT | 100 | 1506 | 87 | 220 |
| 15 | 1 | 15 | 9 - 36 | PXB15-24WS15/NT | 100 | 753 | 87 | 220 |
| 15 | 1 | 15 | 18 - 36 | PXB15-24S15/NT | 100 | 744 | 88 | 220 |
| 15 | 1 | 15 | 18 - 75 | PXB15-48WS15/NT | 100 | 377 | 87 | 220 |
| 15 | 1 | 15 | 36 - 75 | PXB15-48S15/NT | 100 | 372 | 88 | 220 |
| Dual Outputs | | | | | | | | |
| ±5 | ±1.5 | 15 | 9-18 | PXB15-12D05/NT | 100 | 1543 | 85 | ±500 |
| ±5 | ±1.5 | 15 | 9-36 | PXB15-24WD05/NT | 100 | 772 | 85 | ±500 |
| ±5 | ±1.5 | 15 | 18-36 | PXB15-24D05/NT | 100 | 772 | 85 | ±500 |
| ±5 | ±1.5 | 15 | 18-75 | PXB15-48WD05/NT | 100 | 386 | 85 | ±500 |
| ±5 | ±1.5 | 15 | 36-75 | PXB15-48D05/NT | 100 | 386 | 85 | ±500 |
| ±12 | ±0.625 | 15 | 9-18 | PXB15-12D12/NT | 100 | 1506 | 87 | ±150 |
| ±12 | ±0.625 | 15 | 9-36 | PXB15-24WD12/NT | 100 | 753 | 87 | ±150 |
| ±12 | ±0.625 | 15 | 18-36 | PXB15-24D12/NT | 100 | 744 | 88 | ±150 |
| ±12 | ±0.625 | 15 | 18-75 | PXB15-48WD12/NT | 100 | 382 | 86 | ±150 |
| ±12 | ±0.625 | 15 | 36-75 | PXB15-48D12/NT | 100 | 368 | 89 | ±150 |
| ±15 | ±0.500 | 15 | 9-18 | PXB15-12D15/NT | 100 | 1488 | 88 | ±100 |
| ±15 | ±0.500 | 15 | 9-36 | PXB15-24WD15/NT | 100 | 744 | 88 | ±100 |
| ±15 | ±0.500 | 15 | 18-36 | PXB15-24D15/NT | 100 | 744 | 88 | ±100 |
| ±15 | ±0.500 | 15 | 18-75 | PXB15-48WD15/NT | 100 | 377 | 87 | ±100 |
| ±15 | ±0.500 | 15 | 36-75 | PXB15-48D15/NT | 100 | 372 | 88 | ±100 |

Outline Drawing



- All dimensions in inches (mm)
Tolerance: X.XX±0.02 (X.X±0.5)
X.XXX±0.01 (X.XX±0.25)
- Pin pitch tolerance ±0.01(0.25)
- Pin dimension tolerance ±0.004 (0.1)

Pinout

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

Options

| | |
|-----------|--|
| N | Negative logic remote on/off |
| P | Positive logic remote on/off |
| T | Trim - remote adjust (single output models only) |
| Preferred | Example PXB15-24WS3P3/NT |

Other Lambda Industrial Products

| | |
|------|----------------------------------|
| CC-E | 1.5 - 25W, 5, 12, 24 & 48V DC-DC |
| PX | 10 - 40W, 12, 24 & 48V DC-DC |

For Additional Information, please visit
us.tdk-lambda.com/lp/products/px-series.htm