



PXB15 Series

Single and Dual output 15W
DC-DC converters

- Industry Standard 1" x 1" Footprint
- 9-36V or 18-75VDC Input
- Six Sided Shield
- Standard pin out compatible with 2" x 1" products
- Efficiency up to 89%
- Fixed switching frequency

Key Market Segments & Applications

Telecom/Datacom
Process Control
Wireless Network
Measurement & Test

PXB15 Features and Benefits

Features

- UL, C-UL, VDE CE
- 2:1 and 4:1 Range Input
- Low Profile

Benefits

- Easier system approvals
- Less parts to inventory
- Reduced radiated noise

Specifications	Single Output	Dual Output
Max Output Power	15W	
Voltage Accuracy	+/-1%	
Voltage Adjustment (1)	+/-10%	
Minimum Load	None	
Line Regulation Single/Dual output	+/-0.2%	+/-0.5%
Load Regulation Single/Dual output	+/-0.2%	+/-1.0%
Cross regulation	+/-5%	
Ripple and Noise	See table	
Start up time	Nominal VIN and constant Resistive load	Power Up 30mS Remote ON/OFF 30mS
Start up voltage 2:1 Input 12V/24V/48V	9VDC/17VDC/33VDC	
Start up voltage 4:1 Input 24V/48V	9VDC/18VDC	
Shut down voltage 2:1 Input 12V/24V/48V	8VDC/14.5VDC/30.5VDC	
Shut down voltage 4:1 24V/48V	8VDC/16VDC	
Remote on/off	Positive Logic: ON: Open or 3-15V, OFF Short or <1.2V Negative Logic: ON: Short or <1.2V, OFF: Open or 3-15V	
Efficiency	See table	
Temperature Coefficient	<+/-0.02%/°C	
Operating Temperature	-40° to +85°C, derating necessary above 60°C	
Storage Temperature	-55° to +125°C	
Thermal Shock	MIL-STD-810F	
Relative Humidity (non condensing)	5 to 95%	
Transient Response (25% step load change)	250µs recovery	
Overvoltage Protection (Zener clamp)	120-130%	
Overcurrent and Short Circuit Protection	Typically at 150%, hiccup with self recovery	
Input Surge Voltage (Maximum for 100ms)	12V input: 36V, 24V input: 50V, 48V input: 100V	
Reflected input ripple (peak to peak)	30mA	
Isolation Voltage Input to Output	1600VDC minimum	
Input (output) to Case	1000VDC minimum	
Isolation Resistance	10 ⁹ Ω minimum	
Isolation Capacitance (max)	1000pF	
Switching Frequency (Fixed)	400kHz typ	
MTBF (BELLCORE TR-NWT-000332)	1,330,000 hours	
Vibration	MIL-STD-810F	
Conducted and Radiated Emissions (2)	EN55022 Level A	
Immunity (3)	EN61000-4-2, -3, -4, -5, -6 Pref Criteria A	
Safety Agency Certifications	IEC60950-1, UL60950-1, EN60950-1, CE Mark	
Size (mm) (L x W x H)	25.4 x 25.4 x 9.9	
Weight (g)	15	
Warranty (yrs)	2	

Model Selector								
Model	Output Voltage V	Output Current A	Output Power W	Input Voltage V	Nominal Input Current mA	Efficiency %	Ripple and Noise mVp-p	Max Load Capacitance uF
4:1 INPUT Single Outputs								
PXB15-24WS3P3	3.3V	4.0A	13.2W	9 - 36VDC	688mA	86%	75mVp-p	12000uF
PXB15-48WS3P3	3.3V	4.0A	13.2W	18 - 75VDC	336mA	86%	75mVp-p	12000uF
PXB15-24WS05	5.0V	3.0A	15W	9 - 36VDC	762mA	86%	75mVp-p	6000uF
PXB15-48WS05	5.0V	3.0A	15W	18 - 75VDC	382mA	86%	75mVp-p	6000uF
PXB15-24WS12	12V	1.25A	15W	9 - 36VDC	783mA	87%	100mVp-p	1000uF
PXB15-48WS12	12V	1.25A	15W	18 - 75VDC	392mA	87%	100mVp-p	1000uF
PXB15-24WS15	15V	1.0A	15W	9 - 36VDC	753mA	87%	100mVp-p	660uF
PXB15-48WS15	15V	1.0A	15W	18 - 75VDC	377mA	87%	100mVp-p	660uF
4:1 INPUT Dual Outputs								
PXB15-24WD05	±5V	1.5A	15W	9 - 36VDC	772mA	85%	100mVp-p	±3000uF
PXB15-24WD12	±12V	0.625A	15W	9 - 36VDC	753mA	87%	100mVp-p	±520uF
PXB15-24WD15	±15V	0.5A	15W	9 - 36VDC	744mA	88%	100mVp-p	±330uF
PXB15-48WD05	±5V	1.5A	15W	18 - 75VDC	386mA	85%	100mVp-p	±3000uF
PXB15-48WD12	±12V	0.625A	15W	18 - 75VDC	382mA	86%	100mVp-p	±520uF
PXB15-48WD15	±15V	0.5A	15W	18 - 75VDC	377mA	87%	100mVp-p	±330uF
2:1 INPUT Single Outputs								
PXB15-12S3P3	3.3V	4.0A	13.2W	9 - 18VDC	1375mA	84%	75mVp-p	12000uF
PXB15-24S3P3	3.3V	4.0A	13.2W	18 - 36VDC	671mA	86%	75mVp-p	12000uF
PXB15-48S3P3	3.3V	4.0A	13.2W	36 - 75VDC	336mA	86%	75mVp-p	12000uF
PXB15-12S05	5.0V	3.0A	15W	9 - 18VDC	1542mA	86%	75mVp-p	6000uF
PXB15-24S05	5.0V	3.0A	15W	18 - 36VDC	763mA	86%	75mVp-p	6000uF
PXB15-48S05	5.0V	3.0A	15W	36 - 75VDC	372mA	88%	75mVp-p	6000uF
PXB15-12S12	12V	1.25A	15W	9 - 18VDC	1605mA	85%	100mVp-p	1000uF
PXB15-24S12	12V	1.25A	15W	18 - 36VDC	783mA	87%	100mVp-p	1000uF
PXB15-48S12	12V	1.25A	15W	36 - 75VDC	387mA	88%	100mVp-p	1000uF
PXB15-12S15	15V	1.0A	15W	9 - 18VDC	1506mA	87%	100mVp-p	660uF
PXB15-24S15	15V	1.0A	15W	18 - 36VDC	744mA	88%	100mVp-p	660uF
PXB15-48S15	15V	1.0A	15W	36 - 75VDC	372mA	88%	100mVp-p	660uF
2:1 INPUT Dual Outputs								
PXB15-12D05	±5V	±1.5A	15W	9 - 18VDC	1543mA	85%	100mVp-p	±3000uF
PXB15-12D12	±12V	±0.625A	15W	9 - 18VDC	1506mA	87%	100mVp-p	±520uF
PXB15-12D15	±15V	±0.5A	15W	9 - 18VDC	1488mA	88%	100mVp-p	±330uF
PXB15-24D05	±5V	±1.5A	15W	18 - 36VDC	772mA	85%	100mVp-p	±3000uF
PXB15-24D12	±12V	±0.625A	15W	18 - 36VDC	744mA	88%	100mVp-p	±520uF
PXB15-24D15	±15V	±0.5A	15W	18 - 36VDC	744mA	88%	100mVp-p	±320uF
PXB15-48D05	±5V	±1.5A	15W	36 - 75VDC	386mA	85%	100mVp-p	±3000uF
PXB15-48D12	±12V	±0.625A	15W	36 - 75VDC	368mA	89%	100mVp-p	±520uF
PXB15-48D15	±15V	±0.5A	15W	36 - 75VDC	372mA	88%	100mVp-p	±330uF

Specification Notes:

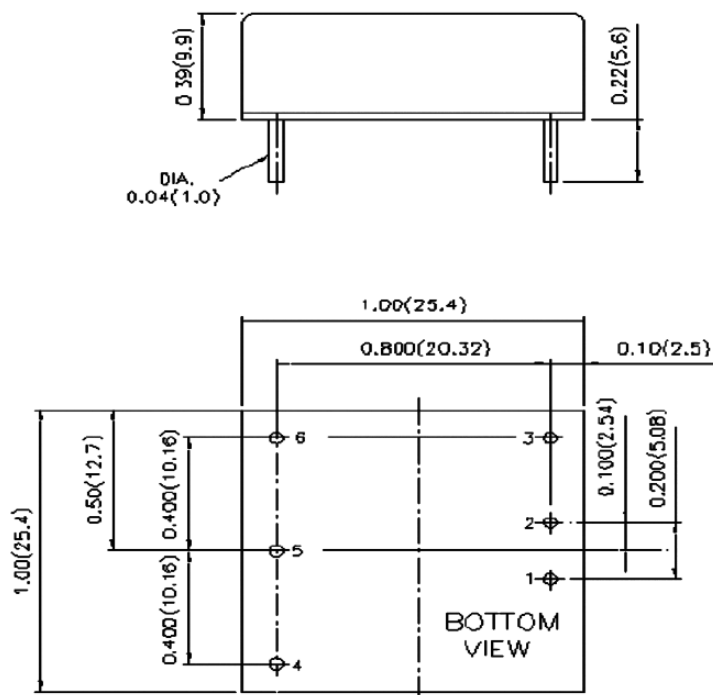
- (1) Output can be trimmed using an external resistor (Single Output only).
 (2) To meet EN55022 Class B external filter components are required. See additional application note.
 (3) To meet EN61000-4-4, EN61000-4-5 an external filter capacitor is required. See additional application note.

Options	
Suffix	Description
P	Positive Logic
N	Negative Logic
T	Trim

–NT as standard on Single Outputs, N as standard on Dual Outputs.

Delete suffix if not required

Outline Drawing PXB15 Series

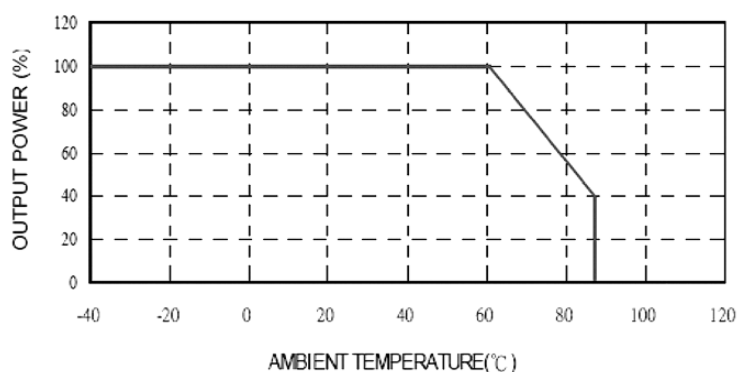


1. All dimensions in Inches (mm)
Tolerance: X.XX±0.02 (X.X±0.5)
X.XXX±0.01 (X.XX±0.25)
2. Pin pitch tolerance ±0.01(0.25)
3. Pin dimension tolerance ±0.004 (0.1)

Pinout

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

Derating Curve PXB15 Series



TDK-LAMBDA EMEA

www.emea.tdk-lambda.com



TDK-Lambda France SAS

ZAC des Delaches
CS 41077
9 rue Thuillere
91978 Villebon Courtaboeuf
France
Tel: +33 1 60 12 71 65
Fax: +33 1 60 12 71 66
france@fr.tdk-lambda.com
www.fr.tdk-lambda.com



Italy Sales Office

Via dei Lavoratori 128/130
20092 Cinisello Balsamo (MI)
Italy
Tel: +39 02 61 29 38 63
Fax: +39 02 61 29 09 00
info.italia@it.tdk-lambda.com
www.it.tdk-lambda.com



Netherlands

info@tdk-lambda.nl
www.tdk-lambda.nl



TDK-Lambda Germany GmbH

Karl-Bold-Strasse 40
77855 Achern
Germany
Tel: +49 7841 666 0
Fax: +49 7841 5000
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



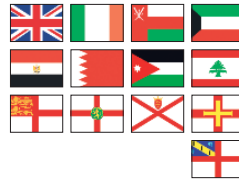
Austria Sales Office

Aredstrasse 22
2544 Leobersdorf
Austria
Tel: +43 2256 655 84
Fax: +43 2256 645 12
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



Scandinavia Sales Office

Valdemarsgade 7
4100 Ringsted
Denmark
Tel: +45 58 10 35 56
Fax: +45 69 80 44 99
info@de.tdk-lambda.com
www.emea.tdk-lambda.com



TDK-Lambda UK Ltd.

Kingsley Avenue
Ilfracombe
Devon EX34 8ES
United Kingdom
Tel: +44 (0) 12 71 85 66 66
Fax: +44 (0) 12 71 86 48 94
powersolutions@uk.tdk-lambda.com
www.uk.tdk-lambda.com



TDK-Lambda Ltd.

Kibbutz
Givat Hashlosa 48800
Israel
Tel: +9 723 902 4333
Fax: +9 723 902 4777
info@tdk-lambda.co.il
www.tdk-lambda.co.il



Russia

Technical Support:

St Petersburg
Tel: +7 (812) 6580463

Sales:

Moscow
info@tdk-lambda.ru
www.tdk-lambda.ru

Local Distribution