

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

Features

- ◆ Industry Standard 2" x 1" Footprint
- ◆ Six Sided Shielding
- ◆ Agency Approved
- ◆ 12V, 24V and 48V Inputs
- ◆ UL, CSA, EN, CE approvals
- ◆ Wide range input



Key Market Segments & Applications



Specifications			
Model	PXD10	PXD15	PXD20
Max Output Power	10W	15W	20W
Voltage Accuracy	±2%	±1%	±1%
Voltage Adjustment (Single Output 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% Dual Output: ±2%	Single Output: ±1% Dual Output: ±2%	±0.5%
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 Negative Logic: ON: Short or <1.2V, OFF: Open or 3.5-12V		
Temperature Coefficient	<±0.02%/°C		
Operating Temperature	See derating curves		
Maximum Case Temperature	100°C		
Storage Temperature	-55 to 105°C		
Thermal Shock	MIL-STD-810D		
Relative Humidity	5 to 95% (non condensing)		
Transient Response (25% step load chg.)	500us recovery	500us recovery	300us 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 ⁹ Ohms minimum		
Isolation Capacitance (max)	300pF		1000pF
Typical Switching Frequency (Fixed)	300kHz	Single: 500kHz 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	See Installation Diagrams		
Immunity	EN61000-4-2, -3, -4, -5, -6 Pref Criteria 2		
Safety Agency Approval	IEC60950-1, UL60950-1, EN60950-1, CE Mark (48V input only)		
Size (L x W x H)	2x1x0.4"		
Weight	0.95 oz (27g)		
Warranty	Two Year		

Notes:

- (1) To meet regulation & noise specifications. Operation at zero load will not damage the device * See website for detailed specifications
 (2) 12uH 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 Curr (A)	Output Power (W)	Input Volt (V)	Model	Eff.(%)
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	±1.5	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

Pinout

PIN#	PXD10/PXD15		PXD20	
	Single	Dual	Single	Dual
1			+Vin	
2			-Vin	
3			+Vout	
4	No Pin	Com	Trim	Com
5			-Vout	
6	Remote On/Off*		Remote On/Off	

* optional, see table below. If not requested, Pin is not fitted.

Remote On/Off Option

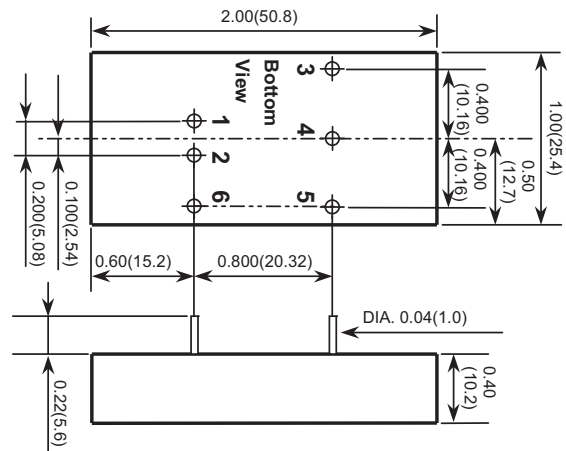
Suffix	Function
-P*	Positive Logic (* Included in PXD20 models)
-N	Negative Logic

Example: PXD1548S12-N

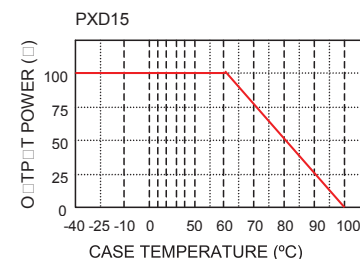
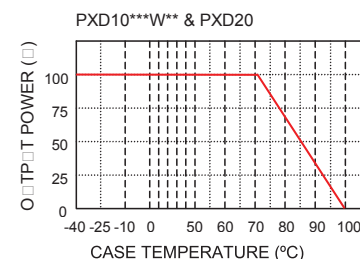
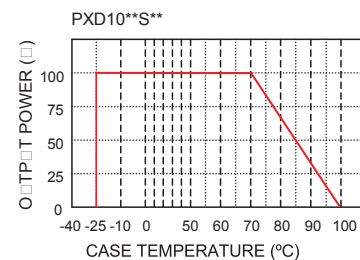
Heat Sink (0.22" high)

HAPXD	(includes thermal adhesive pad)
HAPXBDCLIP	(two clips required when used)

Outline Drawing



Derating Curves



Other Industrial Products

CC-E	1.5-30W, 5 to 48VDC input
PAQ,PAH,PAF	50-700W quarter, half & full bricks

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



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TDK-Lambda:

[PXD1012S3P3](#) [PXD1024S3P3](#) [PXD1024WD15](#) [PXD1024WS05](#) [PXD1024WS05P](#) [PXD1024WS12](#) [PXD1048WD12](#)
[PXD1048WS15](#) [PXD1512D05](#) [PXD1512S12](#) [PXD1512S15](#) [PXD1524D12](#) [PXD1524D15](#) [PXD1524S05](#)
[PXD1524S12](#) [PXD1548D05](#) [PXD1548D12](#) [PXD1548S3P3](#) [PXD1548S3P3P](#) [PXD2012D12](#) [PXD2012S15](#)
[PXD2012S3P3](#) [PXD2024D12](#) [PXD2024D15](#) [PXD2024S05](#) [PXD2024S15](#) [PXD2024S1P8](#) [PXD2024S3P3](#)
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[PXD1048WD15](#) [PXD1524D05](#) [PXD2024S12](#) [PXD1048WS05](#) [PXD1048WS12](#) [PXD2012D15](#) [PXD2048S05N](#)
[PXD1048S3P3](#) [PXD2012S05](#) [PXD1548D15](#) [PXD1024WS15](#) [PXD2048S1P8](#) [PXD1024WD12](#)