

Enclosed or L Bracket

PCB Mount

Non Isolated

# DC-DC Selector

Nominal Input Voltage	# of Outputs	Output Power (W)							
		3	10	30	50	100	150	300	600
5V	Single	CC-E							
		iAC, iBA							
5V	Dual	CC-E							
	12V	Single	CC-E						
iA, iBC									
PXD,PXE,PF									
12V	Dual	CC-E							
		PXD,PXE,PF							
	Triple			PXF					
24V	Single	CC-E							
		PXD,PXE,PF							
		PH-F							
		PH-S							
		iQ						PAH300	
		PAF							
	Dual	CC-E							
	PXD,PXE,PF								
				PAH75D*					
Triple			PXF						
48V	Single	CC-E							
		PXD,PXE,PF							
		iSA, PAE*, iE, iP*							
		iQ, PAQ*							
		PH-F							
		PH-S							
		iH, PAH							
	PAF								
	Dual	CC-E							
		PXD,PXE,PF							
PAQ*									
PAH75D*									
Triple			PXF						
Multiple							Vega*		
82-185VDC	Single	PH-F							
		PH-S							
200-400VDC	Single	PH-F							
		PH-S							
								PAF	

\* See website



## Single, Dual, Triple Output 40W DC-DC Converters

- ◆ Industry Standard 2" x 2" Footprint
- ◆ Six Sided Shielding
- ◆ Agency Approved
- ◆ 12, 24V, and 48V Inputs (including 4:1 ranges)

**RoHS**

### Key Market Segments & Applications

Telecom, Datacom, Point of Load

## Features & Benefits

Feature	Benefit
◆ UL, CSA, EN, CE approvals	◆ Easier system approvals
◆ Wide range input	◆ Less parts to inventory
◆ Six sided shielding	◆ Reduced radiated noise

## Specifications

ITEMS	
Maximum Output Power	40W
Voltage Accuracy (Full Load, Nom. Vin)	Single, Dual and Triple Main $\pm 1\%$ , Triple Auxiliaries $\pm 5\%$
Voltage Adjustment (1)	$\pm 10\%$ (Single and Dual Output Only)
Minimum Load, each output (2)	Single Output = 0%, Dual and Triple = 10% of full load rating
Line Regulation	Single / Dual $\pm 0.5\%$ , Triple (main) $\pm 1\%$ , Triple (auxiliary) $\pm 5\%$
Load Regulation (10% to 100%) (3)	Single $\pm 0.5\%$ , Dual $\pm 1\%$ , Triple (main) $\pm 2\%$ , Triple (auxiliary) $\pm 5\%$
Cross Regulation (25% to 100%) (4)	Triple (main) $\pm 1\%$ , Dual/Triple (auxiliary) $\pm 5\%$
Start up time	PXF40: 25ms typ., PXF40xxW: 20ms max.
Remote on/off (referenced to negative input)	Positive Logic: ON: Open or 3.0-12V, OFF Short or $< 1.2V$
Temperature Coefficient	$< \pm 0.02\%/^{\circ}C$
Operating Temperature	See derating curves
Maximum Case Temperature	PXF40: 100 $^{\circ}C$ , PXF40-xxW 105 $^{\circ}C$ (Over temp 110 $^{\circ}C$ )
Storage Temperature	PXF40: -55 to 105 $^{\circ}C$ , PXF40xxW 125 $^{\circ}C$
Thermal Shock	MIL-STD-810F
Relative Humidity (non condensing)	5 to 95%
Transient Response (25% step load change)	250us recovery
Overvoltage Protection (Zener clamp)	3.3V: 3.9V, 5V: 6.2V, 12V: 15V, 15V: 18V
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) (6)	PXF40: 40mA, PXF40xxW: 20mA
Isolation Voltage	Input - Output, Input to Case: 1600VDC minimum
Isolation Resistance	10 $^{\circ}$ Ohms minimum
Isolation Capacitance (max)	PXF40: 1000pF, PXF40xxW: 2500pF
Switching Frequency (Fixed)	300kHz (typ.)
MTBF (BELLCORE TR-NWT-000332)	PXF40: 1,398,000; PXF40xxW: 1,105,000 hours
Vibration	10 - 55Hz, 10G, 30 minutes each X, Y, Z axis
Conducted and Radiated Emissions	EN55022 Level A, see installation manual
Immunity	EN61000-4-2, -3, -4, -5, -6
Safety Agency Approval	IEC60950-1, UL60950-1, EN60950-1, CE Mark (48V input only)
Size (L x W x H)	2 x 2 x 0.4"
Weight	2.11 oz (60g)
Warranty	Two Year

(1) Maximum output deviation is 10% inclusive of remote sense and trim. If remote sense is not being used, the +Sense and - Sense should be connected to their corresponding outputs; + output, -output.  
 (2) Dual and Triple output models require a minimum load of 10% on the output to maintain specified regulation. No load operation will not damage the device.  
 (3) Load regulation for triple output: Main output:10-100%, with 10-100% balanced load on auxiliaries. Auxiliary outputs: 10% to 100% balanced on all outputs.  
 (4) Cross regulation for dual output: asymmetrical load 25% / 100% full load. Cross regulation for triple output: Main output 100% load, auxiliary 100%, other auxiliary 25% to 100%. Auxiliary outputs: main output 100% load, auxiliary 100%, other auxiliary 25% to 100% or main output 25%, auxiliary 25%, other auxiliary 25% to 100%.  
 (5) An external filter capacitor is required for normal operation. The capacitor should be capable of handling a 1A ripple current for 48V and 24V models.  
 (6) Simulated Source impedance of 12uH placed in series with + input.

# PXF Series

## Model Selector

Output Volt(V)	Output Curr(A)	Input Volt(VDC)	Model	Ripple/Noise (mV)	Eff.(%)	Max Load Cap(uF)
<b>Single Outputs</b>						
3.3	8	9 - 18	PXF40-12S3P3	50	84	21000
3.3	10	9 - 36	PXF40-24WS3P3	50	86	25750
3.3	8	18 - 36	PXF40-24S3P3	50	87	21000
3.3	10	18 - 75	PXF40-48WS3P3	50	86	25750
3.3	8	36 - 75	PXF40-48S3P3	50	88	21000
5	8	9 - 18	PXF40-12S05	50	86	13600
5	8	9 - 36	PXF40-24WS05	50	87	13600
5	8	18 - 36	PXF40-24S05	50	89	13600
5	8	18 - 75	PXF40-48WS05	50	88	13600
5	8	36 - 75	PXF40-48S05	50	90	13600
12	3.333	9 - 18	PXF40-12S12	75	86	2360
12	3.333	9 - 36	PXF40-24WS12	75	87	2360
12	3.333	18 - 36	PXF40-24S12	75	88	2360
12	3.333	18 - 75	PXF40-48WS12	75	87	2360
12	3.333	36 - 75	PXF40-48S12	75	89	2360
15	2.666	9 - 18	PXF40-12S15	75	87	1510
15	2.666	9 - 36	PXF40-24WS15	75	87	1510
15	2.666	18 - 36	PXF40-24S15	75	89	1510
15	2.666	18 - 75	PXF40-48WS15	75	87	1510
15	2.666	36 - 75	PXF40-48S15	75	89	1510
<b>Dual Outputs</b>						
±12	±1.667	9 - 36	PXF40-24WD12	120	86	±1200
±12	±1.8	9 - 18	PXF40-12D12	120	85	±1200
±12	±1.8	18 - 36	PXF40-24D12	120	87	±1200
±12	±1.667	18 - 75	PXF40-48WD12	120	86	±1200
±12	±1.8	36 - 75	PXF40-48D12	120	87	±1200
±15	±1.333	9 - 36	PXF40-24WD15	150	86	±750
±15	±1.4	9 - 18	PXF40-12D15	150	85	±750
±15	±1.4	18 - 36	PXF40-24D15	150	87	±750
±15	±1.333	18 - 75	PXF40-48WD15	150	86	±750
±15	±1.4	36 - 75	PXF40-48D15	150	87	±750
<b>Triple Outputs</b>						
3.3V±12V	6.0±0.4	9 - 18	PXF40-12T3312	50 / 75	83	13000,±330
3.3V±12V	6.0±0.4	18 - 36	PXF40-24T3312	50 / 75	85	13000,±330
3.3V±12V	6.0±0.4	36 - 75	PXF40-48T3312	50 / 75	86	13000,±330
5V±12V	6.0±0.4	9 - 18	PXF40-12T0512	50 / 75	85	6800,±330
5V±12V	6.0±0.4	18 - 36	PXF40-24T0512	50 / 75	87	6800,±330
5V±12V	6.0±0.4	36 - 75	PXF40-48T0512	50 / 75	88	6800,±330

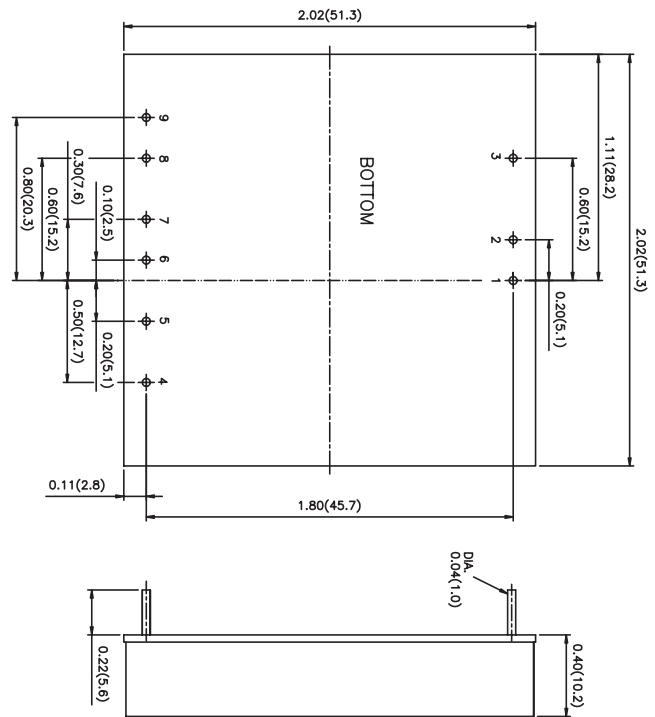
## Pinout

PIN#	Single Output	Dual Output	Triple Output
1	+ Input	+ Input	+ Input
2	- Input	- Input	- Input
3	Remote on/off	Remote on/off	Remote on/off
4	No Pin	No Pin	+ Aux
5	- Sense (Note 1)	+ VO	Common
6	+ Sense (Note 1)	Common	-Aux
7	+ Output	Common	+ Output
8	- Output	- VO	- Output (Com)
9	Trim	Trim	N/C

## Heat Sink (0.22" high)

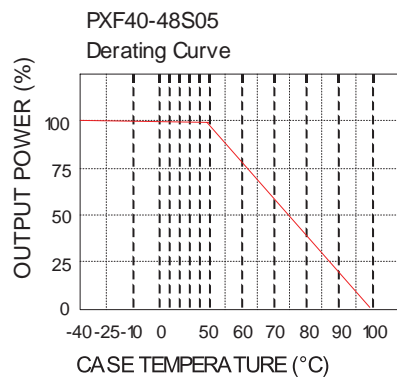
7G0026A (includes thermal adhesive pad)

## Outline Drawing



ALL DIMENSIONS IN INCHES(mm)  
 PIN PITCH TOLERANCE ±0.014(0.35)  
 Tolerance : x.xx±0.02(x.x±0.5)  
 x.xxx±0.01(x.xx±0.25)

## Derating Curves



## Other Lambda Industrial Products

CC-E 1.5-25W, 5 to 48VDC input  
 PAQ }  
 PAH } 50 - 700W quarter, half & full bricks  
 PAF }