



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

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

Key Market Segments & Applications

Telecom, Datacom, Point of Load

Features & Benefits

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

Specifications

ITEMS	
Max Output Power	40W
Voltage Accuracy (Full Load, Nom. Vin)	Single, / Dual $\pm 1\%$, Triple Main $\pm 1\%$, Triple Auxiliary $\pm 5\%$
Voltage Adjustment (Single Output Only) (1)	$\pm 10\%$
Minimum Load, each output (2)	Single Output 0%, Dual and Triple 10% of full load
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	25ms typ.
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	100°C
Storage Temperature	-55 to 105°C
Thermal Shock	MIL-STD-810D
Relative Humidity (non condensing)	5 to 95%
Transient Response (25% step load change)	300us 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)	40mA
Isolation Voltage	1600VDC minimum
Isolation Resistance	10 ⁹ Ohms minimum
Isolation Capacitance (max)	1000pF
Switching Frequency (Fixed)	300kHz (typ.)
MTBF (BELLCORE TR-NWT-000332)	1,398,000 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	IEC606950, UL1950, EN60950, CE Mark (48V input only)
Size (L x W x H)	2 x 2 x 0.4"
Weight	2.11 oz (60g)
Warranty	One 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.

Model Selector

Output Volt(V)	Output Curr(A)	Input Volt(VDC)	Model	Ripple/Noise (mV)	Eff.(%)	Max Load Cap(uF)
Single Outputs						
3.3	8	9 - 18	PXF40-12S3P3	50	84	21000
3.3	8	18 - 36	PXF40-24S3P3	50	87	21000
3.3	8	36 - 75	PXF40-48S3P3	50	88	21000
5	8	9 - 18	PXF40-12S05	50	86	13600
5	8	18 - 36	PXF40-24S05	50	89	13600
5	8	36 - 75	PXF40-48S05	50	90	13600
12	3.333	9 - 18	PXF40-12S12	75	86	2360
12	3.333	18 - 36	PXF40-24S12	75	88	2360
12	3.333	36 - 75	PXF40-48S12	75	89	2360
15	2.666	9 - 18	PXF40-12S15	75	87	1510
15	2.666	18 - 36	PXF40-24S15	75	89	1510
15	2.666	36 - 75	PXF40-48S15	75	89	1510
Dual Outputs						
±12	±1.80	9 - 18	PXF40-12D12	120	85	±1200
±12	±1.80	18 - 36	PXF40-24D12	120	87	±1200
±12	±1.80	36 - 75	PXF40-48D12	120	87	±1200
±15	±1.40	9 - 18	PXF40-12D15	150	85	±750
±15	±1.40	18 - 36	PXF40-24D15	150	87	±750
±15	±1.40	36 - 75	PXF40-48D15	150	87	±750
Triple Outputs						
3.3,±12	6.0,±0.40	9 - 18	PXF40-12T3312	50/75	83	13000,±330
3.3,±12	6.0,±0.40	18 - 36	PXF40-24T3312	50/75	85	13000,±330
3.3,±12	6.0,±0.40	36 - 75	PXF40-48T3312	50/75	86	13000,±330
5,±12	6.0,±0.40	9 - 18	PXF40-12T0512	50/75	85	6800,±330
5,±12	6.0,±0.40	18 - 36	PXF40-24T0512	50/75	87	6800,±330
5,±12	6.0,±0.40	36 - 75	PXF40-48T0512	50/75	88	6800,±330

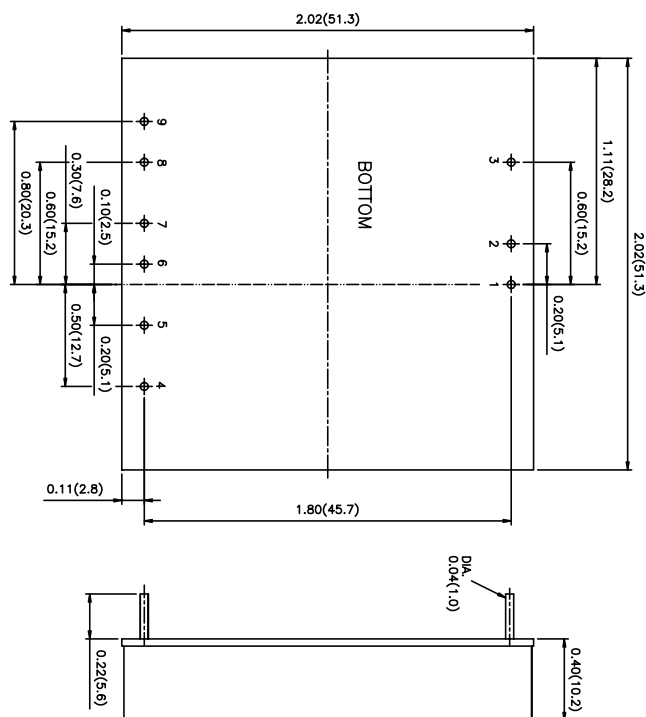
Pinout

PIN#	Single Output	Function 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

Other Lambda Industrial Products

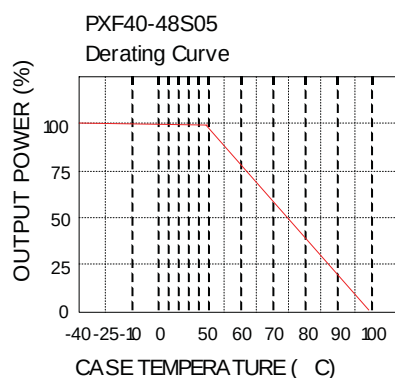
SX	Surface Mount 20W, 24 & 48 input DC-DC converters
PS	1.5-10W, 5V, 12V, 24V & 48V input DC-DC converters
PAQ	} 50 - 700W quarter, half & full bricks
PAH	
PAF	

Outline Drawing



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

Derating Curves



For Additional Information, please visit
www.lambdapower.com/products/px-series.htm