

**Input Ranges :**

**9-75 VDC**

**Output Output:**

**Single Output**

**5.0V - 24V**

**Dual Output**

**5.0V/3.3V, 5.0V/5.0V**

**5.0V/12V, 12V/12V**

**15V/15V**

**Triple Output**

**5.0V / ±12V,**

**5.0V / ±15V,**

**12V / ±05V,**

**15V / ±05V,**

**Quad Output**

**±5.0V / ±12V,**

**±5.0V / ±15V**

**Output Power:**

**40 - 60 W**

**FEATURES**

**General:**

- Output Power to 40 Watts
- Wide Input Range : 10-75Vdc
- 2:1 & 3:1 Input Voltage Range
- High Conversion Efficiency > 80%
- Line & Load Regulation to ±1.0%
- Fixed Operating Frequency
- Output Over-Load Protection
- Output Over-Voltage Protection
- Output Trim or Sense Functions
- Remote Sense
- Remote On/Off
- Safety: UL File# 149006

**Isolation:**

- Isolation Voltage > 500V

**APPLICATIONS**

- Distributed Power Systems
- Workstations
- Computer Equipment
- Communications Equipment



The **P** series DC-DC converters feature high power density, high efficiency and excellent line & load regulation. Using innovative design technique, state-of-the-art Current Mode PWM control, and Surface Mount packaging & manufacturing technology, the P series provides up to 30 watts of well regulated power in a encapsulated 2.56" x 4.56" x 0.83" metal case with six-sided EMI/RFI shielding. Automatic feed forward compensation, pulse-by-pulse current limiting, and output short circuit protection are standard for all models.

These converters are designed for wide input range telecommunications, industrial and instrument applications. The wide input range (2:1 & 3:1) is ideal for battery or unregulated input applications.

No external components are needed for normal operation. Low ESR capacitors are used to minimize the conductive noise. This package is ideal for all I/O board system and distributed DC power configurations.

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### 1. Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause performance degradation, adversely effect longterm reliability, and cause permanent damage to the device.

Parameter	Conditions / Description	Min	Max	Units
<b>Input Voltage</b>				
Continuous	12	-0.3	18	Vdc
	24	-0.3	36	Vdc
	48	-0.3	75	Vdc
	30	-0.3	30	Vdc
	60	-0.3	60	Vdc
Transient (100mSec.)	12	-0.3	20	Vdc
	24	-0.3	40	Vdc
	48	-0.3	80	Vdc
	30	-0.3	33	Vdc
60	-0.3	66	Vdc	
<b>Operating Temperature</b>	All models, base plate temperature	-40	+95	°C
<b>Storage Temperature</b>	<b>Ambient</b>	-55	+105	°C
<b>Isolation Voltage</b>	Input to Output		+700	Vdc

### 2. Input Specifications

Parameter	Conditions / Description	Min	Nom	Max	Units
<b>Input Voltage</b>					
Voltage Range (Continuous)	12	9	12	18	Vdc
	24	18	24	36	Vdc
	48	36	48	75	Vdc
	30	10	24	30	Vdc
	60	18	48	60	Vdc

### 3. Enable (On-Off Control)

Parameter	Conditions / Description	Min	Nom	Max	Units
<b>Enable Pin</b>					
Open Circuit Voltage			5		Vdc
Source Current				1	mA
<b>Positive Logic</b>	<b>Standard</b>				
On-Control	Logic High or Floating	5.0		18	Vdc
Off-Control		-0.5		1.8	Vdc
<b>Negative Logic</b>	<b>Not Available</b>				

\* Enable pin can be left floating if not used.

### 4. Output Specifications

Parameter	Conditions / Description	Min	Nom	Max	Units
Voltage Accuracy	Please see table				%
Output Current	Please see table				Adc
Over Voltage Protection	Not available				Vdc
Line Regulation				±1.0	%Vout
Load Regulation				±1.0	%Vout
Transient Respoonse	50% ± 25% step load change		200		µSec.
Ripple & Noise	Please see table				mVp-p
Switching Frequency			100		KHz

**5. Output Trim**

Parameter	Conditions / Description	Min	Nom	Max	Units
<b>Negative Trim</b>	Standard				
Trim Up	Trim Pin to (-)Vout or (-)Sense			10	%Vdc
Trim Down	Trim Pin to (+)Vout or (+)Sense	10			%Vdc
<b>Positive Trim</b>	Not Available				

\* Trim pin can be left floating if not used

**6. Environmental and Mechanical Specifications**

Parameter	Conditions / Description	Min	Nom	Max	Units
Operating Temperature	Case Temperature	-25		+85	°C
Storage Temperature		-40		+105	°C
Thermal Impedance	Free Convection		4.0		°C/Watt
Temperature Coefficient				±0.02	%/°C
Shock	Halfsine wave, 3 axes	50			g
Sinusoidal Vibration	GR-63-CORE, Section 5.4.2	1			g
Humidity	Relative Humidity, Non-Condensing	20		95	%R.H.
Case Material	Black Coated Metal				
Weight			1.1 (312)		Oz (g)
MTBF (calculated)	Bellcore TR-NWT-000332 method 1 - parts count	0.5			MHrs

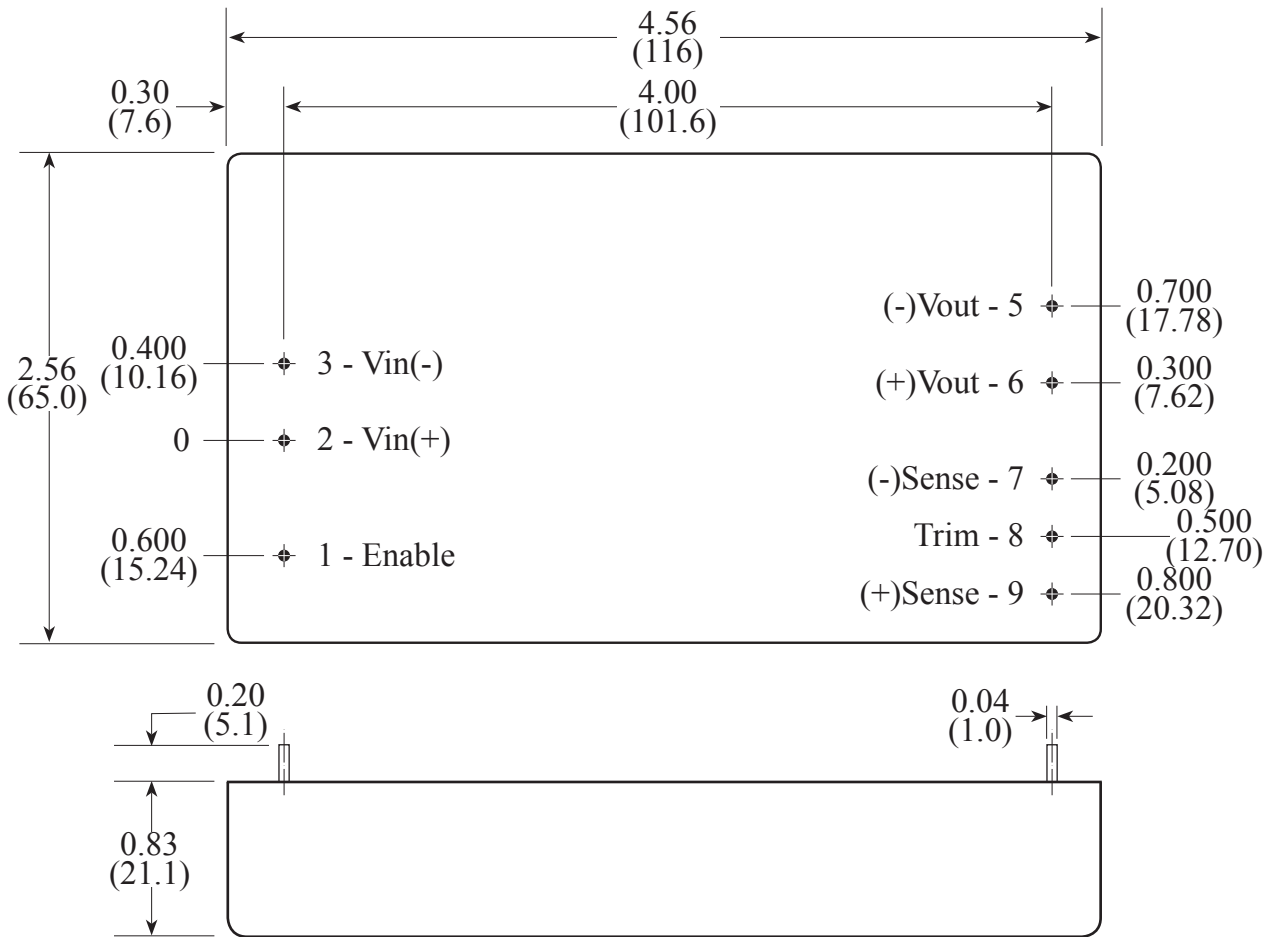
**7. Isolation Specifications**

Parameter	Conditions / Description	Min	Nom	Max	Units
Isolation Voltage					
Input to Output		500			Vdc
I/O to Case		500			Vdc
Isolation Resistance	Input to Output	10			MΩ
Isolation Capacitance	Input to Output		3		nF

INPUT		OUTPUT								EFF. (typ.)	MODEL NO.
Nominal (Range)	Max. Output Power	Voltage (V)			Current (A)		Ripple & Noise		Over Load Protection		
		Set Point	Min.*	Max.*	Min.	Max.	Peak-Peak	R.M.S.			
12 (9 - 18)	40W	5.00	4.90	5.10	0.80	8.0	75mV	15mV	Pulse by Pulse Current Limiting	80%	P40S1205
	40W	12.0	11.88	12.12	0.34	3.4	100mV	25mV		82%	P40S1212
	40W	15.0	14.85	15.15	0.27	2.7	120mV	30mV		82%	P40S1215
	40W	24.0	23.76	24.24	0.17	1.7	200mV	40mV		83%	P40S1224
24 (18 - 36)	40W	5.00	4.90	5.10	0.80	8.0	75mV	15mV		82%	P40S2405
	40W	12.0	11.88	12.12	0.34	3.4	100mV	25mV		83%	P40S2412
	40W	15.0	14.85	15.15	0.27	2.7	120mV	30mV		83%	P40S2415
	40W	24.0	23.76	24.24	0.17	1.7	200mV	40mV		83%	P40S2424
48 (36 - 75)	40W	5.00	4.90	5.10	0.80	8.0	75mV	15mV		82%	P40S4805
	40W	12.0	11.88	12.12	0.34	3.4	100mV	25mV		83%	P40S4812
	40W	15.0	14.85	15.15	0.27	2.7	120mV	30mV		83%	P40S4815
	40W	24.0	23.76	24.24	0.17	1.7	200mV	40mV		83%	P40S4824
30 (10 - 30)	40W	5.00	4.90	5.10	0.80	8.0	75mV	15mV		80%	P40S3005
	40W	12.0	11.88	12.12	0.34	3.4	100mV	25mV		82%	P40S3012
	40W	15.0	14.85	15.15	0.27	2.7	120mV	30mV		82%	P40S3015
	40W	24.0	23.76	24.24	0.17	1.7	200mV	40mV		82%	P40S3024
60 (20 - 60)	40W	5.00	4.90	5.10	0.80	8.0	75mV	15mV	80%	P40S6005	
	40W	12.0	11.88	12.12	0.34	3.4	100mV	25mV	82%	P40S6012	
	40W	15.0	14.85	15.15	0.27	2.7	120mV	30mV	82%	P40S6015	
	40W	24.0	23.76	24.24	0.17	1.7	200mV	40mV	82%	P40S6024	

\* Combined Line & Load Regulation.

**PC Board Mount**



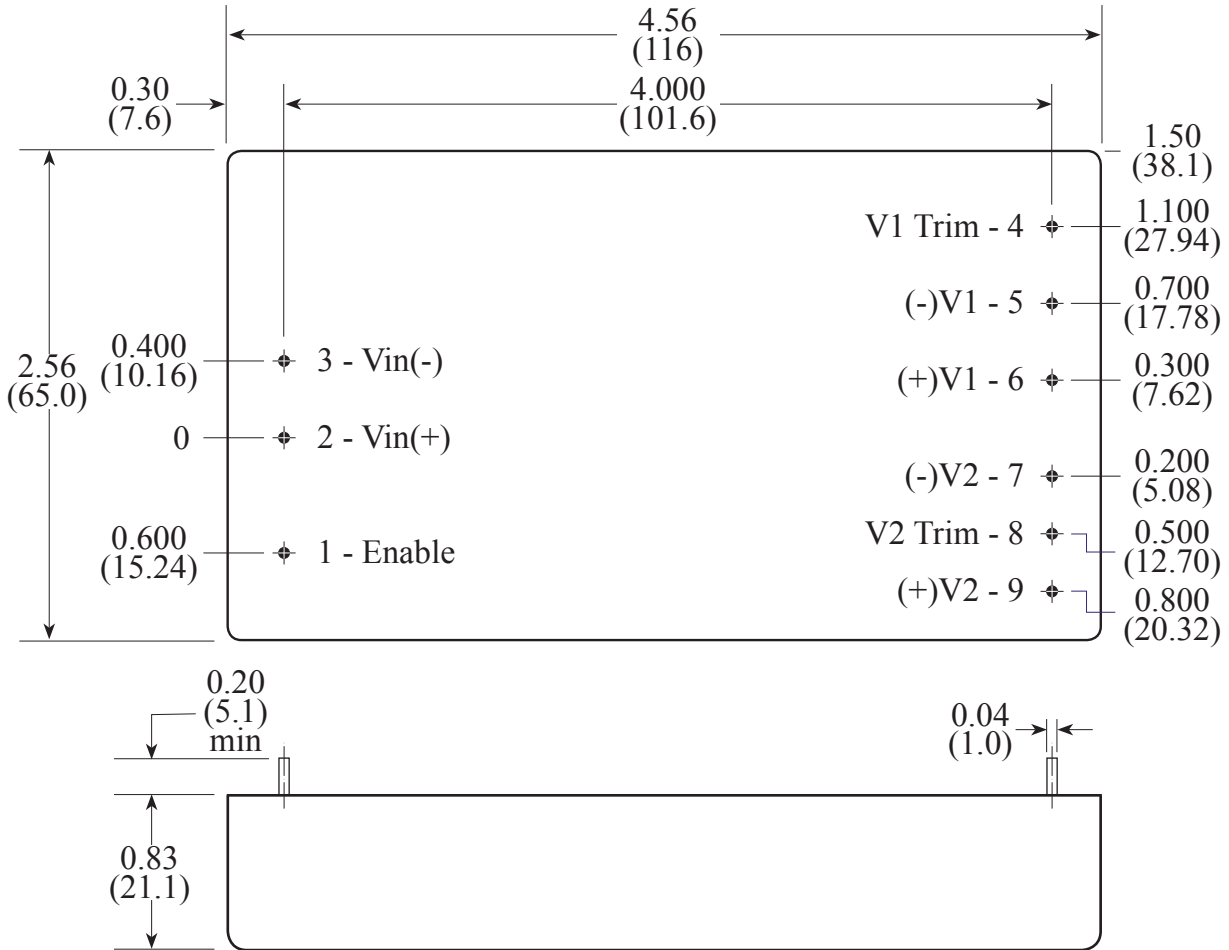
**Product Numbering System & Selection Guide**

<b>P</b>	<b>40</b>	<b>S</b>	<b>24</b>	<b>05</b>
Series No.	Output Power	No Output	Input Voltage	V1 Output Voltage
<b>P</b>	<b>40</b> : 40W	<b>S</b> : Single	<b>12</b> : 10-20V	<b>05</b> : 5V
			<b>24</b> : 18-36V	<b>12</b> : 12V
			<b>48</b> : 36-75V	<b>15</b> : 15V
			<b>30</b> : 10-30V	
			<b>60</b> : 20-60V	

INPUT		OUTPUT										Short Circuit Protection	Over Temp. Protect	EFF. (typ.)	MODEL NO.
Nominal (Range)	Max Output Power	Voltage (V)					Current (A)			Ripple & Noise					
		#	Set Point	Min.*	Max.*	#	Min.	Max.	Peak-Peak	R.M.S.					
12 (9-18)	34W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	78%	P40D1205-03
		3.3V	V2	3.30	3.20	3.40	I2	0.4	4.0	75mV	15mV			80%	P40D1205-05
	40W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV			82%	P40D1205-12
		5.0V	V2	5.00	4.90	5.10	I2	0.4	4.0	75mV	15mV			82%	P60D1205-12
	40W	12V	V1	12.00	11.90	12.10	I1	0.2	1.7	100mV	25mV			82%	P40D1212-12
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			82%	P40D1215-15
	60W	5.0V	V1	5.00	4.90	5.10	I1	0.6	6.0	75mV	15mV			82%	P40D1215-15
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV			82%	P40D1215-15
	40W	12V	V1	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV			82%	P40D1215-15
		12V	V2	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV			82%	P40D1215-15
	40W	15V	V1	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV			82%	P40D1215-15
		15V	V2	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV			82%	P40D1215-15
24 (18-36)	34W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	80%	P40D2405-03		
		3.3V	V2	3.30	3.20	3.40	I2	0.4	4.0	75mV	15mV	82%	P40D2405-05		
	40W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	84%	P40D2405-12		
		5.0V	V2	5.00	4.90	5.10	I2	0.4	4.0	75mV	15mV	84%	P60D2405-12		
	40W	12V	V1	12.00	11.90	12.10	I2	0.2	1.7	100mV	25mV	84%	P40D2412-12		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	84%	P40D2412-12		
	60W	5.0V	V1	5.00	4.90	5.10	I1	0.6	6.0	75mV	15mV	84%	P40D2415-15		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	84%	P40D2415-15		
	40W	12V	V1	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	84%	P40D2415-15		
		12V	V2	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	84%	P40D2415-15		
	40W	15V	V1	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	84%	P40D2415-15		
		15V	V2	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	84%	P40D2415-15		
48 (36-75)	34W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	80%	P40D4805-03		
		3.3V	V2	3.30	3.20	3.40	I2	0.4	4.0	75mV	15mV	82%	P40D4805-05		
	40W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	84%	P40D4805-12		
		5.0V	V2	5.00	4.90	5.10	I2	0.4	4.0	75mV	15mV	84%	P60D4805-12		
	40W	12V	V1	12.00	11.90	12.10	I2	0.2	1.7	100mV	25mV	84%	P40D4812-12		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	84%	P40D4812-12		
	60W	5.0V	V1	5.00	4.90	5.10	I1	0.6	6.0	75mV	15mV	84%	P40D4815-15		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	84%	P40D4815-15		
	40W	12V	V1	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	84%	P40D4815-15		
		12V	V2	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	84%	P40D4815-15		
	40W	15V	V1	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	84%	P40D4815-15		
		15V	V2	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	84%	P40D4815-15		
24 (10-30)	34W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	78%	P40D3005-03		
		3.3V	V2	3.30	3.20	3.40	I2	0.4	4.0	75mV	15mV	80%	P40D3005-05		
	40W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	82%	P40D3005-12		
		5.0V	V2	5.00	4.90	5.10	I2	0.4	4.0	75mV	15mV	82%	P60D3005-12		
	40W	12V	V1	12.00	11.90	12.10	I2	0.2	1.7	100mV	25mV	82%	P40D3012-12		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	82%	P40D3012-12		
	60W	5.0V	V1	5.00	4.90	5.10	I1	0.6	6.0	75mV	15mV	82%	P40D3015-15		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	82%	P40D3015-15		
	40W	12V	V1	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	82%	P40D3015-15		
		12V	V2	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	82%	P40D3015-15		
	40W	15V	V1	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	82%	P40D3015-15		
		15V	V2	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	82%	P40D3015-15		
48 (20-60)	34W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	80%	P40D6005-03		
		3.3V	V2	3.30	3.20	3.40	I2	0.4	4.0	75mV	15mV	82%	P40D6005-05		
	40W	5.0V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	82%	P40D6005-12		
		5.0V	V2	5.00	4.90	5.10	I2	0.4	4.0	75mV	15mV	82%	P60D6005-12		
	40W	12V	V1	12.00	11.90	12.10	I2	0.2	1.7	100mV	25mV	82%	P40D6012-12		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	82%	P40D6012-12		
	60W	5.0V	V1	5.00	4.90	5.10	I1	0.6	6.0	75mV	15mV	82%	P40D6015-15		
		12V	V2	12.00	11.90	12.10	I2	0.25	2.5	100mV	25mV	82%	P40D6015-15		
	40W	12V	V1	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	82%	P40D6015-15		
		12V	V2	12.00	11.90	12.10	I2	0.17	1.7	100mV	25mV	82%	P40D6015-15		
	40W	15V	V1	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	82%	P40D6015-15		
		15V	V2	15.00	14.85	15.15	I2	0.14	1.4	120mV	30mV	82%	P40D6015-15		

\* Combined Line & Load (Low Line to High Line, Min. Load to Full Load)

**PC Board Mount**



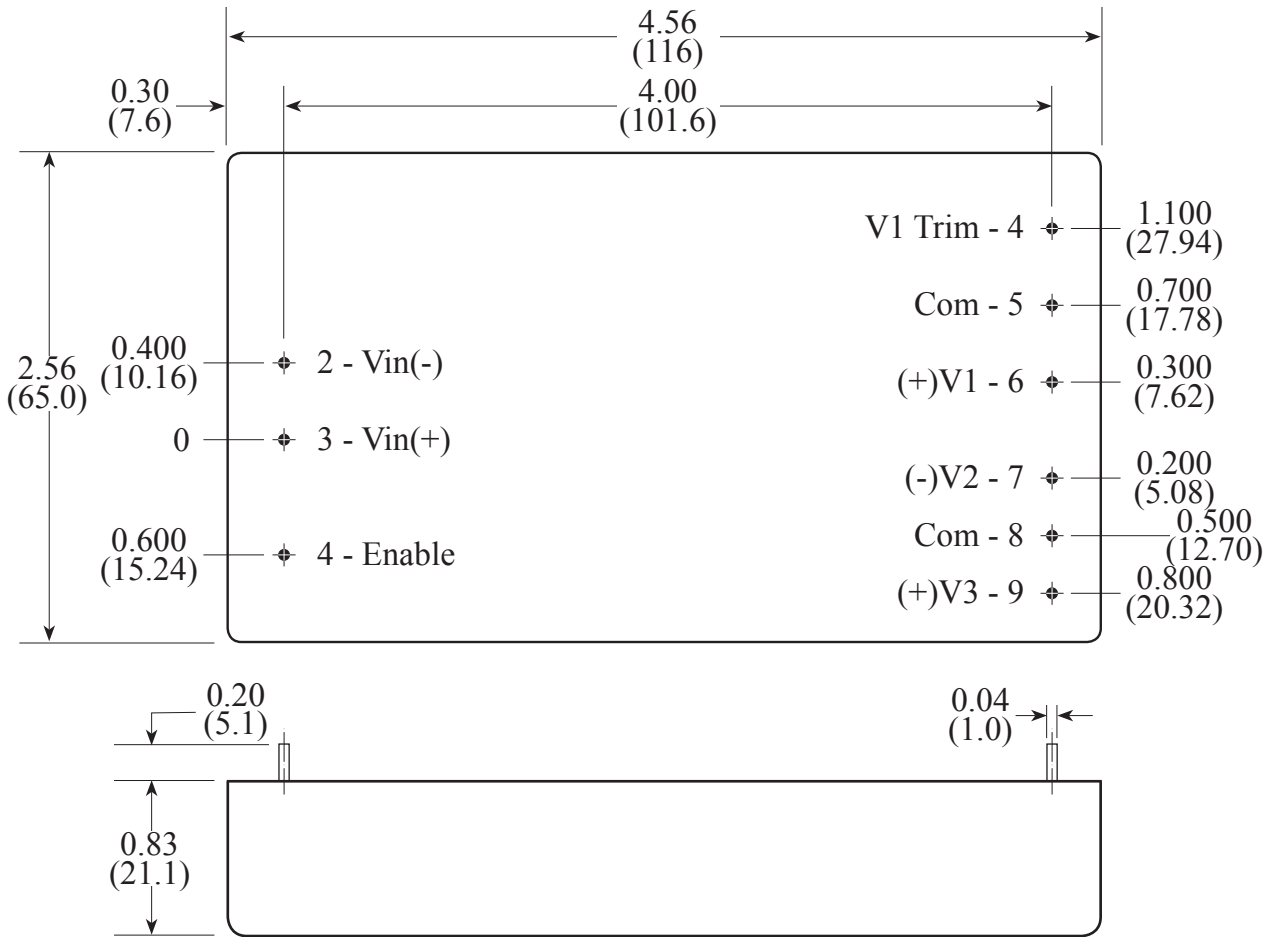
**Product Numbering System & Selection Guide**

<b>P</b>	<b>40</b>	<b>D</b>	<b>24</b>	<b>05</b>	<b>-</b>	<b>12</b>
Series No.	Output Power	No Output	Input Voltage	V1 Output Voltage	V2 Output Voltage	
<b>P</b>	<b>40</b> : 40W	<b>D</b> : Dual	<b>12</b> : 9-18V	<b>05</b> : 5V	<b>12</b> : 12V	<b>15</b> : 15V
	<b>60</b> : 60W		<b>24</b> : 18-36V	<b>12</b> : 12V		
			<b>48</b> : 36-75V	<b>15</b> : 15V		
			<b>30</b> : 10-30V			
			<b>60</b> : 20-60V			

INPUT		OUTPUT										Short Circuit Protection	Over Temp. Protect	EFF. (typ.)	MODEL NO.
Nominal (Range)	Max Output Power	Voltage (V)				Current (A)			Ripple & Noise						
		#	Set Point	Min.*	Max.*	#	Min.	Max.	Peak-Peak	R.M.S.					
12 (9-18)	40W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	82%	P40T1205-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.1	+1.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.1	-1.0	100mV	25mV				
		5.0V ±15V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV			82%	P40T1205-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	120mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	120mV	30mV				
		12V ±5V	V1	12.00	11.88	12.12	I2	0.2	2.0	100mV	25mV			82%	P40T1212-05
			+V3	+5.00	+4.90	+5.10	I2	+0.25	+2.5	75mV	15mV				
			-V2	-5.00	-4.85	-5.15	I2	-0.25	-2.5	75mV	15mV				
		15V ±5V	V1	15.00	14.85	15.15	I2	0.2	2.0	120mV	30mV			82%	P40T1215R05
			+V3	+5.00	+4.90	+5.10	I2	+0.3	+3.5	50mV	15mV				
			-V2	-5.00	-4.90	-5.10	I2	0	-0.5	30mV	5mV				
24 (18-36)	40W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	84%	P40T2405-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.1	+1.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.1	-1.0	100mV	25mV				
		5.0V ±15V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV			84%	P40T2405-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	120mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	120mV	30mV				
		12V ±5V	V1	12.00	11.88	12.12	I2	0.2	2.0	100mV	25mV			84%	P40T2412-05
			+V3	+5.00	+4.90	+5.10	I2	+0.25	+2.5	75mV	15mV				
			-V2	-5.00	-4.85	-5.15	I2	-0.25	-2.5	75mV	15mV				
		15V ±5V	V1	15.00	14.85	15.15	I2	0.2	2.0	120mV	30mV			84%	P40T2415R05
			+V3	+5.00	+4.90	+5.10	I2	+0.3	+3.5	50mV	15mV				
			-V2	-5.00	-4.90	-5.10	I2	0	-0.5	30mV	5mV				
48 (36-75)	40W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	84%	P40T4805-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.1	+1.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.1	-1.0	100mV	25mV				
		5.0V ±15V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV			84%	P40T4805-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	120mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	120mV	30mV				
		12V ±5V	V1	12.00	11.88	12.12	I2	0.2	2.0	100mV	25mV			84%	P40T4812-05
			+V3	+5.00	+4.90	+5.10	I2	+0.25	+2.5	75mV	15mV				
			-V2	-5.00	-4.85	-5.15	I2	-0.25	-2.5	75mV	15mV				
		15V ±5V	V1	15.00	14.85	15.15	I2	0.2	2.0	120mV	30mV			84%	P40T4815R05
			+V3	+5.00	+4.90	+5.10	I2	+0.3	+3.5	50mV	15mV				
			-V2	-5.00	-4.90	-5.10	I2	0	-0.5	30mV	5mV				
30 (10-30)	40W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	80%	P40T3005-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.1	+1.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.1	-1.0	100mV	25mV				
		5.0V ±15V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV			80%	P40T3005-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	120mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	120mV	30mV				
		12V ±5V	V1	12.00	11.88	12.12	I2	0.2	2.0	100mV	25mV			80%	P40T3012-05
			+V3	+5.00	+4.90	+5.10	I2	+0.25	+2.5	75mV	15mV				
			-V2	-5.00	-4.85	-5.15	I2	-0.25	-2.5	75mV	15mV				
		15V ±5V	V1	15.00	14.85	15.15	I2	0.2	2.0	120mV	30mV			80%	P40T3015R05
			+V3	+5.00	+4.90	+5.10	I2	+0.3	+3.5	50mV	15mV				
			-V2	-5.00	-4.90	-5.10	I2	0	-0.5	30mV	5mV				
60 (20-60)	40W	5.0V ±12V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV	Pulse by Pulse Current Limiting	Not Available	82%	P40T6005-12
			+V3	+12.00	+11.88	+12.12	+I3	+0.1	+1.0	100mV	25mV				
			-V2	-12.00	-11.76	-12.24	-I2	-0.1	-1.0	100mV	25mV				
		5.0V ±15V	V1	5.00	4.90	5.10	I1	0.4	4.0	75mV	15mV			82%	P40T6005-15
			+V3	+15.00	+14.85	+15.15	+I3	+0.1	+1.0	120mV	30mV				
			-V2	-15.00	-14.70	-15.30	-I2	-0.1	-1.0	120mV	30mV				
		12V ±5V	V1	12.00	11.88	12.12	I2	0.2	2.0	100mV	25mV			82%	P40T6012-05
			+V3	+5.00	+4.90	+5.10	I2	+0.25	+2.5	75mV	15mV				
			-V2	-5.00	-4.85	-5.15	I2	-0.25	-2.5	75mV	15mV				
		15V ±5V	V1	15.00	14.85	15.15	I2	0.2	2.0	120mV	30mV			82%	P40T6015R05
			+V3	+5.00	+4.90	+5.10	I2	+0.3	+3.5	50mV	15mV				
			-V2	-5.00	-4.90	-5.10	I2	0	-0.5	30mV	5mV				

\* Combined Line & Load (Low Line to High Line, Min. Load to Full Load)

**PC Board Mount**



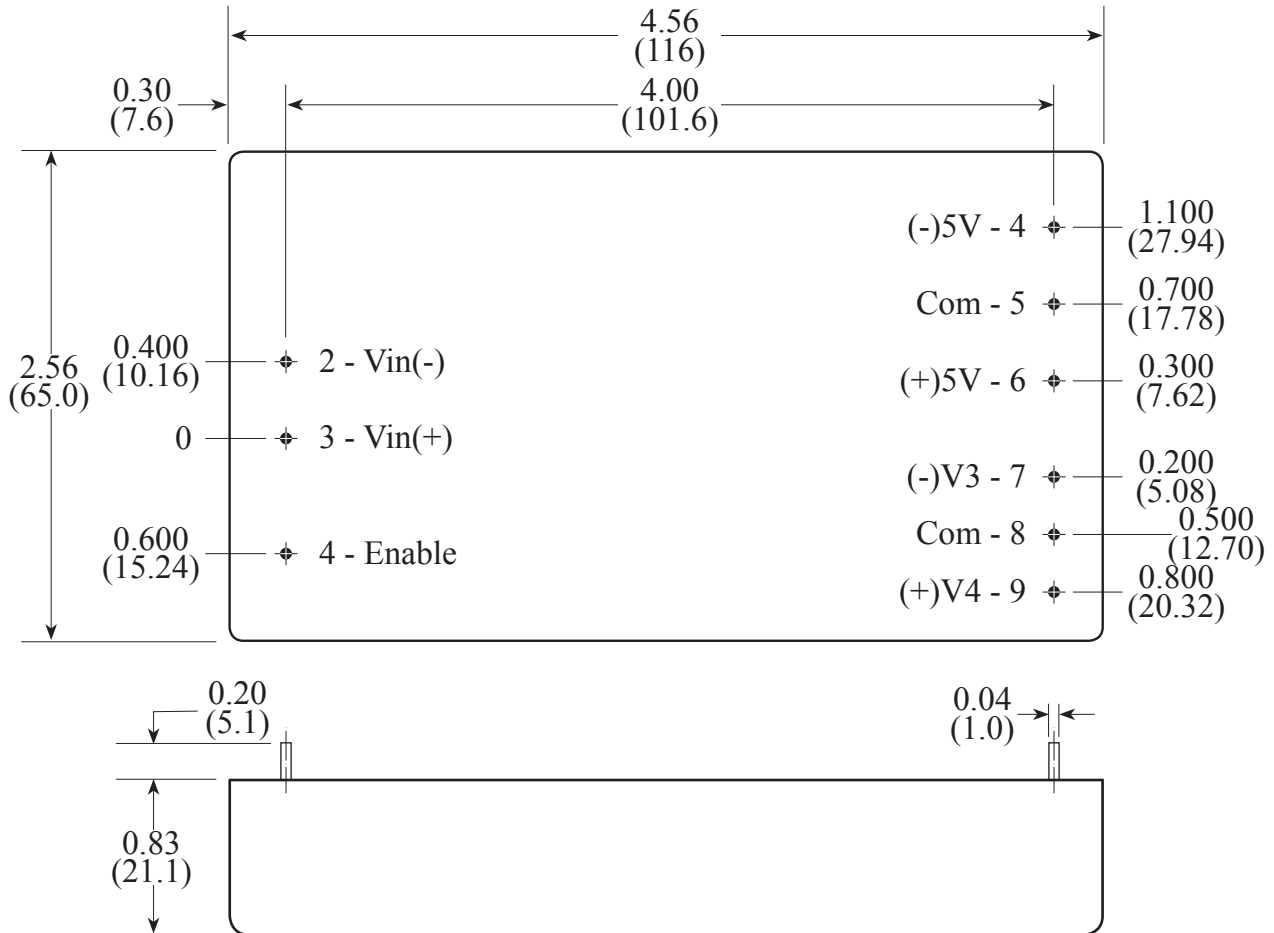
**Product Numbering System & Selection Guide**

<b>P</b>	<b>40</b>	<b>T</b>	<b>24</b>	<b>05</b>	-	<b>12</b>
Series No.	Output Power	No Output	Input Voltage	V1 Output Voltage		V2 Output Voltage
<b>P</b>	<b>40</b> : 40W	<b>T</b> : Triple	<b>12</b> : 10-20V	<b>05</b> : 5V	<b>12</b> : ±12V	
	<b>60</b> : 60W		<b>24</b> : 18-36V	<b>12</b> : 12V	<b>15</b> : ±15V	
			<b>48</b> : 36-75V	<b>15</b> : 15V		
			<b>30</b> : 10-30V			
			<b>60</b> : 20-60V			

INPUT		OUTPUT										Short Circuit Protection	Over Temp. Protect	EFF. (typ.)	MODEL NO.		
Nominal (Range)	Max Output Power	Voltage (V)				Current (A)			Ripple & Noise								
		#	Set Point	Min.*	Max.*	#	Min.	Max.	Peak-Peak	R.M.S.							
12 (9-18)	40W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV	Pulse by Pulse Current Limiting	Not Available	82%	P40Q1205-12		
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-12.00	-11.76	-12.24	-12	-0.1	-1.0	100mV	25mV						
			+V4	+12.00	+11.88	+12.12	+12	+0.1	+1.0	100mV	25mV						
		±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV						
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-15.00	-14.70	-15.30	-12	-0.1	-1.0	120mV	30mV						
			+V4	+15.00	+14.85	+15.15	+12	+0.1	+1.0	120mV	30mV						
24 (18-36)	40W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV			Pulse by Pulse Current Limiting	Not Available	82%	P40Q2405-12
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-12.00	-11.76	-12.24	-12	-0.1	-1.0	100mV	25mV						
			+V4	+12.00	+11.88	+12.12	+12	+0.1	+1.0	100mV	25mV						
		±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV						
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-15.00	-14.70	-15.30	-12	-0.1	-1.0	120mV	30mV						
			+V4	+15.00	+14.85	+15.15	+12	+0.1	+1.0	120mV	30mV						
48 (36-75)	40W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV	Pulse by Pulse Current Limiting	Not Available			82%	P40Q4805-12
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-12.00	-11.76	-12.24	-12	-0.1	-1.0	100mV	25mV						
			+V4	+12.00	+11.88	+12.12	+12	+0.1	+1.0	100mV	25mV						
		±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV						
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-15.00	-14.70	-15.30	-12	-0.1	-1.0	120mV	30mV						
			+V4	+15.00	+14.85	+15.15	+12	+0.1	+1.0	120mV	30mV						
30 (10-30)	40W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV			Pulse by Pulse Current Limiting	Not Available	82%	P40Q3005-12
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-12.00	-11.76	-12.24	-12	-0.1	-1.0	100mV	25mV						
			+V4	+12.00	+11.88	+12.12	+12	+0.1	+1.0	100mV	25mV						
		±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV						
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-15.00	-14.70	-15.30	-12	-0.1	-1.0	120mV	30mV						
			+V4	+15.00	+14.85	+15.15	+12	+0.1	+1.0	120mV	30mV						
60 (20-60)	40W	±5.0V ±12V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV	Pulse by Pulse Current Limiting	Not Available			82%	P40Q6005-12
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-12.00	-11.76	-12.24	-12	-0.1	-1.0	100mV	25mV						
			+V4	+12.00	+11.88	+12.12	+12	+0.1	+1.0	100mV	25mV						
		±5.0V ±15V	-V1	-5.00	-4.90	-5.10	-11	-0.0	-0.5	15mV	5mV						
			+V2	+5.00	+4.90	+5.10	+12	+0.4	+4.0	75mV	15mV						
			-V3	-15.00	-14.70	-15.30	-12	-0.1	-1.0	120mV	30mV						
			+V4	+15.00	+14.85	+15.15	+12	+0.1	+1.0	120mV	30mV						

\* Combined Line & Load (Low Line to High Line, Min. Load to Full Load)

**PC Board Mount**



**Product Numbering System & Selection Guide**

Series No.	Output Power	No Output	Input Voltage	Output Voltage	Dual Positive Output only
<b>P</b>	<b>40</b> : 40W	<b>Q</b> : Quad	<b>24</b> : 10-20V	<b>05</b> : ±5V	<b>12</b> : ±12V
			<b>24</b> : 18-36V		<b>15</b> : ±15V
			<b>48</b> : 36-75V		
			<b>30</b> : 10-30V		
			<b>60</b> : 20-60V		