

## DESCRIPTION

The PD40 series of DC/DC converters provide up to 40 watts of continuous output power. Available in three standard input ranges of 10-30VDC, 20-60VDC and 30-90VDC, they are ideal for a variety of applications including telecoms, process control, portable equipment and vehicle mounted instrumentation. All units are available in compact "open PCB" or "enclosed" mechanical formats.

## PD40 SERIES

RoHS

## FEATURES

- Low cost
- Small size, light weight
- 100% burn-in
- Overvoltage protection
- Overcurrent protection
- Three wide input ranges:  
10-30VDC, 20-60VDC and 30-90VDC
- Compliant with RoHS requirements



## INPUT SPECIFICATIONS

<b>Input voltage :</b>	10 to 30VDC ( PD40 "L" series )
	20 to 60VDC ( PD40 "M" series )
	30 to 90VDC ( PD40 "H" series )
<b>Input current :</b>	2.5A for 24VDC
	1.3A for 48VDC
	0.84A for 72VDC

## ENVIRONMENTAL SPECIFICATIONS

<b>Operating temperature :</b>	0°C to +70°C
<b>Storage temperature :</b>	-40°C to +85°C
<b>Relative humidity :</b>	5% to 95% non-condensing
<b>Derating :</b>	Derate from 100% at +50°C linearly to 50% at +70°C

## OUTPUT SPECIFICATIONS

<b>Output voltage/current :</b>	See rating chart
<b>Total output power :</b>	40 watts maximum
<b>Ripple and noise :</b>	1% peak to peak max.
<b>Overvoltage protection :</b>	set at 112-132% of its nominal output voltage
<b>Overcurrent protection :</b>	All outputs protected to short circuit conditions
<b>Temperature coefficient :</b>	All outputs $\pm 0.04\%$ /°C maximum
<b>Transient response :</b>	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500us after a 25% step load change

## GENERAL SPECIFICATIONS

<b>Switching frequency :</b>	36KHz $\pm 5$ KHz
<b>Efficiency :</b>	70% minimum at full load
<b>Line regulation :</b>	$\pm 0.5\%$ maximum at full load
<b>Withstand voltage :</b>	1000VDC from input to output
<b>MTBF :</b>	600,000 hours minimum at full load at 25°C ambient, calculated per MIL-HDBK-217F

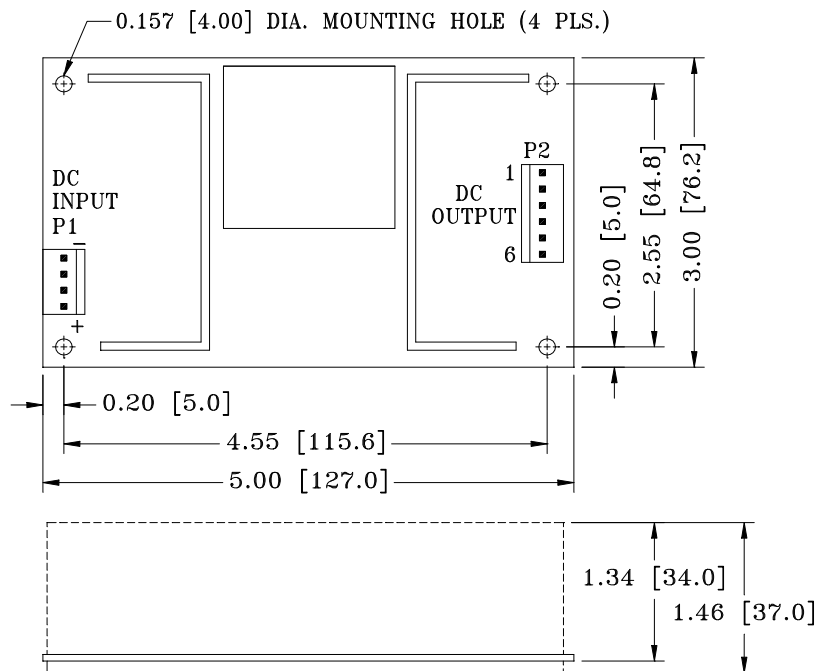
# PD40 SERIES

## OUTPUT VOLTAGE/CURRENT RATING CHART

(1)(2) MODEL	Output #1				Output #2				Output #3				Maximum Output Power(3)
	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	
PD40-10	5V	0A	8.0A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	40W
PD40-12	12V	0A	3.5A	1%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	40W
PD40-13	15V	0A	3.0A	1%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	40W
PD40-14	24V	0A	2.0A	1%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	40W
PD40-23	+5V	0.5A	3.0A	3%	+12V	0.2A	2A	5%	(N/A)	(N/A)	(N/A)	(N/A)	40W
PD40-24	+5V	0.5A	3.0A	3%	+15V	0.2A	2A	5%	(N/A)	(N/A)	(N/A)	(N/A)	40W
PD40-25	+5V	0.5A	3.0A	3%	+24V	0.1A	1A	5%	(N/A)	(N/A)	(N/A)	(N/A)	40W
PD40-30	+5V	0.5A	3.0A	3%	+12V	0.2A	2A	5%	-5V	0A	0.8A	5%	40W
PD40-31	+5V	0.5A	3.0A	3%	+12V	0.2A	2A	5%	-12V	0A	0.8A	5%	40W
PD40-32	+5V	0.5A	3.0A	3%	+15V	0.2A	2A	5%	-15V	0A	0.8A	5%	40W
PD40-33	+5V	0.5A	3.0A	3%	+15V	0.2A	2A	5%	-12V	0A	0.8A	5%	40W
PD40-39	+5V	0.5A	3.0A	3%	+24V	0.1A	1A	5%	-12V	0A	0.8A	5%	40W

- NOTES:
- All multi-output units may be operated at no-load without damage. At no-load, output tolerance increases to 10%.
  - Suffix codes for mechanical format and input range are as follows. PD40-XXYZ; "XX" is the model code from the above table, "Y" is the input range (L=10-30 VDC, M=20-60 VDC, H=30-90 VDC) and "Z" is the mechanical format (A=open PCB, B=L-bracket, C=enclosed), e.g. PD40-31MC (20-60 VDC input range, enclosed).
  - "L" series is suitable only for 75% of the above stated maximum output power.

## MECHANICAL SPECIFICATIONS



### NOTES:

- Dimensions shown in inch [mm]
- Tolerance 0.02 [0.5] maximum
- Input connector mates with Molex housing 09-50-3041 and Molex 2878 series crimp terminal.
- Output connector mates with Molex housing 09-50-3061 and Molex 2878 series crimp terminal.
- Weight: 220 grams approx. (PCB format)
- See the mechanical details of L-bracket and enclosed formats in [page 7-1](#).

## PIN CHART

MODEL	PIN	PIN					
		1	2	3	4	5	6
PD40-10 PD40-13	PD40-12 PD40-14	OUTPUT #1	OUTPUT #1	OUTPUT #1	RETURN	RETURN	RETURN
PD40-23 PD40-25	PD40-24	OUTPUT #2	OUTPUT #1	OUTPUT #1	COMMON RETURN	COMMON RETURN	N.C.
PD40-30 PD40-32 PD40-39	PD40-31 PD40-33	OUTPUT #2	OUTPUT #1	OUTPUT #1	COMMON RETURN	COMMON RETURN	OUTPUT #3