

LP Series 5 Watt

Single and Dual Output

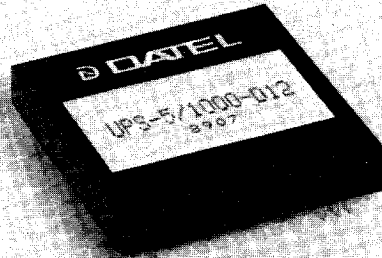
DC-to-DC Power Converters



T-57-11

FEATURES

- Fixed input range; 5V, 12V, 24V, 28V, 48V ($\pm 10\%$)
- Chassis or PC board mount (2" x 2" x 0.75")
- 500V dc input to output isolation (300V dc for 24V models)
- Output current limiting short circuit protection
- Very wide operating temperature (-25°C to $+71^{\circ}\text{C}$)
- Single or dual outputs
- Delivery from stock!

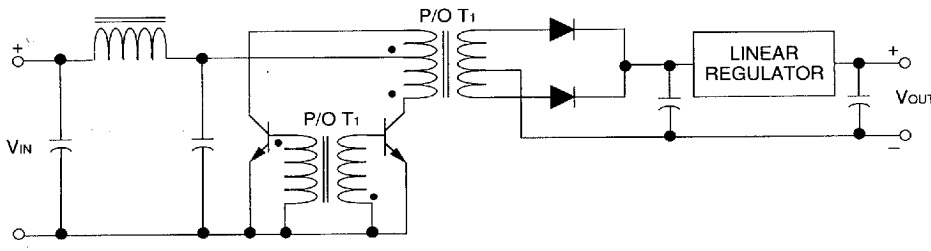


GENERAL DESCRIPTION

The LP Series of high performance, mid-range power 5 Watt DC-to-DC converters provide the accuracy and reliability you've come to expect from DATEL. Sixteen different 5 Watt models are available in a standard 2" x 2" x 0.75" package to cover virtually any application from special in-house designs to high volume OEM applications. Their compact size, low price, and rugged reliability means years of cost effective, trouble-free operation under less than ideal conditions. Outstanding output accuracy combined with low thermal rise, tight regulation, and very low noise and ripple make these power converters ideal for sensitive circuits. A PI network input filter suppresses input reflected ripple current. Additional

features include transformer isolation and current-limiting output protection.

The 5 Watt LP Series are available with input voltages of 5V, 12V, 24V, 28V, 48V ($\pm 10\%$) with unipolar or bipolar outputs of 5V, 12V, 24V, $\pm 12\text{V}$, and $\pm 15\text{V}$. The 5 Watt LP Series converters are found in applications ranging from Industrial Control Systems, Telecommunications Equipment, Analog Systems, Digital Circuits, Field/Mobile Instrumentation, or wherever high reliability at the lowest possible cost is demanded.



APPLICATIONS

- Telecommunications Equipment
- Local Power Distribution Systems
- PC Board Subsystems
- Portable/Mobile/Battery Operated Instrumentation
- Portable Computer and Computer Controlled Equipment
- Automotive/Avionics/Marine Systems and Equipment

SPECIFICATIONS

	SINGLE OUTPUT MODELS		
	UPS-5/1000-D12	UPS-5/1000-D24	UPS-5/1000-D28
Output Voltage	5V	5V	5V
Output Current	1000 mA	1000 mA	1000 mA
Input Voltage	12V dc	24V dc	28V dc
Input Voltage Tolerance	±10%	±10%	±10%
No Load Input Current	50 mA	25 mA	20 mA
Full Load Input Current, max.	640 mA	320 mA	275 mA
Line Regulation	0.02%	0.02%	0.02%
Load Regulation	0.04%	0.04%	0.04%
Temperature Coefficient	0.02%/°C	0.02%/°C	0.02%/°C
Breakdown Voltage, min.	500V dc	500V dc	500V dc
Reflected Ripple Current, max.	54 mA pk-pk	22 mA pk-pk	22 mA pk-pk

	SINGLE OUTPUT MODELS			
	UPS-12/470-D5	UPS-12/470-D24	UPM-24/210-D5	UPM-24/210-D12
Output Voltage	12V	12V	24V	24V
Output Current	470 mA	470 mA	210 mA	210 mA
Input Voltage	5V dc	24V dc	5V dc	12V dc
Input Voltage Tolerance	±10%	±10%	±10%	±10%
No Load Input Current	500 mA	120 mA	500 mA	200 mA
Full Load Input Current, max.	2000 mA	415 mA	2000 mA	830 mA
Line Regulation	0.02%	0.02%	0.05%	0.05%
Load Regulation	0.04%	0.04%	0.01%	0.01%
Temperature Coefficient	0.02%/°C	0.02%/°C	0.02%/°C	0.02%/°C
Breakdown Voltage, min.	500V dc	500V dc	300V dc	300V dc
Reflected Ripple Current, max.	61 mA pk-pk	25 mA pk-pk	100 mA pk-pk	42 mA pk-pk

GENERAL SPECIFICATIONS — ALL MODELS

Output Voltage Accuracy	±1%
Output Noise and Ripple, maximum	50 mV pk-pk (5 mV RMS), 35 mV pk-pk for dual output
Operating Temperature Range	-25 °C to +71 °C
Storage Temperature Range	-55 °C to +85 °C
Case Material	Diallyl Phthalate

The 5 watt series uses 2 DILS-1 or DILS-2 terminal strips for sockets.

SPECIFICATIONS

	DUAL OUTPUT MODELS			
	BPS-12/230-D5	BPS-12/230-D12	BPS-12/230-D24	BPS-12/230-D28
Output Voltage	±12V	±12V	±12V	±12V
Output Current	±230	±230	±230	±230
Input Voltage	5V dc	12V dc	24V dc	28V dc
Input Voltage Tolerance	±10%	±10%	±10%	±10%
No Load Input Current	130 mA	55 mA	25 mA	25 mA
Full Load Input Current, max.	1650 mA	690 mA	340 mA	300 mA
Line Regulation	0.02%	0.02%	0.02%	0.02%
Load Regulation	0.02%	0.02%	0.02%	0.02%
Temperature Coefficient	0.01%/°C	0.01%/°C	0.01%/°C	0.01%/°C
Breakdown Voltage, min.	500V dc	500V dc	500V dc	500V dc
Reflected Ripple Current, max.	58 mA pk-pk	24 mA pk-pk	24 mA pk-pk	23 mA pk-pk

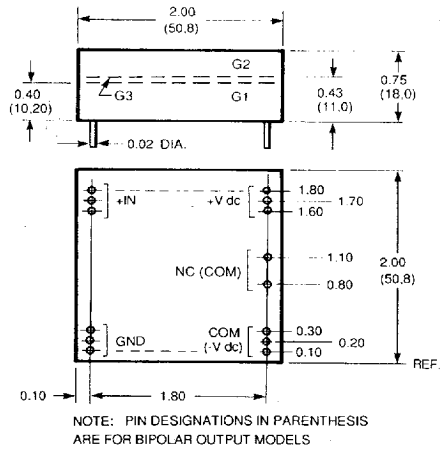
	DUAL OUTPUT MODELS				
	BPD-15/190-D5	BPS-15/190-D12	BPS-15/190-D24	BPS-15/190-D28	BPS-15/190-D48
Output Voltage	±15V	±15V	±15V	±15V	±15V
Output Current	±190	±190	±190	±190	±190
Input Voltage	5V dc	12V dc	24V dc	28V dc	48V dc
Input Voltage Tolerance	±10%	±10%	±10%	±10%	±10%
No Load Input Current	135 mA	55 mA	30 mA	25 mA	14 mA
Full Load Input Current, max.	1700 mA	710 mA	350 mA	300 mA	180 mA
Line Regulation	0.02%	0.02%	0.02%	0.02%	0.02%
Load Regulation	0.02%	0.02%	0.02%	0.02%	0.02%
Temperature Coefficient	0.01%/°C	0.01%/°C	0.01%/°C	0.01%/°C	0.01%/°C
Breakdown Voltage, min.	500V dc	500V dc	500V dc	500V dc	500V dc
Reflected Ripple Current, max.	20 mA pk-pk	25 mA pk-pk	25 mA pk-pk	24 mA pk-pk	25 mA pk-pk

GENERAL SPECIFICATIONS — ALL MODELS

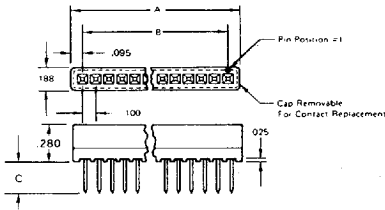
Output Voltage Accuracy	±1%
Output Noise and Ripple, maximum	50 mV pk-pk (5 mV RMS), 35 mV pk-pk for dual output
Operating Temperature Range	-25 °C to +71 °C
Storage Temperature Range	-55 °C to +85 °C
Case Material	Diallyl Phthalate

The 5 Watt Series uses 2 DILS-1 or DILS-2 terminal strips for sockets.

MECHANICAL DIMENSIONS AND I/O CONNECTIONS



SOCKET DILS - 1



Model	No. of Contacts	A	B	C	
DILS-1	20	2.090	1.900	.645	WIRE-WRAP
DILS-2	20	2.090	1.900	.145	SOLDER PIN

**VERY GENEROUS QUANTITY
 DISCOUNTS ARE AVAILABLE.
 CONSULT FACTORY.**

**1-800-233-2765
 (FAX) 1-508-339-6356**