



# DU Series of 5 to 6 Watt DC/DC Converters

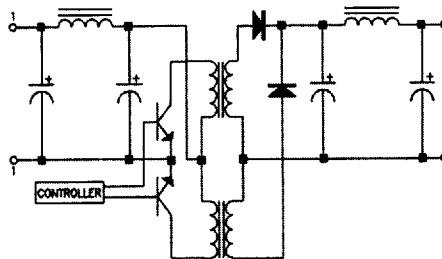


STANDARD DC/DC CONVERTERS WITH SINGLE OR DUAL UNREGULATED OUTPUTS. AN INTERNAL  $\Pi$  (Pi) INPUT FILTER IS STANDARD AND IS USED TO REDUCE REFLECTED RIPPLE CURRENT. ALL MODELS FEATURE A NICKEL-PLATED COPPER CASE WITH SIX-SIDED EMI/RFI SHIELDING.



**DIMENSIONS:**  
1.00" x 2.00" x 0.40"  
(25.40) x (50.80) x (10.16)mm

## BLOCK DIAGRAM



## FEATURES

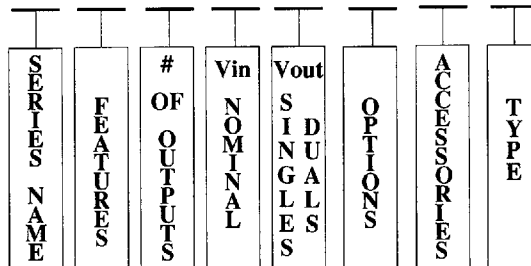
- Industry Standard Pin Out
- Six-Sided Shielding
- 500 VDC I/O Isolation
- Short Term Short Circuit Protection
- Input  $\Pi$  (Pi) Filter

## APPLICATIONS

- A/D and D/A Converters
- Telecommunication
- Process Control Equipment
- Local Power Distribution

## PART NUMBER SELECTION GUIDE

**D U D 12 12**



**Features**  
• Unregulated

**# of Outputs**  
S = SINGLE  
D = DUAL

**Input Voltage Range (VDC)**  
5 = 4.65 to 5.50  
12 = 10.9 to 13.2  
24 = 21.6 to 26.4  
28 = 25.2 to 30.8  
48 = 43.2 to 52.8

**Output Voltage (VDC)**  
*See Notes Below*  
**Single Output:**  
05<sup>\*</sup> = 5V @ 1000mA  
12<sup>^</sup> = 12V @ 500mA  
**Dual Output:**  
12<sup>^</sup> = ±12V @ ±250mA  
15<sup>^</sup> = ±15V @ ±200mA  
18<sup>^</sup> = ±18V @ ±165mA

**Notes:**  
\* Available for all input ranges.  
^ Available for 5V & 12V input ranges only.

**Options**  
S (#) = Modification Number  
I = Industrial Temperature Range (-40°C to +85°C)  
Z = Water-washable sealed case

**Accessories / Type**  
MS = Mating Socket  
Type = C Please Consult Accessories Page for Mating Socket Selection.



**INTERNATIONAL POWER DEVICES, INC.**  
20 Linden Street, Boston, MA 02134 • Phone: (617)782-3331 • Fax: (617)782-7416





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PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS	NOTES:	
<b>GENERAL:</b>							
Switching Frequency	180	200	220	KHz		1. No derating required up to a maximum case temperature of 85°C. Internal Power Dissipation = $P_{out} * (1 - Eff) / Eff$ .	
Isolation Voltage				VDC			
Input to Output	500				Note 4		
Input to Case					Note 4		
Output to Case							
Isolation Resistance							
Input to Output	10 <sup>9</sup>			Ohms			
Short Circuit Protection					Note 3		
<b>ENVIRONMENTAL:</b>							
Operating Temperature	-25		85	°C	Note 1	2. Provided for input fuse selection.	
Storage Temperature	-40		125	°C	Ambient		
Operating Humidity			95%		Non-Condensing		
Storage Humidity			95%		Non-Condensing		
<b>INPUT:</b>							
Input Voltage						3. Short Term Short Circuit Protection is provided. For dual output units the short circuit current on each individual output is equivalent to the short circuit current for a single output unit. Long term operation in this mode is not recommended. Converter will auto-restart once short has been removed.	
5 Vin	4.65	5.00	5.50	VDC			
12 Vin	10.90	12.00	13.20	VDC			
24 Vin	21.60	24.00	26.40	VDC			
28 Vin	25.20	28.00	30.80	VDC			
48 Vin	43.20	48.00	52.80	VDC			
Input Current							
5 Vin			1.63	Amps	Note 2		
12 Vin			0.70	Amps	Note 2		
24 Vin			0.35	Amps	Note 2		
28 Vin			0.30	Amps	Note 2		
48 Vin			0.17	Amps	Note 2		
Input Ripple Current			20%	In max			
Reverse Input Current			100%	In max			
<b>OUTPUT:</b>							
<b>Singles:</b>							
Voltage Accuracy			±4.00%	Vout	Full Load	4. For 48V input models, the case is connected to +Vin. For all other input voltages, the case is tied to either -Vout (Singles) or the Output Common (Duals).	
Load Regulation			±10.0%	Vout	10% to 100%		
Line Regulation			±1.00%	Vout	LL to HL		
<b>Duals:</b>							
Voltage Accuracy							
+Vout			±4.00%	Vout	Full Load		
-Vout			±4.00%	Vout	Full Load		
Load Regulation							
+Vout			±10.0%	Vout	10% to 100%		
-Vout			±10.0%	Vout	10% to 100%		
Line Regulation			±1.00%	Vout	LL to HL		
Temp. Coefficient			±0.02%	/°C			
Voltage Stability			±0.05%	Vout			
Ripple and Noise			1.00%	Vout	p-p, 20 MHz BW		

\* All specifications typical at +25°C Nominal Line and Full Load unless otherwise noted.

\* Specifications subject to change without notice.



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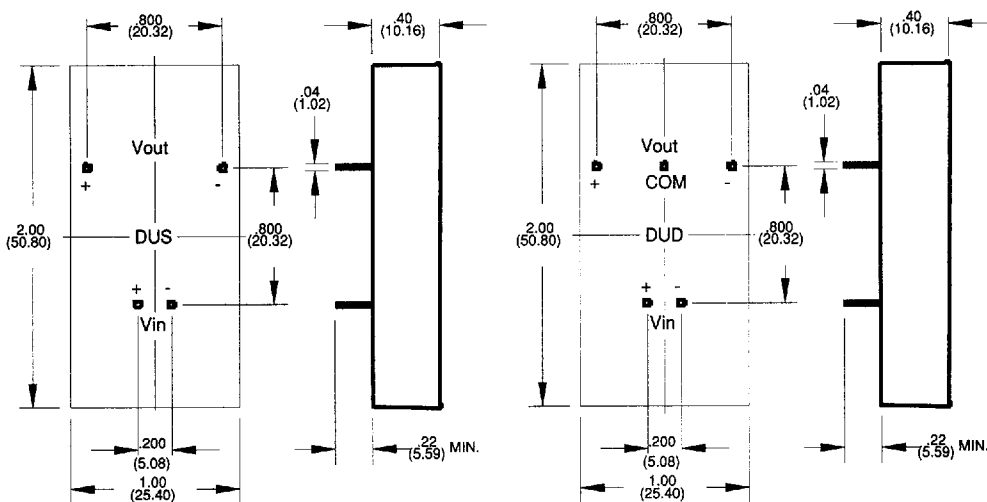
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PIN #	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	No Pin	Common
5	-Vout	-Vout

## BOTTOM VIEW

Mechanical tolerances are  $\pm 0.04$ "



Specifications are subject to change without notice.

All Dimensions are in inches (MM)



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