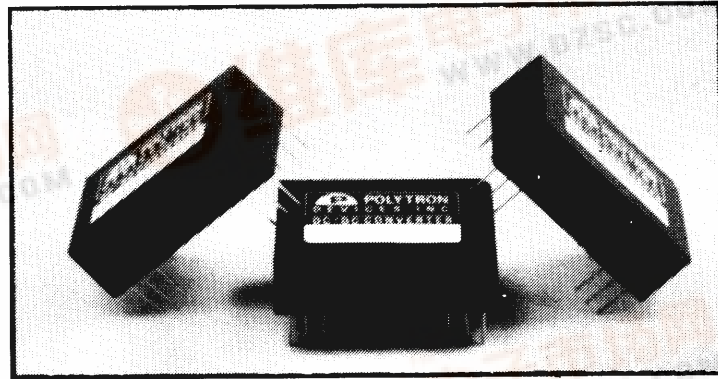


# REGULATED DC/DC CONVERTERS

## 24 PIN DIP

### FEATURES:

- HIGH PERFORMANCE TT INPUT FILTER
- SINGLE AND DUAL OUTPUTS
- HIGHLY REGULATED ISOLATED OUTPUTS
- 100% BURN IN
- HIGH EFFICIENCY
- HIGH RELIABILITY
- NO EXTERNAL COMPONENTS



### SPECIFICATIONS:

- **OUTPUT VOLTAGE STABILITY**  
0.02%/°C Max.
- **OUTPUT VOLTAGE ACCURACY**  
±5%
- **REGULATION**  
Line: ±0.5% Max.  
Load: ±1% Max.
- **RIPPLE AND NOISE**  
50 mVP-P Max.
- **INPUT-OUTPUT ISOLATION**  
500 Vdc Min.  
2000 Vdc (Optional)
- **OPERATING TEMPERATURE**  
-25°C to +71°C
- **STORAGE TEMPERATURE**  
-40°C to +100°C
- **EFFICIENCY**  
55% Min.

SINGLE VOLTAGE UNITS	INPUT VOLTAGE (Vdc)	OUTPUT VOLTAGE (Vdc)	OUTPUT CURRENT (mA)	MODEL NUMBER	PRICE 1-9 QTY		
	5 (4.75-5.25)		5	360	TW1.8-5S5	\$ 23.00	
5			600	TW3-5S5	29.00		
9			250	TW1.8-5S9	23.00		
9			334	TW3-5S9	29.00		
12			150	TW1.8-5S12	23.00		
12			250	TW3-5S12	29.00		
15			120	TW1.8-5S15	23.00		
15			200	TW3-5S15	29.00		
12 (11.40-12.60)				5	360	TW1.8-12S5	23.00
				5	600	TW3-12S5	29.00
	9	250		TW1.8-12S9	23.00		
	9	334		TW3-12S9	29.00		
	12	150		TW1.8-12S12	23.00		
	12	250		TW3-12S12	29.00		
	15	120		TW1.8-12S15	23.00		
	15	200		TW3-12S15	29.00		
	24 (22.80-25.20)			5	360	TW1.8-24S5	23.00
				5	600	TW3-24S5	29.00
9			250	TW1.8-24S9	23.00		
9			334	TW3-24S9	29.00		
12			150	TW1.8-24S12	23.00		
12			250	TW3-24S12	29.00		
15			120	TW1.8-24S15	23.00		
15			200	TW3-24S15	29.00		
48 (45.60-50.40)				5	360	TW1.8-48S5	23.00
				5	600	TW3-48S5	29.00
	9	250		TW1.8-48S9	23.00		
	9	334		TW3-48S9	29.00		
	12	150		TW1.8-48S12	23.00		
	12	250		TW3-48S12	29.00		
	15	120		TW1.8-48S15	23.00		
	15	200		TW3-48S15	29.00		

## 24-PIN DIP DC/DC CONVERTERS (continued)

DUAL VOLTAGE UNITS	INPUT VOLTAGE (Vdc)	OUTPUT VOLTAGE (Vdc)	OUTPUT CURRENT (mA)	MODEL NUMBER	PRICE 1-9 QTY	
	<b>5</b> (4.75-5.25)		± 5	± 180	TW1.8-5-5	\$ 29.00
			± 9	± 100	TW1.8-5-9	29.00
			± 9	± 167	TW3-5-9	34.00
			± 12	± 75	TW1.8-5-12	29.00
			± 12	± 125	TW3-5-12	34.00
			± 15	± 60	TW1.8-5-15	29.00
	<b>12</b> (11.40-12.60)		± 15	± 100	TW3-5-15	34.00
			± 5	± 180	TW1.8-12-5	29.00
			± 5	± 300	TW3-12-5	34.00
		± 12	± 75	TW1.8-12-12	29.00	
		± 12	± 125	TW3-12-12	34.00	
		± 15	± 60	TW1.8-12-15	29.00	
<b>24</b> (22.80-25.20)		± 15	± 100	TW3-12-15	34.00	
		± 5	± 180	TW1.8-24-5	29.00	
		± 5	± 300	TW3-24-5	34.00	
		± 12	± 75	TW1.8-24-12	29.00	
		± 12	± 125	TW3-24-12	34.00	
		± 15	± 60	TW1.8-24-15	29.00	
<b>48</b> (45.60-50.40)		± 15	± 100	TW3-24-15	34.00	
		± 5	± 180	TW1.8-48-5	29.00	
		± 5	± 300	TW3-48-5	34.00	
		± 12	± 75	TW1.8-48-12	29.00	
		± 12	± 125	TW3-48-12	34.00	
		± 15	± 60	TW1.8-48-15	29.00	
		± 15	± 100	TW3-48-15	34.00	

**BOTTOM VIEW**

ALL DIMENSIONS  
IN INCHES (MM)

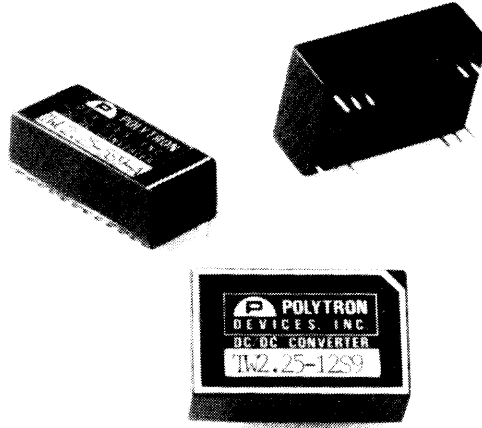
Pin Connections		
PIN	SINGLE OUTPUT	DUAL OUTPUT
1	+ V INPUT	+ V INPUT
2	N.C.	- V OUTPUT
3	N.C.	COMMON
10	- V OUTPUT	COMMON
11	+ V OUTPUT	+ V OUTPUT
12	- V INPUT	- V INPUT
13	- V INPUT	- V INPUT
14	+ V OUTPUT	+ V OUTPUT
15	- V OUTPUT	COMMON
22	N.C.	COMMON
23	N.C.	- V OUTPUT
24	+ V INPUT	+ V INPUT

# DC/DC CONVERTERS LOCAL AREA NETWORK 24 PIN DIP PACKAGE

\$5.95  
OEM QTY.

## FEATURES:

- IEEE 802.3 STANDARDS
- FCC CLASS B APPROVAL
- 78% EFFICIENCY
- SHORT CIRCUIT PROTECTION
- 24 PIN DIP PACKAGE
- 100% BURNED IN + TRIPLE TESTED



## SPECIFICATIONS:

- Input Voltage Range:  $\pm 10\%$
- Voltage Accuracy:  $\pm 5\%$
- Ripple and Noise (20 MHz BW): 50mV P-P Max
- Line Regulation:
  - Regulated Models:  $\pm 3\%$
- Load Regulation:
  - Regulated Models:  $\pm 3\%$
  - Unregulated Models: (See Graph)
- Efficiency: Regulated Models: 65%
  - Unregulated Models: 78%
- Switching Frequency: 25 KHz Min
- Isolation Voltage: 500 VDC
- Isolation Resistance: 1000 Megohms
- Operating Temperature:  $-25^{\circ}\text{C}$  to  $+71^{\circ}\text{C}$
- Case Material: Non - Conductive Black Plastic
- Weight: 0.5 oz. (14.3 grams)
- Dimensions: 1.25" x 0.80" x 0.50"

## SELECTION GUIDE

	INPUT VOLTAGE Vdc	OUTPUT VOLTAGE Vdc	OUTPUT CURRENT mA	EFF %	CASE STYLE	MODEL NUMBER
UNREGULATED	5	9	200	78	A	TWU1.8-5S9-A
	12	9	250	78	A	TWU2.25-12S9-A
REGULATED	5	9	250	65	A	TW2.25S9-A
	12	9	250	65	A	TW2.25-12S9-A
	5	9	250	65	B	TW2.25-5S9
	12	9	250	65	B	TW2.25-12S9



## 24 PIN DIP DC/DC CONVERTERS: CONTINUED

**CASE B**

Pin Connections		
PIN	SINGLE OUTPUT	DUAL OUTPUT
1	+ V INPUT	+ V INPUT
2	N.C	- V OUTPUT
3	N.C	COMMON
10	- V OUTPUT	COMMON
11	+ V OUTPUT	+ V OUTPUT
12	V INPUT	- V INPUT
13	- V INPUT	- V INPUT
14	+ V OUTPUT	+ V OUTPUT
15	- V OUTPUT	COMMON
22	N.C	COMMON
23	N.C	- V OUTPUT
24	+ V INPUT	+ V INPUT

**BOTTOM VIEW**

ALL DIMENSIONS IN INCHES (MM)

**CASE A**

**TOP VIEW**