# MINIATURIZED DUAL & TRIPLE OUTPUT

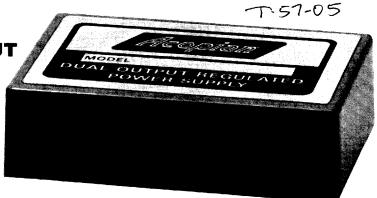
PC BOARD MOUNTING LINEAR REGULATED AC-DC

Acopian

#### SHIPPED IN 3 DAYS

ALL MODELS U.L. RECOGNIZED

These dual and triple output mini-modules are compact and convenient sources of the voltages required to power operational amplifiers and related circuits. They may be mounted directly on printed circuit board assemblies, simplifying system layout and minimizing the connectors and wiring required.



#### STANDARD FEATURES

- May be used in series
- No derating or heat sinking required
- Short circuit protected
- · Compact, lightweight

### **SPECIFICATIONS:**

Input Voltage: 105-125 VAC, 47 to 420 Hz, single phase.

Output Specifications: See table.

Output Voltage Setting: Each output is factory preset to  $\pm 2\%$  (1 to 9 volt outputs) or  $\pm 1\%$  (10 to 28 volt outputs) of the nominal output voltage. Outputs of Case Size END modules, except those marked (\*), may be trimmed to the nominal voltage rating with an external trim resistor.

Polarity: Single output sections may be used in either polarity. Dual output sections, marked (\*), are provided with a plus/common/minus output connection configuration.

Ambient Operating Temperature: -20 to +71 °C. No derating required.

Storage Temperature: -55 to +85°C.

**Temperature Coefficient:** From 9 to 28 volts, typical TC is 0.015%/°C; 1 to 8 volts, 0.03%/°C.

**Impedance:** 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.).

Weight: 7 oz. (Case size ES-10.)

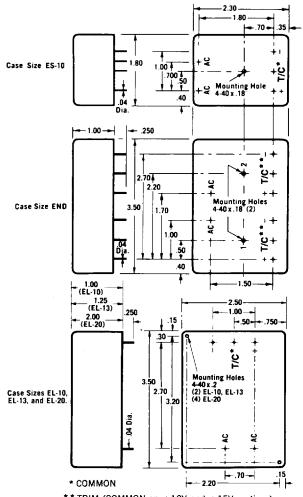
13 oz. (Case size END.)

13 oz. (Case size EL-10.)

1 lb. 3 oz. (Case size EL-13.)

1 lb. 15 oz. (Case size EL-20.)

Optional 230 Volt Input: All models can be alternately furnished for operation on an input of 210 to 250 VAC, 47-420 Hz. To order, add suffix "-230" to model number and \$10.00 to price.



\*\* TRIM (COMMON on  $\pm 12$ V and  $\pm 15$ V sections)

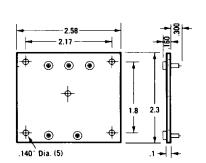
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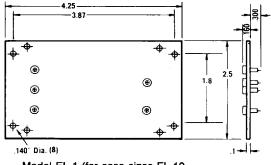
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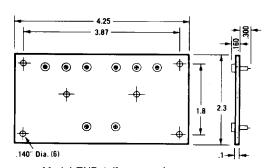
T-57-05

#### **ACCESSORY SOCKETS**

Each of these sockets has a sturdy phenolic base with gold plated teflon-insulated contacts.







Model ES-1 (for case sizes ES-10 and ESC-10) . . . . \$15.00 ea.

Model EL-1 (for case sizes EL-10, EL-13, EL-20 and ELC-10)....\$15.00 ea.

Model END-1 (for case size END) . . . . . . . . . . . . . . . . . . \$15.00 ea.

## DUAL (ISOLATED) & TRIPLE OUTPUT, USER-SELECTED How to Order:

Any two of the sections listed below, or two of the same section, can be combined into a multiple-output module. The complete model number is the combination of the two section numbers selected. Note that some sections provide two outputs; combination with a single output section results in a triple-output module.

Example: The combination of sections 6E20D and 15E10D is the Model 6E20D-15E10D. Always assign the lower voltage section first. For pricing purposes, add the costs of the sections selected. Example: The price of the Model 6E20D-15E10D is \$52.00 plus \$45.00, or \$97.00 total.

Nominal	Output Current Amps.	Regulation		Ripple		Section	
Output Voltage		Load ±%	Line ±%	mv RMS	Price per Section	(See "How to order")	Case Size
1 1.5 2 3	.250 .250 .200 .250	.1 .1 .1	.05 .05 .05 .05	0.5 0.5 0.5 0.5	\$52 52 52 52 52	1E25D 1.5E25D 2E20D 3E25D	END END END
3.6 4 5 6	.250 .200 .250 .200	.05 .05 .05 .05	.05 .05 .05 .05	0.5 0.5 0.5 0.5	52 52 52 52 52	3.6E25D 4E20D 5E25D 6E20D	END END END
7 8 9 10	.170 .150 .130 .120	.05 .05 .05 .02	.05 .05 .05 .02	0.5 0.5 0.5 0.5	52 52 45 45	7E17D 8E15D 9E13D 10E12D	END END END
±12* 12 12 13	.050 .100 .150 .100	.10 .02 .05 .02	.05 .02 .05 .02	1 0.5 0.5 0.5	52 45 55 45	D12E05 12E10D 12E15D 13E10D	END END END END

-	Nominal	Output Current Amps.	Regulation		Ripple		Section	
	Output Voltage		Load ±%	Line ±%	mv RMS	Price per Section	(See "How to order")	Case Size
	14 ±15* 15 15	.100 .050 .100 .150	.02 .10 .02 .05	.02 .05 .02 .05	0.5 1 0.5 0.5	\$45 52 45 55	14E10D D15E05 15E10D 15E15D	E S S S S S S S S S S S S S S S S S S S
	16 17 18 20	.080 .070 .060 .060	.02 .02 .02 .02	.02 .02 .02 .02	0.5 0.5 0.5 0.5	45 45 45 45	16E08D 17E07D 18E06D 20E06D	END END END
	21 22 23 24	.060 .050 .050 .050	.02 .02 .02 .02	.02 .02 .02 .02	0.5 0.5 0.5 0.5	45 45 45 45	21E06D 22E05D 23E05D 24E05D	END END END
	25 26 27 28	.050 .040 .040 .040	.02 .02 .02 .02	.02 .02 .02 .02	0.5 0.5 0.5 0.5	45 45 45 45	25E05D 26E04D 27E04D 28E04D	END END END

<sup>\*</sup>Dual output section. Combination with a single output section results in a triple output module.

### **DUAL TRACKING OUTPUTS**

(These model numbers are complete as shown.)

	Output	Regulation					
Nominal Output Voltages		Load ±%	Line ±%	Ripple mv RMS	Price	Model	Case Size
±5 ±5 ±5	.150 .250 .500	.1 .1 .1	.05 .05 .05	1.5 1.5 1.5	\$ 79 98 135	D5-15 D5-25 D5-50	EL-10 EL-10 EL-20
±10 ±10 ±10	.200 .300 .400	.05 .05 .1	.05 .05 .05	1 1 1	89 115 135	D10-20 D10-30 D10-40	EL-10 EL-13 EL-20
±12 ±12 ±12 ±12	.025 .050 .100 .150	.1 .05 .05	.05 .05 .05 .05	1 1 1	49 59 69 79	D12-03 D12-05 D12-10A D12-15A	EL-10 EL-10 EL-10 EL-10

	Current per Output Amps.	Regulation					
Nominal Output Voltages		Load ±%	Line ±%	Rippie mv RMS	Price	Model	Case Size
±12 ±12 ±12 ±12	.200 .300 .350 .500	.05 .05 .05	.05 .05 .05 .05	1 1 1 1	\$ 89 105 115 135	D12-20 D12-30 D12-35 D12-50	EL-10 EL-13 EL-13 EL-20
±15 ±15 ±15 ±15	.025 .050 .100 .150	.1 .05 .05	.05 .05 .05 .05	1 1 1 1	49 59 69 79	D15-03 D15-05 D15-10A D15-15A	ES-10 ES-10 EL-10 EL-10
±15 ±15 ±15 ±15	.200 .300 .350 .500	.05 .05 .05 .1	.05 .05 .05 .05	1 1 1	89 105 115 135	D15-20 D15-30 D15-35 D15-50	EL-10 EL-13 EL-13 EL-20



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