

INSTRUCTION SHEET



KEPCO An ISO 9001 Company.

FCP

FCP 10 WATT DUAL OUTPUT MINIATURE SWITCHING POWER SUPPLIES

I-INTRODUCTION

The Kepco FCP 10W Series of a compact high reliability 3.53-ounce 10-Watt switching power supplies feature simplicity and high reliability with isolated input/output. Units operate from a 120V a-c 47-440Hz source and are housed in a plastic case with threaded inserts for versatile mounting. All connections are made through a STO-41T-187N(JST) or 170037-2 (AMP) mating connector. The FCP 10W Series consists of two models. Model FCP-101K has a $\pm 12V$ output and Model FCP-102K has a $\pm 15V$ output as shown in Table 1. Output voltage V1 (+) may be adjusted within the ranges shown in Table 1. An external 125V, 1A slow-blow fuse is recommended.

II-SPECIFICATIONS

The following specifications apply to both FCP 10W models

MODEL	FCP-101K V1 & V2	FCP-102K V1 & V2
Output	$\pm 12V$, 0.4A/9.6W	$\pm 15V$, 0.32A/9.6W
Adjustment Range (V1)*	+ 10.8V - + 13.2V	+13.5V - + 16.5V
Ripple (mV p-p max)	80	80
Noise (mV p-p max)	150	150
Overcurrent (120V Input @ 25°C)	0.45A/1.0A	0.35A/0.9A
Efficiency (Nominal input, rated load, @ 25°C)	77% typ.	77% typ.

*V2 follows within $\pm 2\%$ of the V1 setting

TABLE 1 SPECIFICATIONS OF INDIVIDUAL FCP 10W MODELS

INPUT

Voltage: 120V a-c, single phase, 85-132V a-c or 145V d-c, 110V-170V d-c

Frequency: 47-440 Hz

Brownout Voltage: 80V a-c, 105V d-c

Current rated load @ 25°C: 0.25A rms, typ., @ 120V input
0.35A rms, max. @ 85V input

Initial Turn-on Surge: (one-half of first input cycle). @ Rated Load, 25°C cold start @ 120V input: 16A.

STABILIZATION:

Source Effect: <0.1% typ. (85V-132V)

Load Effect: <0.8% typ. (10% - 100% load)

Temperature Effect: 1% (0°C to 50°C)

Combined Effect: (includes source, load and temperature effects); $\pm 1\%$ typ., $\pm 3\%$ max.

Drift (8 hr. after 1/2 hr. warmup): 0.5% max.

Start-up and Hold-up time (25°C, nominal input @ rated load):

Start-up: 100 ms. max. to reach 90% of nominal output.

Hold-up: 20 ms. min.

Recovery Characteristics: A step load change from 50% to 100% produces less than $\pm 4\%$ output excursion. Recovery occurs within $\pm 1\%$ of the original setting within 1ms. A step load change should be over 50 micro-seconds.

Ripple: See Table 1. Ripple components are harmonically related to the source frequency and the switching frequency.

Noise: See Table 1. Noise bandwidth is d-c to 50MHz.

Isolation: (20°C, 65% Relative humidity)

Insulation resistance between output terminals and ground, d-c 500V, 100 MOhm, min.

Dielectric strength:

Between input and output or input and ground terminals, 2KV a-c for one minute.

Between output and ground terminals, 0.5KV a-c for one minute.

Leakage current, nominal input with rated load @ 25°C, UL method: 0.5 mA rms, max.

Safety: UL 478 recognized; CSA 1402 certified.

EMI: Designed to meet FCC Class B (0.45-30MHz, 48dB max.)

Vibration: (non-operating, one hour on each of three axes):

5-10 Hz, 10 mm amplitude

10-55 Hz, 2G acceleration

Shock (non-operating, one-half sinusoidal pulse, three shocks to each axis):

Acceleration: 20g peak

Duration: 11ms. ± 5 ms.

Operating Temperature: See Figure 1

Storage Temperature: -40°C ~ +85°C

Operating and Storage Relative Humidity: 20% ~ 95% non-condensing

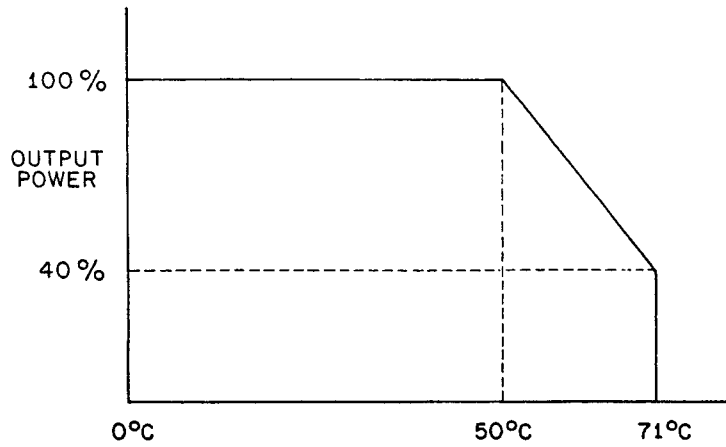


FIGURE 1: OPERATING TEMPERATURE

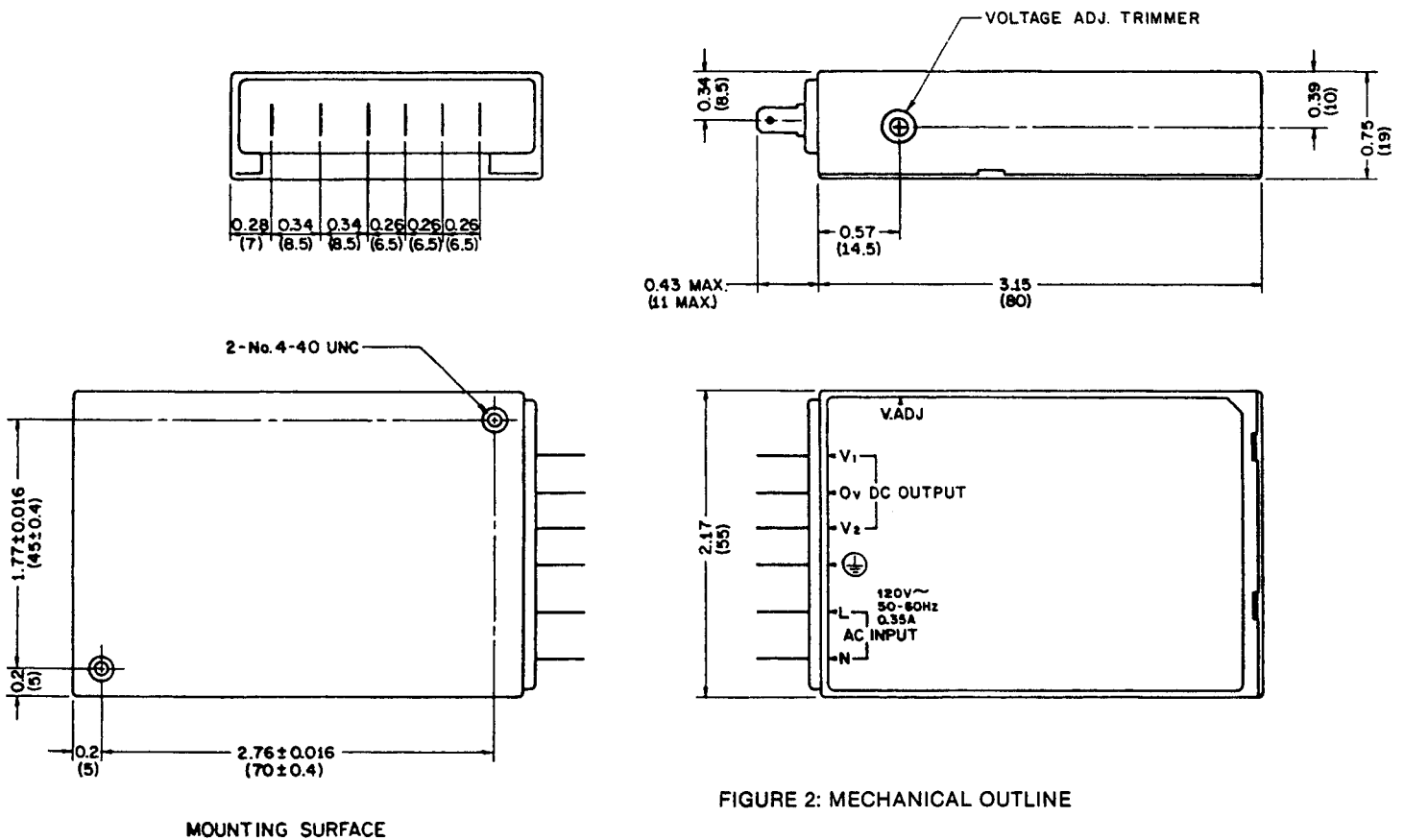


FIGURE 2: MECHANICAL OUTLINE

NOTES:

1. MATERIAL: PHENYLENE OXIDE.
2. DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS, OTHERS IN INCHES.
3. TOLERANCE: ± 0.03 (± 0.7) UNLESS NOTED OTHERWISE.
4. AC & DC TERMINALS: 0.187 INCH SERIES TABS.
5. AC & DC MATING RECEPTACLES: AMP. INC., FASTON 187 SERIES OR EQUIVALENT.
6. WEIGHT: 3.53 oz. (100 gr.) MAX.
7. MAXIMUM MOUNTING SCREW PENETRATION: 0.24 (6).