

INSTRUCTION SHEET



KEPCO An ISO 9001 Company.

FMP

FMP 3 WATT SINGLE OUTPUT MINIATURE SWITCHING POWER SUPPLIES

I-INTRODUCTION

The Kepco FMP 3W Series of a compact high reliability 2.82-ounce 3-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 FMP 3W Series consists of four models with different output voltages shown in Table 1. An external 125V, 630mA slow-blow fuse is recommended.

II-SPECIFICATIONS

The following specifications apply to all FMP 3W models

MODEL	FMP 5-0.6K	FMP 12-0.25K	FMP 15-0.2K	FMP 24-0.13K
Output	5V, 0.6A/3W	12V, 0.25A/3W	15V, 0.2A/3W	24V, 0.13A/3.1W
Adjustment Range (120V Input @ 25°C)	4.5V - 5.5V	10.8V - 13.2V	13.5V - 16.5V	21.6V - 26.4V
Ripple (mV p-p max)	50	80	80	100
Noise (mV p-p max)	100	150	150	150
Overcurrent (120V input @ 25°C)	0.7A/1.2A	0.3A/0.5A	0.25A/0.4A	0.15A/0.3A
Efficiency (Nominal input, rated load, @ 25°C)	68% typ. 65% min.	70% typ. 67% min.	70% typ. 67% min.	74% typ. 70% min.

TABLE 1 SPECIFICATIONS OF INDIVIDUAL FMP 3W MODELS

INPUT

Voltage: 120V a-c, single phase, 85V-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: 0.08A rms, typ., @ 120V input

0.1A rms, max. @ 85V input

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

@ 120V input: 16A max.

@ 132V input: 20A max.

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); ±1% typ., ±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 time: 100 ms. max. to reach 90% of nominal output.

Hold-up time: 20 ms. min.

Recovery Characteristics: A step load change from 50% to 100% produces less than ±4% output excursion. Recovery occurs within ± 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.)

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

Acceleration: 20g peak

Duration: 11ms. ±5ms.

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

5-10 Hz, 10 mm amplitude

10-55 Hz, 2G acceleration

Operating Temperature: See Figure 1

Storage Temperature: -40°C ~ +85°C

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

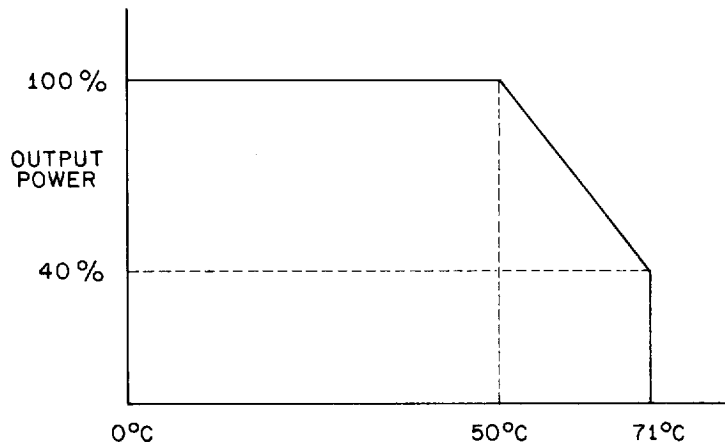


FIGURE 1: OPERATING TEMPERATURE

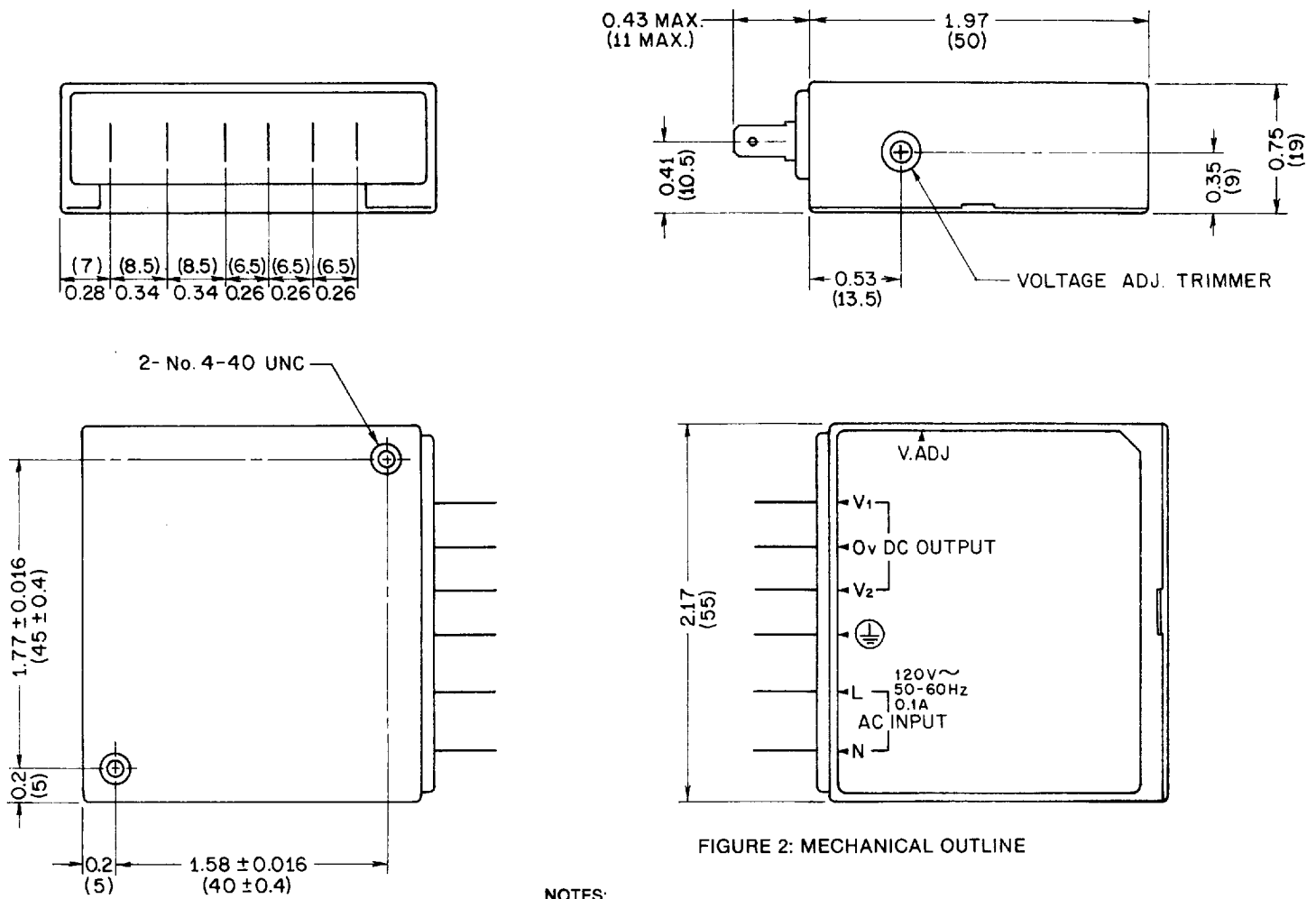


FIGURE 2: MECHANICAL OUTLINE

- 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: 2.82 oz. (80 gr.) MAX.
 7. MAXIMUM MOUNTING SCREW PENETRATION: 0.24 (6).