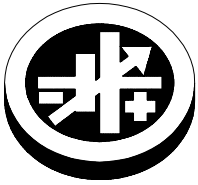


INSTRUCTION MANUAL



KEPCO An ISO 9001 Company.

MSP 5-1

INSTALLATION MODEL MSP 5-1

Figure 1 illustrates an exploded view of the Kepco Model MSP 6-1 LED panel (1/8 rack). To make this unit functional, the unit must be disassembled to facilitate the insertion of resistors matched to the associated power supply. Figure 2 illustrates the schematic. Figure 3 illustrates component location. Proceed as follows:

1. Disassemble unit (see Figure 1) by removing two 6-32 X 1/4 ACF. ST. nuts (P/N 102-0004), associated washers (P/N 103-0015) and spacers (P/N 104-0227).
2. Calculate the value (in ohms) of resistors R1 through R8, with respect to the power supply voltage (V_n) and the operating characteristics of the LED (DS1 through DS4). Refer to Table 1 for resistor values and Kepco part numbers associated with standard Kepco power supply output voltages.

where V_n = voltage across resistor/LED network (power supply output voltage)

where V_F = forward voltage across LED (approximately 2V)

where I_F = forward current across LED (approximately 20mA)

The following is an example for a resistor value associated with a 5 volt power supply:

$$\text{resistor value (in ohms) } R_n = R_n = \frac{V_n - V_F}{I_F} = \frac{5V - 2V}{20mA} = 150 \text{ ohms}$$

Calculate the power rating (in watts) as follows:

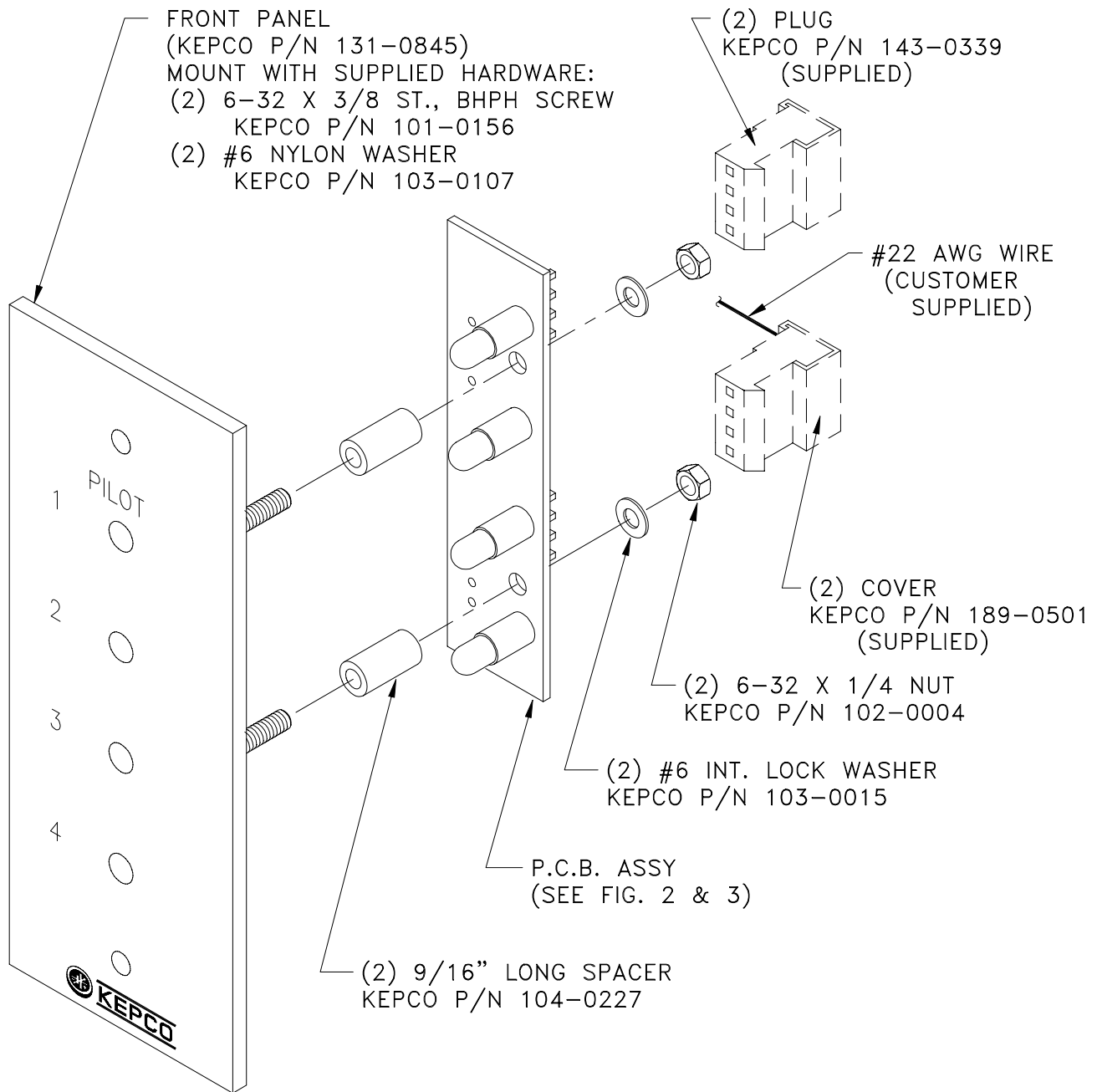
$$W_n = 2 \times 20mA \times (5V - 2V) = 0.12W^*$$

* use nearest larger standard size (1/4 or 1/2 Watt).

TABLE 1. KEPCO MSP SERIES LED PANELS, RESISTOR SELECTION

OUTPUT VOLTAGE	RESISTOR	KEPCO P/N
2V	10Ω, 5%, 1/4W	115-2643
5V	150Ω, 10%, 1/4W	115-0543
9V	390Ω, 5%, 1/4W	115-0883
12V	560Ω, 5%, 1/4W	115-0888
15V	750Ω, 5%, 1/4W	115-2438
24V	1.1KΩ, 5%, 1/4W	115-0545
28V	1.5KΩ, 10%, 1/4W	115-0664
48V	2.7KΩ, 10%, 1/4W	115-2465

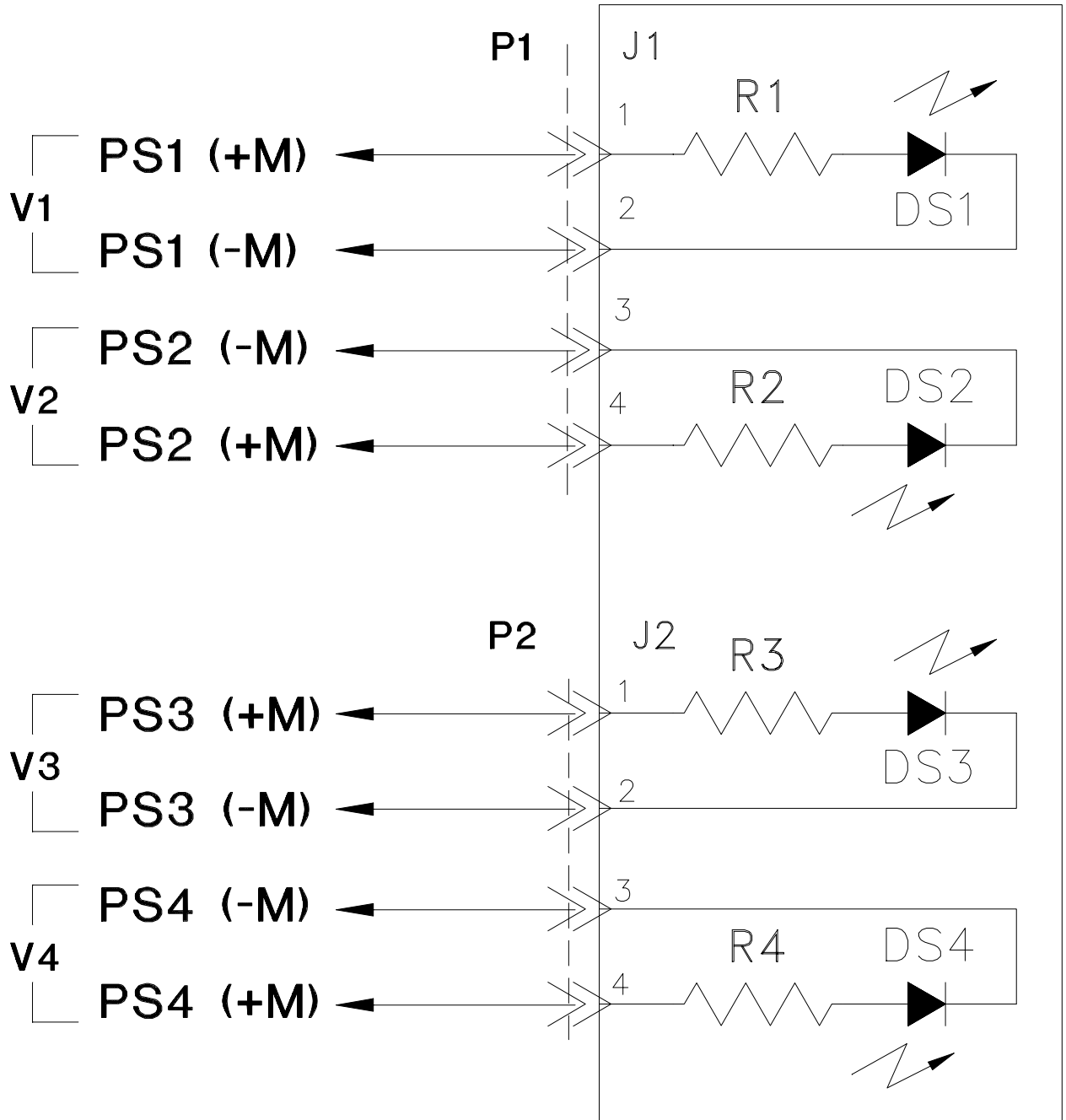
3. Position and solder resistor in place (see Figure 3).
4. Reassemble unit (see Figure 1).



NOTE:
CONNECTIONS TO PLUGS (143-0341) VIA #22 AWG WIRE
ARE MADE USING AMP TOOL 59804-1 (IF AMP TOOL UNAVAILABLE,
USE SMALL SLOT BLADE SCREWDRIVER)

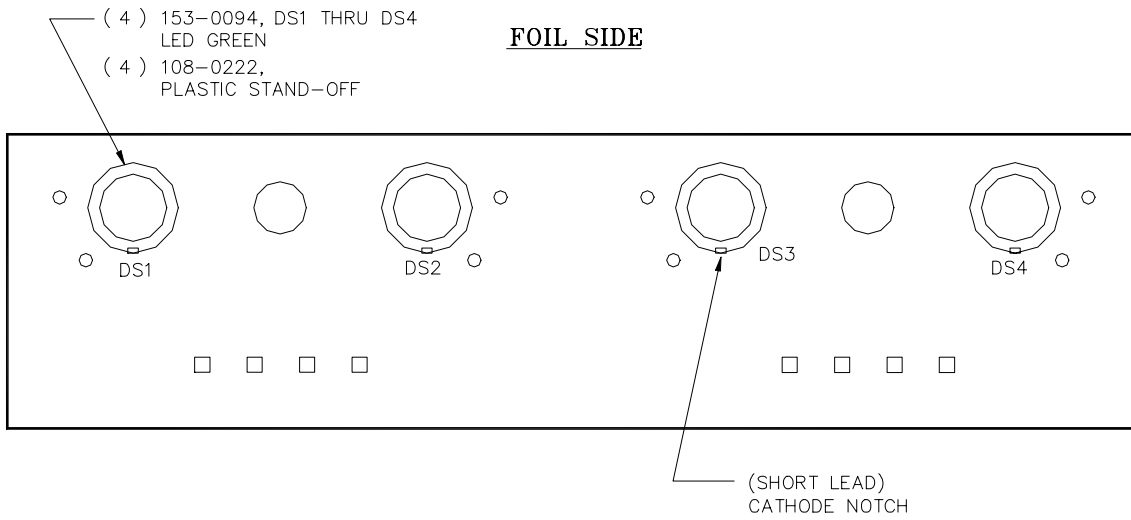
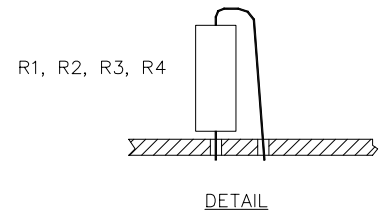
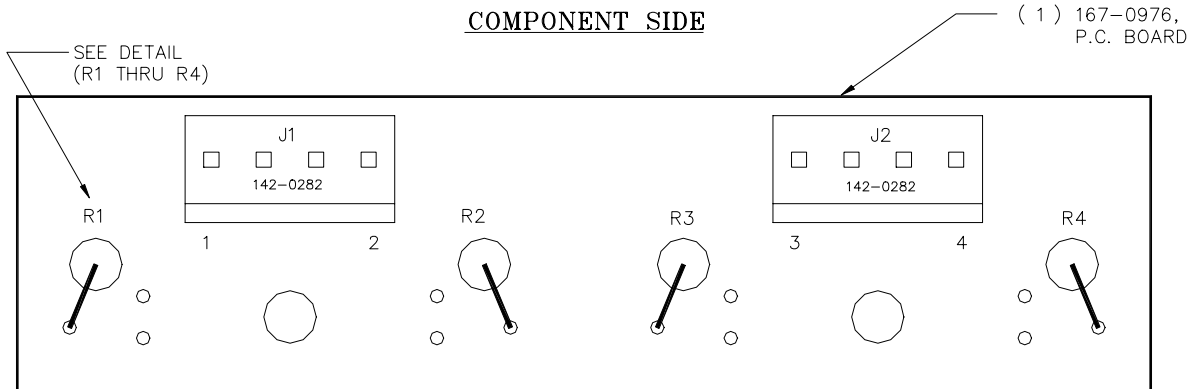
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FIGURE 1. KEPCO MODEL MSP 5-1, EXPLODED VIEW



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FIGURE 2. KEPCO MODEL MSP 5-1, SCHEMATIC DIAGRAM



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FIGURE 3. KEPCO MODEL MSP 5-1, COMPONENT LOCATION