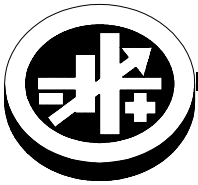


INSTRUCTION SHEET



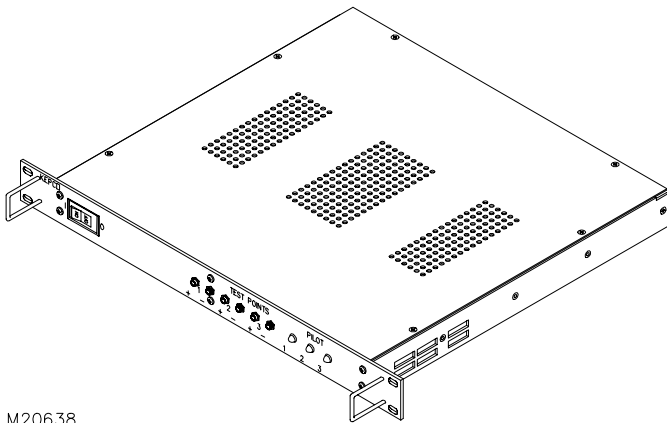
KEPCO An ISO 9001 Company.

RA 75
RA 76

MODEL RA 75, RA 76 RACK ADAPTER

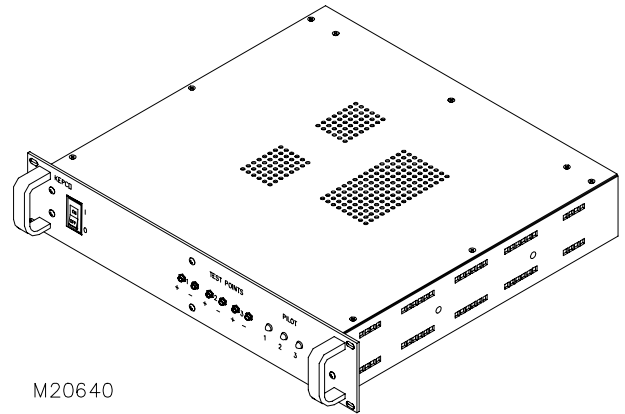
1. DESCRIPTION

The Kepco RA 75 (Figure 1) and RA 76 (Figure 2) Rack Adapters are specifically designed for the installation of Kepco FAW Series Power Supplies into 19-inch EIA standard equipment racks. Each Rack Adapter accommodates from one to three FAW power supplies. The RA 75 Rack Adapter accommodates FAW 50W and 100W models; it occupies 1U, 1.75 inches (44.5 mm) of vertical space in the standard 19 inch (482.6 mm) equipment rack, and has a maximum depth protrusion of 16.0 inches (406.4mm) as measured from the mounting surface of the front panel (see outline drawing, Figure 7). The RA 76 Rack Adapter is identical, except that it occupies 2U, 3.5 inches (89 mm) of vertical space to accommodate FAW 150W as well as 50W and 100W models (see outline drawing, Figure 8). Table 1 lists equipment supplied.



M20638

FIGURE 1. RA 75 RACK ADAPTER



M20640

FIGURE 2. RA 76 RACK ADAPTER

TABLE 1. EQUIPMENT SUPPLIED WITH RA 75 AND RA 76 RACK ADAPTER

DESCRIPTION	FUNCTION	KEPCO PART NO.	QTY
Line Cord	Connect A-C input power	118-0647	1
Multi terminal Jumper Strip	Connect a-c power distribution (TB2) terminals	172-0394	0.1*
Two-terminal Sense Link	Connect sense and output terminals (TB1)	172-0300	6
Resistor	Limit current through CB1 indicator (see Fig. 6)	115-1127	1
Screw (4-40 x 3/8, ST, FLSO)	Mount FAW power supplies	101-0237	15
* Quantity of 0.1 means 1/10 of 110-terminal Jumper Strip, equivalent to 12 terminals. Cut as needed.			

The front panel (Figure 3) is equipped with a 7.5A Input power circuit breaker that can be used to enable input power to the FAW power supplies. Three front panel pilot lights can be wired to indicate whether the associated FAW power supply is on. Front panel Test Points (+ and -) can also be wired so that the DC output voltages are accessible for monitoring from the front panel.

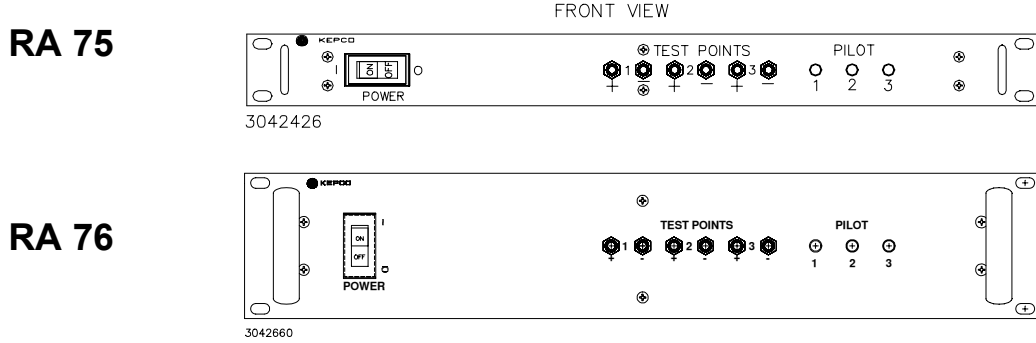


FIGURE 3. FRONT PANEL

The rear panel (Figure 4) includes a 15-terminal terminal block that can be used to make the FAW power supply outputs accessible and an a-c inlet connector. A separate 115V a-c line cord is included with the rack adapter.

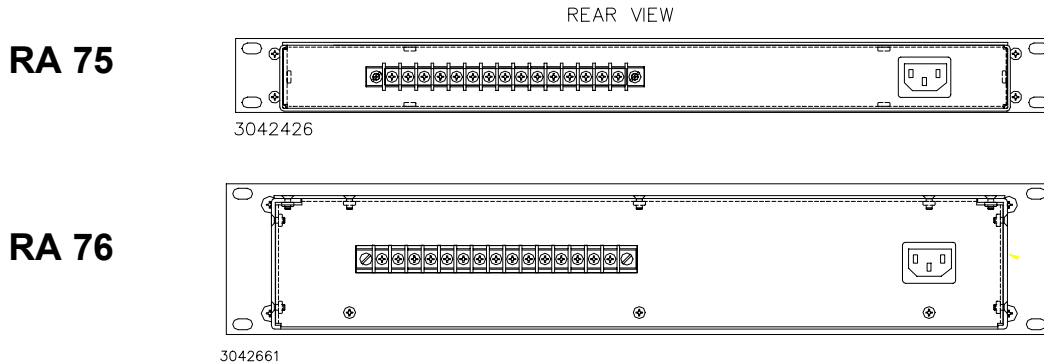


FIGURE 4. REAR PANEL

1. INSTALLATION

The Rack Adapter is equipped with handles; while installation is proceeding, the Rack Adapter must be supported from below until it has been secured. The Rack Adapter can also be fitted with optional slides (see Figure 7).

1. To activate the front panel pilot lights, the pilot light resistors must be configured to match the FAW output voltage prior to installing the power supplies. The front panel must be partially disassembled to facilitate the insertion of resistors matched to the associated power supply output voltage. Figure 6 illustrates the schematic. Figure 5 illustrates component location. Proceed as follows:
 - a. Remove the top cover of the rack adapter by removing screws from the top (six for RA 75 and nine for RA 76) and one from the top center of the front panel above Test Point 1 (-).
 - b. Separate the front panel from the chassis by removing 5 screws from the front panel, then disassemble the PCB assembly (see Figure 5) 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).

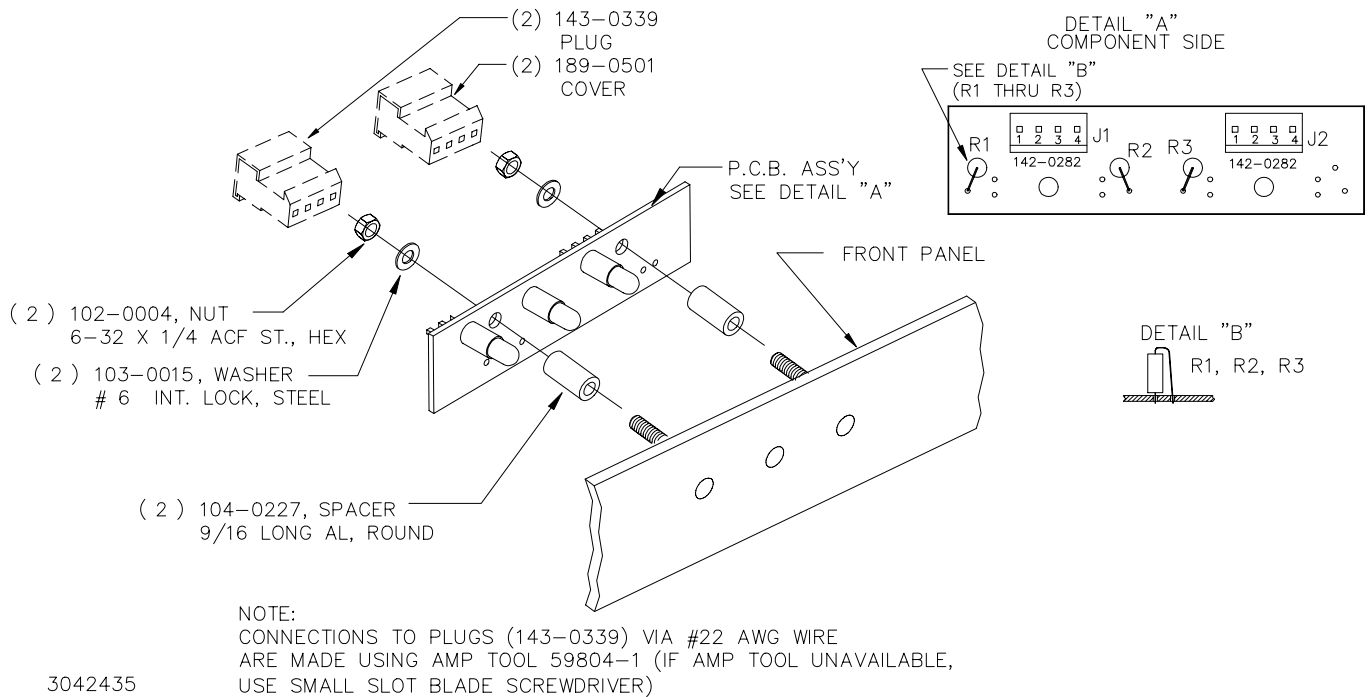


FIGURE 5. FRONT PANEL DISASSEMBLY FOR INSERTION OF PILOT LIGHT RESISTORS

- c. Calculate the value (in ohms) of resistors A1R1 through A1R3, with respect to the power supply voltage (V_n) and the operating characteristics of the LED (DS1 through DS3). Refer to Table 2 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:

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

Calculate the power rating (in watts) as follows:

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

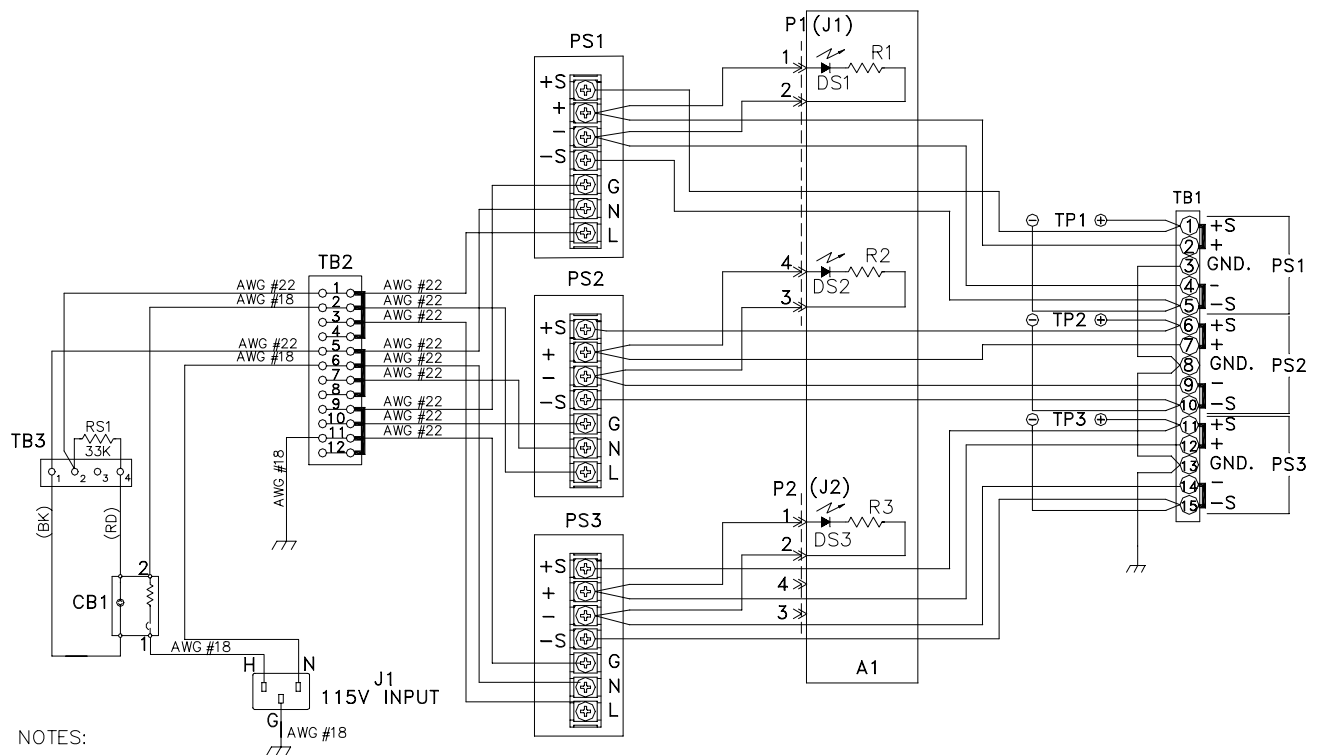
* use nearest larger standard size (1/4 or 1/2 Watt).

- d. Position and solder resistor in place (see Figure 5).
 e. Reassemble PCB assembly (see Figure 5) and reattach front panel to chassis using five screws.

TABLE 2. RA 75/RA 76 RACK ADAPTER LEDS, RESISTOR SELECTION

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

2. Install the FAW power supplies in the Rack Adapter (see Figure 7) using four 4-40 x 3/8 ST. FLSO screws (supplied).
3. Wire the Rack Adapter as needed. Schematic Diagram Figure 6 is provided as a guide showing a typical installation of three FAW power supplies. Be sure to connect resistor RS1 (supplied).
4. Replace top cover and secure with screws removed during disassembly.
5. Install the line cord (supplied) at connector J1 at the rear panel.
6. Install the unit in the rack and secure using suitable mounting hardware (not supplied).

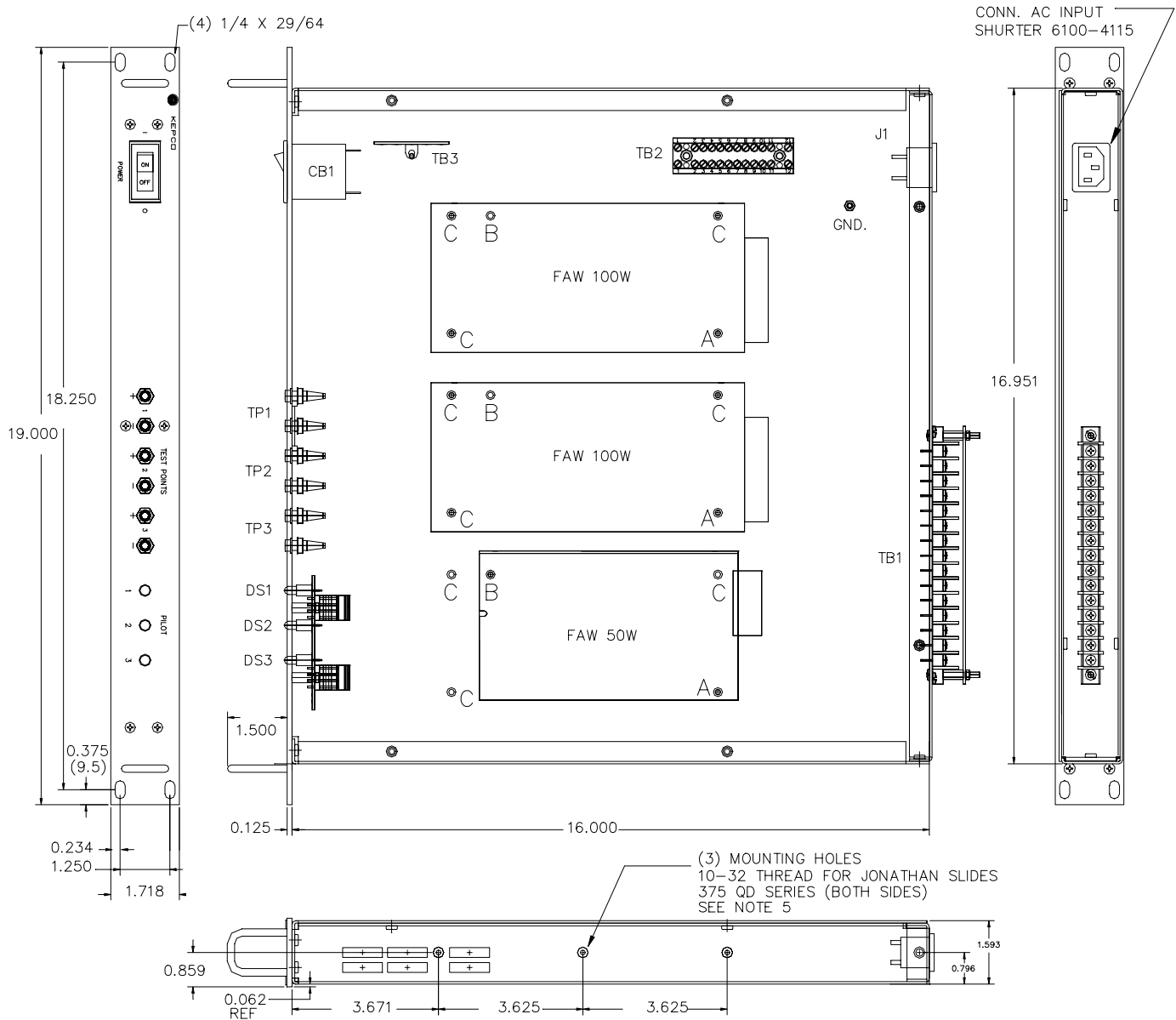


NOTES:

1. TYPICAL WIRING CONNECTIONS SHOWN FOR REFERENCE ONLY. ACTUAL WIRING DETERMINED BY USER NEEDS.
2. IT IS RECOMMENDED THAT TWISTED PAIRS AND TRIPLET WIRES BE USED FOR AC WIRING AND CONNECTIONS TO TEST POINTS AND (IF USED) SENSE CONNECTIONS.
3. FOR RESISTOR VALUES A1R1 THROUGH A1R3, REFER TO PAR. 1, STEP 1a.
4. RESISTOR RS1 (SUPPLIED) MUST BE INSTALLED AT TERMINAL STRIP TB3 TO LIMIT CURRENT TO THE INTEGRAL NEON INDICATOR OF CIRCUIT BREAKER CB1.
5. JUMPER STRIPS (LINKS) MAY BE CUT AS NEEDED FOR AC DISTRIBUTION AT AC DISTRIBUTION TERMINAL BLOCK TB2.
6. TWO-POSITION JUMPER LINKS ARE PROVIDED FOR LOCAL SENSE CONNECTIONS AT DC OUTPUT BARRIER STRIP TB1.

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FIGURE 6. SCHEMATIC DIAGRAM

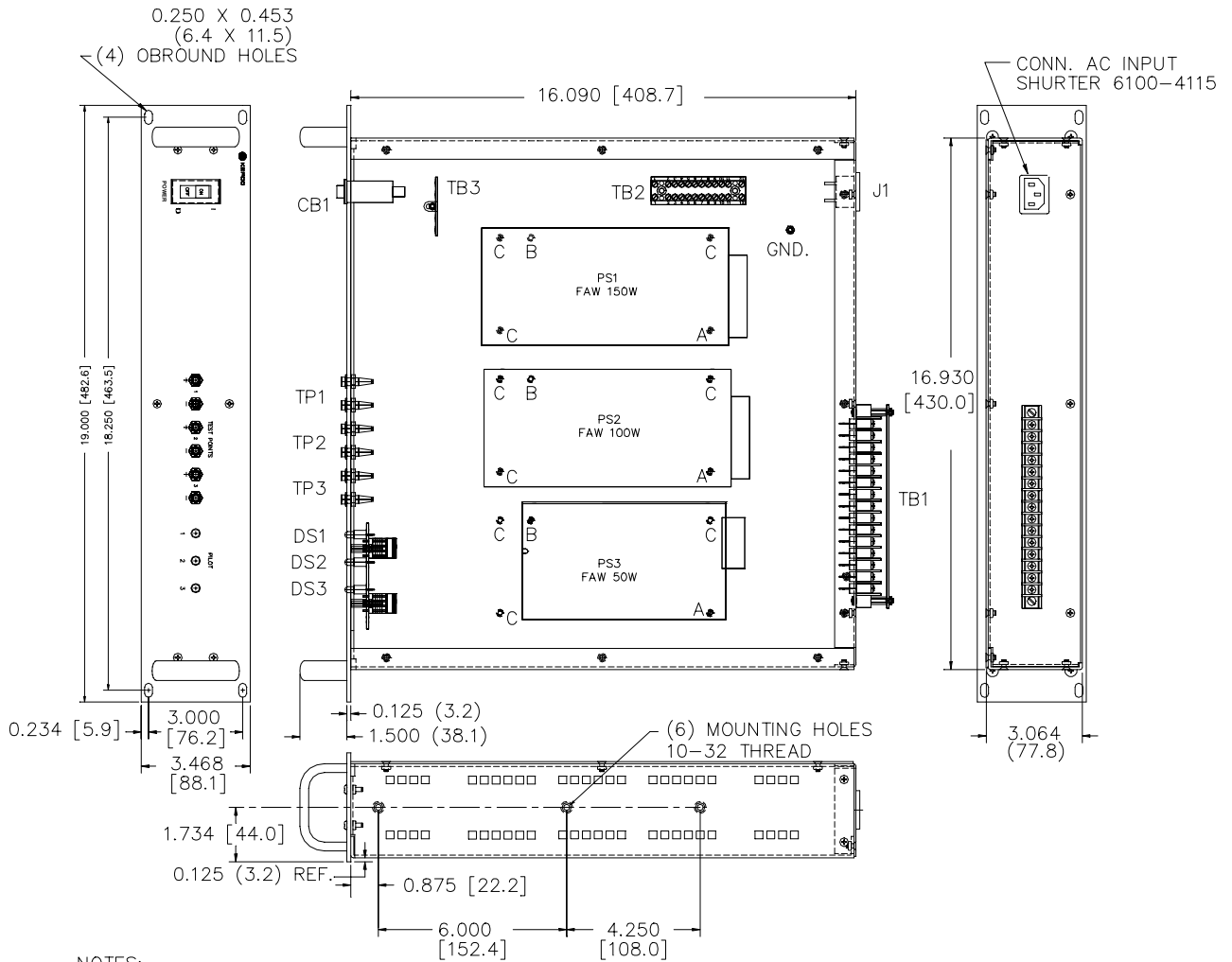


NOTES:

1. MATERIAL:
 - A) CHASSIS: 0.064 THK. ALUM. 5052-H32
 - B) COVER: 0.064 THK. ALUM. 5052-H32
 - C) BACKPLATE: 0.050 THK. ALUM. 3003-H14
 - D) FRONT PANEL: 0.125 THK. ALUM. 6061-T6
2. FINISH:
 - A) CHASSIS, COVER AND BACKPLATE: YELLOW IRIDITE
 - B) FRONT PANEL: KEPCO GREY, HARTIN PAINT #71-22493.
3. TOLERANCES:
 - A) BETWEEN MOUNTING HOLES: $\pm 1/64$ (± 0.4)
 - B) ALL OTHER DIMENSIONS: $\pm 1/32$ (± 0.8) EXCEPT AS NOTED
4. COVER NOT SHOWN ON THE TOP VIEW.
5. SPACERS ARE REQUIRED WHEN MOUNTING SLIDES. THIS IS TO AVOID OBSTRUCTION OF VENTILATION SLOTS.
6. POWER SUPPLY MOUNTING:
 - A) FOR 50W, USE TWO HOLES (A, B)
 - B) FOR 100W AND 150W USE FOUR HOLES (A AND C)

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FIGURE 7. RA 75 RACK ADAPTER OUTLINE DRAWING



NOTES:

1. MATERIAL:
 - A) CHASSIS: 0.064 THK. ALUM. 5052-H32
 - B) COVER: 0.064 THK. ALUM. 5052-H32
 - C) BACKPLATE: 0.050 THK. ALUM. 3003-H14
 - D) FRONT PANEL: 0.125 THK. ALUM. 6061-T6
2. FINISH:
 - A) CHASSIS, COVER AND BACKPLATE: YELLOW IRIDITE
 - B) FRONT PANEL: KEPKO GREY, HARTIN PAINT #71-22493.
3. TOLERANCES:
 - A) BETWEEN MOUNTING HOLES: $\pm 1/64$ (± 0.4)
 - B) ALL OTHER DIMENSIONS: $\pm 1/32$ (± 0.8) EXCEPT AS NOTED
4. COVER NOT SHOWN ON THE TOP VIEW.
5. SPACERS ARE REQUIRED WHEN MOUNTING SLIDES. THIS IS TO AVOID OBSTRUCTION OF VENTILATION SLOTS.
6. POWER SUPPLY MOUNTING:
 - A) FOR 50W, USE TWO HOLES (A, B)
 - B) FOR 100W AND 150W USE FOUR HOLES (A AND C)

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FIGURE 8. RA 76 RACK ADAPTER OUTLINE DRAWING

**KEPCO****REPLACEMENT PARTS LIST**

RA 75, RA 76

CHASSIS ASSEMBLY

CODE: 1306153

REFERENCE DESIGNATOR	QTY.	DESCRIPTION	MFRS. NAME & PART NO. (SEE BOTTOM NOTE)	KEPCO PART NO.	REC. SPARE PART QTY.
A1J1, A1J2	2	ASSY., PLUG, PCB MOUNT (STRAIGHT PINS), 4 PINS	AMP INC 640445-4	142-0282	1
CB1	1	CIRCUIT BREAKER, (FULLY MAGNETIC), 1POLE 125VAC 7.5A	CARLING TECHNOL MF1-B-34-475-1-BB2-B-C	127-0383	1
DS1, DS2, DS3	3	DEVICE, SIGNALING, , LED-GN DIFFUSED LENS, VF=2.7V	DIALIGHT CORP. 521-9250	153-0094	1
J1	1	CONNECTOR, POWER INLET, 3 PINS	SCHURTER 6100-4115	143-0616	1
P1, P2	2	PLUG, SOCKET, CABLE CONNecTOR, 4 PINS	AMP INC. 640428-4	143-0339	1
RS1	1	RES., FIX., CARBON FILM, 33 KOHM , 1/2W, 5%	KOA/SPEER CF1/2 333 J T52A	115-1127	1
TB1	1	TERMINAL BLOCK, 15 TERMINALS, 20A/TERM.	MAGNUM (USD) A2193-15-07-MP	167-1023	1
TB2	1	TERMINAL BLOCK, COMPACT, 12 POLE	WIELAND 29.401.1253 *	167-0995	1
TB3	1	TERMINAL STRIP, 4 LUGS	KEYSTONE ELECTR 818	167-0554	1
TP1(+), TP2(+), TP3(+)	3	TEST POINT, JACK-RED	KEYSTONE ELECTR 6025	173-0001	1
TP1(-), TP2(-), TP3(-)	3	TEST POINT, JACK-BK	KEYSTONE ELECTR 6026	173-0002	1

NOTE: REPLACEMENT PARTS MAY BE ORDERED FROM KEPCO, INC. ORDERS SHOULD INCLUDE KEPCO PART NUMBER AND DESCRIPTION.
PLEASE NOTE: THE MANUFACTURER'S NAME AND PART NUMBER LISTED FOR EACH ITEM ON REPLACEMENT PARTS LISTS REPRESENTS AT LEAST ONE SOURCE FOR THAT ITEM AND IS LISTED SOLELY FOR THE CONVENIENCE OF KEPCO EQUIPMENT OWNERS IN OBTAINING REPLACEMENT PARTS LOCALLY. WE RESERVE THE RIGHT TO USE EQUIVALENT ITEMS FROM ALTERNATE SOURCES. KEPCO, INC.