

MAINTENANCE MANUAL
POWER DISTRIBUTION PANEL
19C852636P1

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SPECIFICATIONS*

DIMENSIONS

Length	Standard 19-inch rack mount
Height	2 rack units (3.5 inches)
Depth	2.75 inches

INPUT CONNECTIONS

Total Connectors Three: J1, J8, and Buss Bar Studs

Connector Type J1 and J8 - Amp 641685-2 Four-position connector
Buss Bar from Power Supply to PDP

OUTPUT CONNECTIONS

Total Connectors Six: J2 thru J7, and Buss Bar Studs

Connector Type Amp 641685-2 Four-position connector

SENSE CONNECTIONS

J9 and J10

* These specifications are intended for use during servicing. Refer to appropriate Specification Sheet for the complete specification.

INTRODUCTION

This manual documents maintenance information on the 19C852636P1 Power Distribution Panel (PDP). The panel was designed for use in any application using the 350A1441 series Power Supply System.

NOTE

References within this manual to low current ± 12 Vdc also apply to Redundant Power Supply Systems providing ± 15 Vdc or 24 Vdc. Where applicable these alternate voltages will be shown in parentheses.

DESCRIPTION

The PDP provides DC power interconnections between the Redundant Power Supply (RPS) System and the individual units within the equipment cabinet. Each cabinet requires a PDP for power distribution. In some cases more than one PDP will be required in a single cabinet.

Each PDP distributes +5 Vdc and ± 12 Vdc (or ± 15 Vdc/24 Vdc) power provided by the RPS to the individual units mounted above the PDP. In multiple cabinet

configurations, the RPS output power is routed to the other PDPs via the main PDP.

POWER DISTRIBUTION

INPUT POWER

High Current (+5 Vdc) enters the PDP via the buss bar connected between the RPS and PDP stud assemblies. This power is then routed to J1 thru J8 pins 1 (+5 Vdc) and pin 3 (Ground).

The low current ± 12 Vdc (or ± 15 Vdc/24 Vdc) power from the RPS output connector J3 enters the PDP at J1. When three or more power modules are configured for N+1 operation, the output of the second RPS is routed from connector J3 to J8 on the PDP.

OUTPUT POWER

The PDP is used to distribute both high and low current +5 Vdc power and low current ± 12 Vdc (or ± 15 Vdc/24 Vdc).

The high current output is used when there are multiple cabinets being serviced by an RPS system mounted in a central cabinet. This is accomplished by connecting 1/0 gauge cables (19B804346P121, P122) between the high current studs on the central PDP and the high current studs on the PDP(s) located in the other cabinets.

The low current +5 Vdc and ±12 Vdc (or ±15 Vdc/24 Vdc) is routed to the individual units above each PDP from the output connectors J3 thru J7. Figure 1 shows the pinouts for connectors J1 thru J8. When connecting the low current output to multiple cabinets, the output from the central PDP is cabled (19B804346P171) from J2 and J8 to J1 on the remote PDP(s). Refer to the Assembly and Interconnect Diagrams (LBI-39153 for Voter applications) for cable identification and routing.

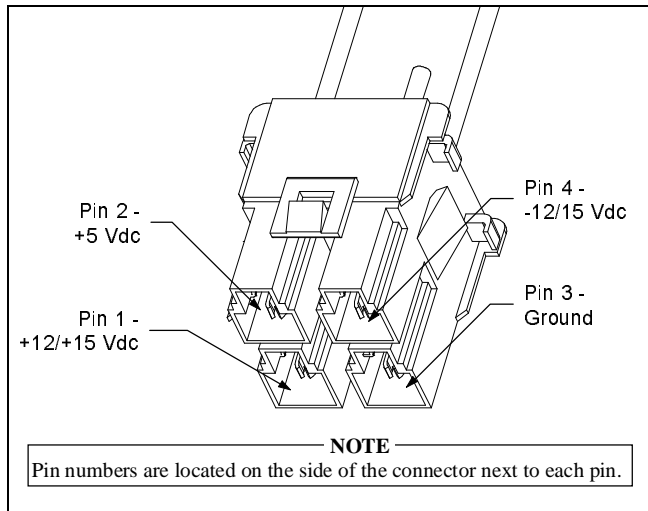


Figure 1 - Pin-outs for J1 thru J8

REMOTE SENSE CONNECTIONS

Remote Sensing is provided by connecting the Remote Sense cable 19B804346P201 between the RPS sense connector J4 or J5 and the PDP Sense connector J9 or J10.

The sense leads are then connected to the load furthest from the source. This is accomplished by connecting the Remote Sense cable 19B804346P202 to J9 or J10 on the main PDP and connecting the free end to across the load. Specific connection points will be shown in the application assembly drawings and interconnect diagrams.

CAUTION

Be sure to observe polarity of the sense leads. J9 or J10 Pin 1 is the 5V(+) Sense (red wire) and pin 2 is the 5V (-) Return Sense (black wire).

NOTE

In some situations it may not be necessary to use remote sensing. If Remote Sensing is not used, it will be necessary to connect the two wires (part of the Small Plug Assembly) to the (+) and GND Buss Bars as shown in the PDP assembly diagram (19C852636 Sheet 2).

MAINTENANCE

There is no periodic maintenance required on the power distribution panel. If, however, the PDP is dismantled, observe the following torque specifications when reassembling the unit.

NOTE

Reference designations refer to Assembly Diagram and Parts List 19C852636P1.

1. Clamp buss bars (Items 4, 5, & 6) to connector buss rods using Allen head set screws (Item #13).	Torque set screw to 8-10 in. lb.
2. Install Stud Assemblies (Item 9). Carefully align nylon washers (Items 9b and 9c) to provide insulate the cap screw from the front panel (Item #1).	Torque nuts (Item 9f) to 30-35 ft. lb.
3. Replace and secure back cover (Item #2) using M3 thread forming screws (Item #11).	Torque screws to 8-10 in. lb.

POWER DISTRIBUTION PANEL
19C852636P1 Sheet 1, Rev. 2

SYMBOL	PART NUMBER	DESCRIPTION
1	19C852639P1	Front Panel.
2	19C852640P1	Back Cover.
3	19C852641P2	Access Cover Single Panel.
4	19C852645P1	Ground Buss Bar.
5	19C852644P1	(+) Buss Bar.
6	19C852643P1	Low Current Buss Bar (qty. 2).
7	19C852637P1	Small Plug Assembly.
8	19C852635P1	Large Plug Assembly; includes the following: (8 required per panel.)
	344A3804P2	Plug (qty. 1 per Plug Assembly); sim to Amp 641685-2.
	344A3805P1	Contact (qty. 4 per Plug Assembly); sim to Amp 350650-1.
	19C852646P2	Long Buss Rod (qty. 2 per Plug Assembly).
	19C852646P1	Short Buss Rod (qty. 2 per Plug Assembly).

SYMBOL	PART NUMBER	DESCRIPTION
9	19C852638P1	Stud Assembly, includes the following: (2 required per panel.)
9a	N18P25032B6	Hex cap screw, 3/8" x 2" (qty. 1 per Stud Assembly).
9b	N203P25B6	Nut, 3/8" - 16 (qty. 2 per Stud Assembly).
9c	N405P13B40	Lock washer, 3/8" (qty. 2 per Stud Assembly).
9d	N402AP13B6	Flat Washer, 5/16" (qty. 2 per Stud Assembly).
9e		Nylon washer; sim to Micro plastics 17W07512 (qty. 1 per Stud Assembly).
9f		Nylon shoulder washer; sim to Micro Plastics 12W53007 (qty. 1 per Stud Assembly).
10	19A702381P408	Thread forming screw, M3 (qty. 8).
11		Phillips pan head screw, #8-32 x 1/4" (qty. 2).
12		Lock washer (ext. star) #8 (qty. 2).
13		Set Screw (knurled point), #8-32 x 1/4" (qty. 32).

POWER DISTRIBUTION PANEL OPTIONS

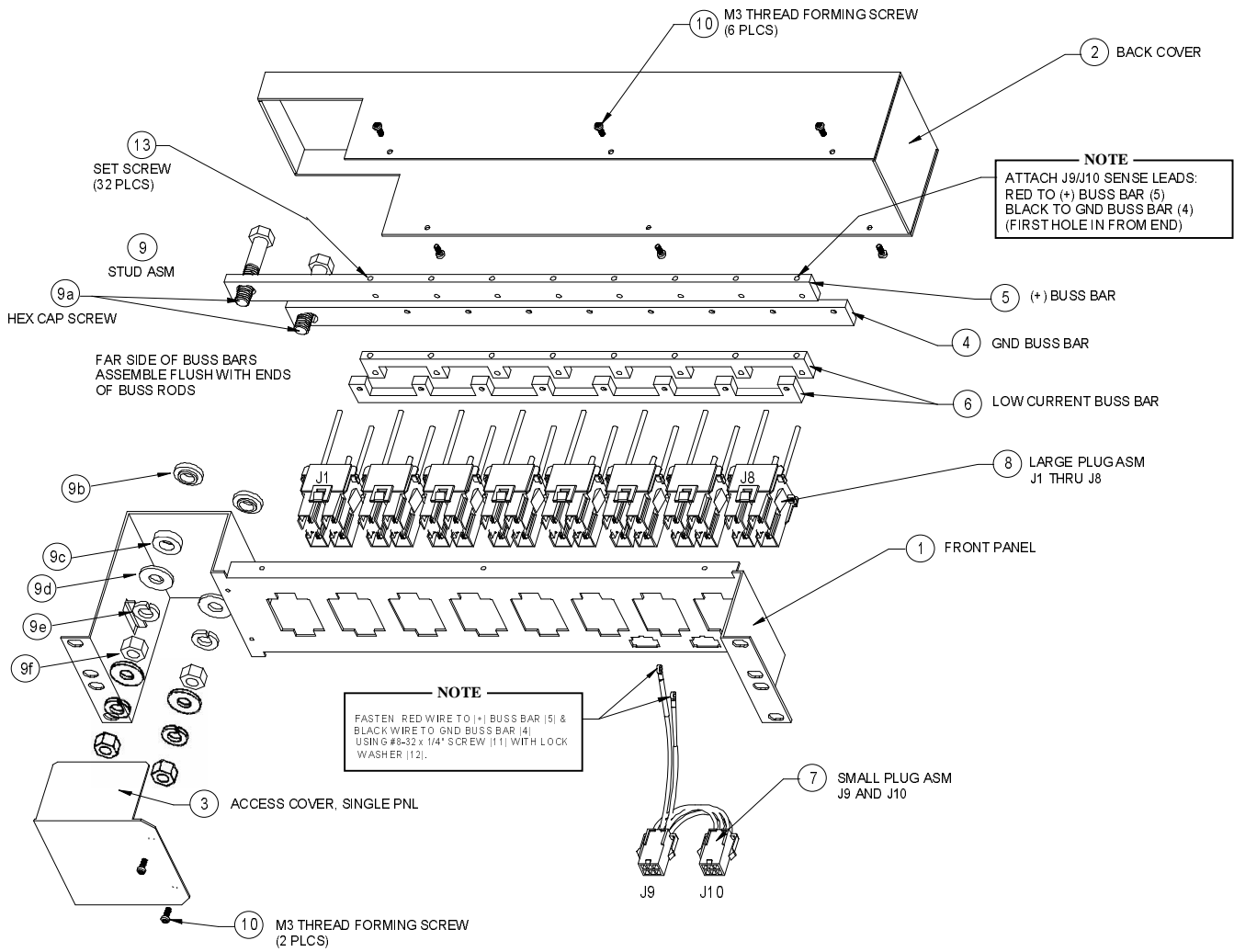
19C852649G1 - MULTIPLE POWER DISTRIBUTION PANEL KIT

19C852649G2 - SINGLE POWER SUPPLY BUSS BAR KIT

19C852649G3 - DUAL POWER SUPPLY BUSS BAR KIT

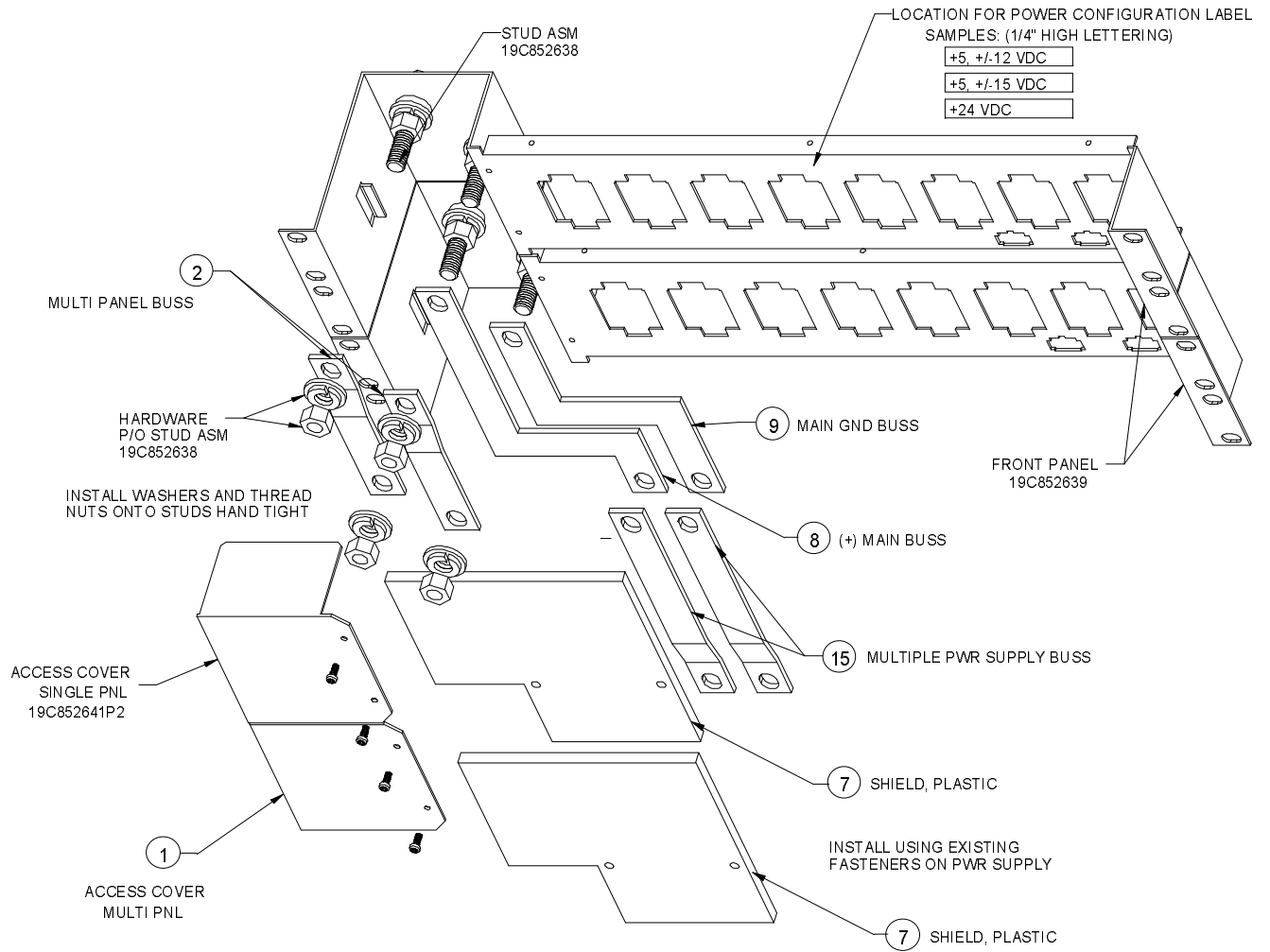
PL19C852649 Rev. 0

SYMBOL	PART NUMBER	DESCRIPTION
		MULTIPLE POWER DISTRIBUTION PANEL KIT 19C852649G1
1	19C852641P1	Access Cover, Multi-panel.
2	19C852647P1	Multi-panel Buss Bar (qty. 2).
		SINGLE POWER SUPPLY BUSS BAR KIT 19C852649G2
7	19C852648P1	Shield, plastic: PS to PDP Cover.
8	19C852642P1	Main (+) Buss Bar.
9	19C852642P2	Main Ground Buss Bar.
		DUAL POWER SUPPLY BUSS BAR KIT 19C852649G3
7	19C852648P1	Shield, plastic: PS to PDP Cover.
15	19C852647P2	Multi Power Supply (PS1 to PS2) Buss Bar (qty. 2).



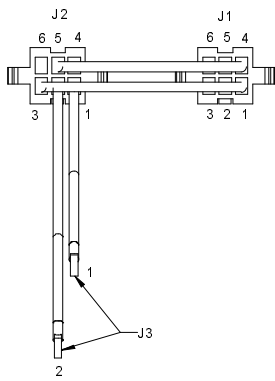
**POWER DISTRIBUTION PANEL
19C852636P1**

(19C852636, Sh. 2, Rev. 2A)

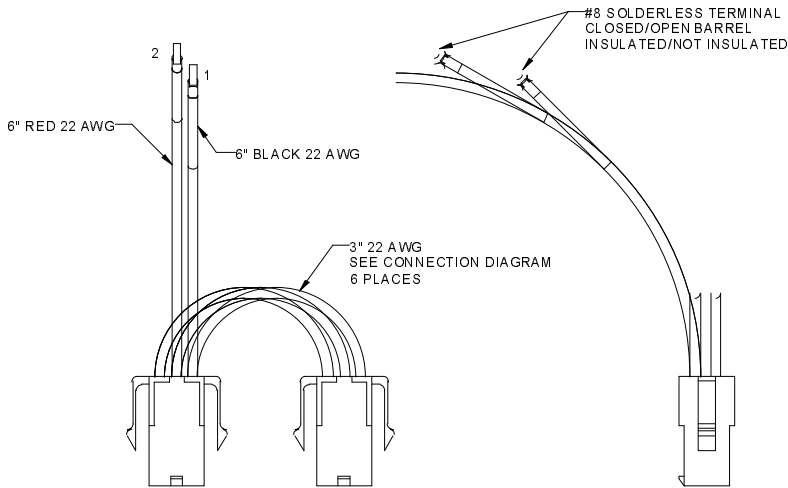
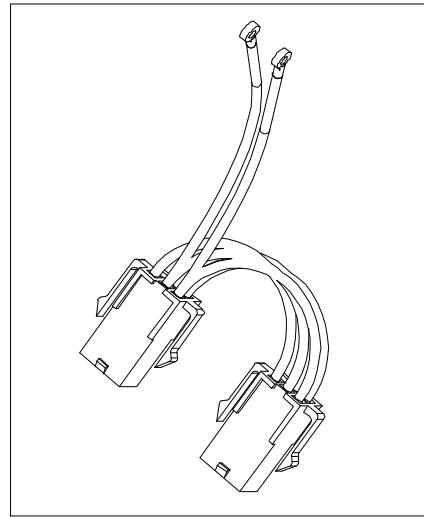


POWER DISTRIBUTION PANEL BUSS BAR OPTIONS

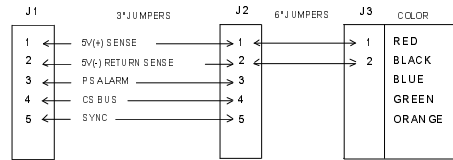
(Made from 19C852650, Sh. 1, Rev. 1)



ALL WIRES 22 AWG



CONNECTION DIAGRAM



PARTS LIST

ITEM	SIMILAR TO#	VENDOR # OR EQUIV	DESCRIPTION	QTY
J1	19B801802P43	AMP 172160-1	CONNECTOR HOUSING	1
	19B801802P2 or P4	AMP 170365-3 or 170362-3 170366-3	CONNECTOR	6
J2	SAME AS J1 (INCLUDE JUMPERS FOR J3 AS SHOWN)			
J3	19B209260P24		#8 TERMINAL	2

REMOTE SENSING - SMALL PLUG ASSY
19C852637P1

(19C852637, Sh. 1, Rev. 1)

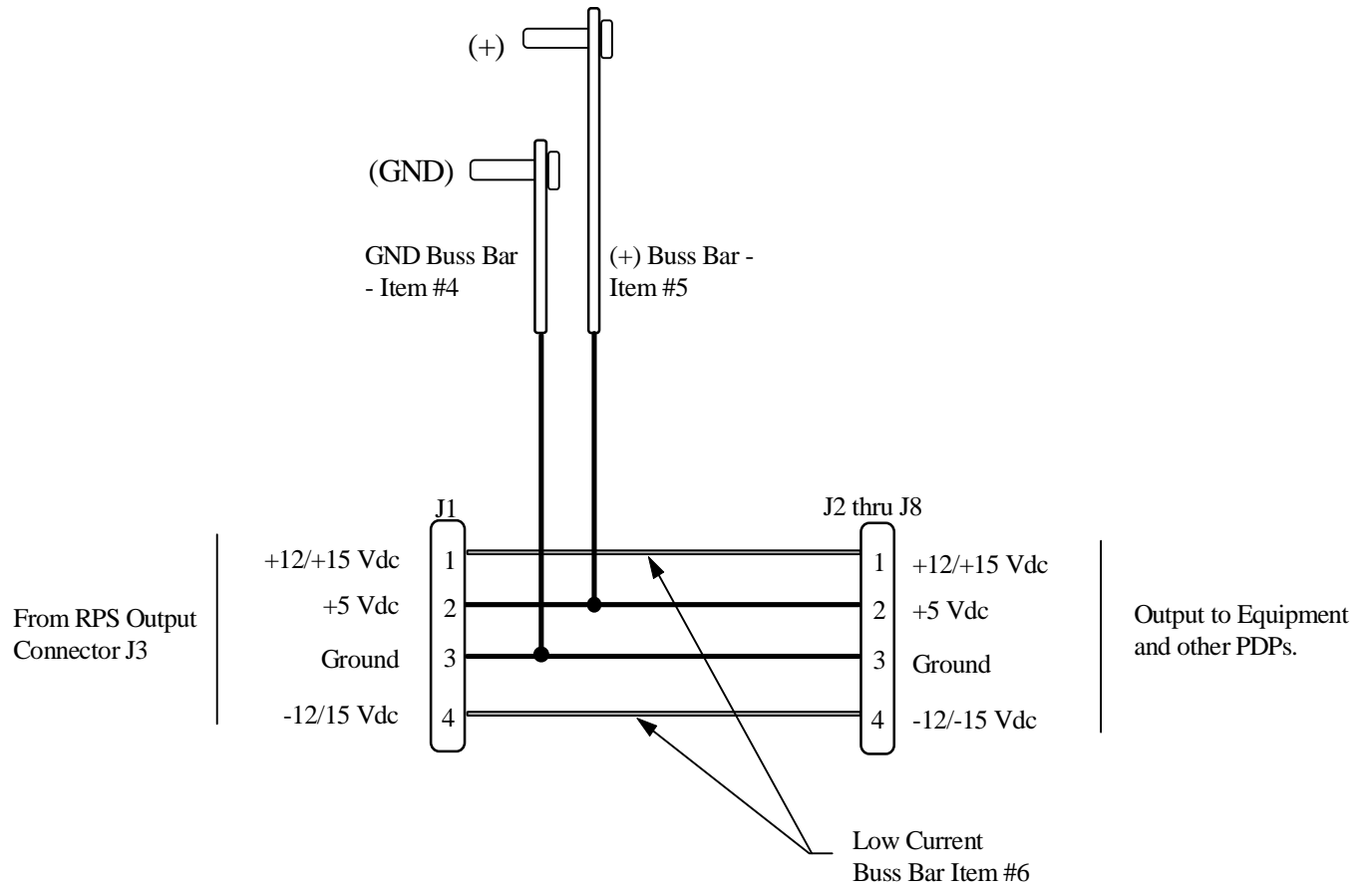


Figure 2 - PDP Schematic Diagram

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