# **Robotic Voltage Divider PCB Installation HPR130XD, HPR260XD, and HPR400XD**

**Field Service Bulletin** 

806430 - Revision 1 - September, 2013



	Ŵ	WARNING ELECTRIC SHOCK CAN KILL	
e a sta	Disconnect electrical power before performing any maintenance. All work requiring removal of the power supply cover must be performed by a qualified technician.		
	See the Safety Section of the system's Manual for more safety precautions.		

# Introduction

#### Purpose

This field service bulletin provides the instructions necessary to install a voltage divider PCB in an HPR130XD, HPR260XD, or HPR400XD power supply.

#### Kit 228529 contents

Part number	Description	Quantity
041995	PCB: Voltage divider, 30:1 ratio	1
229343	Voltage divider harness	1

**Note:** The 30:1 voltage divider option has an operating range up to 150 arc volts. Applications using arc voltage greater than 150 volts will result in the output of the 041995 voltage divider card being clipped or inaccurate.

## HPR130XD and HPR260XD power supplies

#### Install the voltage divider PCB



 $(\mathbf{B})$ 

A

B

Remove the left and right side panels from the power supply.

Install the voltage divider PCB (041995) on the 4 standoffs in the power supply.

Note: Only the HPR130XD power supply is shown, but the location for installing the voltage divider PCB and the location of the bundled wires are the same in the HPR260XD power supply.



Figure 3i-1 Right side panel removal



Install the voltage divider PCB

# Voltage divider PCB and I/O board connections

Cut the cable tie on the wires (numbered 25 and 26) bundled below the voltage divider PCB.



Attach wire number 25 to the terminal marked +2, and wire number 26 to the terminal marked -1 on terminal block TB1.



C Cut the cable tie on the wires (numbered 25 and 26) bundled near the I/O board.



Connect wire Number 25 to the I/O PCB, bus bar, marked WORK (+). Connect wire Number 26 to the I/O PCB, bus bar, marked TORCH (-).

Secure all wires and cables as required.



Arc voltage wire location



**Voltage divider PCB connections** 



I/O wire location





### HPR400XD power supply

#### Install the voltage divider PCB



Remove left and right side panels from the power supply (not shown).



B

Install the voltage divider PCB (041995) on the 4 standoffs in the power supply.



Left side panel removal

#### Plasma interface and I/O board connections



B

A Cut the cable tie on the wires (numbered 25 and 26) bundled below the I/O board.

Make the connections to the voltage divider PCB using the wire ends with fork terminals. Attach wire number 25 to the terminal marked +2 and wire number 26 to the terminal marked -1 on TB1.

Make the connections to the I/O board using the wire ends with ring terminals. Connect wire Number 25 to (C)the bottom bus bar as shown. Connect wire No. 26 to the top bus bar marked as shown.



Arc voltage wire location



Voltage divider PCB connections



I/O board connections

#### **Power distribution PCB connections**



A Locate the power distribution PCB and unplug connector J2.1.

#### **B** For an HPR130XD or HPR260XD:

Insert wire number 15 from the harness in this kit (229343) into position 15 at the rear of connector J2.1. Carefully insert the pin until it snaps into place. Insert wire number 18 from the harness in this kit into position 18 at the rear of connector J2.1. Carefully insert the pin until it snaps into place. Look at the front of the connector to visually confirm that pins 15 and 18 are properly inserted. Plug connector J2.1 back into the power distribution PCB.

#### For an HPR4000XD or HPR800XD:

Insert wire number 15 from the harness in this kit (229343) into position 1 at the rear of connector J2.1. Carefully insert the pin until it snaps into place. Insert wire number 18 from the harness in this kit into position 5 at the rear of connector J2.1. Carefully insert the pin until it snaps into place. Look at the front of the connector to visually confirm that pins 1 and 5 are properly inserted. Plug connector J2.1 back into the power distribution PCB.

Plug connector REC 1 from the harness in this kit into the voltage divider PCB REC 1 connector. The installer will need to supply the cable or wires for the voltage output connection between the voltage divider board (REC2) and the torch height control interface. A shielded, twisted pair cable is highly recommended, and it should be as short as possible to minimize electrical noise. The harness comes with connector REC 2 and the corresponding socket inserts in a plastic bag. The socket inserts can be used with wires sizes24 AWG through 20 AWG.





#### **B** For HPR400XD and HPR800XD systems





Voltage divider PCB

Voltage output connection signals				
REC 2 Pin number	Voltage divider board signal	Torch height interface signal		
1	Volts out +	Volts in +		
2	Volts out –	Ground		
3	Chassis	Cable shield		



□=□□⊒□ Spare socket

**REC 2 and socket inserts** 

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