

4.0 DIAGNOSTICS AND TROUBLESHOOTING

This section explains how to troubleshoot the Power Supply module and Rack. Any problems with either the Power Supply module or the Rack can usually be isolated by observing the condition of the LEDs on the Power Supply module faceplate. Problems with the Rack backplane (bus) will result in error codes on the LEDs of Processor modules in the Rack. See J-3650 for more information on troubleshooting the AutoMax Processor module. See J-3668 for more information on troubleshooting the DCS 5000 Processor.

DANGER

THE POWER SUPPLY MODULE OPERATES USING A-C INPUT VOLTAGE CAPABLE OF PRODUCING SEVERE SHOCK. MAKE CERTAIN THAT THE EXTERNAL AC SUPPLY CIRCUIT IS TURNED OFF BEFORE INSERTING OR REMOVING THE MODULE OR ANY CONNECTING WIRES. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SERIOUS BODILY INJURY OR LOSS OF LIFE.

If the problem cannot be determined using the troubleshooting instructions below, the hardware is not user-serviceable.

DANGER

SOME OF THESE STEPS ARE MADE WITH POWER ON. EXERCISE EXTREME CAUTION BECAUSE HAZARDOUS VOLTAGE EXISTS. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

4.1 The POWER ON LED Is Off

Problem: the POWER ON LED on the Power Supply module is off. This LED should always be on when input power is on. If the LED is off, the module is not receiving 115 VAC power. Use the following procedure to isolate the problem.

- Step 1. Using a voltmeter, verify that the Rack is receiving 115 VAC power.
- Step 2. Turn off power to the Rack. Wait until all of the LEDs on the faceplate of the Power Supply module have gone out. Verify that the connections at the Rack and the L1 and L2 connections at the Power Supply module are tight.
- Step 3. Turn on power to the Rack. If the problem is not corrected, replace the Power Supply.

4.2 The P/S READY LED Is Off

Problem: the P/S READY LED on the Power Supply module is off. This LED should always be on when input power is on. If the LED is off, use the following procedure to isolate the problem.

- Step 1. Turn off power to the Rack and all connections.
- Step 2. Wait until all of the LEDs on the faceplate of the Power Supply module have gone out. Use a screwdriver to loosen the screws holding the Power Supply module in the Rack. Slide the module out about one inch to insure that the backplane connections have been broken. Do not take the module out of the Rack.
- Step 3. Turn on power to the Rack. If the P/S READY LED turns on, the problem lies in the Rack backplane. Go on to step 4.

If the P/S READY LED does not light, the Power Supply module is malfunctioning and needs to be replaced.
- Step 4. Turn off power again. Wait until all of the LEDs on the faceplate of the Power Supply module have gone out. Use a screwdriver to disconnect the terminal strip from the Power Supply module. Do not remove the wires from the terminal strip.
- Step 5. Remove the module from the Rack and verify that card edge connectors are clean and that the connectors on the backplane are in good condition.
- Step 6. Re-insert the Power Supply module. Use a screwdriver to re-connect the terminal strip to the Power Supply module. Turn on power to the rack. If the problem is not corrected, replace the Rack.

4.3 The SYSTEM READY LED Is Off

Problem: the SYSTEM READY LED on the Power Supply module is off. This LED should always be on when input power is on and all Processor modules in the Rack are operating correctly. The light will go off if the OK LEDs on any Processors in the Rack go off.

Check the OK LEDs on all Processor modules in the Rack. Troubleshoot the Processor(s) whose LEDs are off. Verify that the Power Supply output is sufficient to power all of the modules in the Rack by checking the total power requirements of the modules in the Rack against the Power Supply output.

4.4 The BLOWN FUSE LED Is On

Problem: the BLOWN FUSE LED on the Power Supply module is on. This LED should always be off. Use the following procedure to isolate the problem.

CAUTION

THE FUSE MUST BE REPLACED ONLY BY ANOTHER 250V 8AMP NORMAL BLOW FUSE. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN DAMAGE TO OR DESTRUCTION OF THE EQUIPMENT.

- Step 1. Turn off power to the Rack.
- Step 2. Wait until all of the LEDs on the faceplate of the Power Supply module have gone out. Use a screwdriver to release the fuse holder (labeled "FUSE") located on the Power Supply module faceplate. Pull the fuse holder out of the module.
- Step 3. Take the old fuse out of the fuse holder and replace with the new fuse.
- Step 4. Re-insert the fuse holder into the module. Turn the screwdriver clockwise and press down on the fuse holder at the same time. The fuse holder must be flush against the faceplate.