MOTOROLA

instruction manual revision

This revision provides information for the new iSC Power Supply Board.

Instruction Manual Affected

68P81098E05-C integrated Site Controller System Manual

Revision Details

Please add the attached section to your existing iSC System Manual.

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Power Supply Board

Chapter overview

This chapter provides technical information for the Power Supply Board.

The topics of this chapter are listed in the following table.

Section	Page	This section..
Power Supply Board	12-2	provides a description
Performance specifications	12-3	describes the controls and indicators
Performance specifications	12-3	defines the performance specifications
iSC Power Supply Board Removal/Installation	12-4	defines removal/replacement procedures

Power Supply Board

The power supply board supports one DC input and four DC outputs. The supply has a nominal 48V DC input and a 5V, 12V, -5V, and -12V output. Figure 12-1 shows the power supply board. Figure 12-2shows a block diagram of a generally configured power supply board.

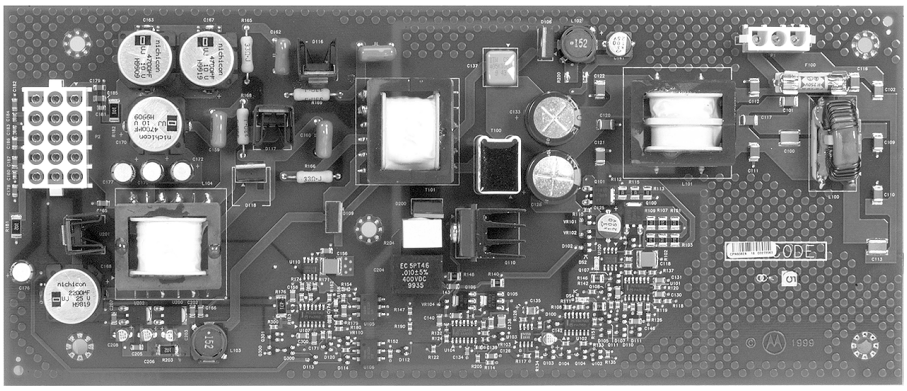

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Figure 12-1 ***Power Supply Board***

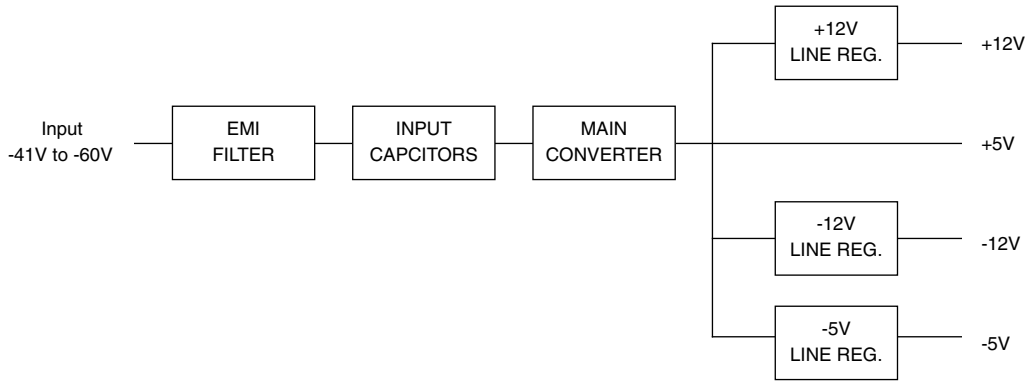

Figure 12-2 ***Power Supply Board block diagram***

Performance specifications

Table 12-1 through Table 12-3 lists Input, Output, and Environmental specifications, respectively.

Table 12-1 ***Input Power specifications***

Specification	Value or range
Input DC Voltage	-41Vdc to -60 Vdc
Input DC Voltage (Nominal)	-48 Vdc
Input Turn-On/Turn-Off Point	$V_{Turn\text{-}On}$ = -43V ± 1 Vdc $V_{Turn\text{-}Off}$ = -39V ± 1 Vdc
Input Current	$I_{Steady\ State}$ = 1.5A max I_{Inrush} ≤ 48A
Efficiency	≥ 65% @ +25˚ C

Table 12-2 ***Output Power specifications***

Output	V_{out} (Vdc)	Tol.	I_{min} (A)	I_{max} (A)	Ripple (mVp-p) (NOTE 3)
V1	+5	±5%	1.0	6.5 (rms) (NOTE 1)	150
V2	+12	±5%	0.2	0.5 (rms) (NOTE 2)	150
V3	-5	±5%	0.0	0.1	150
V4	-12	±5%	0.0	0.2	150

Note 1: Peak current is 13A at startup.
Note 2: Peak current is 1.0A at startup.
Note 3: Ripple is measured using a 20 MHz BW scope with a supply at a 25°C ambient at full load.

Table 12-3 ***Power Supply Board performance specifications***

Specification	Value or range
Operating temperature	-30˚ to 140˚ F (0 to 40˚ C)
Storage temperature	-40˚ to 185˚ F (-40˚ to 85˚ C)
Humidity	5% to 95% (non-condensing)

iSC Power Supply Board Removal/Installation

Removal

Note: Keep track of iSC cabling connections when removing and reconnecting cables. Label each cable that connects to the iSC and Power Supply Board before removing cable.

Note: The site will be shut down during the following procedures.

1. Remove power from the iSC by setting the following circuit breakers on the Circuit Breaker Panel to OFF.
   - CTRL A
   - EAS/iSC
   - CTRL B
2. Disconnect the cables from the back of the iSC.
3. Un-secure the iSC from the front of the Cabinet by removing the four iSC mounting screws
4. Un-snap the cover from the iSC chassis.
5. Disconnect the two cables attached to the power supply board.
6. Remove the three chassis mounting screws to take the board/bracket assembly out of the iSC chassis
7. Remove the five mounting screws that mounts the power supply board to the bracket.

   Note: The Power Supply Board (kit # CPN6082) is mounted on a bracket and held in place by five screws.

Installation

1. Unpack the new power supply board and bracket and record the bar code number in the site records.
2. Using the five power supply board mounting screws, mount the power supply board to the bracket, if not pre-assembled.
3. Secure the board/bracket assembly to the iSC using the three chassis mounting screws.
4. Attach the warning label to the bracket, if not pre-assembled.
5. Connect the two cables attached to the power supply board.
6. Snap the cover back on the iSC chassis.
7. Place the iSC in the Cabinet.
8. Using the four iSC mounting screws removed during removal procedure, secure the iSC to the front of the Cabinet.

   Using a torque wrench, torque the screws to 40 in-lbs.
9. Connect the cables to the back of the iSC.
10. Turn on iSC by setting the following circuit breakers on the Circuit Breaker Panel to ON.
    - CTRL A
    - EAS/iSC
    - CTRL B

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