5-4.14. SCR High Voltage M Frame Interface Board (DS200SHVM)

The DS200SHVM SCR High Voltage M Frame Interface Board (SHVM) provides an interface for signals from an M frame drive's SCR bridge to the DCFB or SDCI board and PCCA card. The SHVM performs the following functions:

- Converts shunt signals (-500 mV to 500 mV) into differential-frequency outputs (0 to 500 kHz) that are sent to the DCFB or SDCI board
- Incorporates hardware jumper-selectable 10:1 current transformers to provide additional current attenuation capability
- Provides attenuation of ac line, motor armature, and SCR bridge voltages

Section 6-15 defines I/O points for the SHVM board.

5-4.14.1. CONFIGURABLE HARDWARE. The SHVM board includes Berg-type jumpers used for manufacturing test or customer options. Figure 5-18 shows the SHVM board layout, including the locations of these jumpers. Table 5-13 lists and defines these items.

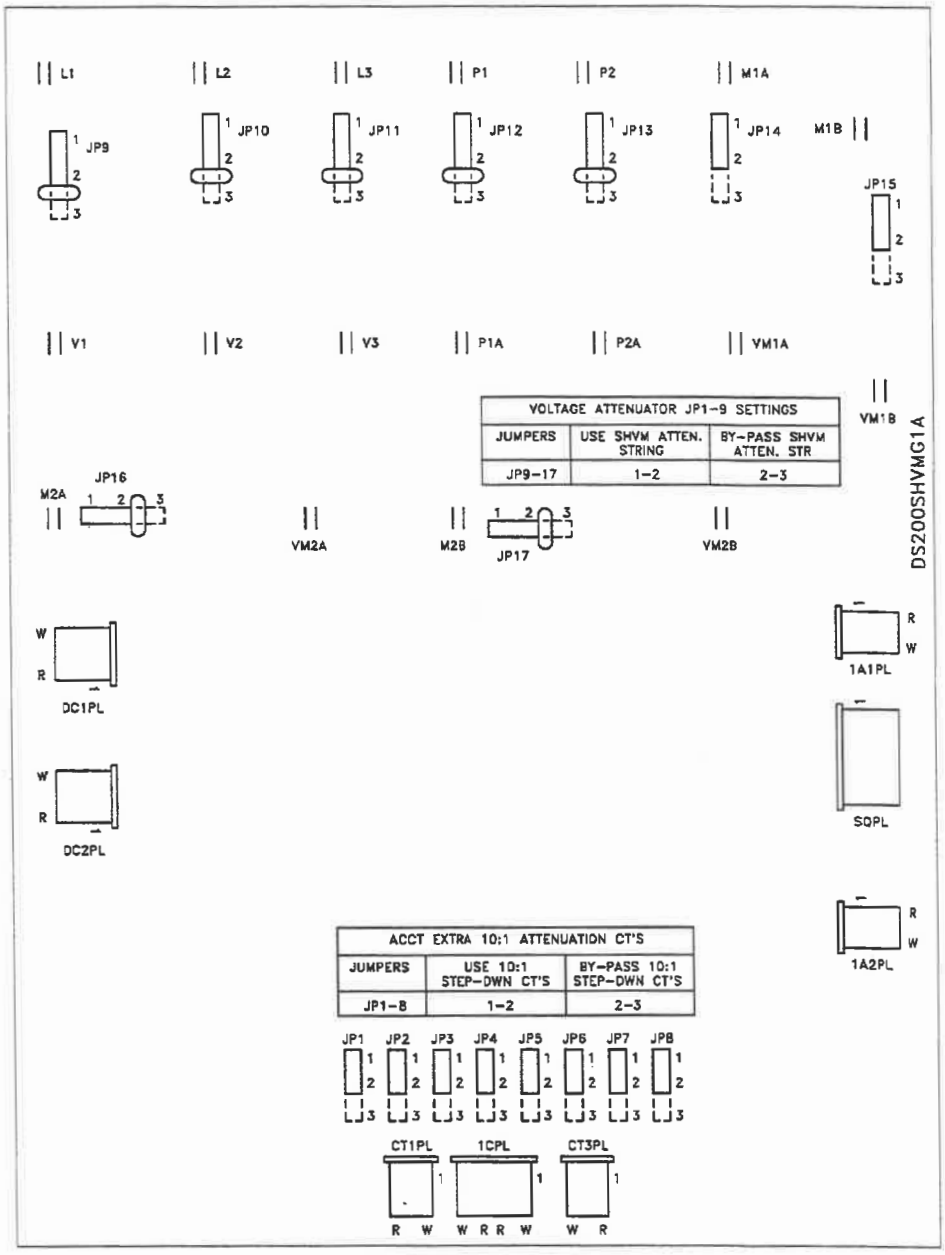

Figure 5-18. SHVM Board Layout

Table 5-13. SHVM Board Adjustable Hardware

Revision	Name	Description
All	JP1 – JP8	Select 10:1 attenuation for phase A (JP1 - JP4) and phase C (JP5 – JP8) current transformers Jumpers JP1-JP8 should be set to the same position, either selecting or bypassing the SHVM 10:1 CT attenuation for the ac line currents. Attenuation is required above 144 mA main line ACCT secondary current (Rated dc current/ACCT ratio), because the CT burden resistors on the SDCI board are not rated to handle > 144 mA. Be sure to compensate for the 10:1 current attenuation when setting the burden scaling switches on the SDCI board. 1.2 Insert 10:1 attenuator, ACCT current > 144 mA 2.3 Bypass 10:1 attenuator, ACCT current ≤ 144 mA
All	JP9	Bypass line voltage phase L1 attenuator string for 240 – 600 V ac JP9, JP10, and JP11 together are used to scale the ac line voltage feedbacks. 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP10	Bypass line voltage phase L2 attenuator string for 240 – 600 V ac 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP11	Bypass line voltage phase L3 attenuator string for 240 – 600 V ac 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP12	Bypass dc+ bus voltage attenuator string for 240 – 600 volts (P1) JP12 and JP13 together are used to scale the dc bus voltage feedback. However, the settings for JP12 and JP13 are based on the nominal main ac rms input voltage. 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP13	Bypass dc- bus voltage attenuator string for 240 – 600 volts (P2) 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP14	Bypass motor voltage #1 M1A attenuator string for 240 – 600 volts JP14 and JP15 together are used to scale the motor voltage #1 voltage feedback. However, the settings for JP14 and JP15 are based on the nominal main ac rms input voltage. 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP15	Bypass motor voltage #1 M1B attenuator string for 240-600 volts (M1B) 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP16	Bypass motor voltage #2 M2A attenuator string for 240 – 600 volts JP16 and JP17 together are used to scale the motor voltage #2 voltage feedback. However, the settings for JP16 and JP17 are based on the nominal main ac rms input voltage. 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)
All	JP17	Bypass motor voltage #2 M2B attenuator string for 240 – 600 volts 1.2 Main ac = 601 – 1000 volts 2.3 Main ac = 240 – 600 volts (bypass attenuator)