

## SECTION E – HIGH VOLTAGE INTERFACE PANEL

### OPAL-RT CONNECTIONS TO THE HIGH VOLTAGE INTERFACE PANEL

The High Voltage Interface Panel (HVIP) has the capability to provide digital signals of up to 250 V<sub>DC</sub> to equipment external to the Opal-RT Simulator. It can provide up to 16 such signals. The connection between the Opal-RT simulator and the HVIP is made using a 64 DIO DIN96 4x50 adapter on a digital I/O slot of the simulator, a 50pins-37pins IDC50 to DB-37 round shielded cable and the DB-37 female connector at the rear of the HVIP. The digital outputs from the simulator are used to send the required signals to activate the required relay (Brentek International Dual Channel Solid state output module). 16 Relay Status LED indicate when the relay switch is closed or opened.

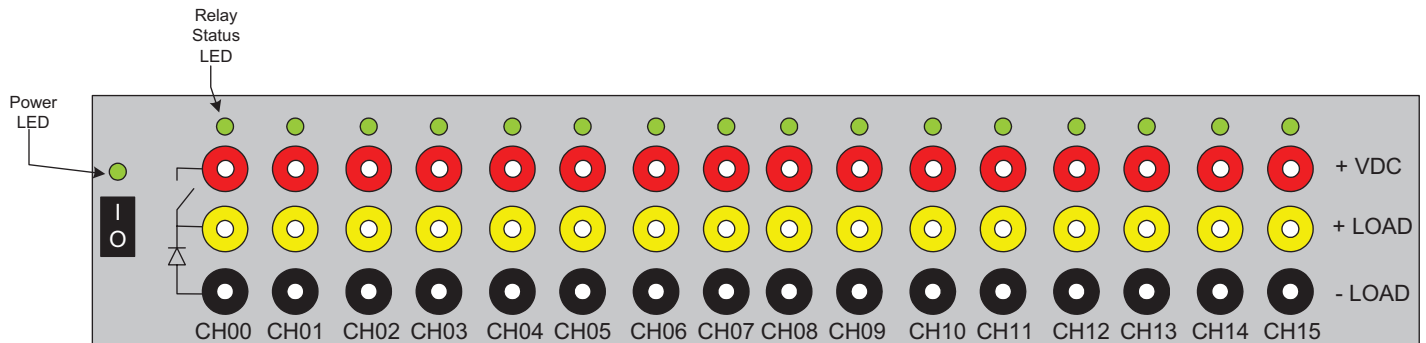


Figure 9: HVIP front View

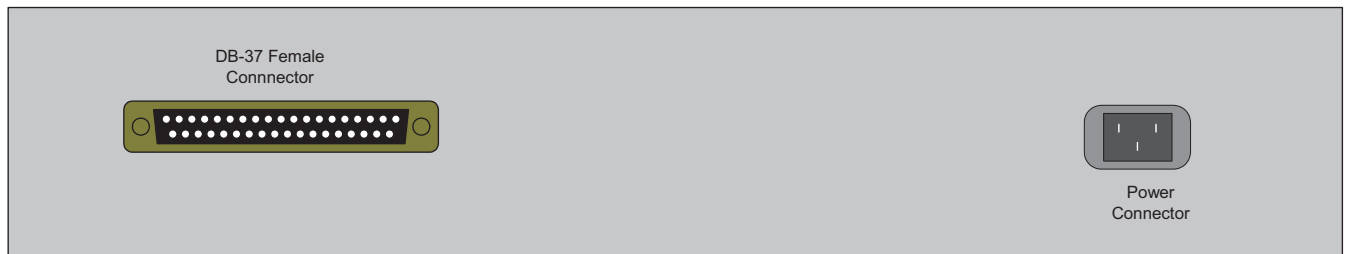


Figure 10: HVIP Rear View



**CAUTION:** When making connections between the HVIP and the external equipment, ensure that the +V<sub>DC</sub> voltage supply is turned OFF

## CONNECTIONS BETWEEN THE HVIP AND EXTERNAL EQUIPMENT

The connections between the HVIP and the user's external equipment are made with safety type banana plugs. An external DC supply (max 250 VDC) is required to provide the source voltage. The power supply +VDC output must be connected to the connector labeled +VDC (RED) on the front of the HVIP. The external load is to be connected between the + LOAD and –LOAD connections (Yellow and Black) on the front of the HVIP, as shown in Figure 11.

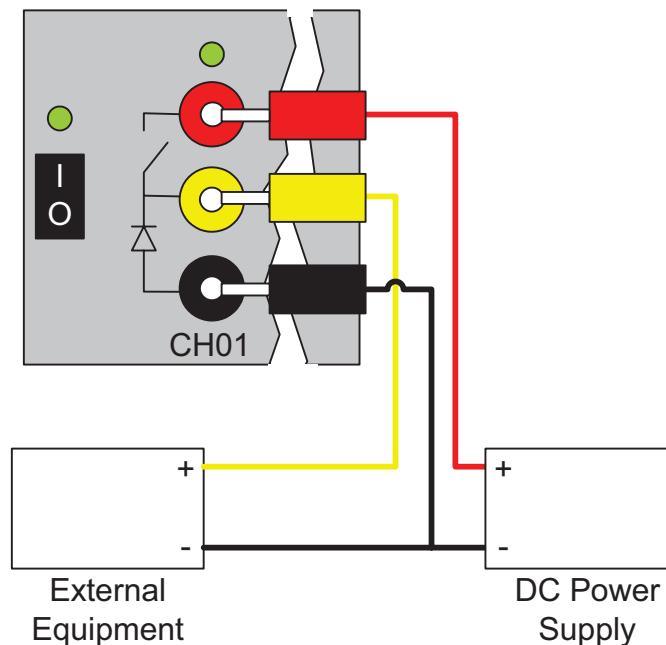


Figure 11: HVIP Connection to Power Supply and External User Equipment

The Opal-RT digital outputs are used to control the relay switch located between the +VDC and +LOAD connections.

## HVIP SWITCH SPECIFICATIONS AND OPERATION

The HVIP uses 8 Brentek International dual channel solid state output modules for the 16 output channels. Each output module can switch up to 250mA at 250VAC/VDC. The module is operated using an active low signal which is provided from the Opal-RT simulator. The module output contact is closed when 0 Volts is applied to the control input. When the module contact is closed, the relay status LED will be ON. If no connection is made to the control input, then the module contact is open.



**CAUTION:** When making connections between the HVIP and the external equipment, ensure that the +V<sub>DC</sub> voltage supply is turned OFF

For Brentek International dual channel solid state output module specification, please refer to the Related Documents section.