

SCB Solenoid Recovery

(Taken from the ISAC ION notes on Plone, instructions by Klaus Reiniger, updated by Dan Louie, November 26, 2009. V.1.1.)

In the event that a site power interruption lasts more than four second, the Helium Conservation Modules will become unarmed and effectively create a short circuit across the magnet power supply lines, which enables the magnets to dissipate its energy without boiling off the liquid helium.

In the event that the HCM becomes disarmed, please do the following (see Figure 1 below):

1. Go to the ISAC-2 Power Supply Room (Room #260) and find the correct row of racks for the particular SCB device. Go to Rack #5.
2. Press the "Output Inhibit" switch on the 4-Quadrant power supply (near the top of the rack) so the switch LED is lit.
3. Toggle the "ON/OFF" power switch on the 4-Quadrant power supply to OFF.

Please note that the EPICS system will not allow you to rearm the HCM until the solenoid has discharged its internal energy, ie. $I_{sol} = 0ADC$.

To establish current in the solenoid after the power outage, do the following (See image below):

1. Arm the Helium Conservation Module (see Figure 2 below).
2. Go to the model 420 Power Supply Programmer (immediately below the 4-Quadrant power supply). The LCD display should read, "Quench Detected @XX A No PSwitch Installed." The QUENCH DETECT LED should be ON.
3. Press the RESET/ZERO pushbutton on the Power Supply Programmer.
4. The RAMP/PAUSE LED will be on after a successful reset.
5. Go to the 4-Quadrant power supply. Toggle the power switch to ON.
6. Press the "Output Inhibit" switch on the 4-Quadrant power supply so the switch LED is off.
7. Set the power supply to the previous current setting.

Figure 1: The following picture of the SCB1 HCM devices is provided as an example. For each SCB row of racks, they are on Rack #5.

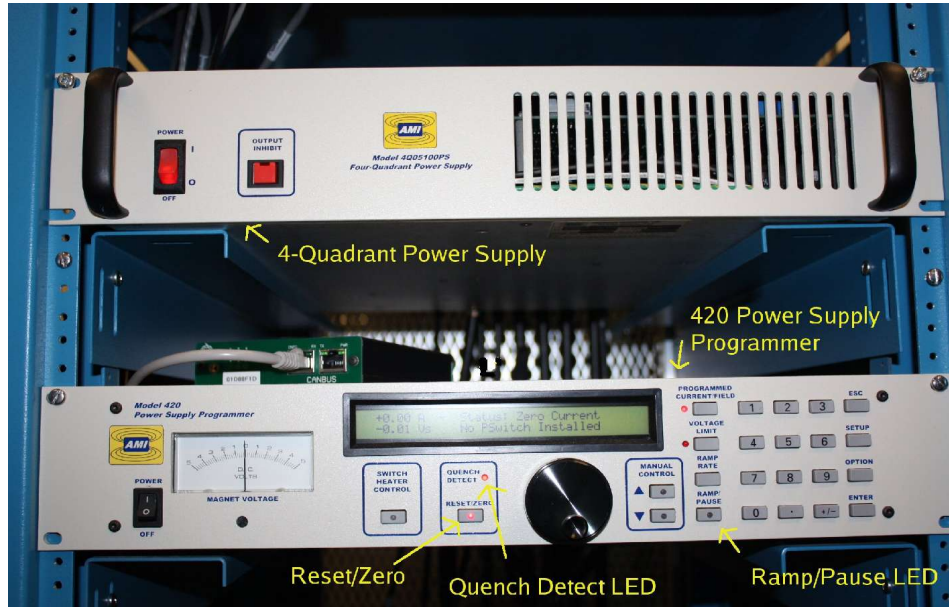
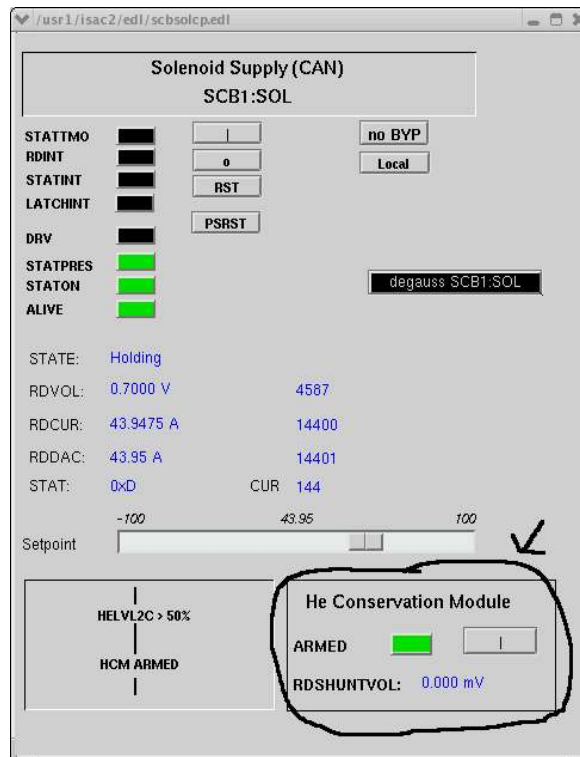


Figure 2: Arming the He Conservation Module. There is one such solenoid supply page for each SCB (SCBx:SOL), accessible from the SCB optics page. Push the button to arm.



System Experts:

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