DSG-SoLID Magnet Controls Meeting Minutes

Date: August 4, 2021
Time: 11:00 – 12:00

Attendees: Aaron Brown, Peter Bonneau, Pablo Campero, Brian Eng, George Jacobs, Tyler Lemon, Marc McMullen, and Whit Seay

1. ## Completed drawings
   Mary Ann Antonioli and Pablo Campero
   1. A00000-16-03- 0262 *JTV Motor Drives Wiring Diagram*
   2. A00000-16-03- 0305 *PLC Relay Module, Remote A, Slot 5 Wiring Diagram*
   3. A00000-16-03- 0313 *PLC Relay Module, Remote B, Slot 3 Wiring Diagram*

2. ## Modification for drawings in progress
   Mary Ann Antonioli and Pablo Campero
   1. A00000-16-03-0301 *PLC Relay Module, Remote A, Slot 1 Wiring Diagram*
   2. A00000-16-03-0312 *PLC Relay Module, Remote B, Slot 2 Wiring Diagram*
      - Need to show connection node numbers for current lead heaters and sorb heaters, after creating wiring diagram for them
      - Will research specifications and pinout of sorb heaters' temperature controller
   3. A00000-16-03-0403 *Radial Support Load Sensors Cable Diagram*
      - Defining cable colors for wires
      - Determining number and type of terminal strip to be used
      - Assigning labels for terminal strips
   4. A00000-16-03-0404 *Axial Support Load Sensors Cable Diagram*
      - Defining cable colors for wires
      - Determining number and type of terminal strip to be used
      - Assigning labels for terminal strips
   5. A00000-16-03-0350 *Power Supply Terminal Strips*
      - Need to confirm number and ampacity of circuit breakers required to protect 24 VDC and 5 VDC power supply circuits
   6. A00000-16-03-0100 *Instrumentation Control Panel - Rear Layout*

3. ## Cables for SoLID magnet instrumentation
   Pablo Campero, Brian Eng, and Marc McMullen
   1. Updated *Cable List* spreadsheet
      - Added specifications for cables for strain gauges and load cell sensors
      - Eight cables added to the list
      - Added delivery dates for recent three cables delivered to Physics storage building
   2. Reviewing voltage input specifications of Dataforth signal conditioning modules that will be used for voltage tap readout
      - Reviewed transient input protection rating code ANSI/IEEE C37.90.1. in ANSI-IEEE standard issued in 2002
      - Need access to the most current standard issued; working with Tim Fitzgerald
   3. Delivered 20 AWG, 18-conductor cable (100 ft) to the Physics storage building
      - Cable (rated for 600 V) connects voltage tap signal readouts from the terminal strip to the Dataforth signal conditioning module
      - Required 20'; 80' leftover to be used in another application

4. Delivered 24 AWG, 8-conductor cable (100 ft) to the Physics storage building
   - Connects macro sensors output or transmitter (EBV8) to 12-position switch (for local readout of valve position) and PLC terminal strip to MCR relay terminals
   - Required 50'; 50' leftover
5. Delivered 24 AWG, 2-conductor cable (200 ft) to the Physics storage building
   - Connects macro sensor output voltage to 12-position switch, PLC terminal strip to key switch, PLC terminal strip to PLC terminal block terminals, and terminal strip to MCR connector for contacts
   - Required 100'; 100' leftover
6. Researching available ferrules for single and multi-connections, and ferrule crimper
   - Ferrules be purchased
     - For 20–24 AWG single and double conductors
     - For 16 AWG single and double conductors