

DSG-SoLID Magnet Controls Meeting Minutes

Date: July 7, 2021

Time: 11:00 – 12:00

Attendees: Pablo Campero, Marc McMullen, and Steven Lassiter

1. Electrical drawings in progress

Mary Ann and Pablo Campero

1. A000000-16-03-0210 to A00000-16-03-0214 *Temperature Sensors Wiring Diagrams*
 - Changing colors for cables shown in drawings to match selected cable
2. A00000-16-03-0406 *PT-102 and Diode Temperature Sensors Cable Diagram*
 - For the heat exchanger sensors connections, replacing single 8-conductor cable with two 4-conductor cables
3. A00000-16-03-0350 *Power Supply Terminal Strips*
 - Adding 2-A breakers for signal conditioning modules (5 VDC supply circuit)
 - Will research power requirements for signal conditioning modules to check a single 2-A breaker can be used for more than one signal conditioning module
4. A00000-16-03-0100 *Instrumentation Control Panel - Rear Layout*
 - Added 2-A breakers required for valve motor drives to match A00000-16-03-0350
 - Moved power supplies (5 V and 24 V), breakers, and terminal strips from bottom of rack #1 to middle of rack #2 so all breakers are in rack #2
 - Will determine total number of 2-A breakers
5. Drawing A00000-16-03-0402 *JT and EB Valve Cable Diagram*
 - Adding extra terminal strip for drain wire

2. Cables for SoLID magnet instrumentation

Pablo Campero, Brian Eng, and Marc McMullen

1. Delivered LVDT, current lead, and heat exchanger temperature sensor cables and tooling to the physics storage area
 - 4-conductor, 22 awg cable (4 spools of 500')
 - 12 Milspec connector kits
 - One crimper + positioning tool for Milspec connector
2. Delivered motor drive cables and tooling to the physics storage area
 - 4-conductor, 16 awg cable (3 spools of 500')
 - 12 Trim Trio connectors + backshells
 - 60 female Trim Trio contacts
 - One crimping handle + die + extraction tool for Trim Trio
3. For the voltage tap cable, delivered four sets (cable and bulkhead ends) of AMP circular plastic connectors + male and female 16 awg contacts to the physics storage area
4. Researched and ordered cable for the temperature sensors in the magnet, CCR, and heat exchanger
5. Cable needed for the Voltage Tap sensors connections in the rack
 - From MAG-TS-09 terminal strip to signal conditioning module
 - From signal conditioning interface board to PLC-TS-09 terminal strip
 - From PLC-TS-09 terminal strip to PLC module terminal block

6. Cable needed for the LVDT signal connection in the rack
 - From terminal strip (MAG-TS-13 and HX-TS-02) to signal conditioning module
 - From signal conditioning interface board to PLC-TS-13 terminal strip
 - From PLC-TS-13 terminal strip to PLC module terminal block
7. Updated *Cable List*
8. Will look into possible ways to reduce the number of cables used to connect a common connection point (terminal strip) to the same device type (modules or boards)