

## DSG-SoLID PLC Programming Meeting Minutes

**Date:** December 9, 2020

**Time:** 10:30 – 12:00

Attendees: Aaron Brown, Peter Bonneau, Pablo Campero, Steven Lassiter, Tyler Lemon, and Marc McMullen

1. Debugged 1794-ACN15 Flex I/O adapter module faults (Pablo Campero, Steven Lassiter)
  - 1.1. Confirmed the module is from version Series C
  - 1.2. Checked status indicators; confirmed that flashing green LED indicators refers to “On Line but not connected” status. Error code found: 16#0204
  - 1.3. Rescheduled node address for ControlNet network
  - 1.4. Attempted to upgrade firmware to version 5.003, upgrade failed since the target module was unreachable
  - 1.5. Removed module from project file and checked communication status with RS-Link
  - 1.6. Problem unsolved; discussed possibility of getting another module
  
2. Reviewed and modified *Cleo* routine
  - 2.1. Sheet 1: Added general comments to note changes needed for all sheets in the Cleo Routine
  - 2.2. Sheets 4–7 and 12–14: Modifications of PLC Enhanced Selector (ESEL) instructions
    - 2.2.1. Pablo Campero added fault inputs for ESEL instructions used to select maximum, minimum, and average values for temperature and load sensors; verified that values of bad sensors were removed from the selection
    - 2.2.2. Four extra sheets added to the Cleo routine to accommodate the code modifications
    - 2.2.3. Steven Lassiter will modify Sheets 12–14; actual setup groups for load sensors need to be changed based on their installed location
  - 2.3. Sheet 29: Pablo Campero replaced incorrect PLC tag used to monitor LN<sub>2</sub> maximum temperature in the solenoid shields
  - 2.4. Sheets 32–34: Added comments to note that Cryo PLC tags used in these sheets must be changed at a later date, once defined
  - 2.5. Sheets 37–38: Heat exchanger JT valve set controls
    - 2.5.1. Steven Lassiter will send screenshots showing changes done
    - 2.5.2. Pablo Campero will change the PLC code to match those changes
  - 2.6. Sheets 40–41: Mass flow controllers
    - 2.6.1. Once model for mass flow controllers and current lead specs are confirmed, Steven Lassiter will update PLC code
  - 2.7. Sheets 42–45: PSU commands will be tested and changed as needed, once the PSU is confirmed by the PLC code; tentatively HMS-Q1 PSU from Hall C could be used
  
3. Miscellaneous
  - 3.1. Steven Lassiter requested changes on layout of the CCR-Expert HMI screen
  - 3.2. Pablo Campero noted the DSG schedule for Motor Controlled Relay and Constant Current Source (CCS) boards assembly
    - 3.2.1. Marc McMullen will deliver the two already assembled boards to Steven Lassiter