

HALL C PLC TASKS REPORT (05/31/2018 – 06/06/2018)

- Worked on NRM PT2026 Tesla Meter communication with PLC task.
 - ★ Debugged Ethernet communication with PT2026 Tesla Meter.
 - ★ Assigned TCP port 1024 and 111, these ports enable connection with the PT2026 Tesla Meter but the sending and receiving of the SCPI commands still with problems.
 - Unable to find proper TCP port number for PT2026 seems to be the reason for the communication problem between 490 NBX modules and the PT2026 Tesla Meter.
 - VXI-11 is the communication protocol available in the PT2026 Tesla Meter.
 - Researched Remote Procedure Call (RPC) commands used for VXI-11 protocol
 - ★ Contacted ECCO vendors to see another optional module that can be used to communicate PLC with PT2026 Tesla Meter.
 - ★ Debugging and researching better communication options.
 - ★ Investigated possible use of NBX module as the interface between the PLC and NMR probe.
 - NBX module does not seem to work, as the probe uses VXI-11 which has dynamic ports.
- Instrumentation for PLC tasks identified/located in Hall and counting house.
 - ★ SHMS shutter, SHMS flexes I/O modules, Skylla7 server PC, three UPSs and terminal blocks for HMS I/O PLC modules found.
 - ★ Could not locate HMS flex I/O modules.
- PR submitted for AP9613 Dry Contact I/O (relay) card for APC UPS interface.
 - ★ APC UPS has no usable built-in interface with PLC, so the AP9613 Dry Contact I/O (relay) card is needed to read the UPS status using PLC.
- UPSes in the detector hut examined for UPS-to-PLC interface.
 - ★ Both HMS and SHMS use FERRUPS model Fe5.3KVA UPSs.
 - ★ UPSes have one built-in DB-25 port that contains two relay outputs:
 - UPS is on its inverter (relay 1)
 - Alarm status summary (relay 2).
- Began generating SHMS PLC network map.
- Began development of a program on DSG-PLC to test logic for UPS interface.
 - ★ Current version of program uses an analog input module with external power supply to mimic fault outputs of UPSs.