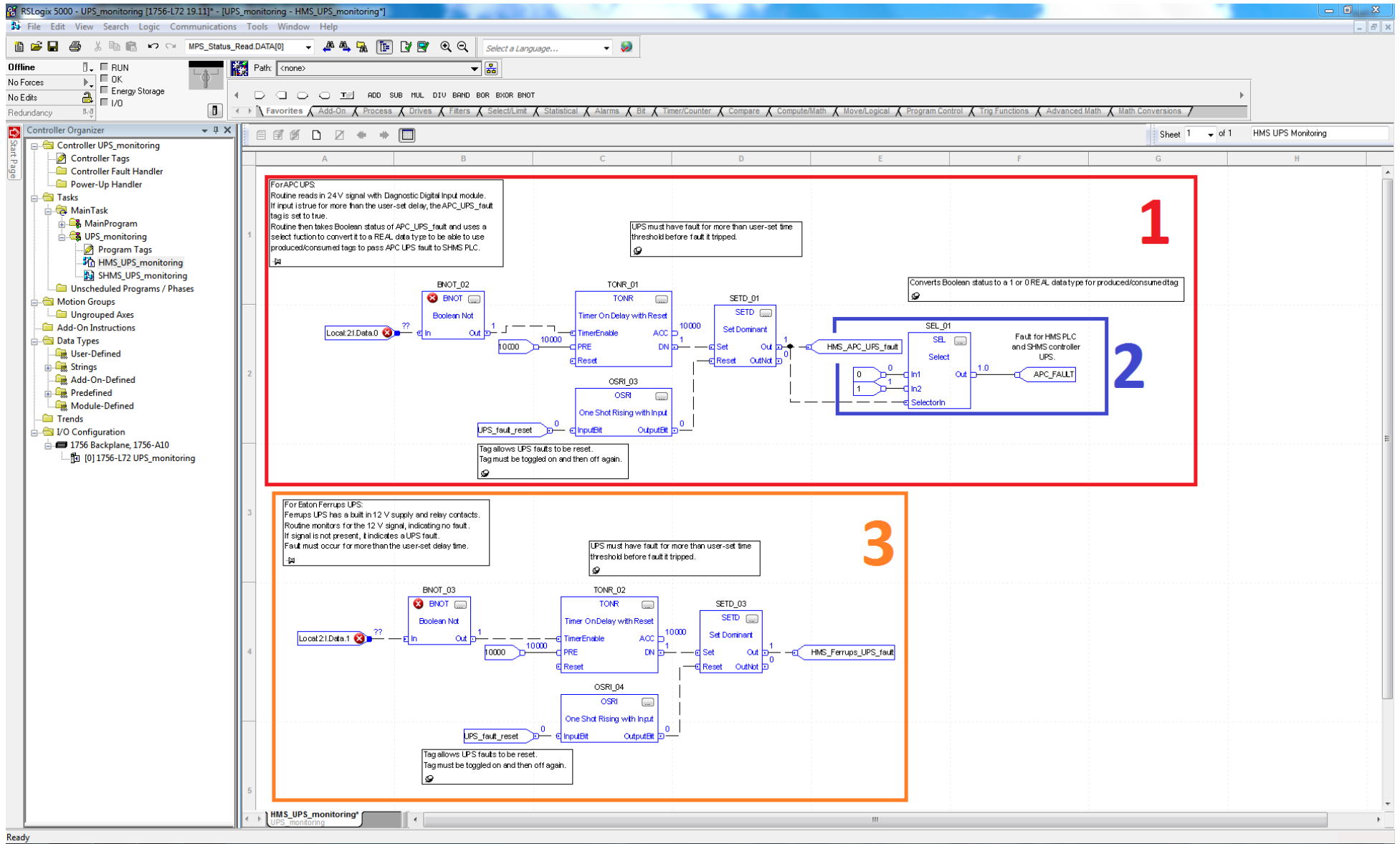


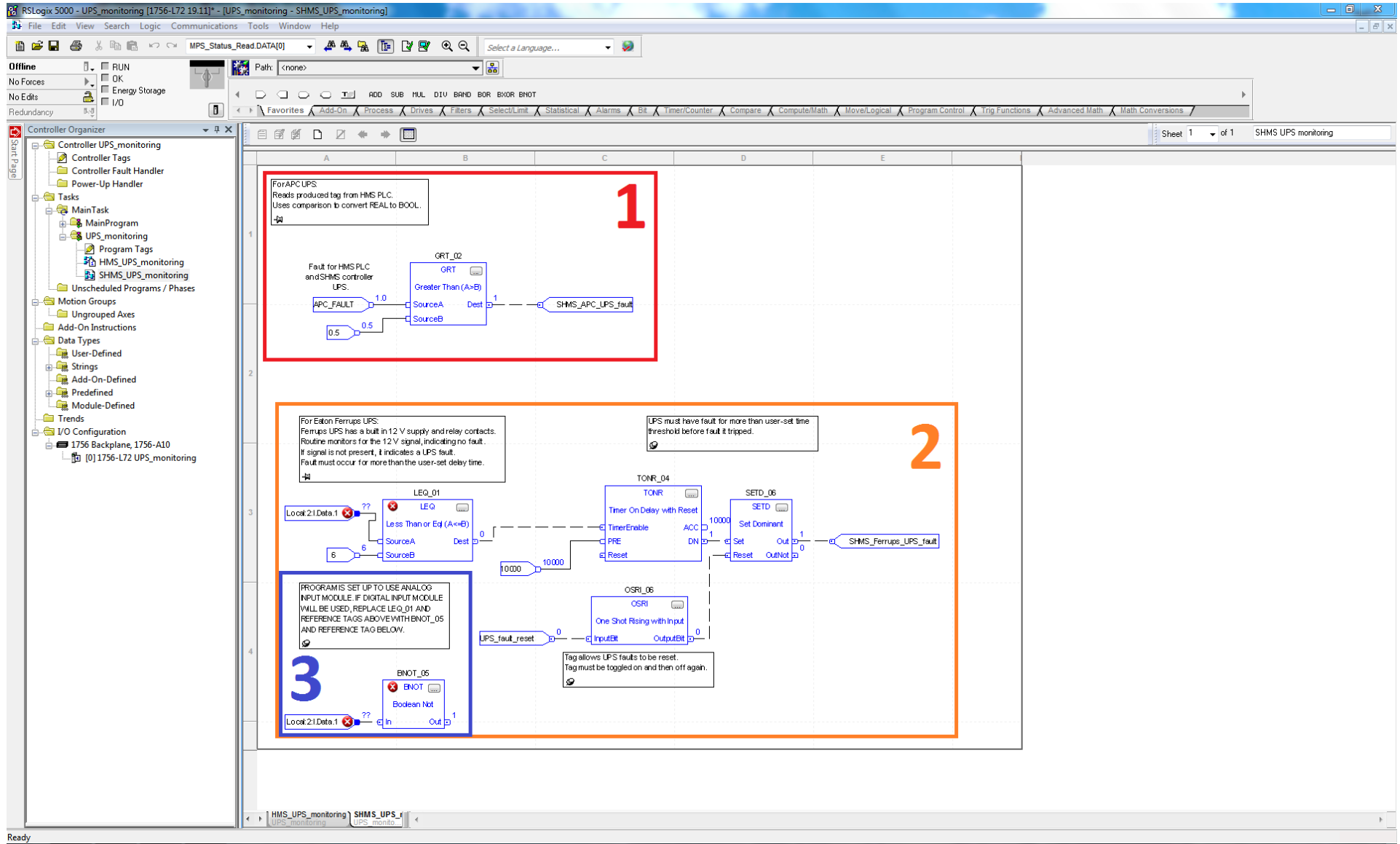
HMS UPS Monitoring Routine



HMS UPS Monitoring Routine

1. Portion of function block monitors status of PLC controllers' UPS. UPS is an APC brand unit. UPS unit's relay card will be wired to a 24 V power supply to provide a constant 24 V signal when there is no UPS fault. In the event of a fault, the relay card will break the 24 V signal, causing the PLC logic to indicate a fault. The 24 V signal will be read by a digital input channel in the HMS rotation PLC chassis.
2. Portion of function block to convert Boolean APC fault data to REAL. REAL data type needed for produced Ethernet tag to send to SHMS PLC. The tag name passed to SHMS will be APC_FAULT.
3. Portion of function block to monitor HMS's Detector Hut UPS. UPS is an Eaton FERRUPS brand unit that has a built-in 25-pin dsub with status relays and a 12 V source. DSG has fabricated the cable with connector for this UPS. The PLC logic monitors for 12 V from the UPS. In the event of a fault, the built-in relays will break the 12 V signal, causing the PLC logic to indicate a fault. The 12 V signal will be monitored by a digital input channel in the HMS rotation PLC chassis.

SHMS UPS Monitoring Routine



SHMS UPS Monitoring Routine

1. Portion of function block monitors Ethernet tag from HMS PLC indicating a fault on the PLC controllers' UPS. APC_FAULT tag data type is REAL and comparison function converts tag to Boolean.
2. Portion of function block to monitor SHMS's Detector Hut UPS. UPS is an Eaton FERRUPS brand unit that has a built-in 25-pin dsub with status relays and a 12 V source. DSG has fabricated the cable with connector for this UPS. The PLC logic monitors for 12 V from the UPS. In the event of a fault, the built-in relays will break the 12 V signal. Logic in screenshot is for using an analog input module to monitor the 12 V supply. If voltage measured is greater than 6 V, it indicates no fault. If voltage is less than 6 V, there is a fault on the UPS. There are currently analog input channels available in the SHMS HX PLC chassis.
3. Portion of function block that will need to replace comparison of analog input channel's voltage if a digital input channel is used for signal. There are currently no available digital input channels in the SHMS HX PLC chassis. Hall C must decide what type of input channel to use or whether to install an additional digital input module in the SHMS HX PLC chassis.