

Division 25 – Integrated Automation

25 00 00 Integrated Automation

1. The following building system and equipment controls shall be integrated through the HVAC Energy Management and Control System (EMCS)
 - HVAC DDC Control System
 - Building Lighting Controls and Day Lighting Controls
 - Data Center Monitoring
 - Power Monitoring
 - Plumbing Equipment Monitoring
 - Fuel oil handling systems and equipment.
 - Building Performance Measurement and Verification.
2. The following building system controls shall not be integrated with the EMCS:
 - Security
 - Audio/visual
 - Laboratory Equipment Monitoring
 - Elevator Controls
 - Fire Alarm
3. All building equipment shall be provided with integral microprocessor based controllers when available through the manufactures. In addition to the he integral equipment controllers functioning with the Siemens Building Technologies DDC system they shall also be capable of communications with the EMCS through industry standard communication protocol such as BACnet (ASHRAE Standard 135.1), Lontalk (LonWorks), or Modbus (Modicon/Schneider Electric).
4. The EMCS shall utilize the HVAC DDC control system network and operator interface for monitoring and adjustment of all integrated systems. The level of integration with integral equipment controllers shall be discussed with Mason and evaluated during the design. Refer to 230900 - “Instrumentation and Control for HVAC” and 230923 - “Direct Digital Controls.”
5. Measurement and verification of building system performance, efficiency and energy usage shall be incorporated into the EMCS.
6. All equipment utilizing programmable controllers shall be provided with a licensed copy of the controller software and software manual for use by Mason.
7. In addition to use of the Siemens Building Technologies DDC system to monitor power, all power monitoring shall also be provided using separate, field mounted power monitoring hardware. Use of integral factory mounted power monitoring hardware in electrical panels and motor control centers is not acceptable.