SECTION 26 90 10

CLASS TWO WIRING

PART 1 - DESIGN DIRECTIVE

1.1 No Special Requirements

PART 2 - PRODUCTS

2.1 No Special Requirements

PART 3 - EXECUTION

3.1 BUILDING AUTOMATION SYSTEMS

A. All building automation and control panel assemblies specified and installed on projects at Dartmouth College shall be UL listed as “Industrial Control Panels”. The manufacturer shall obtain the “Industrial Control Panel” listing after final assembly and before substantial completion of the project. Field modifications or additions to listed Industrial Control Panels void the UL listing.

B. Class one and line voltage wiring that must enter a building automation and control panel shall do so through a dedicated conduit. The wiring shall terminate at a UL listed device for the connection of class one and line voltage circuits and shall maintain a minimum spacing of 2 inches from any class two conductors.

C. Where class two control wiring must enter a device or enclosure that contains class one and or line voltage circuits the following rules shall apply:

1. The subject equipment and enclosure are UL-rated for the purpose of interfacing class two wiring with class one and or line voltage circuits.

2. The class two wiring enters through a dedicated conduit or raceway system.

3. The class two wiring is protected over its entire length inside the enclosure by a field applied layer of UL rated nylon spiral wrap.

D. Field mounted relay modules such as Air Products & Controls, Inc. relay model #901-SPNO-C shall be installed in a dedicated enclosure with the class two wiring entering the enclosure through a dedicated raceway system separate and distinct from the raceway that houses the class one or line voltage conductors. Inside the enclosure the class two wiring shall maintain a minimum separation from the class one and line voltage conductors of ¼ inch.

E. Screw type terminations inside all control panels shall be limited to two conductors per terminal. When more than one wire is installed per screw terminal ring type crimp lugs shall be used on each conductor.

F. Building automation and control panel assemblies are exempt from the requirement to have rigid metal conduit enclosing all wiring in mechanical spaces below eight feet for all conduits that enter the top and sides of the enclosure. Raceways that enter the bottom of the control panels in mechanical spaces shall be rigid metal conduit.

3.2 SECURITY SYSTEMS

A. This section applies collectively to Access Control, Surveillance, and Intrusion Detection Systems.

B. Door Panel supplies shall be UL listed.

C. Enclosures containing Security Systems shall, as determined by the Authority Having Jurisdiction (Town of Hanover), comply as follows:

1. Do not require independent laboratory testing (i.e. UL).

2. Shall be labeled as follows:
   a. Date of manufacture.
   b. Maximum allowed voltage (24 volts AC).
   c. Manufacturer’s name.

END OF SECTION 26 90 10