Electrical Controls

Description:
The purpose of the section is to highlight the current applicable UMCP Design Standards for the design, selection and installation of lighting control systems.

Related Sections:
- TBD

Effective Date:
- July 10, 2009

Applicable Standards:
- NEMA ICS 2
- ANSI/NEMA ICS 4
- NEMA ICS 6

General Requirements:
1. Required Submittals:
   - Shop Drawings: Indicate control device enclosure wiring diagrams and panel layout drawings
   - Product Data: Provide data on each control device specified
   - Operating and Maintenance Instructions: Include instructions on adjusting, repairing, cleaning, and lubricating each control device specified

2. Product Requirements:
   - Control Switches and Stations
     - Description: Heavy duty, oil-tight control switches and stations manufactured to NEMA ICS 2
     - Contact Ratings: Class A150
   - Photocells Switch
     - Description: Photocell switch manufactured to NEMA ICS 2
     - Ratings: Contact Ratings: Class A150
     - Enclosure: Gasketed, cast ferroly box with conduit hub
   - Relays
     - Description: Relays manufactured to NEMA ICS 2
       - Magnetic Control Relay: Class A300
       - Time-Delay Relay: Class A600
     - Ratings:
       - Contact Ratings: Class A150
       - Coil Voltage: 120 volts, 60 Hz., Single Phase
       - Enclosure: NEMA Type 1 for interior and NEMA type 4 for exterior use
   - Time Switch
     - Description: Clock timer manufactured to NEMA ICS 2, with astronomical dial
     - Ratings:
       - Contact Ratings: Class A150; SPST
       - Coil Voltage: 120 volts, 60 Hz., Single Phase
       - Dial Time: 24 hours, 7 days
       - Enclosure: NEMA Type 1 for indoor applications, and NEMA Type 4 for outdoor applications
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• Control Device Enclosures
  • Description: Shop, fabricate and wire control device enclosures to NEMA ICS 1, for groupings of more than one device
  • Use hinged cover enclosures under provisions of 26.05.00
  • Terminal Blocks: ANSI/NEMA ICS 4
  • Fabrication: Shop assemble to NEMA ICS 6 - Use plastic wiring through to route internal wiring

• Installation Requirements
  • Install control devices in accordance with manufacturer’s instructions
  • Install individual components in enclosures
  • Connect control devices to systems controlled, to achieve proper system operation

• Adjustments
  • Adjust time delay relays and clock timers to achieve specified system operation