

## **PART 1 GENERAL**

### **1.1 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for electric and electronic control system for HVAC and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.

### **1.2 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials off ground indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect electric and electronic control systems from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.

## **PART 2 PRODUCTS**

### **2.1 CONTROL VALVES**

- .4 Body: globe style
  - .1 Flow characteristic as indicated on control valve schedule: quick opening.
  - .2 Normally closed
  - .3 Two port
  - .4 Leakage rate ANSI class IV, 0.01% of full open valve capacity.
  - .5 Packing easily replaceable.
  - .6 Stem, stainless steel.
  - .7 Plug and seat, stainless steel, brass, or bronze
  - .8 Disc, replaceable, material to suit application.
  - .9 NPS 2 and under:
    - .1 Screwed National Pipe Thread (NPT) tapered female connections.
    - .2 Valves to ANSI Class 150, valves to bear ANSI mark.
    - .3 Rangeability ON/OFF

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**PART 3 EXECUTION**

**3.1 EXAMINATION**

- .5 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for electric and electronic control systems installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied [and after receipt of written approval to proceed from Departmental Representative.

**3.2 INSTALLATION**

- .6 Install control devices.
- .7 On outside wall, mount thermostats on bracket or insulated pad 25 mm from exterior wall.
- .8 Install remote sensing device and capillary tube in metallic conduit. Conduit enclosing capillary tube must not touch heater or heating cable.

**3.3 CLEANING**

- .9 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .10 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

**END OF SECTION**