

**1. GENERAL**

**1.1 References - General**

- .1 Refer To Section 17010.

**2. PRODUCTS**

**2.1 General**

- .1 Use normally open contacts for alarm actuation which close to initiate the alarm.
- .2 Use normally open contacts to control equipment. The contacts close to start the equipment.
- .3 Contacts monitored by solid state equipment to be hermetically sealed and adequately rated for the connected load.
- .4 Contacts monitored by electro-magnetic devices such as mechanical relays to be rated NEMA ICS 2, designation B300.
- .5 Provide double barriers between switch elements and process fluids such that failure of one barrier will not permit process fluids into electrical enclosures.
- .6 Switch electrical enclosures to be rated EEMAC 4, minimum.

**2.2 Indicators, Pushbuttons and Selector Switches**

- .1 All control indicator lamps, pushbutton switches and selector switches in unclassified or non-corrosive areas to be Allen Bradley 800T or 800E series items.
- .2 All control indicator lamps, pushbutton switches and selector switches in classified or corrosive (includes outdoors) areas to be Allen Bradley 800H series items.
- .3 Enclosures to be as specified under Section 17110.

**2.3 Relays**

- .1 The Quality and type of relays shall be based on Omron types.
- .2 120VAC relays to be Model LY 4PDT, plug-in, complete with test button and operation indicator, and surge suppressor.
- .3 24VDC relays to be Model MY 2PDT plug-in, complete with test button and operation indicator, and surge suppressor diode.
- .4 Time delay relays for behind panel mounting to be Model H3BA, 2PDT, plug-in, and programmable for 16 time ranges and 4 operation modes.

- .5 Time delay relays for flush panel mounting and operator accessible timing range modifications to be Model H5BR, SPDT, screw terminals, programmable for 5 timing ranges and 8 operation modes, complete with digital display, module for time settings and flexible protective cover.
- .6 Where the contact ratings of the relays listed are insufficient for the application select an appropriate type from an approved manufacturer with the same quantity of contacts as was originally specified.
- .7 Provide relay plug-in sockets for DIN mounting complete with stacked screw clamp terminals.

### **3. EXECUTION**

#### **3.1 References - General**

- .1 Refer To Section 17010.

**END OF SECTION**