

Materials Specification – 31 for SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA)

1. GENERAL:

Equipment that is not specified on this sheet must be approved by Denver Water.

2. CONTROL SYSTEMS:

Controls systems shall be Bristol Babcock Distributed Process Controllers (3330 Series) or Synergetics Data Acquisition Systems (4100 Series). Another control system may be used only if it is pre-approved by the Process Control Section of Denver Water.

3. PRESSURE TRANSMITTERS:

Pressure transmitters shall be either Rosemount pressure transmitter model #2088G or Bristol Babcock pressure transmitter model #2508.

4. CONTROL ENCLOSURES:

Control enclosures shall be Hoffman enclosures.

5. FLOW TRANSMITTERS:

The flow transmitter shall be Rosemount differential pressure transmitter model #1151DP. Two transmitters are required for flow indications. The high range transmitter shall be calibrated to 25% of the maximum design flow rate. For range selection switching, utilize an AGM Suppression Discriminator model #TA-4014-2.

6. INTRUSION ALARMS:

Intrusion alarms shall be Square-D, Class 9007 Type C. The limit switches for intrusion alarms shall be heavy duty precision turret head type. The limit switch assembly shall be enclosed in a die cast zinc standard box that is oil-tight and water-tight, with SPDT snap action, silver alloy type contacts. The turret head shall be a standard pre-travel spring return with Viton shaft seals on the lever arm; the plunger and wobble stick boots shall be made of neoprene. The lever arm type shall be operable in both clockwise and counter-clockwise directions.

7. WATER ON THE FLOOR ALARMS:

Water of the floor alarms shall be B/W controls, Model 7010-L-4-A-20 with Part No. 12-085000 Weight, Part No. 12-084900 Cord Grip and Part No. 12-085200 Wall Mount Bracket, unless sump pumps are required and supplied with the alarm limit switches.

8. PRESSURE SIGHT GAUGES:

Pressure sight gauges shall be Ashcroft Type 1010. Pressure gauges shall be industry general service Grade 1A, 1.0% F.S. accuracy, 12-inch diameter face, epoxy painted aluminum case, AISI 316 stainless steel drawing C bourdon tube and socket, ¼-inch NPT bottom piping connection, calibrated 0 to maximum operational psig.

9. TERMINAL BLOCKS:

Terminal blocks shall be Phoenix Controls #UK 6, 3-HESI, #UK 4-TG, #UK 5-MTK-P/P or an equivalent. Terminal blocks shall be din rail mount with disconnect. (Knife, plug or lever fuse disconnects are preferred).