

Materials Specification – 31 for SUPERVISORY CONTROL AND DATA ACQUISITION

1. GENERAL

SCADA equipment listed in this Specification must be approved by Denver Water.

2. PLC FOR CONTROL SYSTEMS

PLC for control systems shall be preapproved by Denver Water's Process Control Section.

3. PRESSURE TRANSMITTERS

Pressure transmitters shall be Rosemount pressure transmitter 3051S Series with 4-20ma transmitter output, an LCD display, and NSF/ANSI 61 certified when required.

4. CONTROL ENCLOSURES

Control enclosures shall be Hoffman enclosures.

5. FLOW TRANSMITTERS

Flow transmitters shall be Rosemount differential pressure transmitter model 3051S Series with 4-20mA transmitter output, an LCD display, and NSF/ANSI 61 certified when required. Two transmitters are required for flow indications. The high range transmitter shall be calibrated to 25% of the maximum design flow rate.

6. INTRUSION ALARMS

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 watertight with DPDT snap action, silver alloy type contacts. The turret head shall be a standard pretravel spring return with Viton shaft seals on the lever arm; the plunger and wobble stick boots shall be made of neoprene. The lever arm shall be operable in clockwise and counter-clockwise directions.

7. WATER ON THE FLOOR ALARMS

Water on the floor alarms shall not contain mercury. The float shall be SPDT and the alarm shall be wired normal closed.

8. PRESSURE SIGHT GAUGES

Pressure gauges shall be industry general service Grade 1A, 1.0% F.S. accuracy, 12 inch diameter face, epoxy painted aluminum case, AISI Type 316 stainless steel drawing C bourdon tube and socket, 1/4 inch NPT bottom piping connection, calibrated 0 to maximum operational psi.

9. TERMINAL BLOCKS

Terminal blocks shall be Phoenix Controls UK 6, UK 6-FSI/C, UK 4-TG, and UK 5-MTK-P/P. Terminal blocks shall be din rail mount with disconnect. Knife, plug, or lever fuse disconnects are preferred.

10. CERTIFICATION

The manufacturer shall furnish a sworn statement that the inspection and all specified tests have been completed and that results comply with the requirements of these Standards. A copy of the Certification shall be provided to Denver Water.