

((This is a Master, Edit for Specific Application))
Pulsafeeder –MicroVision Conductivity controller

PART 1 – GENERAL

1.01 GENERAL

This specification covers the supply, installation, and testing of completely functional conductivity control system including all necessary accessories and appurtenances as shown on the drawings and described herein. A single manufacturer shall be responsible for supplying all components of the control system.

1.02 QUALITY ASSURANCE

For the purpose of establishing quality assurance, experience, and system reliability, the products described herein are based on the MicroVision controller manufactured by Pulsafeeder Inc. All controllers shall be functionally tested prior to shipment.

1.03 WARRANTY

The manufacturer shall provide a two-year warranty, including the conductivity sensor.

PART 2 – PRODUCTS

2.01 GENERAL

Manufacturers:

1. Pulsafeeder
2. No equal

2.02 DESCRIPTION

- a. The conductivity controller shall be microprocessor based with a 64 x 128 pixel graphical back lit LCD display and indicator lights. The keypad will allow for simple scrolling and display of programmed parameters. The controller shall conform to applicable standards set forth by ETL, ETLc and CE
- b. A programmable 4-20mA isolated output for conductivity readings shall be a standard feature.
- c. The power supply shall be universal with a range of 90 VAC to 250 VAC and 50Hz or 60Hz.

- d. The conductivity probe shall be the electrode less, inductive, toroidal type with a range of 0 uS/cm to 9,999 uS/cm rated for 122F and 125 PSI.
- e. The controller shall utilize non volatile memory to save program settings when the power is off.
- f. A dry contact relay for alarm conditions shall be a standard feature.
- g. The bleed relay output shall provide for NO/NC contacts to permit the connection of a motorized ball valve.
- h. The controllers enclosure shall be NEMA4X

2.04 PROGRAMMING AND CONTROL

The controller shall:

- a) Accurately control the level of dissolved solids (TDS) in terms of electrolytic conductivity, measured in $\mu\text{S/cm}$.
- b) Provide a dual programmable 28 day biocide timer with pre-bleed and bleed lock-out for accurate addition of biocide chemicals.
- c) Allow for one inhibitor feed control programmable as either a water meter input, bleed and feed with limit, percentage cycle timer, or percent post bleed.
- d) Incorporate an inhibitor feed skip or pause program to prevent mixing of inhibitor and biocide in the injection stream.
- e) Allow for proportional feed of inhibitor chemical based on the make-up water as measured by a contacting head or Hall Effect type water meter.
- f) Provide an individual status LED for each output control relay.
- g) Accept a dry contact input for up to three drum level sensors with a program setting to allow for deactivation of the chemical feed relays on a low chemical level condition if desired.
- h) A user defined security code shall be provided to prevent unauthorized access to program settings.

- i) Individual relay run times shall be accessible from a status screen in the programming.
- j) A security code shall prevent unauthorized changes to program configuration.
- k) The conductivity sensor shall have an accuracy of +/- 1% at point of measure.
- l) Provide a programmable language, English, Spanish, and Portuguese
- m) Incorporate onboard diagnostics to confirm proper operation.

2.05 ACCESSORIES ((ALL ARE OPTIONAL AND MAY BE INCLUDED AS SEPARATE ITEMS OR AS COMPONENTS OF A CONTROL SYSTEM))

- a) The controller should be assembled on a wall mount Polyethylene panel. A single manufacturer shall be responsible for supplying and assembling all components of the system.

The panel shall include the following:

- b) Mounting and injection point locations for _ metering pumps.
- c) A Flow switch assembly to lock out the relays when the sample flow is less than 1 GPM
- d) A PVC strainer with sample port.

END OF SECTION

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