



Series 1400 Compound-Loop Controller Engineering SPECIFICATIONS

Spec: 1400.01.06

1.0 SCOPE

These specifications describe a model 1400 microprocessor based; compound loop chemical feed controller system as manufactured by Enchlor, Inc.

2.0 DESCRIPTION

The controller shall be full featured, microprocessor-based PID and chemical feed compound-loop control station with capability to accept two process input signals and producing a controlled, isolated 4-20 mAdc output. The controller shall be an Enchlor Inc. Series 1400 Universal Process Controller or approved equal.

The instrument shall be user friendly with all process and control parameters being configured in firmware to simplify calibration. Configuration shall be menu driven using logical, 12-character legends in the lower display directly above the appropriate pushbutton on the operator keypad. Configuration function shall be password protected.

All operating parameters, configuration parameters and alarms shall be displayed on the 2-line by 16 characters, backlit LCD display. The operator keypad on the face of the instrument shall utilize four (4) tactile feedback pushbuttons. All adjustments to the configuration and interrogation of process information shall be accessed through the operator keypad. Opening of the instrument case for configuration or adjustments other than for wire termination shall not be required.

The control modes shall include P, I, PI, and PID. Control mode ranges shall be, as a minimum:

| | |
|---|-------------|
| P | 10-1000% |
| I | 0-9999 sec. |
| D | 0-9999 sec. |

In addition to the standard control modes, the control station shall be capable of compound loop control for application to chlorine disinfection applications, which require pacing of the control device by flow and chlorine residual.

The instrument shall accept two 4-20 mAdc input signals and shall produce a single isolated, controlled output of 4-20 mAdc into 500 ohms, maximum. Capability of accepting a thermistor temperature input shall also be included. Optionally available shall be capability for input of an RTD



temperature input to permit display and temperature compensation. The controller shall be provided with three contact inputs rated 1.2 A @ 120 Vac. A fourth contact shall be optionally available.

A digital, serial RS232 input shall also be optionally available to permit direct serial interface to a process computer. The controller shall optionally have the capability for interface with network protocols such as RS485, Profibus, and Modbus.

Controller shall require a 120 Vac, 60 Hz, single-phase power source and the capability for powering a two-wire transmitter shall be optionally available. The instrument shall be housed in a fiberglass, NEMA 4X enclosure designed for surface mounting. The instrument case shall measure 6 1/2" high by 7 1/2" wide by 3 1/4" deep.

2.1 WARRANTY

The controller shall be pretested, calibrated and 100% quality control inspected and is warranted against defects in parts and labor for one (1) year from date of shipment.