

SSC Single Stage Controller (A100/Tanktrol): High Resolution Electronic Setpoint Controller

Model SSC Pressure/level Controllers

The A100 SSC controllers provide a direct solution for many difficult pump control jobs that would otherwise require remote control. Even in the presence of erratic surging and high friction losses, the digital pressure-averaging circuitry and solid-state transducer can reliably sense true system demand and provide stable operation.

Applications include water supply pump control, open/close automatic valve control, remote water well operation, process industry pressure control, high-rise water booster control and other pump, valve and alarm applications. The controller can be used with a single pump or a multi-stage interlocked system.

The controller is an ON/OFF automatic pump control device that responds to pressure excursions past two setpoint values, turning the pump (or valve or alarm) ON at one pressure/level and turning it OFF at another. It is a highly stable, accurate pressure switch with some unusual performance characteristics. It incorporates a state-of-the-art, variable-capacitance solid-state pressure transducer and precision ON/OFF setpoint circuitry with digital signal processing so that its control action is in response to variations in the averaged pressure excursion over a selected time period. The digital ON/OFF control signal processing time-integrates the control action with a clocked count-up/count-down system. This allows the controller to provide stable control even in the presence of erratic surge pressures (as are often found in water distribution and other process systems).

Three standard models are available: open construction, single control stage in NEMA 3X enclosure with gauge and valves, and dual control stages in NEMA 3X enclosure with gauge and valves.

SSC Features In Brief

Analog and discrete outputs. Single differential On/Off control and non-normalized voltage output spanning from approximately 0.5 to 4.5 VDC over the full excursion range. Pressure ranges: 0-5, 0-25, 0-30, 0-75, 0-150. Typically applied in tank level monitoring and pump or valve control applications. Two or more can be used to provide multi-level control and alarm functions. Requires a pressure tap into the system.



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Description	PART NUMBER
SSC pressure/level controller; 1 stage, 15#, open	601257-14
SSC pressure/level controller; 1 stage, 30#, open	601257-15
SSC pressure/level controller; 1 stage, 75#, open	601257-16
SSC pressure/level controller; 1 stage, 150#, open	601257-17
SSC pressure/level controller; 1 stage, 200#, open	601257-18
SSCM logic module (add, l stages); open	601205-02
SSC pressure/level controller; 1 stage, 15#, N3X FG encl w/valves & gauge	601244-14
SSC pressure/level controller; 1 stage, 30#, N3X FG encl w/valves & gauge	601244-15
SSC pressure/level controller; 1 stage, 75#, N3X FG encl w/valves & gauge	601244-16
SSC pressure/level controller; 1 stage, 150#, N3X FG encl w/valves & gauge	601244-17
SSC pressure/level controller; 1 stage, 200#, N3X FG encl w/valves & gauge	601244-18
A100/A300 oil seal freeze protective interface	601412-01

Technical Data

1. Performance

- Accuracy: $\pm 0.3\%$ best straight line of full span
- Temperature Error: Less than $1/2$ of 1% span over a $0-50^{\circ}\text{C}$ range
- Stability: (Over one year, typical) $\pm 1/2$ of 1% of full span
- Range: (0-5#)(0-15#)
(0-30#)(0-75#)(0-150#)

2. Environmental

- Temperature: 0 to $+70^{\circ}\text{C}$
- Humidity: $0-95\%$, non condensing

3. Power Requirements

- Input Voltage: 110 VAC , $\pm 10\%$
- Power Consumption: 10 VA
- With $1/4$ amp. Slo-Blo fuse and Varistor transient protector

4. Displays

- Pressure ABOVE setpoint LED
- Pressure BELOW setpoint LED
- Control Relay output ON LED

5. Signal Interface

- Inputs: (Analog) signal from integral pressure transducer, ON control interlock, OFF control interlock
- Outputs: (Analog) signal output from integral pressure transducer, ON control interlock, OFF control interlock, Control relay output rated 10 amperes at 240 VAC

6. User Adjustments

- Pump-UP (filling) or Pump-DOWN (draining) control mode selector
- HIGH setpoint 25 -turn potentiometer
- LOW setpoint 25 -turn potentiometer
- Control Output ON surge quelling integrator; $3-360$ second (270 degree) potentiometer
- Control output OFF surge quelling integrator; $3-360$ second (270 degree) potentiometer

7. Features

- Line protection: Slo-Blo fuse and Metal Oxide Varistor (MOV) transient protector
- Customer connections: Screw clamp, barrier type terminals rated $12-22\text{ AWG}$
- Oil filled isolation diaphragm protects transducer from sensed media and containments
- Multiple controllers can be interlocked for complex control schemes
- Solid-state pressure transducer with digital pressure averaging circuitry

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