



SHIPPENSBURG PUMP CO., INC.
 P.O. BOX 279, SHIPPENSBURG, PA 17257
 PHONE 717-532-7321 • FAX 717-532-7704
 WWW.SHIPCOPUMPS.COM

PRIDE

QUALITY

CRAFTSMANSHIP

BULLETIN 171

AMS

**Advanced
Monitoring System**



- Will mount in any standard U.L. Panel
- Sends 4-20 mAmp signal
- Remote monitoring
- Pump control
- Pump alarms
- Reduces time in problem solving
- Thermocouple, RTD, & process inputs
- High accuracy auto-tuning PID
- Heating & cooling models
- Universal power supply 100-240 VAC
- Up to 3 relays & 2 analog outputs
- Digital input set point selection
- RS-485 serial communications option
- Modbus® RTU/ASCII communications
- Free operating & data logging software
- IP55 fronts
- 1/16, 3/16, 1/8, 1/4 DIN sizes

A control panel with an Advanced Monitoring System (SHIPCO® AMS) uses a level control station that will send a 4-20 mA signal to a computer or remote monitoring location for more efficient management of your boiler room.

In real time, the SHIPCO® AMS will report to your boiler room management team the exact water level in your tank and pump status. Moreover, the SHIPCO® AMS will be able to signal all alarm notifications associated with condensate return and boiler feed units.

The SHIPCO® AMS will also control your pump sequence in lieu of float switches or mechanical alternator and with the same reliability and increased accuracy.

Using the SHIPCO® AMS you can eliminate valuable wasted maintenance time managing your current condensate and feed systems. The SHIPCO® AMS can reduce wasted condensate return and significantly improve the energy efficiency of your steam system. When your condensate pump or boiler feed pump fails, you can be notified instantly where a remote monitoring system exists.

The SHIPCO® AMS can be utilized in conjunction with the condensate portion of your pump vacuum units. When you are working with an engineer on your next design build project, remember: SHIPCO® is the only manufacturer in the steam condensate industry to offer this system along with a broad range of cast iron receiver sizes!

Finally, the SHIPCO® AMS is tomorrow's technology now! Now, your system operator can sit in the control room and monitor ALL of the ancillary equipment in addition to the boiler.

AMS INPUTS

Controllers use a single universal input that accepts process and temperature inputs.

Thermocouple: J, K, T, E, R, B, S, L, N, U, W, Platinel II
RTD: Pt100 (0.00385), JPt100 (0.00392)

Process: -10 to 20 mV, 0 to 100 mV; 0.4 to 2 V, 1 to 5 V, 0 to 10 V; 4 to 20 mA input with a resistor shunt

VERSATILE OPERATION

Powerful standard and optional features such as universal inputs, up to three relays and two analog outputs, two digital inputs, and serial communications make this controller applicable for most process or temperature control applications.

Programmable Relays

All controllers have a standard 3 A Form C (SPDT) relay. Up to two additional 1 A Form A (SPST) relays. All relays can be programmed for numerous control or alarm functions.

- Time-Proportional PID Control
- On/Off Control
- High/Low Alarms
- Set Point Deviation Alarms
- Fail-Safe and Standby Alarms
- Alarm Delays and Deadbands

Analog Output Configurations

Up to two analog outputs are available on series controllers. Each analog output can be programmed independently, and numerous output types are selectable.

- 4-20 mA PID Control
- 4-20 mA Retransmitting
- Time-Proportional PID Voltage Pulse
- Transmitter Loop Power Supply

Auto-Tuning PID

A high accuracy auto-tuning function using Fuzzy Logic calculates the PID values for your system with the push of a button, eliminating the need for complex PID calculations and time consuming setup. After several on/off cycles, the PID values will be set up automatically.

Gain Adjustment

Adjustments to system control characteristics can be done after auto-tuning with the programmable Gain function. Increasing the Gain will increase accuracy and reduce overshoot. Lowering the Gain will let the system reach the set point faster.

DIFFERENTIAL PRESSURE TRANSMITTER FOR LEVEL MONITORING AND ALARMS ON UNITS, CONTROLS PUMP AND OR MAKE-UP AS WELL

The differential pressure transmitters featuring extensive user-friendliness and high accuracy. The parameterization is performed using push-buttons, over HART communication. PROFIBUS-PA or FOUNDATION Fieldbus interface.

Extensive functionality enables the pressure transmitter to be precisely adapted to the plant's requirements. Operation is very simple in spite of the numerous setting options.

Transmitters with type of protection "intrinsic safety" and "explosion-proof" may be installed within potentially explosive atmospheres (zone 1) or in zone 0. The transmitters are provided with an EC type examination certificate.

The transmitters can be equipped with various designs of remote seals for special applications such as the measurement of highly viscous substances.

CUSTOM OPERATING DISPLAYS

The controller has dual four-digit LEDs and can display commonly used setup parameters defined by the user.

- Main operating display
- Percent output display
- Two user defined displays

EASY SETUP & PROGRAMMING

All programming of Controller is done through the front panel. No switches or jumpers are required.

PC COMPATIBILITY

Any Controller with the serial communications option can be configured to interface with the Multi-Monitoring PC software. Up to 30 controllers can be monitored and operated, and each can use independent data logging.

- Easy to setup and use
- View PV, SP, and alarm status simultaneously
- Control set points
- Log, view and save data in spreadsheet files

Specifications

Communications: An RS-232 to RS-485 or USB to RS-485 converter may be used for communication with PC software.

Baud Rate: 9,600 to 19,200 bps

Data Logging: Graph and save data as .hdr format. Each controller saves graphs independently. Data exportable in spreadsheet format.

Logging Interval: 1 second to 24 hours