SHIPCO PUMPS
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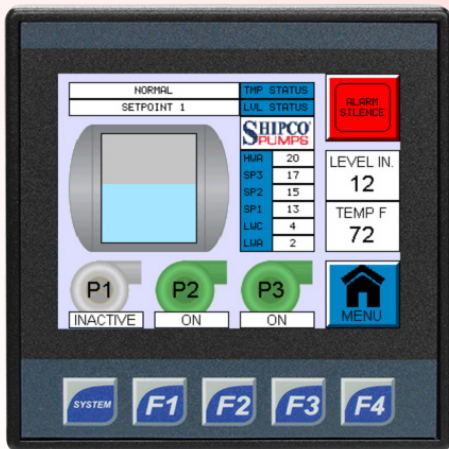WWW.SHIPCOPUMPS.COM

Pride

Quality

Craftsmanship

BULLETIN 183
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TYPE SLC

SHIPCO® LOGIC CONTROLLER

OVERVIEW

SHIPCO® Type SLC (**SHIPCO**® Logic Controller) is an economical method of automating functions on a **SHIPCO**® condensate, boiler feed, deaerator or vacuum unit. Depending on the type of unit, the SLC can perform various functions such as pump control and alternation; display live level, temperature or pressure indication; and provide alarm status. All SLC controllers are UL® listed and feature a factory-programmed NEMA 4X full-color touchscreen HMI display. Control panels with an SLC include audible alarm and through-door disconnects. SLC controllers also have PID functions for all modulating controls.

Remote monitoring and control override through building automation protocols BACnet® and Modbus®.

SLC-C
Operates Condensate Return Unit and pumps water on high level.

- Live graphical and numeric indication for water level and temperature via **SHIPCO**® Transmitter.
- Operates up to 3 pumps with alternating or manual (lead-off-lag) control.
- Failure indication and protection with high and low water alarm, high temperature alarm and shutoff. Supports adding cooling water to maintain operating temperature.

SLC-V
Operates Vacuum only and maintains CFM.

- Live graphical and numeric indication for temperature and vacuum pressure via external float switch, vacuum transmitter and temperature transmitter.
- Operates 1-2 vacuum pumps with alternating or manual (lead-off-lag) control.
- Vacuum pumps turn on at low vacuum (high psia) and off at high vacuum (low psia). Optional VFD control on vacuum pumps.
- Failure indication and protection.
- Support for adding cooling water to maintain operating temperature.
- Makeup switch adds water to Vacuum Hurling Chamber.

SLC-VC

Operates Vacuum Condensate Return Unit, maintains CFM and pumps water on high level.

- Live graphical and numeric indication for water level, temperature, and vacuum pressure via **SHIPCO®** Transmitter, vacuum transmitter and temperature limit switch.
- Operates 1-2 vacuum pumps and 1-2 condensate pumps with alternating or manual (lead-off-lag) control.
- Condensate pumps turn on at high level and off at low level.
- Vacuum pumps turn on at low vacuum (high psia) and off at high vacuum (low psia).Optional VFD control on vacuum pumps.
- Failure indication and protection with high and low water alarm, high temperature alarm and shutoff to protect pumps from cavitation.
- Support for adding cooling water to maintain operating temperature.
- Make-up switch adds water to Vacuum Hurling Chamber.
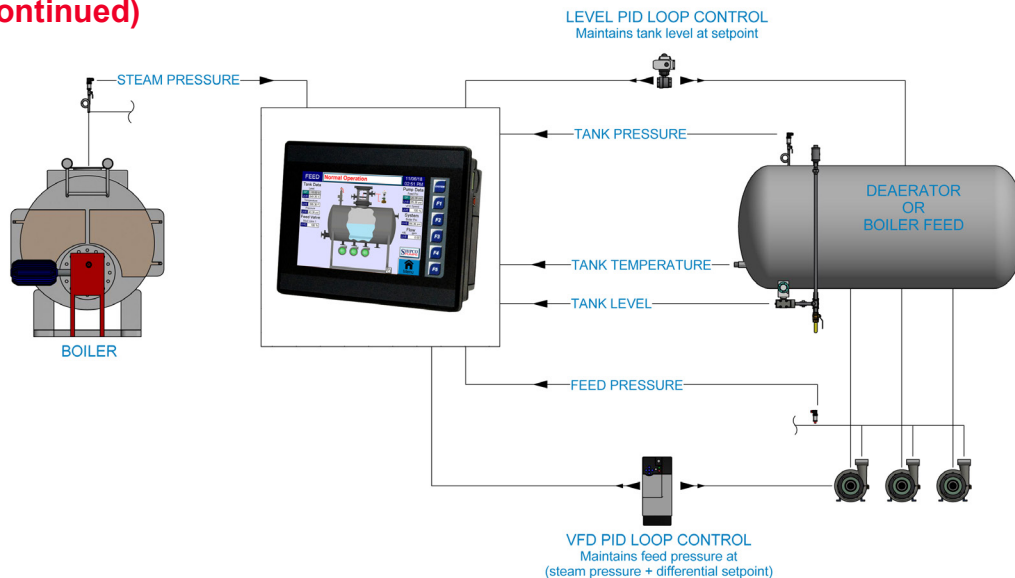
SLC-FWS

Operates a Feed Water System such as a Boiler Feed, Deaerator or combined DA/Surge (duo system). Configurations depend on end user requirements.

- Live graphical and numeric indication for water level and temperature via **SHIPCO®** Transmitter or differential pressure level transmitter and RTD temperature transmitter.
- Could operate up to 8 pumps with alternating and manual control; pump graphics to indicate status; operate from boiler level signals, maintain feed pressure or with VFDs.
- Support for modulating make-up valves and steam regulators.
- Failure indication and protection with various high & low water alarms; high & low temperature alarm. Shutoff for high temperature and low water. Alarms for routine maintenance and standby pumps and loss of sensor signal indicators.
- *VFD Max Efficiency Sequence* optimizes efficiency by maintaining multiple feed pumps at low speed.
- Support for additional modulating and solenoid make-up valves; transfer pumps; flow meters on makeup, transfer and feed water headers; modulating vent orifice valve.

On/Off Make-up Control	Modulating Make-up Control	Deaerator, Surge Tank or Duo System
4" touchscreen control.	6" or 10" touchscreen control.	6" or 10" touchscreen control.
SHIPCO® Transmitter with guided float level with built in temperature probe.	**Adds Modulating Make-up Valve Control or Guided Float.**	**Adds Pump Control.**
Up to 2 solenoid make-up valves.	Differential pressure level transmitter or guided float level.	Up to 8 boiler feed pumps and up to 4 transfer pumps.
High and low water level and temperature alarms.	RTD temperature transmitter.	Up to 2 solenoid make-up valves (per tank)
Low water cutoff and high temperature cutoff for pumps.	Alarms for level, temperature, pressure, etc.	Up to 2 modulating make-up valves (per tank).
No pump operation.	Up to 2 solenoid make-up valves.	Up to 2 steam regulators.
	Up to 2 modulating make-up valves.	Alarms for level, temperature, pressure, pump fault, routine maintenance, etc.
	No pump operation	Alternation and manual sequencing.
		On/Off operation from boiler level signals or to maintain feed pressure.
		Continuous for automatic standby.
		VFD Max Efficiency Sequence.
		Total and service interval run timers.

SLC-FWS (continued)

Communications

Type SLC communicates to Building Automation Systems via BACnet® or Modbus® for Remote Monitoring and Control.

Complete monitoring for all sensory inputs and alarms with remote control override on all outputs.

BACnet® IP
User configurable connection parameters
    IP Address, Subnet, Gateway
Factory can preset BACnet® Device ID
RJ45 10/100 Ethernet port

BACnet® MS/TP
Address, Baud, BACnet® Device ID, etc. preset by
    factory per requested specifications
Baud rates: 9600, 19200, 38400, 57600, 115200
RS-485 via RJ45 modular jack serial port

Modbus® TCP/UDP
User configurable connection parameters:
    IP Address, Subnet, Gateway
RJ45 10/100 Ethernet port

Modbus® RTU
User configurable connection parameters
    Address, Baud, Parity, Data/Stop bits, Handshake
Baud rates: 9600, 19200, 38400, 57600, 115200
RS-232 or RS-485 via RJ45 modular jack serial port