

## IPS CONTROLLER 9000 HVAC Variable Speed Pump Control Unit

The Armstrong IPS Controller 9000 is an automated control device designed specifically for HVAC chilled water and heating water mechanical room applications. The IPS Controller 9000 is available as a controller for three different hydronic circuit configurations: a controller for the variable secondary circuit only, a controller for the constant primary and variable secondary circuit, and a controller for a variable primary flow circuit. During setup, the easy-to-use IPS Controller 9000 leads the user through a series of menu-driven questions to select the appropriate pump sequencing speed control, and safety related pump system functionality. In addition, the IPS Controller 9000 can be programmed with custom logic for project-specific requirements. The IPS Controller 9000 is available in nine standard configurations:



- IPS Controller 9101 - Variable Secondary control with up to 6 zones and 6 pumps**
- IPS Controller 9102 - Variable Secondary control with up to 12 zones and 6 pumps**
- IPS Controller 9103 - Variable Secondary control with up to 18 zones and 6 pumps**

- IPS Controller 9201 - Constant Primary & Variable Secondary control with up to 6 zones and 6 pumps**
- IPS Controller 9202 - Constant Primary & Variable Secondary control with up to 12 zones and 6 pumps**
- IPS Controller 9203 - Constant Primary & Variable Secondary control with up to 18 zones and 6 pumps**

- IPS Controller 9501 - Variable Primary Flow control with up to 6 zones, 3 chillers or boilers and 3 pumps**
- IPS Controller 9502 - Variable Primary Flow control with up to 12 zones, 4 chillers or boilers and 4 pumps**
- IPS Controller 9503 - Variable Primary Flow control with up to 18 zones, 5 chillers or boilers and 5 pumps**

### Standard Features

- A large-sized (10.4") touchscreen operator interface
- 115V AC 60 Hz or 240V AC 50 Hz power connection
- On-screen menu-driven operator interface
- Manual or automatic system control (H-O-A selection)
- Remote or local start/stop mode of operation
- Field and factory-level password security
- Alarm and event logging of 2000 events
- Data trending with display screen
- Internal circuit breaker protection
- Automatic or manual pump alternation
- End-of-curve pump run-out protection
- 3 standard alarms: (1) drive, motor, or pump failure, (2) system fault, (3) zone signal fault
- Logic outputs for automatic VFD by-pass control
- Digital inputs for pump differential pressure switches
- Output for remote alarm/horn signal
- Input for silencing of remote alarm/horn
- Separate input screens for: setpoints, differential pressure sensors, flow and kW monitors
- Separate status display screens for: pump status, zone status, system status and plant status
- Multi-color schematic active display of mechanical room hydronic circuit indicating operating status
- Embedded logic to prevent hunting, pump flow surge, and motor overloading
- Manual control screen for fixed speed, by-pass, or selected variable speed settings
- Secure front cabinet door with lock and key
- Diagnostic test of CPU, RAM and Flash memory
- Supports multiple communications protocols: LonWorks, Modbus, Trend, BACnet, Johnson Controls Metasys N2 and pLAN
- Sequencing, isolation valve, and modulating control for chillers, or boilers in a variable primary flow application
- Best Efficiency Point Staging
- Wire to water efficiency monitoring and optimization
- End-of-curve detection using DP or flow meter

### Optional Features

- Serial communications port to the VFD(s)
- Serial communications port to communicate with a Building Automation System of other devices
- Optional communications gateways for Webgate (TCP/IP) and BACnet
- NEMA 2, NEMA 4, NEMA 12, or EEMAC 2 rated enclosure
- Operating Range: -10°C to 60°C, %rh 90 non-condensing

### Dimensions and Weights

Model	Width	Height	Depth	Weight
IPS9000	24 (610)	36 (810)	8 (203)	95 (44)

Note: Dimensions are in inches (mm) and weights are in lbs. (kg).

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