



Duplex Dual Voltage Control Panel

Panel Model: AFSCPD120/240

Installation Instructions and
Operation Manual

Applications

The AFS logic duplex control panel controls two pumps in residential and light commercial wastewater pumping applications, demand duplex pump control applications, and two pump reservoir pump up and alarm applications.

General

Offering a feature rich duplex panel platform, the duplex logic panel offers an array of additional operating and data observation options. Our AFS engineers worked to provide a single duplex panel solution that fit nearly every typical application while providing heightened system operation data. Each panel features lockable NEMA 4X enclosure, nearly silent power relays that are rated for 30 amps and 100,000 cycles, dual voltage pump operation, redundant OFF/low level alarm, an Auto and Manual mode of operation, pump and controls circuit breakers, and an audible/visible high water level alarm with manual audible alarm silence and automatic reset. The AFS logic dual mode duplex control digital backlit LCD provides pump control and historical system information, including: float status, elapsed time pump run, cycle counter, alarm counts, and float error count features. The AFS digital dual mode duplex panels can be used with either mechanical or mercury float switches, and includes a simplified wiring diagram that is not removable from the interior of the panel.

Materials of Construction

Enclosure	Polycarbonate
Hinge	Polycarbonate
Latch	Stainless steel

Specifications

Height, in. (mm)	10.5 (292)
Width, in. (mm)	10.25 (260.35)
Depth, in. (mm)	8.0 (203.2)
Panel ratings	120, 208 & 240 VAC, 20 amps max, 1-phase, 60 Hz

Features

Programmable digital controller

Backlit LED display

Demand dose only mode

120, 208 & 240 volt single phase motor control

Two wire pumps up to 20 amps

Nearly silent power relays rated for 30 amps and 100,000 cycles

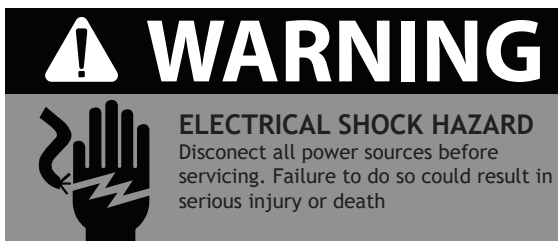
Simplified wiring

Lockable NEMA 4X enclosure

Listed per UL-508 and cUL-508.

Installation

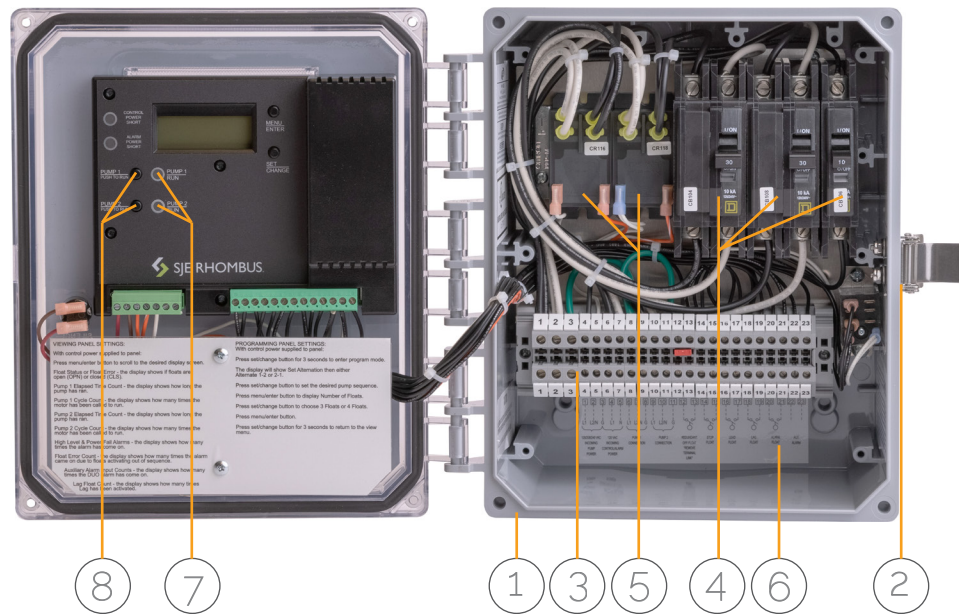
1. The AFS dual mode duplex control panel is designed to operate with five, normally open signal floats when used in a pump down application like a sewage or septic pump system. These floats operate (from top to bottom), (1) high level alarm, (2) lag pump ON, (3) lead pump ON, (4) Stop (OFF), (5) and redundant OFF/low level alarm (optional with removal of the terminal link) functions.
2. SJE Rhombus float type recommended for all 5 operations listed above: MilliAmpMaster Control Switch - Normally Open. The AFS float tree assembly model number **AFSFT5-o** includes the five required floats, tree and adjustable float clips to make float adjustment and installation quick and easy.
3. All floats can be ordered with various cord lengths depending on application and depth of tank.
4. The control panel can be mounted on an exterior wall or treated post near the pump tank area, and should be mounted within visual site and 50' of pump tank riser lid location as required by National Electric Code.



This control panel must be installed and serviced by a licensed electrician in accordance with National Electrical Code NFPA-70, state and local electrical codes. UL Type 4X enclosures are for indoor and outdoor use.

Warranty void if panel is modified.

Control Panel Components



- ① 10.5" X 10.25" X 8" NEMA 4X enclosure rated for outdoor use
- ② Stainless steel lockable latch for added safety
- ③ Large touch safe terminal strip for easy wiring
- ④ Three circuit breakers - two for pump power and a third for control and alarm power
- ⑤ Pump run relays (30 amp), controls pump by switching electrical lines
- ⑥ Simplified field wiring diagram inside box
- ⑦ Pump run lights (pump run lights also on panel door exterior)
- ⑧ Pump Push to Run switches for easy control circuit troubleshooting



Viewing Panel Settings

Press menu/enter button to view

- Float status or float error
- Elapsed time meter
- Cycle count
- High level & power fail alarm counts
- Float error counts
- Lag Float Count

Programming Panel Settings

Press set/change button for 3 seconds to enter program mode

The display will show Set Alternation, then either Alternate, 1-2 or 2-1.

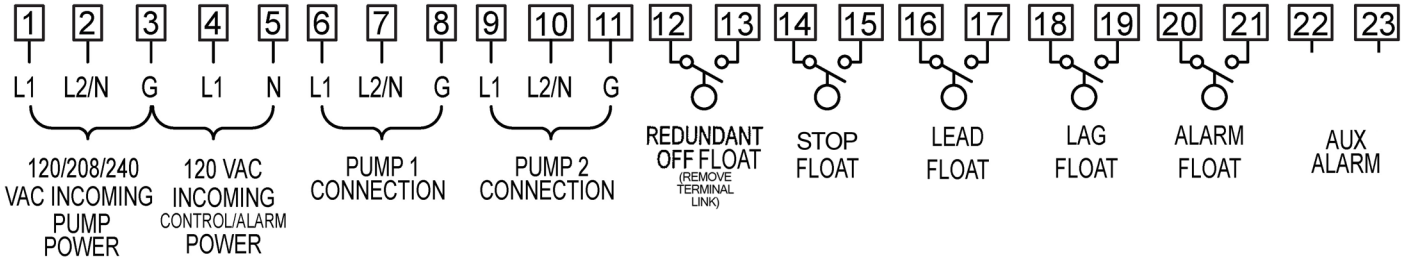
Press set/change button to set the desired pump sequence.

Press menu/enter button to display the number of floats.

Press set/change button to choose 3 Floats (eliminate the Lag float function) or 4 floats (add the Lag float function).

Press menu/enter button.

In Panel Wiring Connection Diagram



Complete Panel Wiring Schematic

On next page.