APS™ Simplex Control Panel

Single Phase, 120VAC and 120/230VAC | Type 4X Enclosure
Models: APS120, APS120-AB, APS220, and APS220-AB

APS SIMPLEX CONTROL PANEL

⚠ **CAUTION!** Risk of Electric Shock
⚠ **ATTENTION!** Risque de choc électrique
⚠ **¡PRECAUCIÓN!** Riesgo de Descarga Eléctrica

ALDERON™ Industries
Leading Edge Control Products

QUICK START GUIDE

Safety Guidelines

⚠ ⚡ 🔥 💥 # WARNING

Before proceeding with the installation or operation of this product, read all instructions thoroughly, as well as complying with all federal, state and local codes, regulations, and practices. This product must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NEC) (NFPA 70). Failure to properly install, test, and operate this product can result in personal injury or equipment malfunction.

1. DISCONNECT POWER when installing or servicing the product. Failure to disconnect all power sources could result in serious injury or death.

2. NEVER enter a flooded space without proper Personal Protective Equipment (PPE). Always wear dielectric rubber boots and other applicable protective equipment when water is on the floor and you must service an energized pump, alarm system, or product.

3. DO NOT enter the water if the water level is higher than that of the protection your PPE offers or if your PPE is not watertight.

4. DO NOT use or install this product with or near flammable liquids.

5. DO NOT use or install this product in locations classified as hazardous or in explosive atmospheres as defined by any applicable electrical safety code.

Step 1: Installation

Use this quick start guide as reference to match up each component included to the correct terminal blocks inside the Alderon™ control panel shown in each step.

1. Mount and secure the control panel in the desired location. Recommended to use four (4) screws (not included) and wall mount anchors (not included) if necessary.

2. Install using the appropriate conduit connections. Make sure all conduits are sealed and waterproof per local codes.

3. **WARNING:** Do not mix high and low voltage wires in the same conduit or junction box, failure to do so will cause system failure. Follow NEC requirements pertaining to separation of voltages if run in the same conduit.

4. Incoming alarm/control and pump power must match control panel voltage. Refer to included electrical schematic for complete wiring and voltage information.

Step 2: Wiring | Sensors

Wire the sensors (signaling device) to the terminal blocks listed below and shown in the diagram for pump stop, pump start, and high level alarm.

FS1-Stop Float; Wire #1	=	TB1:1
FS1-Stop Float; Wire #2	=	TB1:2
FS2-Start Float; Wire #1	=	TB1:3
FS2-Start Float; Wire #2	=	TB1:4
FS3-Alarm Float; Wire #1	=	TB1:5
FS3-Alarm Float; Wire #2	=	TB1:6

(APS120 model shown, 120VAC)

(TB1)

1 2 3 4 5 6 7

FS1 Stop Float

FS2 Start Float

FS3 Alarm Float
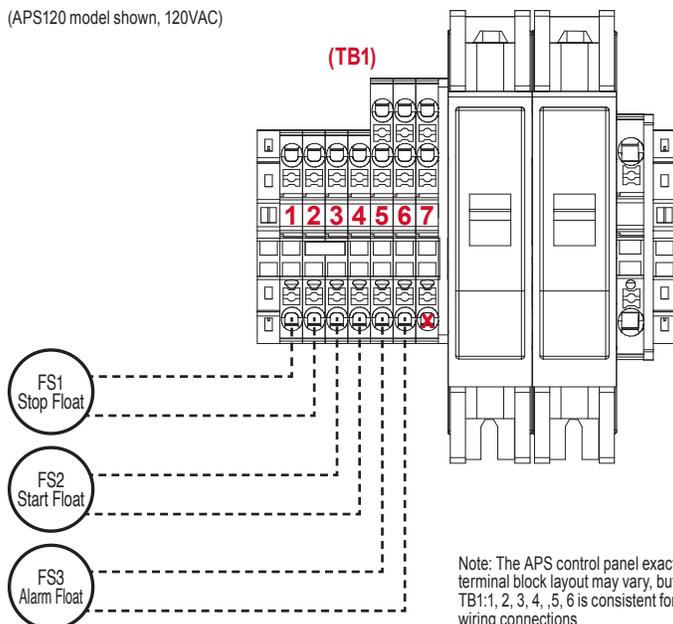
Note: The APS control panel exact terminal block layout may vary, but TB1:1, 2, 3, 4, ,5, 6 is consistent for wiring connections

Step 3: Wiring | Pump Connections

Wire the pump connections (load) to the motor contactor terminals listed below and shown in the diagram.

Pump Connection-T1	=	M1-T1
Pump Connection-T2	=	M1-T2
Ground Pump Motor PE	=	GND1 (control panel ground lug)

L1 L2

(M1)

T1 T2

PUMP 1 1~
PE
T1
T2
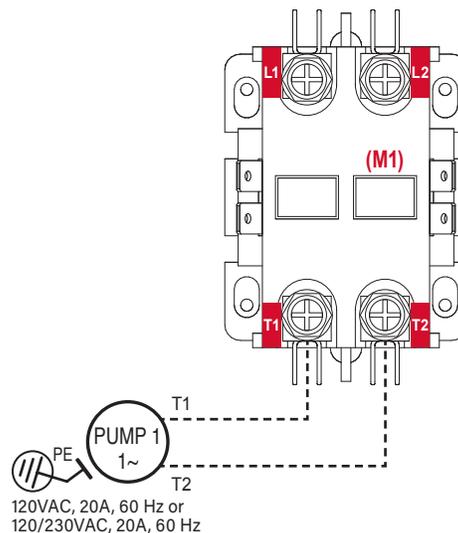
120VAC, 20A, 60 Hz or
120/230VAC, 20A, 60 Hz

Note: Pump must contain integral thermal overload protection and Ground Motor PE to the control panel ground lug (not shown).

Step 4.1: Wiring | Power, 120VAC

Wire the incoming alarm and pump/control power to the terminals listed below and shown in the diagram (*APS120 series)*.

Incoming Alarm Power; Neutral (N) = TB1:7
Incoming Alarm Power; Line (L1) = CB2:2
Incoming Alarm Power; Ground (G) = GND1

Incoming Pump/Control Power; Neutral (N) = TB2:1
Incoming Pump/Control Power; Line (L1) = CB1:2
Incoming Pump/Control Power; Ground (G) = GND1
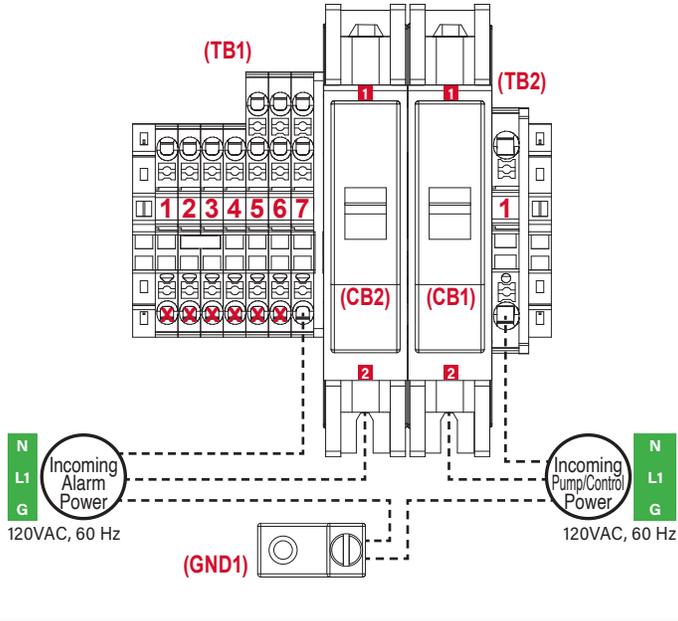
Step 4.2: Wiring | Power, 120/230VAC

Wire the incoming alarm/control and pump power to the terminals listed below and shown in the diagram (*APS220 series)*.

Incoming Alarm/Control Power; Line (L1) = TB1:7
Incoming Alarm/Control Power; Neutral (N) = TB1:8
Incoming Alarm/Control Power; Ground (G) = GND1

Incoming Pump Power; Line 2/Neutral (L2/N) = CB1:4
Incoming Pump Power; Line 1 (L1) = CB1:2
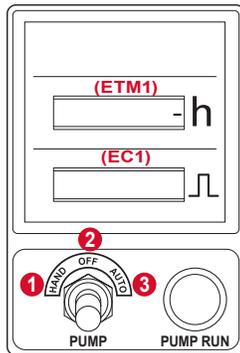Incoming Pump Power; Ground (G) = GND1
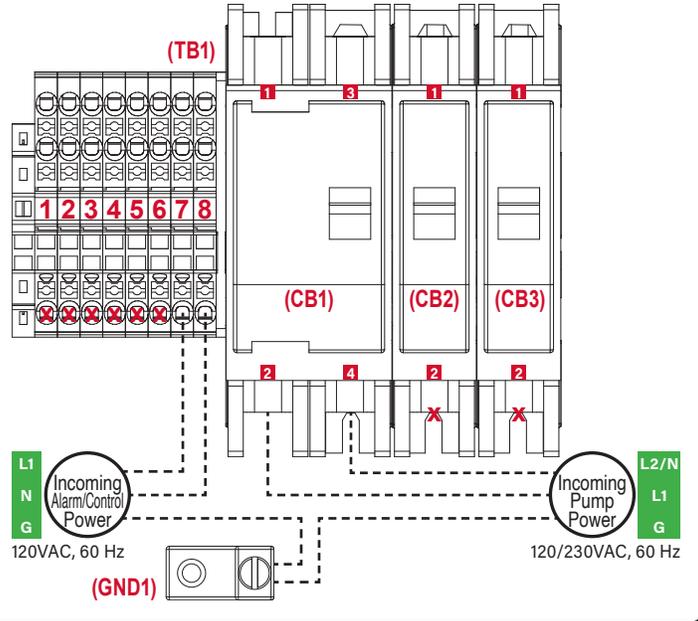
Step 5: Hand-Off-Auto Selector Switch

The pump hand-off-auto (HOA) selector switch is used to control the desired operation mode of the pump. The pump run light (green) illuminates when the pump is running. Optional models include a non-resettable elapsed time meter/cycle counter for pump monitoring.

See below for more information, "normal" operating position is Auto Mode.

1) **Hand Mode (H);** the pump will start and continue to run until the switch is toggled to the off position regardless of sensor status.

2) **Off Mode (O);** the pump will remain off until the switch is toggled to either hand or auto positions regardless of sensor status.

3) **Auto Mode (A);** the pump will operate based only on the status of the system sensors, turning the pump on and off.

Hand-Off-Auto
(3-position switch)

Step 6: Power and Quick Test

After all wiring and installation steps are completed, verify the incoming voltages match the control panel. Apply power to the control panel and pump, then place the HOA switch in Auto Mode.

1) Toggle the test/silence switch upward to activate an alarm test. The buzzer should annunciate and red alarm beacon should illuminate.

2) Activate the alarm float switch (sensor), the buzzer should annunciate and red alarm beacon should illuminate. Toggle the test/silence switch downward during an alarm condition, the buzzer should silence and alarm beacon should remain illuminated. Deactivate the sensor and the alarm condition should reset.

3) Activate both the pump stop and pump start float switches (sensors) in sequence, the pump should start and continue to run until both float switches are deactivated to complete the pump cycle.

Included with Product

- **Base Model: APS120 / APS220**; (1) Control Panel and No Additional Options

- **Base Model: APS120-AB / APS220-AB**; (1) Control Panel and (1) Elapsed Time Meter/Cycle Counter

Additional Options Available:
2-Float Setup; (1) Narrow Angle Alarm and (1) Wide Angle Control (stop/start)
3-Float Setup; (1) Narrow Angle Alarm and (2) Narrow Angle Control (stop/start)
36-inch Pedestal; Control Panel Mounted on Pedestal (safely route wires and curved bottom fits to riser)

Customer Support

Specifications

APS™ Simplex Control Panel

Primary Power:	120VAC or 120/230VAC, 0-20 Amps maximum, 60 Hz
Phase/Pump Type:	Single Phase, Simplex
Terminal Blocks:	120/230VAC, 20A and 30A
Definite Purpose Contactor:	120VAC or 230VAC, 20A, 50/60 Hz, 2-Pole, Normally Open
Circuit Breakers:	120/230VAC, 1P or 2P, 10A or 25A
Alarm Beacon:	10 Watt, Polycarbonate (red)
Alarm Buzzer:	120VAC, 95dB at 2-feet
Control Relay:	110VAC, 15A, Single Pole, Double Throw
HOA Switch:	120VAC, 6A, Single Pole, Double Throw
Test/Silence Switch:	120VAC, 6A, Single Pole, Double Throw
Pump Run Indicator:	125VAC, 3 Watt, Neon (green)
ETM (timer)/EC (counter):	120VAC, 15A, 60 Hz, Non-resettable *(optional)*
Pedestal (riser attachment):	36-inch, Polyethylene, Curved Bottom/Side Cutouts *(optional)*
Enclosure (sizes; inches):	Polycarbonate, 10x8x4, Type 4X (indoor/outdoor), Lockable Latch
Certifications:	UL 508 (US and Canada)
Warranty:	Three-Year Limited Warranty

Altra™; Alarm and Control Float Switches *(optional)*

Electrical/Operating Temp:	5 Amp, 120/240VAC, 0 - 140° F
Cable Type/Housing:	SJOOW (UL/CSA), Flexible, 18 AWG, 2-conductor, Polypropylene
Switching Differential/Config:	20° total (narrow angle) and 90° total (wide angle), Normally Open
Certifications:	CSA (US and Canada)