



- Pump Wiring & Connections
- Pump Sizing & Electrical (Voltage/Amperage)

Pump Wiring & Connections

Provided by others: All electrical field wiring, 24VAC cable and fan switching relay contactor boxes external to the pump station and otherwise not included in the equipment package.

Pump wiring connections are completed on site located inside the pump with all connection points labeled at the required terminal blocks.

A strain relief as shown is provided for all wiring to enter the enclosure for all final wiring connections.

It is sometimes helpful to unfasten the hardware holding the electrical panel and lay the panel flat for all final connections. To access inside the pump housing enclosure, large housings use three ¼-20 pan head screws accessed from the lower side of the electrical panel and require a Phillips head screwdriver. Medium housings use two ¼-20 hex head cap screws accessed from the bottom of the electrical panel and require a 7/16 wrench.

Single phase pumps come standard with 6' cord and plug; all 3 phase pumps require hard wiring.

All pump station wiring is recommended to originate from a dedicated 20 amp breaker or dedicated circuit breaker sized for maximum amp draw.

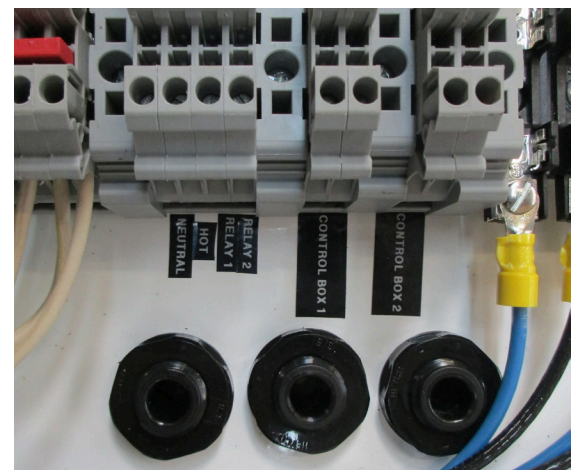
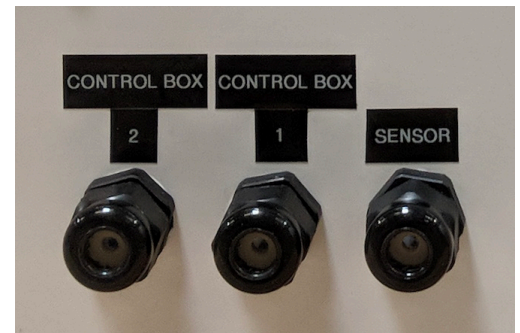
There are fuses installed on the electrical panel to protect individual circuits. Spare fuses are located in a plastic bag included in the pump box. Additionally, there is a 13 amp circuit breaker installed to protect the entire electrical system in the pump.

For Fan Operation, the Pump provides 24 Vac power with terminals for the electrician to run a 24 VAC control signal via two wire 18 gauge cable to plant located contactor relay boxes (electrician supplies). This controls the power to all fans in a zone so they are energized only when activated by the pump PLC controller. Pump PLC fan control will have two basic controls to operate fans:

1. Pump Power Switch ON for automatic winter operation to run fans sequentially with pump for humidity control;
2. A toggle switch/zone for manual operation of fans only to be independent from the pump. All wiring is completed at the factory for toggle operation. *It is advised to switch the fans on prior to system startup to make sure all fans are wired correctly.*

When the pump energizes, the 24 VAC control signal will be on and signals the fans to operate “on” in advance of the pump by 10 seconds being energized by a remote relay (provided by others) controlling plant power to all zone fans. It is likely that the relay will be located near the breaker box supplying the plant power to the fans or in a location which is able to maximize use of low voltage wiring as an economical consideration. The number of relays used and number of circuits is up to your electrical contractor. When the humidity in the space is satisfied, the 24 VAC signal to the fans will remain on for ten seconds longer to allow the remaining moisture to be distributed – then the control signal will go away, shutting down the fans.

Shown as 2 zone Pump
Strain Relief Sleeves located on Outside and Inside





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Pump Sizing, Voltage and Amperage

- Pumps Sized with Corresponding Voltage and Amperage Data:

- 0-1.4 GPM – 1 HP motor.

(pumps can be 1/4, 1/2, 3/4 or 1 HP motors depending on required GPM).

Voltage and Amperage for 1 HP motor:

(maximum HP and amp draw for this category)

- 115V/1Ph = 12.9 Amps
- 230V/1Ph = 6.5 Amps
- 230V/3Ph = 3.0 Amps
- 480V/3Ph = 1.5 Amps

- 1.5-2.0 GPM – 1.5 HP motor up to 2.0 HP motor.

Voltage and Amperage for 1.5 HP motor:

(maximum HP and amp draw for this category)

- 1115V/1Ph = 14.4 Amps
- 230V/1Ph = 10.2 Amps
- 230V/3Ph = 4.4 Amps
- 480V/3Ph = 2.2 Amps

- 2.1-2.9 GPM – 3 HP motor.

Voltage and Amperage for 3 HP motor:

(maximum HP and amp draw for this category)

- 115V/1Ph = 30 Amps
- 230V/1Ph = 15 Amps
- 230V/3Ph = 8.4 Amps
- 480V/3Ph = 4.2 Amps

- 3.0-3.8 GPM – 3 HP motor.

Voltage and Amperage for 3 HP motor:

(maximum HP and amp draw for this category)

- 230V/1Ph = 15 Amps
- 230V/3Ph = 8.4 Amps
- 230V/3Ph = 3.0 Amps
- 480V/3Ph = 4.2 Amps

Pump Enclosure: Electric Data and Specifications

Size	GPM	Motor HP	Unit RPM	Volts / Phase	Full Load Amps	Dimension In.	Weight Lbs
.25		.5	730	115/1	8.5	30.5 X 20.5 X 22	90
.25		.5	730	230/1	4.25	30.5 X 20.5 X 22	90
.5		.5	566	115 / 1	8.5	30.5 X 20.5 X 22	90
.5		.5	566	230 / 1	4.25	30.5 X 20.5 X 22	90
1		1	460	115 / 1	12.9	30.5 X 20.5 X 22	110
1		1	460	230 / 1	6.45	30.5 X 20.5 X 22	110
1.5		1	690	115 / 1	12.9	30.5 X 20.5 X 22	110
1.5		1.5	690	230 / 1	10.2	30.5 X 20.5 X 22	110
2		1.5	921	230 / 1	10.2	30.5 X 20.5 X 22	110
3		3	1381	230/ 1	15	30.5 X 20.5 X 22	130