



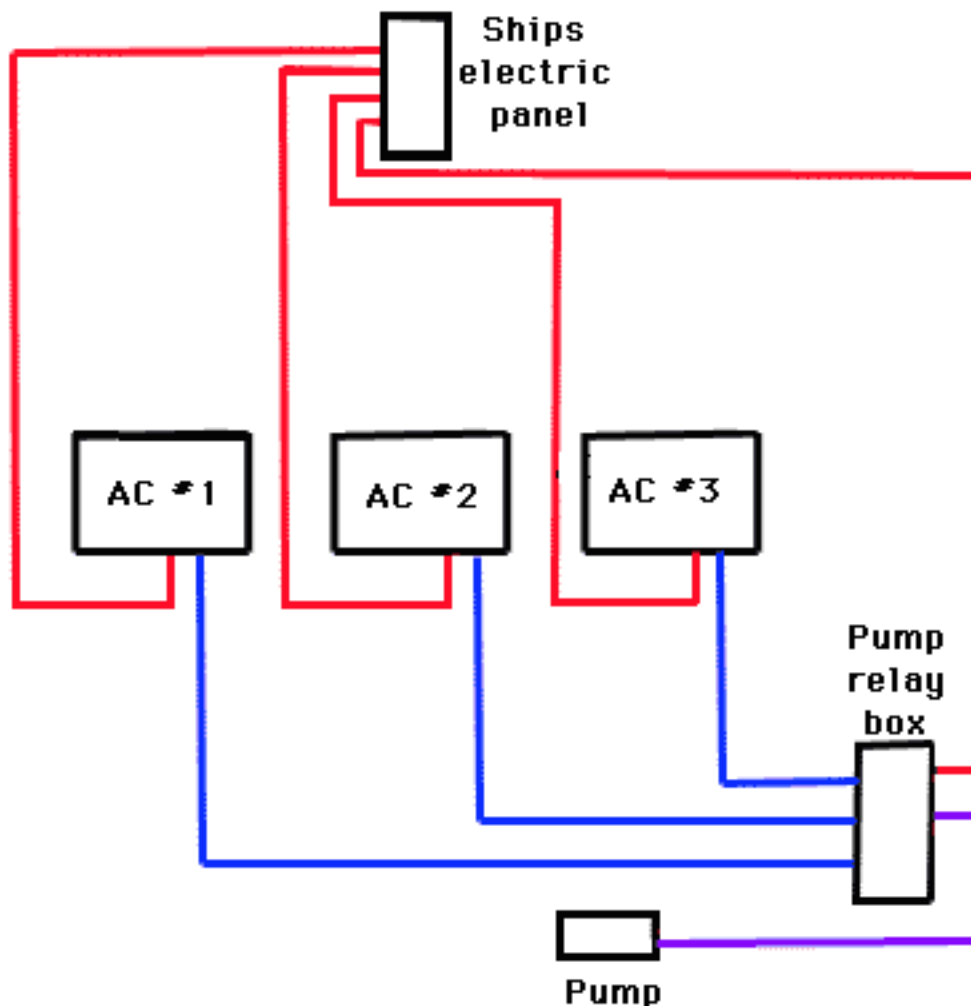
Multiple Unit Installations

If more than one AC unit is installed on a vessel it is often desirable to have a single intake through hull fitting and a single pump and strainer rather than multiple components to maintain and numerous hull penetrations.

When you do this you have a choice of having the raw water pump run constantly or you may install a relay box that will energize the pump if any one unit starts.

To accomplish this, Flagship Marine manufactures Pump Relay Control boxes that are compatible with all of our equipment.

Typical wiring diagram for multiple unit installation using a pump relay box:

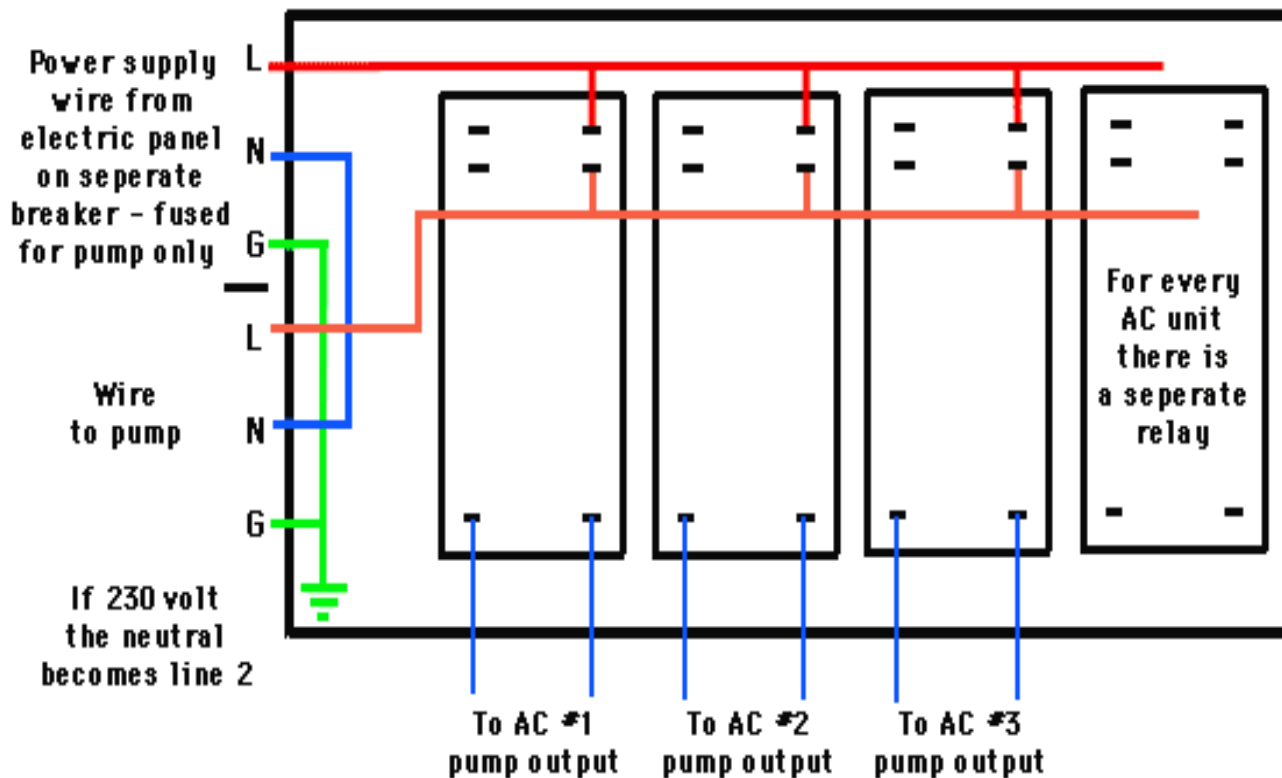


Pump Relay Box Schematic

The red wires are the high voltage (115 or 230 volt) power supply wires for the different AC units and the pump. The wire and breaker size is dependent on the current requirements of the individual components.

The blue wires (usually 24 volts AC) connect the pump output terminals of each AC unit to the pump relay box.

The purple wire is a high voltage wire (usually 115 or 230 volt) that connects the pump output of the pump relay box to the pump itself.



The simplicity of this schematic is in keeping with our philosophy of keeping it simple - we strive to manufacture products that local station personnel can diagnose and repair - you will never have to fly in a rocket scientist to repair a Flagship Marine unit!

The wire we supply for the connection to the pump relay box from each unit is #18 tinned/stranded wire (AGW 20 or 22 is OK for short runs of less than 20 feet - the relay coils consume only about 50 milliamps).

The pump output connection on each AC unit is 24 VAC if we know in advance a pump relay box is to be used, and is powered by the internal transformer in each AC unit.

Normally the pump output is the same voltage as the unit, either 115 VAC or 230VAC - however this can be changed in the field to the 24VAC. We prefer 24VAC for remote pump relay boxes for the safety advantage of reducing high voltage wiring in the vessel.

We use high quality enclosures that meet or exceed the NEMA 4 classification - all electrical connections are made on clearly labeled externally mounted marine terminal blocks with stainless connectors - one six position 20 amp block for the high voltage side (power supply and pump) and numerous 15 amp blocks for the individual AC unit connections.

The pump relay box is typically mounted near the pump.

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