

**Products:** [Pump Start Relay](#) <sup>[1]</sup>

**Topics:** Charts, Educational, FAQs, Installation Details, Installation Procedures, Replacement Guides, Troubleshooting

The chattering you hear on a pump start relay is usually caused by insufficient amperage arriving at the relay from the controller. The first question you should ask yourself is – Did this Relay work for some time before or is this new installation?

**New installation** - It is possible you have undersized the wires going from the controller to the relay. Pump Start Relays require 24 VAC as well as a great deal of amperage to operate properly. You will want a separate common wire from the controller to the Pump Start Relay. Never share a common wire from your solenoids with your relay. Ensure that all wire connections are clean and follow the wire sizing table listed below.

**Existing installation** – If the Pump Start Relay has been working fine for a number of years, there may be dirt or insects inside the contactors of the relay. Isolate the relay from the incoming power supply and disassemble the contactor to ensure that it is clean. If you are not familiar with electricity, we recommend that you hire a licensed electrician to do the tests. You can disconnect the 120 or 240 power supply leaving the relay going to your pump, then check the relay for correct performance. If the relay is still chattering and not fully engaging, verify the incoming amperage from the controller to the relay. Clean up any suspect wire connections to decrease possible resistance.

### Pump Start Relay Maximum Wire Lengths

**MAXIMUM wire length one way (Do NOT go this far!)**

Model	18Awg	16Awg	14Awg	12Awg	10Awg	8Awg
PSR-22	243	386	616	976	1551	2463
PSR-52	134	214	341	540	859	1365
PSR-53	134	214	341	540	859	1365

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