

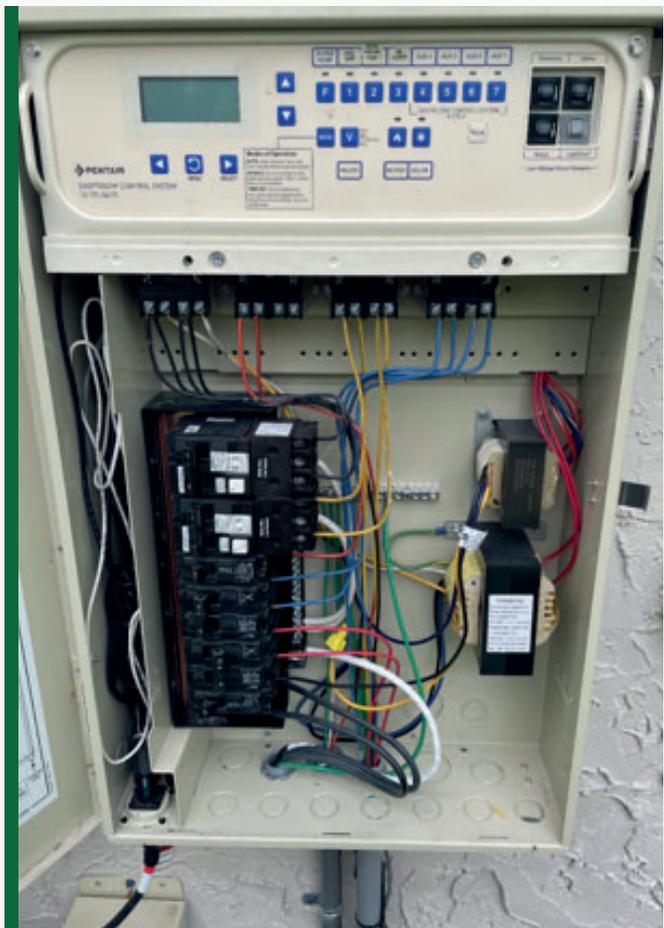


# PROTECTING POOL AUTOMATION CONTROLS

*Swimming pool systems are becoming more complex and control panels now have internal electronics.*

These are usually located outdoors, mostly located on an exterior wall near the pool pump and equipment. A 240V power circuit is run to the control panel from the main electrical service of the home. Surge protection starts at the main electrical panel with a quality lightning arrester. The 240V pool control power can be located either underground or through an attic area, in both cases this long power cable can be exposed to surge energy even with a main electrical panel surge protector. A second layer of protection should be installed at the pool control panel. The T1SPD is a great choice for this application.

- First turn off power to the controls at the main. Then remove the cover from the control panel and you should see something like the below picture.



- Then locate a pair of breakers that are convenient to connect the T1SPD black wires. A 240V breaker is fine or you can use two 120V breakers provided they are next to each other (this is so both phases of the 240V circuit are protected).

Locate a 3/4" knock out in the control panel and open it as shown.



Insert the TISPD through the knockout hole and install the nut and washer, tighten hand tight. Do not overtighten and damage the plastic threads on the TISPD.

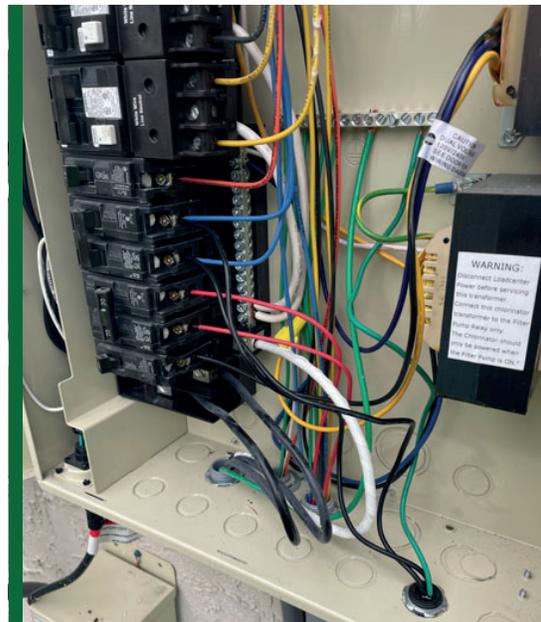


Make sure the LED on the TISPD can be easily seen.

Connect the green wire of the TISPD to the ground bus in the panel and connect each black wire to the circuit breaker(s) as shown below. To install per NEC (NEC states you



cannot put two wires into one breaker lug unless it was designed for that) you must remove the existing wire from the breaker then insert a small length of the same gauge wire. The existing wire and the TISPD lead can then be wire nudded to the small length of wire from the breaker. This is not shown below.



● If you follow the green wire from the TISPD you will see it connects to the bare aluminum ground bus. Each black wire from the TISPD is connected to the poles of a 240V breaker having blue existing wires. Note that the TISPD will be operational as long as that breaker is ON.

The cover can now be installed on the control panel then the main electric panel breaker powering the pool controls can be turned on. You should see a green light from the TISPD when power is ON. It will be very bright at night, less bright in the daylight.

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## Questions?

Please contact us if you have questions about this article or a particular issue that you need help with.

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