TECHNICAL BULLETIN

No. 4 of 2018

Solenoid Power Supply / Controller Compatibility

A compatibility issue exists between the **Pulsar**® Infinity solenoid 24V DC power supply and prominent DCM series chemical controllers when the power supply is directly plugged into the controller. The inrush current to the 24V DC power supply of 70 – 140 Amps far exceeds the designed capacity of the DCM controller 10 Amp relays. Excessive current of this nature can cause relay contacts to remain on (stick) and allow chemicals to feed after the controller has turned off the relay. Although it occurs intermittently, this situation can lead to over feeding chlorine in the pool and overshooting the ORP set point.

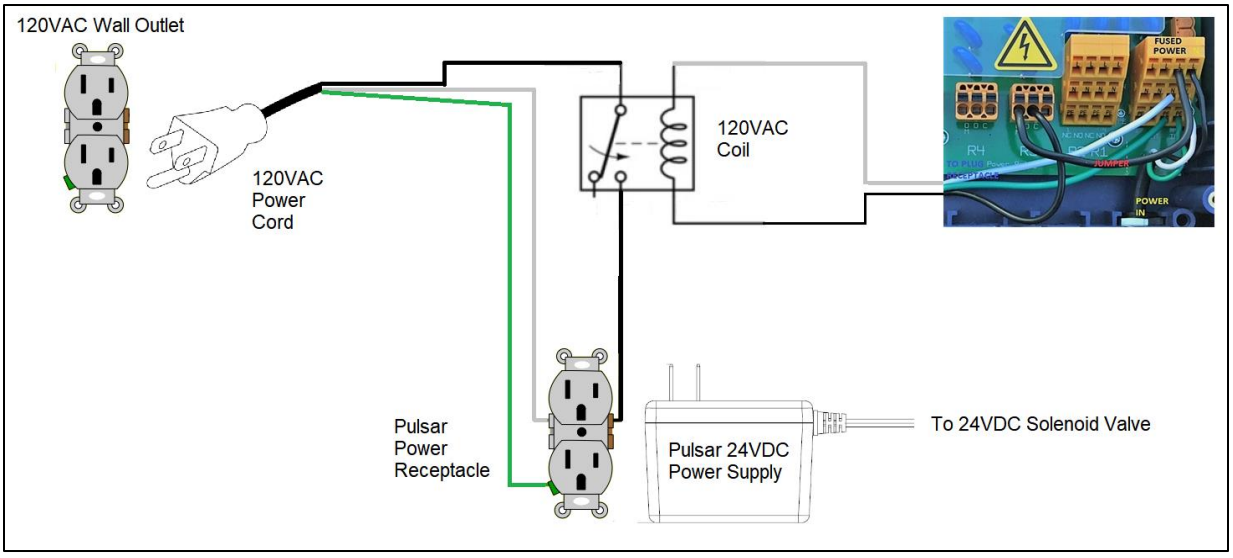
ORP Monitoring

Although this has only been observed to happen on the Prominent controllers DCM series, the physical electrical process that causes the issue can potentially occur on any controller that has a mechanical relay rated much less than the inrush current rating of the Endurance 24V DC power supply. We recommend users monitor their controllers and feeders closely to make sure the solenoid valve is **NOT** on (open) when the controller is **NOT** calling for chlorine. If the solenoid valve does remain on when the controller is **NOT** sending a signal to feed, there may be a compatibility issue with that particular controller and the power supply.

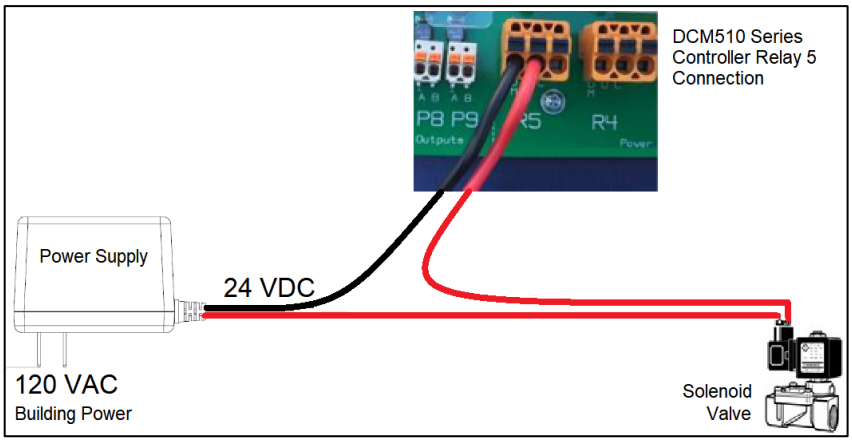
Immediate Fix

Lonza recommends using the following two options assuming a “sticking” relay from your Prominent DCM510 controller or other controller with a mechanical relay.

1. Use an isolation relay to isolate the controller from the excessive inrush current of the solenoid 24V DC power supply. The drawing below represents an example of how to wire an isolation relay.



2. Connect the 24VDC power supply to one of the three DCM510 dry contact relays R3 - R5 as shown in the diagram below.



Permanent Solution

Lonza is working with the supplier and power supply manufacture to source a replacement power supply with a much lower inrush current rating that would eliminate this condition from occurring when connecting to controllers with mechanical relays. An update to this technical bulletin will be released when the new power supply is sourced.