

## Caution with Programmed Start Ballasts

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I recently replaced an instant start ballast with a programmed start ballast (Sylvania QTP2x32T8/UNV PSN-TC). I also replaced the lamps, Philips Alto FB32T8/TL35/6 with GE F32T8-SP30-U-6. Both lamps are “U” shaped.

The new ballast did not work with either the old or new lamps. Tony at Sylvania advised that I may not have proper grounding, but grounding was not the issue.

Tony also raised the possibility that the lamp connectors were shorted to one another at each socket, which is typical in a fixture designed for instant start ballasts. Instant start ballasts work by just providing a very high voltage (typically 600v) across each lamp; they do not heat the filament; each end of the lamp is wired in common. In contrast, a programmed start ballast heats the filaments for a few seconds, strikes an arc with a lower voltage (405v to 550v), and then deenergizes the filament. For this reason, the programmed start ballast requires a separate wire going to each pin to energize the filament.

Indeed the lamp connectors were shorted to one another within each socket with an internal jumper. At each socket, I removed the internal jumper and drilled a small hole to allow the each connector to receive a separate wire. I then rewired the fixture so each wire of each wire pair (blue, red, and 2 yellow) goes to its own separate connector within each socket.

Now the fixture works with the new programmed start ballast and the old lamps, as well the new lamps.

### Caveats:

It is essential to use utmost caution when rewiring fluorescent fixtures, because of the danger of high voltages and the always-present danger of fire. Do not use this advice unless you are fully trained and aware of the way circuits work and safe electrical practices.