Condensation Sensation



"Our lineman noticed condensation on the inside of the photocontrol window. What's wrong?" In most cases, when the control is returned to the standards engineer (and eventually DTL), the water/condensation is gone. So what happened? Was the control leaky? The simple answer is that window condensation is completely normal in all photocontrols and does not affect photocontrol performance.

It is normal for photocontrols to "breathe" with changes in temperature or barometric pressure?

The air inside the control, just like the air outside, has humidity in it. After a cool, damp night the humidity level may be very high. When the sun rises and the photocontrol switches off, the circuit consumes slightly more power: about 1.5 watts. This heat drives the humidity away from the electronics and toward the coolest part of the control, the north facing window. The window, made of hard acrylic, carries this moisture as a very visible thin film of droplets. This film evaporates as the day becomes warmer and the control and fixture dry out.

This has never affected the proper operation of DTL's controls. Condensation is most obvious when the control is on a fixture with a bad lamp, starting aid, fuse or ballast. Any of these "light out" conditions can result in condensation. When the lineman visits the trouble site early the next morning he's likely to see the condensation and blame the control for the failure. However:

No light = no power = no nighttime fixture heat = cooler control at night = more humidity inside control

A glove test will prove the control is operational. Condensation has never been the cause of any DTL photocontrol failure. DTL has over 10 million controls installed from northern Maine and Canada to the tropics (Kauai) to Florida to San Diego to Seattle and throughout the Midwest-in some pretty steamy places.