

Pretoria - Tech Talk # 7

Date: 3/8/2010

Topic: Arc Sensitive Ballast & Latching Ballast used for Fluorescent Lighting Systems

Pretoria Transit Interiors has issued this Tech Talk to keep our customers informed on issues pertaining to the passenger interior light systems.

Pretoria offers two types of fluorescent ballast with arc sensitive circuitry to minimize arcing at the lamp tube ends and wire connection junctions that meet the UL935 Type CC requirements.

Standard Ballast

Our standard issue ballast including BAL-025-XX (standard ballast), BAL-027-XX (extinguishable ballast) and BAL-028-XX (dimmable ballast) are designed to maximize reliability and be intrinsically safe.

These fluorescent lamp ballast will not permit ground fault current from flowing from any end of the fluorescent lamp. This is accomplished by transformer technology where as the lamp output is fully isolated and floating between the transformers input and output. Basically speaking, there is no wire connecting the input and output of the transformer as in most other ballast transformers.

A ground fault in an electrical circuit permits leakage of electricity. Power leaks into the casing of the fixture, ballast or appliance through a faulty wire. Faults usually result from worn insulation, moisture, or in tools that have deteriorated from age or abuse.

Ground faults are very dangerous when people become part of an electrical path or circuit to ground. When electrical current leaks out of faulty appliances, it seeks the path of least resistance to ground. This can harm a person using or touching the faulty fixture, ballast, or appliance while standing in a damp location on the ground or other conductive material becomes a good path to ground. The electrical current flowing through a person's body to ground can possibly result in serious injury.

Latching Ballast

Pretoria also offers latching ballast for properties that require even more arc protection circuitry. A latching ballast will interrupt sending power to the lamp tube ends if an arc is detected in the circuit. Once a latching ballast is latched or power is cut off to the lamp tube, the power must be reset to the fixture in order for the ballast to power up.

Although latching ballast may indeed provide arc detection, they can be latched off due to jarring as a bump in the road may cause the lamp tube to shift in the sockets causing an intermittent arc thus latching the ballast in the off mode. When the ballast becomes latched, power to the lamps must be turned off for a few seconds to allow the ballast to reset. If the ballast does not reset a short either in the sockets or wiring must be located and repaired.

For more information call: