

TECHNICAL COMPARISON

LVS VERSUS BODINE AND IOTA AUTOMATIC LOAD CONTROL SWITCHING DEVICE

Bodine and Iota are transfer controls which transfer utility power lighting load to a 20AMP emergency circuit supplied by a generator or inverter during utility or branch circuit breaker interruption. Basically this transfer method is the same as both companies use in their battery packs used in emergency fluorescent light fixtures. These battery packs are equipped with an accessible test switch which by law must be tested every 30 days for a minimum of 15 seconds, and once a year for 1.5 hours. Even though a test switch is a UL 924 requirement since June 2001, Bodine and Iota are ignoring this requirement and make it an option which at times, at great expense, has to be field installed by an electrical contractor when local or state inspectors enforce N.E.C. rules.

LVS automatic load control switching devices have an internal test switch or a unique self diagnostic test feature which automatically tests all emergency light fixtures everyday and a status LED on regular and emergency power along with high voltage surge protection. Bodine and Iota lack this safety feature completely.

Transfer of a lighting load between utility power and generator power is generally done by a UL 1008 transfer switch, a very expensive device with an interrupting capacity of 100,000 AMP. Bodine and Iota accomplish this with a low cost 3 AMP contact rated relay and a simple 1 transistor slow resetting time delay. This method is susceptible to failure when a momentary utility power failure occurs and the high voltage line hits wet pavement and the power line jumps up and down, creating on and off momentary voltage surges.

LVS automatic load control devices for standard 2 conductor light fixtures utilize a straight forward approach, pioneered in 1992, whereby all emergency light fixtures are connected to a 24 hour emergency circuit at all times and one 20 AMP emergency circuit can serve as many as 4 to 10 rooms of emergency lighting. The on and off condition of the emergency light fixture is controlled by the regular room lights switch, and supervised by each room's utility lighting power. Failure or interruption of the emergency line results in emergency light fixtures not lighting in 4 to 10 rooms when regular lights are turned on, and this is noticed in multiple locations. With Bodine or Iota devices a break in emergency conductors or a turned off emergency breaker is only noticeable when emergency light is really needed, during a utility power interruption.

All LVS devices employ 20 AMP contact rated relays which can withstand 3 to 15 direct shorts without noticeable damage, whereas a 3 AMP rated contact will fail completely if a ballast develops a short. The result is that not only the ballast has to be replaced, but also the automatic load control device.

Bodine and Iota units are designed and UL approved to be installed in a light fixture ballast enclosure. If there is no space available, such as a round or suspended fixture, a separate enclosure has to be provided to house the unit. This increases field installation costs. By contrast, LVS devices can be installed behind wall switch or any standard electric junction box reducing installation costs.