



## **TECHNICAL BULLETIN**

Issued: 09/13/04

**TO:** All Users of System Sensor Audible/Visible Devices  
**FROM:** Technical Service  
**SUBJECT:** U.L Current Draw/Voltage Drop Clarification

### **BACKGROUND**

Effective May 1, 2004, UL revised the way that they measure current draw and voltage drop. These changes were designed to simplify how these two vital calculations were conceived and to make them more accurate. The purpose of this correspondence is to clarify the confusion that these changes have caused in the marketplace.

The new UL standard for voltage drop requires that the operating voltage for notification devices must be within the following parameters:

- A 24V notification device must operate between 16V and 33V.
- A 12V notification device must operate between 8V and 17.5V.

Any device that does not fall within these parameters will be considered a Special Application and must be treated as such.

Further, UL requires notification device manufacturers who choose to publish current draw information for their devices to do so as if the devices were operating in a "worst case" scenario. For example, the current draw for a 24V device must be calculated (using Root Mean Squared) as though the device were operating at only 16V.

### **HOW CHANGES AFFECT YOU**

UL's objective in introducing this new measurement method is to ensure that systems designers do not place too many notification devices on a loop and overload the circuit. These changes are also intended to improve measurement accuracy and to simplify the specifying process. The new calculations do not affect existing installations. They will, however, affect the way you specify and install Audible/Visible devices after May 1, 2004.

Under the new standard, device current draws appear to be higher when using RMS as opposed to the Average DC that was being used prior to May 2004. While this new measurement method may cause notification devices to appear to be drawing more current than previously, this is not the case. The devices themselves have not changed; only the method for measuring current draw is different. The higher RMS current draw inhibits over-design of notification appliance circuits.

### **SYSTEM SENSOR'S STANCE**

Since the May 1 file review, there has been confusion in the marketplace about these changes and the way that different manufacturers have been publishing their current draw numbers. System Sensor followed the UL mandate to effect these new calculations by May 1. In addition to updating our Voltage Drop Calculator, manuals and nameplates, we have updated all of our marketing materials per UL Standards 464 and 1971. System Sensor has also made a concerted effort to notify our customers about these changes through direct mailers and notices prominently posted on our website.

### **CONCLUSION**

With these changes, System Sensor understands that there will be confusion in the market for some time and is trying to make sure that unbiased, factual information is provided to all Audible/Visible customers.

If there are any questions or concerns, please contact the System Sensor Customer Service Department at 800/736-7672.