WIREMOLD

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SALES LETTER: E-07-06

To: EWS SALES FORCE

From: Keith Falkenberg/Brian Magaw

Date: March 9, 2007

Subject: UL1449 SECOND EDITION

As of February 9th, 2007 UL is requiring all manufacturers of Transient Voltage Surge Protective devices to meet more stringent requirements. These requirements ensure that the Surge Suppressor will not increase the risk of fire, electric shock or injury to persons when subjected to various abnormal current conditions from 50A to 500A.

After a lot of hard work and effort by both the Wiremold and Pass and Seymour Engineering team both companies have passed the new requirements and all production after February 9th will be UL/cUL Listed Second Edition dated August 15, 1996 including requirements effective February 9, 2007.

Most of Wiremold's product and all of Pass and Seymour's product required no external changes but all products required new internal components to meet the new requirements. The main change was adding additional fusing to the circuit board (sounds easier than it was).

Attached is a white paper that provides additional details concerning UL's new requirements.

Page 2 of this document lists the changes to the Wiremold products (new part numbers, obsolete items). Please review and if you have any questions or concerns please contact me.

Sincerely,

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Surge Protection Devices Meet New Test Requirements

Surge protection devices are critical to preventing damage to electronic equipment. Surges result from a variety of causes ranging from lightning to motors and compressors. Surge protection devices divert surges and spikes away from sensitive equipment by the use of metal oxide varistors (MOVs).

Effective February 9, 2007 all UL Listed or Recognized surge protection devices must meet revised testing requirements of the UL 1449 standard. The revision supplements existing abnormal overvoltage current tests by introducing new intermediate current testing levels between 50 and 500 Amps.

Engineering Considerations

Fuse protection for surge suppressors is a balance of two opposing factors: robustness and speed. The fuses need to be robust enough to withstand large surges without opening, yet they must operate quickly enough to meet the new test requirements. In other words, the fuse must be sensitive enough to disconnect quickly without becoming overly vulnerable to surges.

The new surge suppressor design incorporates a new fuse design that balances these competing requirements. This design was tested and survived 30 large surges (3 kiloamps, 8x20 microseconds) without opening of the surge components or fusing.

Effects on Features and Specifications

Surge suppressors are rated by clamping voltage. Actual clamping voltage is the voltage that will pass through the surge protection device to the equipment being protected. UL groups devices into clamping categories based on the amount of a surge that is not diverted and dissipated by the device. UL groups surge protectors into categories that are based on a fairly wide range of actual clamping voltage. As a result, two significantly different devices may be found in the same category.

Under the existing standard, Wiremold® computer grade and premium grade devices were rated at 330V clamping voltage. No suitable fusing exists that allows the 330V level to be retained (except on the line to neutral for the premium grade products), while also passing the new tests. This is due to a higher voltage drop across the fusing than with the old design.
The table below summarizes the changes:

Product	Clamping Level/Old Design	Clamping Level/New Design
Computer grade	330V	400V
Premium grade	330V	330 V on line to neutral 400V on line to ground 400 V on neutral to ground