SymCom Inc
Motor Protection & Controls Since 1974

Manufacturer of MotorSaver® and PumpSaver®

Fusing Considerations for SymCom's MotorSaver® products.

Panel builders and original equipment manufacturers must carefully review their electrical designs to determine if fuse protection is required on the input side of a voltage monitor.

Relevant design considerations include:

1. Does the voltage monitor require fusing to protect from internal component failures that result in a short circuit condition? (Note: This is usually determined by Underwriters Laboratories. Many products that require fuses will have "UR" symbols instead of "UL". This requirement will be stated in the "engineering considerations" provided with the "UR'd" product. These application requirements are not always clearly stated and product users should contact the manufacturer for clear application information).

2. Can exposed terminals on the voltage monitor be easily short circuited by service personnel that have inadvertently entered the enclosure without disconnecting power?

3. Has the product been installed according to the manufacturer's installation instructions, and mounted to comply with UL 508 section 18.2.1 and NEC Article 430?

4. Are there any special considerations for the panel or OEM equipment that would require additional fusing requirements? (Example: branch conductors are also used to power other equipment).

SymCom's voltage monitors are fully listed under UL's 508 standard, which is harmonized with the National Electric Code Article 430. These products do not require the input fuse protection that is required with many other "UR'd" products.

Most of SymCom's voltage monitors have finger safe terminal blocks, or protective terminal covers that significantly reduce the chance for service personnel to inadvertently create a short circuit. Manufacturers rarely advise servicing live equipment, but reducing this hazard is in the best interest of safety.

UL's 508 standard does not require branch short circuit protection for conductors that are less then 12 inches in length from the power source*. (*Consult with your UL advisor and UL 508 section 18 for accurate compliance.)

Careful consideration of the issues in this document can save many panel builders and OEMs the added expense of fuse protection when applying a voltage monitor. Please consult with any agencies or standards organizations that may apply to your equipment for proper compliance with the information described in this document.

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