



# Environmental Durability APPLICATION Guide

## Environmental Tests - Indicators- Piezo

### MSE, MSO, MSR, & SBM Series:

Test Name	Description of Test
Surge Voltage	15% over maximum rated voltage applied for one minute.
Reverse Voltage	Maximum reverse polarity equal to rated voltage for one minute.
Intermittent RT Life	A duty cycle of 1 second on & 1 second off, for a minimum of 25,000 times at room temperature at maximum rated voltage.
Hot Life	250 hours continuous operation at maximum rated operating temperature and maximum rated voltage.
Cold Life	250 hours continuous operation at maximum rated operating temperature and minimum rated voltage.
Hot Storage	250 hours at maximum rated hot storage temperature (no voltage applied)
Cold Storage	250 hours at maximum rated cold storage temperature (no voltage applied).
Humidity	95% relative humidity @ 40C for 100 hours (no voltage applied).
Vibration	2 hours each in each of the 3 mutually perpendicular planes (6 hours total). Harmonic motion amplitude of 0.03 in with a uniform varying frequency between 10 and 55 Hz. No voltage applied.
Salt Spray	96 hours in an atomized 5% salt spray solution at 35C (no voltage). Test not applicable to MSO, MSR, SBM, SNP, & VSB series.
Terminal Strength	5 lbs applied axially for a period of 5 minutes.

**ASI, PK, PF, PL, PFD, PLD, MAS800, MCP Series:**

<b>Test Name</b>	<b>Description of Test</b>
Cold Life	100 hours at maximum rated cold storage temperature
Hot Life	100 hours at maximum rated hot storage temperature
RT Life	1000 hours at maximum rated voltage at room temperature
Humidity	100 hours at 95% relative humidity @ 40C
Drop Test	A natural drop from 75cm down to the ground
Vibration	2kHz per min; 2mm amplitude applied in X, Y, & Z directions for 30 mins each.