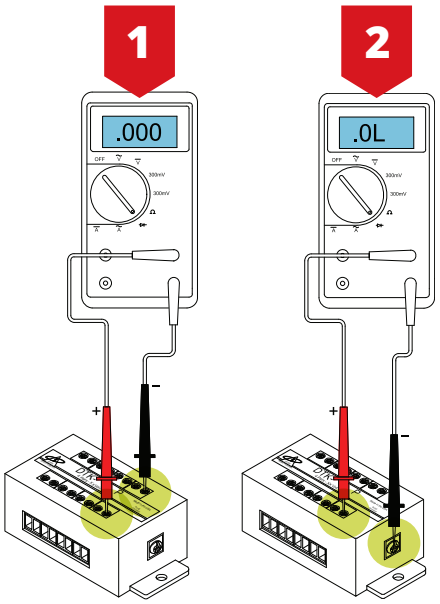
TECHNICAL WHITE PAPER

Field Testing: DTK-LVLP Series

The DTK-LVLP Series utilizes a multi-stage, hybrid circuit design that incorporates TVS diodes and gas discharge tubes to protect both common (L-G) and differential (L-L) modes. This device is passive to the circuit until there is a spike in voltage (transient surge), causing the protection component to react and dissipate the surge energy safely to Earth ground. After the surge has been dissipated, the protection components return to their normal, passive state and await the next transient event.



Test 1

Remove DITEK unit from the circuit.

Using a VOM Meter, test for continuity between:

- 1+ unprotected (input) and 1+ protected (output) → short = pass
- 1- unprotected (input) and 1- protected (output) → short = pass
- 2+ unprotected (input) and 2+ protected (output) → short = pass
- 2- unprotected (input) and 2- protected (output) → short = pass

Results: If the surge energy exceeds the capacity of the device, or the number of surge impulses is too great, the result will be an OPEN circuit from INPUT to OUTPUT. This is the indication that the surge protector has gone end of life.

Test 2

Remove DITEK unit from the circuit.

Using a VOM Meter, test for continuity between:

- 1+ unprotected (input) and GND (ground) → open = pass
- 1- unprotected (input) and GND (ground) → open = pass
- 2+ unprotected (input) and GND (ground) → open = pass
- 2- unprotected (input) and GND (ground) → open = pass
- 1+ unprotected (input) and 1- unprotected (input) → open = pass
- 2+ unprotected (input) and 2- unprotected (input) → open = pass

Results: If the surge energy exceeds the capacity of the device, or the number of surge impulses is too great, the protection component will cause a short on either line to ground, or line to line. This is the indication that the surge protector has gone end of life.

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DITEK® Surge Protection

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