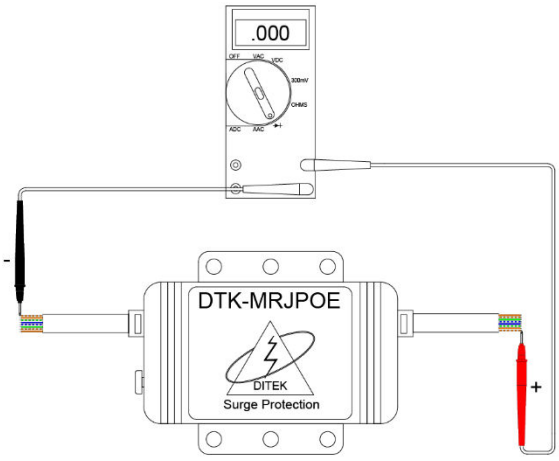
SPD Field Testing – DTK-MRJ Series
Technical White Paper

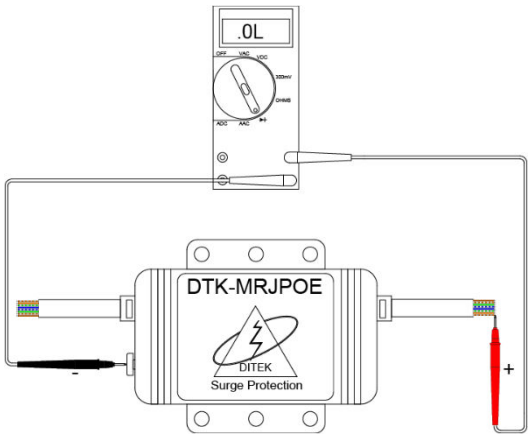
The following procedure is for testing and evaluating DITEK's DTK-MRJ Series of surge protectors in the field.

Test 1
Remove DITEK unit from the circuit, use an Ethernet cable cut back as shown.
Using a VOM Meter, test for continuity between:
Pins 1-8 (IN) and Pins 1-8 (OUT) **SHORT = PASS**



This is to make sure the DITEK unit is passing signal.
An **OPEN** circuit, or not passing signal is the indication that the DITEK unit has gone end of life.

Test 2
Remove DITEK unit from the circuit, use an Ethernet cable cut back as shown.
Using a VOM Meter, test for continuity between:
Pins 1-8 (IN) and GND (Ground) **OPEN = PASS**



Scenario: If the surge voltage energy is too great for the components to handle, or the number of surge hits are too numerous, the SAD component will **SHORT** out giving a ground fault.
This is the indication that the DITEK unit has gone end of life.

The DTK-MRJ Series utilizes a multi-stage hybrid circuit design that incorporates SAD (Silicon Avalanche Diode) technology. This device is passive to the circuit until there is a change in voltage (overvoltage).
Then, the component turns on and shorts the overvoltage energy down the ground path and away from the circuit.
After the fault is removed, the components release their hold on ground; they reset and get ready for the next event.

Please see the product page DTK-MRJSeries. For more information about our other products and solutions, please visit https://www.diteksurgeprotection.com/