

# TSI

## Two Step Insulation Test

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The T81 version 4.100 paired with the new DCS-III comparator offers a Two Step Insulation (TSI) test. This optional capability comes complete with the new DCS ROMs. The test mode makes a first insulation test at a specified lower voltage. Only if this test passes is the actual higher voltage applied.

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### The Purpose

TSI checks for a short or leakage at a lower voltage before actually applying the specified high voltage of 500V or more. This helps prevent high voltage from reaching your sensitive components due to a short in the product, saving your components from damaging arcs.

### An Example

*Syntax:*                    F,500V,>20M,.05S  
                                  TSI,100V

The TSI Steps:

1. TSI makes a 20M insulation test at 100V for .05 seconds.
2. If this test fails (or breaks down), TSI reports a failure and executes the next test in the file.
3. If this test passes, then TSI increases the voltage to 500V and makes a 20M insulation test for .05 seconds.

*Where:*

TSI     =     Two Step Insulation test directive  
100V   =     Initial voltage parameter. You may program any voltage value greater than 40V.

*Notes:*

1. TSI mode applies to DCS-III tests only.
2. TSI with no voltage parameter following will turn off the TSI mode.
3. DTB (Dwell Time Bypass) may be enabled.
4. A simultaneous HIPOT test may be made at each voltage, if programmed.
5. Dwell must be programmed to handle each test.

