

How to Connect a Foot Switch to the 1870 Dielectric Analyzer

The 1870 Dielectric Analyzer is supplied with a PLC interface which allows complete control from an industrial programmable controller. Frequently though, it is desirable to start a measurement on the 1870 instrument using a simple switch on a component fixture or a foot pedal. Figure 1 illustrates how to make the proper connections to the 25-pin PLC Interface on the rear panel of the 1870 instrument.

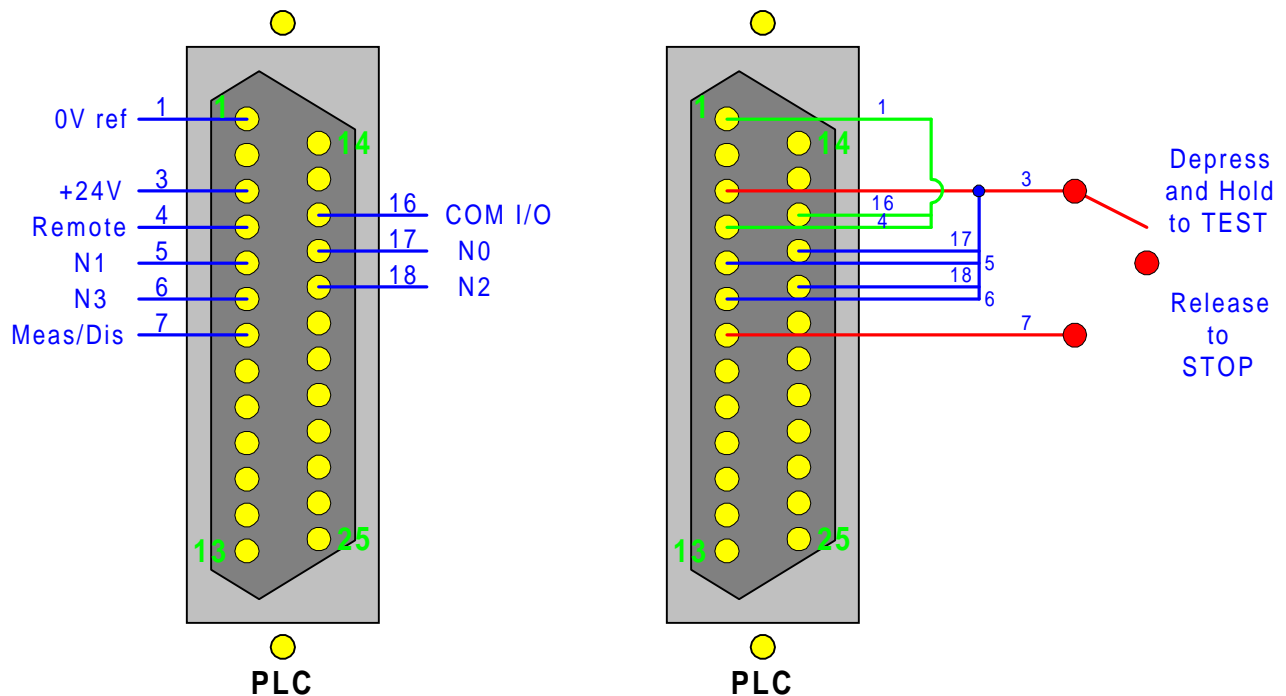


Figure 1: Connection of Foot Pedal to PLC Interface

WARNING

Potentially dangerous voltages may be present on the measurement terminals. Use all safety precautions and follow all warnings in the instruction manual. Dangerous energy levels may be stored on devices tested by this unit. Always make sure the high voltage indicator is **OFF** when connecting or disconnecting the device under test.

The 1870 AC/DC Dielectric Analyzer

Figure 2 illustrates the 1870 Dielectric Analyzer front panel controls and indicators. The 1870 instrument is both an AC/DC hipot tester and an insulation resistance tester in one unit. For dielectric strength testing, the 1870 instrument can be programmed for test voltage of 0V-6kV (AC or DC) and storage of the voltage and current at which breakdown occurs. Constant monitoring of leakage current and programmable current trip range (1uA to 10mA) provides essential data for detection of material breakdown. For insulation resistance testing the 1870 instrument provides a measurement range of 500kΩ to 2TΩ at a basic accuracy of 3%. The IR test voltage is positive pole grounded and selectable as 45V, 100V, 250V or 500V DC with a basic accuracy of 1%. Programmable test time is 1s-999s and current is limited to 2mA.

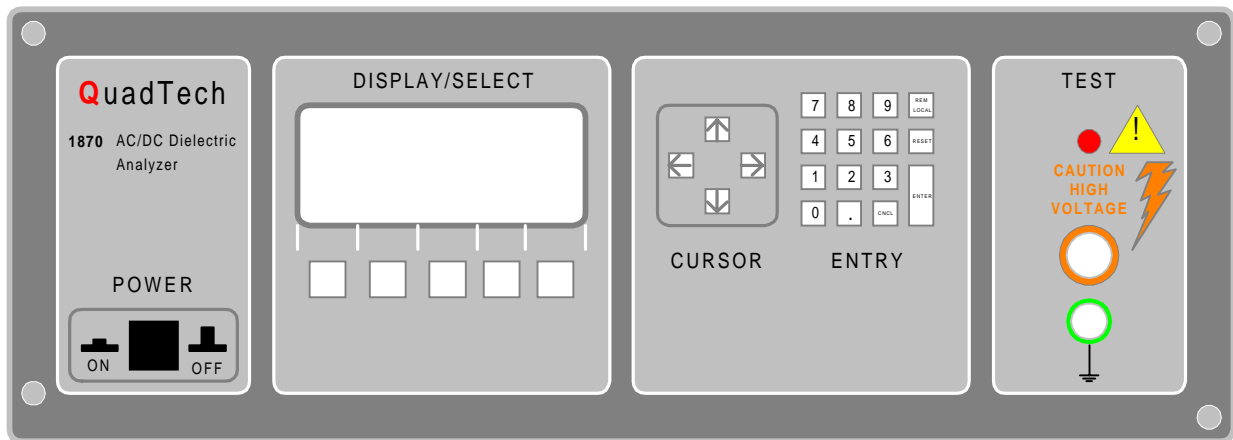


Figure 2: 1870 Dielectric Analyzer

The 1870 instrument comes standard with an IEEE-488 interface and PLC interface for remote control of instrument functions. Safety features include current limiting capability, a high voltage indicator and a safety interlock.

QuadTech introduced **twelve** new electrical safety analyzers in 1999/2000 to fully modernize and round out its EST product line. These new units include the Sentry 15/25/35 AC/DC/IR hipot testers, the Guardian 2510/2520/2530 AC/DC/IR hipot testers, the Guardian 500VA hipot tester, the Guardian 10kV AC hipot tester, the Guardian 12kV DC hipot tester and the Guardian 6000, 6100 & 6200 Electrical Safety Analyzers. Although sale of the 1870 instrument has been discontinued, QuadTech continues to service this instrument. For complete product specifications on QuadTech's products, please visit us at <http://www.quadtech.com>. If you can't find the instrument to fit your specific application, email our applications specialist at jkramer@quadtech.com. We'll work with you on a custom solution.

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