

Digibridge Connections to the LD3 Dielectric Cell

The QuadTech Digibridge may be used with a dielectric cell to make accurate and rapid measurements on dielectric materials. Figure 1 demonstrates how to connect to a 3-terminal (guarded) LD3 cell manufactured by Dielectric Products Company. The connection method employs the standard extender cables available for both types of Digibridges (bench or rack). For permanent installations it may be preferable to modify the cables for cleaner more repeatable connections. It is also recommended to make the cables as **short** as possible, especially for higher frequency measurements.

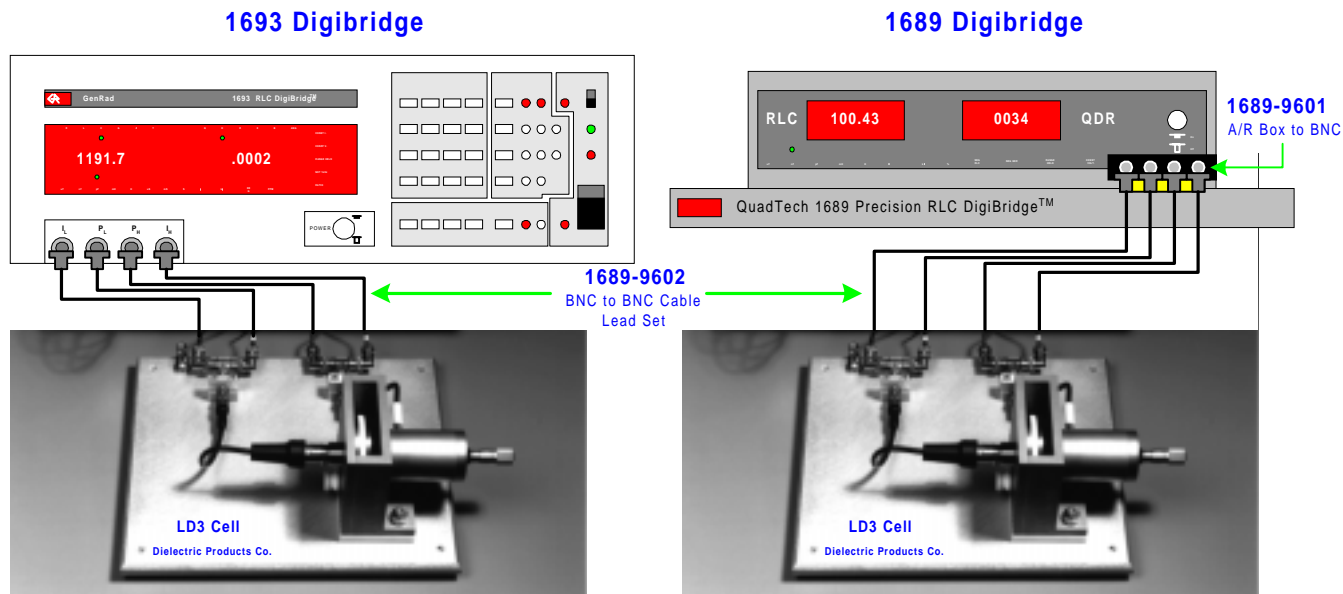


Figure 1: Connection of Digibridge to LD3 Dielectric Cell

The 1693 Digibridge comes standard with the 1689-9602 BNC to BNC 1 meter cable lead set. Connect the 1689-9602 BNC to BNC cable lead set to the pair of BNC tees on the test fixture. The BNC tees are then connected via an 874 adapter to the specific LD3 cell. The 1689 Digibridge is connected to the LD3 test fixture using both the 1689-9601 Axial/Radial to BNC box and the 1689-9602 BNC to BNC cable lead set. Make sure that for either digibridge connection that the P+/I+ connectors go to one BNC tee and the P-/I- connectors go to the other BNC tee. Prior to making measurements, perform an open and short compensation on your test fixture.

Open & Short Compensation

It is very important to perform an OPEN and SHORT circuit zero with the Digibridge before making measurements **and** after any frequency change. Figure 2 illustrates the cable lead position for the Open & Short zero function. The cables should be placed the same distance apart during an open as when they are attached to the test fixture for measurement.

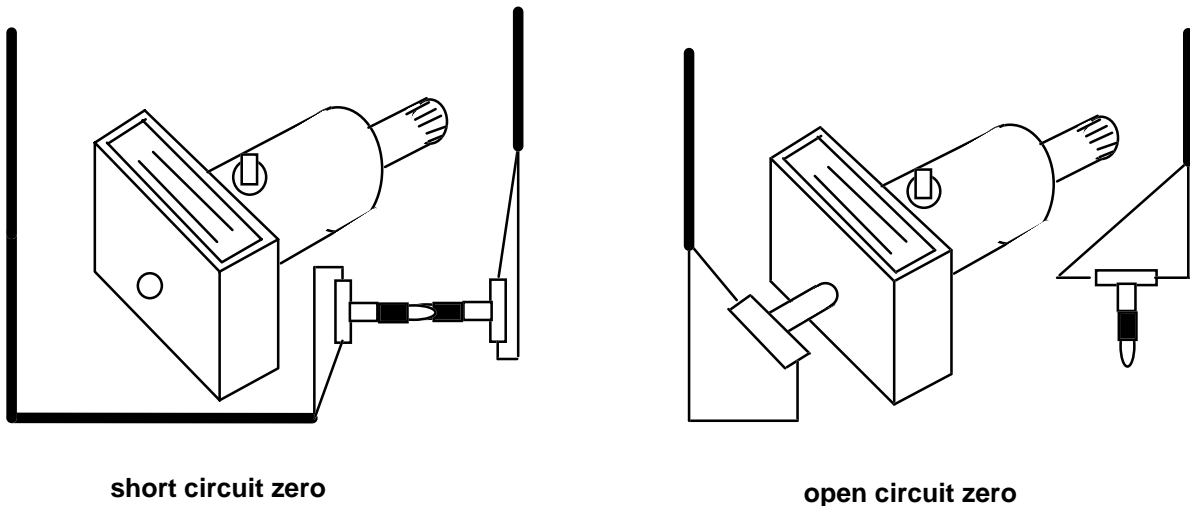


Figure 2: Cable Lead Position for Open & Short Compensation

Available from Dielectric Products Company*:

Interface Cable Set
High Temperature Cell LD-T3
High Temperature Cable Set
Dielectric Cell Top Cover LD-3-TC
Thermocouple & Fitting
Teflon Standard TS-100
Liquid Cell 350
Powder and Paste Cell MC-100
Resistivity Cell RF-100

* Dielectric Products Co., 178 Orchard Street, Watertown, MA 02172 (617) 924-5688

For complete product specifications on the 1600 Series Digibridge instruments or any of QuadTech's products, visit us at <http://www.quadtech.com/products>. Do you have an application specific testing need? Call us at 1-800-253-1230 or email applications at jkramer@quadtech.com and we'll work with you on a custom solution. Put QuadTech to the test because we're committed to solving your testing requirements.

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