



Service Bulletin SB0047

Date: December 2002
From: Capstone Technical Support
Subject: Reconfigure Corner Grounded Delta Configuration

Systems Affected

All C30 Standalone with a Battery Controller Transient (BCT) connected in a corner-grounded Delta configuration.

Description of Problem

A C30 Standalone system operating in a corner-grounded Delta electrical configuration creates high levels of common mode voltage to components within the C30 Battery Controller Transient (BCT). These large voltages can cause excessive heating of board level components - ultimately resulting in premature failure of multiple MicroTurbine components or collateral failure of components in MultiPac-connected systems.

The result of ineffective grounding creates a failure from the high voltage bus to the low voltage bus on the BCT Power Board. Secondary failures of the Digital Power Controller (DPC) Control Board, Personality Modules (PMs), and other low voltage components will also occur.

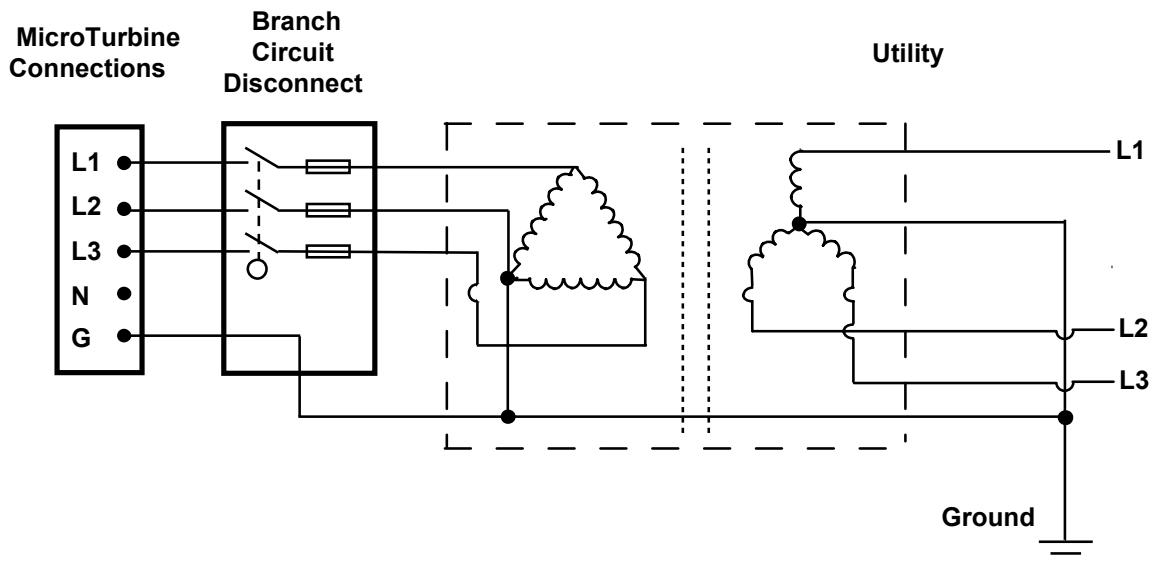


Figure 1. Existing Corner Grounded Delta-to-Wye Configuration

Recommended Solution

To prevent failure, an installation configured corner-grounded delta must be reconfigured to the Wye configuration. Per Capstone approved installation, replace the Delta transfer with a Wye transformer connecting the high voltage wiring as shown in Figure 2. When configured in a Wye configuration, the MicroTurbine will be operating in its designed configuration and comply with UL1741 standard for grid interconnection.

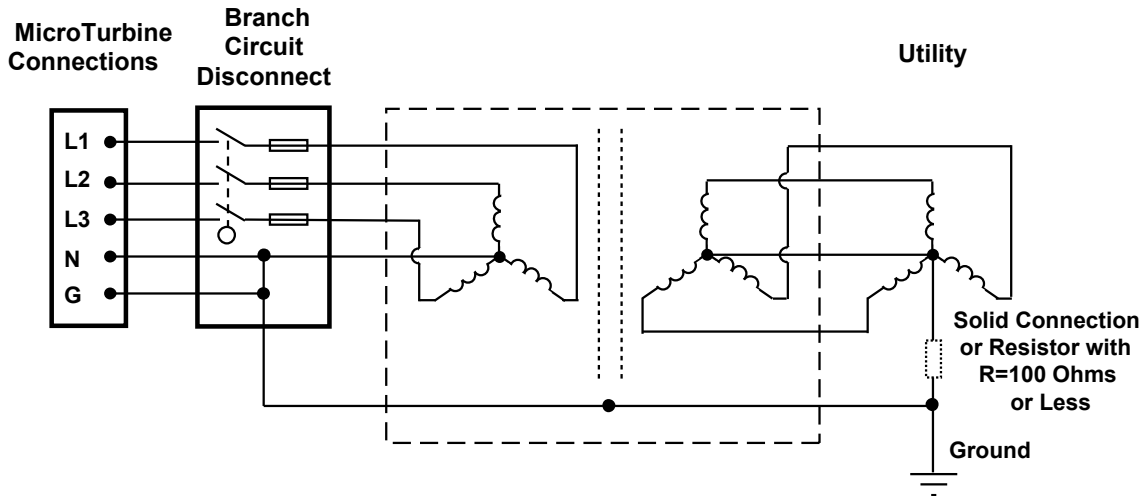


Figure 2. Wye-to-Wye Transformer Configuration

Alternative Solution

An alternative solution to continue uninterrupted operation with a Delta transformer for existing installations only is shown in Figure 3 below. To modify the configuration, remove the corner ground from the Delta winding and connect a neutral-to-ground connection at the branch circuit disconnect. Any external power metering equipment may only be installed on the utility Wye, and not between the MicroTurbine and Delta transformer. As described in the MicroTurbine Electrical Installation (410009) manual, a MicroTurbine installed in a Delta configuration does not comply with UL1741 standard for grid interconnection.

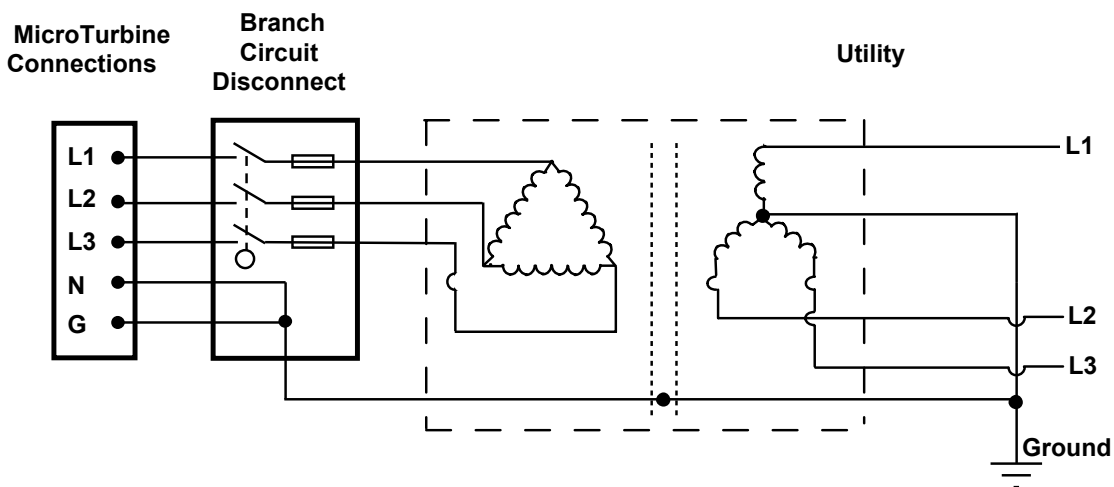


Figure 3. Revised Delta-to-Wye Transformer Configuration
 (does not conform with UL1741)

Responsibility

Capstone is responsible for the identification of failures found in the field and providing instructions for corrective action. Monetary support will not be provided by Capstone for resolution of this problem.

It is the responsibility of Capstone's Authorized Service Providers to inform owners of the Capstone MicroTurbine product of information contained within this service bulletin by close of business December 15, 2002.

After January 10, 2003, Capstone shall not be held responsible for any failures that occur as a result of the MicroTurbine being installed in a corner grounded delta configuration.

Contacting Technical Support

Visit www.microturbine.com for additional information or contact Technical Support:

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