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1. Terms and Definitions

<u>AEI</u>	Avid Extreme Inverter
<u>CDC</u>	Common Drive Controller

2. References & Related Documents

Document Number	Document Title	Notes
DTS-MID0012-REV_09	AEI900L / AEI1000L / AEI1250L / AEI1400L Avid Extreme Liquid Cooled Inverter Module – Data Sheet	

3. Document Purpose and Overview

This document explains the Avid Extreme Inverter impact on GRID COMPLIANCE in MV3000 Converters.

4. Document Contents

Replacing MVDL800 or MVDL1000 modules on either the GRID or GENERATOR power converter (or BOTH) with AEI900L or AEI1000L modules has no measurable impact on any control function. This includes torque and power control for the generator, and current and power-factor control for the grid.

This can be stated, since:

- The function of the MVDL and AEIL units is to switch the inverter IGBT's exactly as commanded by the CDC controller (with or without DSP option).
- The DC link capacitance is identical between the MVDL800 & AEI900L and between the MVDL1000 & AEI1000L modules.
- The CDC controls both the GRID and GENERATOR inverter modules using closed-loop synchronous current control, with identical scan times, gains and scaling, whether using AEI or MVDL modules.

Based on the above, it can be confirmed that replacing MVDL modules with equivalent rating AEI modules in an MV3000 wind-turbine power converter will have no effect of GRID COMPLIANCE.

5. Revision History

Rev.	Date	Author(s)	Changes
00	3/1/2021	Kevin Williams	Document Created within AQS