

Real Time Hardware-in-the-Loop Validation of Common Bus Inverter Low Voltage Drives

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Abstract: The PowerFlex 750-Series products with TotalFORCE control are Architecture Class AC drives, bus supplies, and common bus inverters for the Low Voltage market from 160kW to 6000kW. An Opal-RT Hardware-in-the-Loop (HIL) system was chosen to perform a wide variety of product software and hardware verification and validation during the product design phase and will be used for regression testing over the life of the product. As with any simulation, fidelity and accuracy of the simulation must adequately match the product itself in order to guarantee usefulness and confidence in any testing and verification. This paper demonstrates through simulation and experimental results that the HIL system provides an accurate and flexible test and verification platform for the PowerFlex 755TM Common Bus Inverter.

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