



Master Contract: 203213
Reports: 1878274, 2065918, 2223511,
2308317, 2708530, 2760387,
2779302, 70043714 & 70050250

Date: November 13, 2015

Fronius International GmbH
Guenter Fronius Strasse 1
Wels-Thalheim, 4600
Austria

Subject: Fronius International GmbH Utility Interactive Inverters

All Fronius International GmbH Renewable Energy Utility Interactive Inverter model series listed below are CSA Certified to UL 1741 2nd Edition, January 28, 2010 (RD IEEE 1547/1547.1). Specifically, these products have been tested, are certified to, and meet the requirements for utility interactive operation in accordance with the following standards:

- UL 1741 Standard for Safety for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, Second Edition, Dated January 28, 2010 (Revised January 7, 2015)
- IEEE 1547-2003 Standard for Interconnecting Distributed Resources with Electric Power Systems
- IEEE Std 1547.1-2005 Standard Conformance Test Procedures for Equipment interconnecting Distributed Resources with Electric Power Systems

Model Series:

CSA Report Number	Utility Interactive Inverter Model Series
1878274	Fronius IG Series
2065918	Fronius IG Plus Series
2223511	Fronius CL Series
2308317	Fronius IG Plus V Series / Fronius IG Plus A Series
2708530	Fronius Galvo Series
2760387	Fronius Symo Series & Fronius Symo Lite Series
2779302	Fronius Primo 1P7 Series
70043714	Fronius Primo 1P15 Series
70050250	Fronius Symo 15.0-3 208

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The Standard UL 1741 Edition 2, January 28, 2010 (Revised January 7, 2015), section 46 Utility Compatibility makes reference to IEEE 1547 and IEEE 1547.1; these Reference Documents (RD) are integral to UL 1741.

Below please find a list of the tests conducted for compliance to RD IEEE 1547/1547.1.

IEEE 1547.1	Applicable Requirement/Topic
IEEE 1547.1 Cl. 5.1	Temperature Test
IEEE 1547.1 Cl. 5.1	Output Characteristics Test
	Output Ratings
	DC Input Range
IEEE 1547.1 Cl. 5.1.1	Harmonic Distortion
IEEE 1547.1 Cl. 5.6	DC Injection
IEEE 1547.1 Cl. 5.1, 5.2, 5.3	Utility Voltage and Frequency Variation Test
IEEE 1547.1 Cl. 5.4	Synchronization
IEEE 1547.1 Cl. 5.10	Reconnection to Area EPS
IEEE 1547.1 Cl. 5.9	Open Phase Test
IEEE 1547.1 Cl. 5.7	Anti-Islanding Test
IEEE 1547.1 Cl. 5.1.2.2	Storage Test
IEEE 1547.1 Cl. 5.5.1	Protection from electromagnetic interference (EMI) Requirements using IEEE C37.90.2, one trip function.
IEEE 1547.1 Cl. 5.5.2	Surge Withstand Performance. Requirements using IEEE C37.90.1, performed on external signal and control circuits.
IEEE 1547.1 Cl. 5.5.2	Surge Test Requirements. Surge requirements of IEEE C62.41.2-2002, Location Category B (6kV). Tests performed using ring wave and combination waveforms, both polarities, for common mode and differential mode coupling, 20 pulses (5 each phase angle) for each coupling mode.

Yours truly,



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 Alternative Energy & Sustainability
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