Wels, July 20th 2018

CONFORMITY VDE-AR-N-4105 FRONIUS INVERTERS

Fronius International GmbH

hereby confirms that the Fronius inverters

- **Fronius Primo 3.0-1 – 8.2-1**
- **Fronius Galvo 1.5-1 – 3.1-1**
- **Fronius Symo 3.0-3-M – 20.0-3-M**
- **Fronius Symo Hybrid 3.0-3-S – 5.0-3-S**
- **Fronius Eco 25.0 – 27.0**

meet the requirements according to the German low voltage directive VDE-AR-N 4105 when set to Setup DE1, DE2 or DE3. This is tested and certified by the German test- and certification body VDE and recorded by the corresponding certificates.

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Business Unit Solar Energy
Froniusplatz 1
A-4600 Wels

DI Dr. Martin Heidl
Head of Systems Technology

Wels, July 20th 2018

CONFORMITY VDE-AR-N-4105 INTERFACE-PROTECTION FRONIUS INVERTERS

Fronius International GmbH

hereby confirms that the Fronius inverters

- **Fronius Primo 3.0-1 – 8.2-1**
- **Fronius Galvo 1.5-1 – 3.1-1**
- **Fronius Symo 3.0-3-M – 20.0-3-M**
- **Fronius Symo Hybrid 3.0-3-S – 5.0-3-S**
- **Fronius Eco 25.0 – 27.0**

are equipped with an interface protection meeting the requirements according to the German low voltage directive VDE-AR-N 4105 when set to Setup DE1, DE2 or DE3. This is tested and certified by the German test- and certification body VDE and recorded by the corresponding certificates.

The following setting values and trip times are configured in the Setups mentioned above:

	Setting value	Trip Time
undervoltage protection U<	184 V	100 ms
overvoltage protection U>*	253 V	100 ms
overvoltage protection U>>	264 V	100 ms
underfrequency protection f<	47,5 Hz	100 ms
overfrequency protection f>	51,5 Hz	100 ms

*10-minute running mean value according to DIN EN 50160

Island detection is carried out by means of a frequency shift method.

It is hereby confirmed that the specific requirements of DIN V VDE V 0126-1-1:2006-02 +A1:2011-06 have been tested and recorded by the corresponding certificates.

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