

Wels, July 03rd 2017

## **CONFORMITY VDE-AR-N-4105 NS-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 20.3-3-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.

## **Fronius International GmbH**

Business Unit Solar Energy Froniusplatz 1 A-4600 Wels

Thomas Min

DI Thomas Mühlberger Head of Solution Management