

Wels, April 25th 2019

DECLARATION OF CONFORMITY WITH “TECHNICAL REQUIREMENTS FOR CONNECTION OF POWER GENERATING PLANTS TO THE LOW VOLTAGE GRID (≤ 1 KV); VERSION 1.2 (FEB. 2019)

Manufactures Name	Fronius International GmbH
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Fronius Hereby confirms that the inverters listed in the following table fulfill the requirements of “*Technical requirements for connection of power generating plants to the low voltage grid (≤ 1 kV); Version 1.2*” published by Dansk Energi.

Model designation	Model software version	Nominal active power [kW]	Number of phases
Fronius Primo 3.0-1	0.3.23.0	3	1
Fronius Primo 3.5-1	0.3.23.0	3.5	1
Fronius Primo 3.6-1	0.3.23.0	3.6	1
Fronius Symo 3.0-3-S	0.3.23.0	3.0	3
Fronius Symo 3.7-3-S	0.3.23.0	3.7	3
Fronius Symo 4.5-3-S	0.3.23.0	4.5	3
Fronius Symo 3.0-3-M	0.3.23.0	3.0	3
Fronius Symo 3.7-3-M	0.3.23.0	3.7	3
Fronius Symo 4.5-3-M	0.3.23.0	4.5	3
Fronius Symo 5.0-3-M	0.3.23.0	5.0	3
Fronius Symo 6.0-3-M	0.3.23.0	6.0	3
Fronius Symo 7.0-3-M	0.3.23.0	7.0	3
Fronius Symo 8.2-3-M	0.3.23.0	8.2	3
Fronius Symo 10.0-3-M	0.3.23.0	10.0	3
Fronius Symo 12.5-3-M	0.3.23.0	12.5	3
Fronius Symo 15.0-3-M	0.3.23.0	15.0	3
Fronius Symo 17.5-3-M	0.3.23.0	17.5	3
Fronius Symo 20.0-3-M	0.3.23.0	20.0	3
Fronius Symo Hybrid 3.0-3-S	1.12.1.5	3.0	3
Fronius Symo Hybrid 4.0-3-S	1.12.1.5	4.0	3
Fronius Symo Hybrid 5.0-3-S	1.12.1.5	5.0	3
Fronius Eco 25.0-3-S	0.3.23.0	25.0	3
Fronius Eco 27.0-3-S	0.3.23.0	27.0	3

The following setting are configured in the Setups DKA1 and DKA2:

Parameter	DKA1	DKA2
LFSM-O		
Threshold frequency [Hz]	50.2	50.5
Droop [% of P_n]	5 % (40 % P_n /Hz)	4 % (50 % P_n /Hz)
Intentional Delay [ms]	500	500
Reactive Power		
Q fix		
Enabled/Disabled [On/Off]	On	On
Q setpoint [VAr]	0	0
Cos φ fix		
Enabled/Disabled [On/Off]	Off	Off
Power factor setpoint	1	1
Cos φ (P)		
Enabled/Disabled [On/Off]	Off	Off
Cos φ (P) P1 [% of P_n]	0	0
Cos φ (P) Power factor at P1	1	1
Cos φ (P) P2 [% of P_n]	50	50
Cos φ (P) Power factor at P2	1	1
Cos φ (P) P3 [% of P_n]	100	100
Cos φ (P) Power factor at P3	0.9 inductive	0,9 inductive
Cos φ (P) Lockin [% of U_n]	105	105
Cos φ (P) Lockout [% of U_n]	100	100
Connection and Reconnection		
Softstart Gradient [% of P_n /min]	20	20
Observation time [s]	180	180
U_{min} [% of U_n]	85	85
U_{max} [% of U_n]	110	110
f_{min} [Hz]	47.5	47.5
f_{max} [Hz]	50.2	50.5
System Protection		
f> [s]	0.2	0.2
f> [Hz]	51.5	51.5
f< [s]	0.2	0.2
f< [Hz]	47.5	47.5
U> [s]	60	60
U> [% of U_n]	110	110
U>> [s]	0.2	0.2
U>> [% of U_n]	115	115
U< [s]	50	50
U< [% of U_n]	85	85
Loss of Mains Detection		
U<< [s]	0.2	0.2
U<< [% of U_n]	80	80
RoCoF [s]	0.08	0.08
RoCoF [Hz/s]	2.5	2.5



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A handwritten signature in blue ink, appearing to read "Martin Heidl".

DI Dr. Martin Heidl
Head of Systems Technology