

Wels, October 7th 2014

FLICKER INFORMATION FRONIUS SYMO 3.0 – 20.0

Fronius International GmbH

Flicker Values D_{MAX} , P_{ST} and P_{LT}

Inverter type	D_{MAX}	P_{ST}	P_{LT}
Fronius Symo 3.0-3-S	0,06 %	0,13	0,1
Fronius Symo 3.7-3-S	0,06 %	0,13	0,1
Fronius Symo 4.5-3-S	0,06 %	0,13	0,1
Fronius Symo 3.0-3-M	0,15 %	0,16	0,18
Fronius Symo 3.7-3-M	0,15 %	0,16	0,18
Fronius Symo 4.5-3-M	0,15 %	0,16	0,18
Fronius Symo 5.0-3-M	0,15 %	0,16	0,18
Fronius Symo 6.0-3-M	0,15 %	0,16	0,18
Fronius Symo 7.0-3-M	0,15 %	0,16	0,18
Fronius Symo 8.2-3-M	0,15 %	0,16	0,18
Fronius Symo 10.0-3-M	-0,04%	0,29	0,28
Fronius Symo 12.5-3-M	-0,04%	0,29	0,28
Fronius Symo 15.0-3-M	-0,52%	0,38	0,36
Fronius Symo 17.5-3-M	-0,52%	0,38	0,36
Fronius Symo 20.0-3-M	-0,52%	0,38	0,36

Steady-State voltage change d_c

The maximum relative steady-state voltage change d_c was calculated based on the measured line current and the reference impedance Z_{REF} given in EN 61000-3-3 and EN 61000-3-11. The permissible value for d_c is 3,3%. The results are given in table 1.

Steady state voltage change d_c according to EN 61000-3-11.

Inverter type	Steady state voltage change d_c
Fronius Symo 3.0-3-S	-0,46 %
Fronius Symo 3.7-3-S	-0,46 %
Fronius Symo 4.5-3-S	-0,46 %
Fronius Symo 3.0-3-M	0,02 %
Fronius Symo 3.7-3-M	0,02 %
Fronius Symo 4.5-3-M	0,02 %



SHIFTING THE LIMITS

Fronius Symo 5.0-3-M	0,02 %
Fronius Symo 6.0-3-M	0,02 %
Fronius Symo 7.0-3-M	0,02 %
Fronius Symo 8.2-3-M	0,02 %
Fronius Symo 10.0-3-M	1,67 %
Fronius Symo 12.5-3-M	1,67 %
Fronius Symo 15.0-3-M	2,17 %
Fronius Symo 17.5-3-M	2,17 %
Fronius Symo 20.0-3-M	2,17 %

Fronius International GmbH

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A handwritten signature in black ink on a light blue background, appearing to read "ppa Hackl".

Ing. Prok. Martin Hackl

Head of Solar Energy Division