



Wels, February 2nd 2016

COMPLIANCE PROTECTION PHILOSOPHY FRONIUS SYMO

Fronius International GmbH

hereby confirms that the inverters

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|-------------------------------------|---------------------------------|
| / Fronius Symo 10.0-3 208-240 | / Fronius Symo 15.0-3 480 |
| / Fronius Symo 10.0-3 208-240 Light | / Fronius Symo 15.0-3 480 Light |
| / Fronius Symo 10.0-3 480 | / Fronius Symo 17.5-3 480 |
| / Fronius Symo 10.0-3 480 Light | / Fronius Symo 17.5-3 480 Light |
| / Fronius Symo 12.0-3 208-240 | / Fronius Symo 20.0-3 480 |
| / Fronius Symo 12.0-3 208-240 Light | / Fronius Symo 20.0-3 480 Light |
| / Fronius Symo 12.5-3 480 | / Fronius Symo 22.7-3 480 Light |
| / Fronius Symo 12.5-3 480 Light | / Fronius Symo 24.0-3 480 |
| / Fronius Symo 15.0-3 208 | / Fronius Symo 24.0-3 480 Light |
| / Fronius Symo 15.0-3 208 Light | |

comply with the following Protection Philosophy:

Internal faults:

Fronius inverters are designed and tested according to UL 1741 Standard.

Abnormal system conditions:

At abnormal conditions at the connection to the electric power system the inverter acts in accordance to IEEE 1547 (and is tested according to IEEE 1547.1). This standard explains e.g. response (tripping matrix) to abnormal voltage (chapter 4.2.3, Table 1) and abnormal frequencies (chapter 4.2.4., Table 2).

Islanding:

Requirements for a protection against unintentional islanding are fulfilled and tested according to IEEE 1547 (1547.1).

Synchronization sequence:

All grid parameters are monitored and have to be within the parameters according to IEEE 1547 for 5 min before connection or reconnection. There can never be an inrush current >1 per unit.

Grid tied operation:

All mentioned inverters are not capable of operating or starting operation without a 3-phase voltage supplied at its output terminal from the mains grid. There is a need of an existing 3-phase voltage for operation at any circumstance.

Fronius International GmbH

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