

# Manufacturer declaration

## Integrated Residual Current Protection of Fronius Inverters

### **Fronius International GmbH**

hereby confirms, that the following listed Fronius inverters are equipped with an integrated residual current monitoring unit. This unit will isolate the inverter in case of exceeding dangerous residual current limits during feeding in and so it will protect from arising injury and damage. (See explanation of this function.)

- Fronius Symo GEN24 (Plus)
- Fronius Primo GEN24 (Plus)
- Fronius Tauro
- Fronius Tauro Eco
- Fronius Verto
- Fronius Symo
- Fronius Symo Advanced
- Fronius Eco

These inverters meet the requirements according to IEC 62109-2 and IEC 63112.

## Explanation of this Function

### **Protection from electric shock (sudden jump of residual current)**

If a sudden jump of the residual current is detected, the inverter gets isolated from the grid within the limits stated in table 1:

<b>Sudden jump of residual current</b>	<b>Maximum response time</b>
30 mA	300 ms
60 mA	150 ms
90 mA	40 ms

Table 1: sudden jump limits and response times

## Protection from fire hazard (continuous residual current)

If the total residual current exceeds the limits stated in table 2, the inverter gets isolated from the grid:

Inverter rated power	Maximum cont. residual current	Maximum response time
devices up to 33,3 kW	300 mA	300 ms
devices up to 50 kW	450 mA	300 ms
devices from 99 kW	900 mA	300 ms

Table 2: continuous residual current limits and response times

According to the standards, the limits for the continuous residual current may be adjusted in dependency of the PV array size.

PV array size	Maximum continuous residual current
≤ 30kWp (STC)	≤ 300 mA
> 30kWp (STC)	≤ 10 mA * kWp, max. 5A

Adjustment options can be found in the inverter's operating instruction.

### Fronius International GmbH

Business Unit Solar Energy

Froniusplatz 1

4600 Wels



Philipp Rechberger

Head of System Technology