



Declaration of Conformity

Inverter to grid OMRON KP100L-OD-EU-83

OMRON Corporation hereby certifies that the inverter family for connection to the grid incorporate the following protective functions:

The functions to protect people and installations from dangers can be considered, based on technological development, as an alternative method to the isolation transformer required by **the Royal Decree RD 1663/2000**:

1. Two redundant relays connected in series for secure grid disconnection
2. Leakage (residual) current protection
 - (1) Bigger than 300mA will lead to a disconnection within 0.3s.
 - (2) Sudden raising current 30mA will lead to a disconnection within 0.3s.
 - (3) Sudden raising current 60mA will lead to a disconnection within 0.15s.
 - (4) Sudden raising current 150mA will lead to a disconnection within 0.04s.
3. Protection against DC injection in the AC side
(please refer to the note below *)

Some other protective functions complying with **the Royal Decree RD 1663/2000**:

- Anti-islanding operation
- Maximum and minimum frequency protection (51 and 49 Hz, respectively)
- Maximum and minimum voltage protection (1,1 and 0,85 Um, respectively)
- The automatic re-connection, after 180 seconds, of the system to the low voltage grid once the voltage and/or frequency are within the rating values
- Temperature sensor for protecting the inverter against the rise of temperature
- The software and the protective functions are not accessible and/or changeable to the user

Based on the above mentioned sentences, our inverters comply with **the Royal Decree RD 1663/2000** of September 29th 2000.

* The RD 1663/2000 requires the existence of an isolation transformer between the photovoltaic installation and the low voltage grid. The protective functions (to protect people and installations from electrical dangers) integrated in the inverter (2 serial connected relays, leakage –residual- current protection, protection against DC injection in the AC side) can be considered as an alternative method to the isolation transformer although it does not represent a galvanic isolation. These inverters are designed based on the severe German norms VDEW VDE0126-1-1(2006).

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