Declaration of compliance to NRS097-2-1:2010 - Oasis II inverter range

Manufacturer:	MLT Inverters Pty. Ltd. 103 Garfield Road, Kenilworth, Cape Town, 7708 South Africa +27 21 201 1335
Testing house:	MLT Inverters Pty. Ltd.
Third-party witness:	Dr Johan Beukes, Pr.Eng. number 20070124
Type reference:	Oasis II 448 inverter
Type group:	Oasis II inverter range (324, 436, 448, 636 and 648)
Maximum export capacity:	6000VA
Versions tested:	2.04 (software) 2.0 (hardware)
Date of test:	24 February 2015

MLT Inverters declares that its Oasis II range of inverters meet the type verification specification listed in NRS097-2-1:2010. The Oasis II range of inverters falls into the category of UPS which could have embedded generation, but cannot operate in parallel with the utility network. This is mentioned in NRS097-2-1:2010 as follows:

"4.4.1.2 A UPS that cannot operate in parallel with the utility network (i.e. is unable to export energy to the utility side) shall comply with 7.12.2.5 of SANS 10142-1:2009 with regard to a change-over switch between the main supply and the backup supply."

SANS 10142-1:2009 says the following:

"7.12.2.5 Where an alternative supply is provided to an installation or part of an installation as a switched alternative to the main supply, the change-over switching device shall disconnect the main supply before the alternative supply is switched in. The change-over switching device shall be interlocked in such a way that the main supply and the alternative supply cannot be connected to the installation or part of the installation at the same time."

In order to comply with the above, the Oasis II range of inverters always stops inverting before connecting the main supply to the load and only starts inverting again after disconnecting the main supply from the load. The internal switching device provides feedback on its position to the inverters controller so that if the switching device fails to operate or malfunctions, the inverter will not run. The testing of this has been witnessed by a third party, as described in the test report. Since the same switching device, feedback mechanism, controller and software are used in the entire range of Oasis II inverters this declaration of compliance applies to all inverters in this range.

Dr Bernard Bekker
CEO MLT Inverters

Dr Johan Beukes
Third party witness

WITNESSED TEST REPORT

The following test procedure was performed on an Oasis 448 inverter to verify that the Oasis range of inverters complies to section 4.4.1.2 in NRS097-2-1:2010.

1. The Oasis 448 was connected to the grid, so that the grid was supplying the load and the batteries were being charged.
2. To verify normal operation, the grid supply was disconnected. The internal switching device first opened, after which the inverter within the Oasis began supplying AC power to the load.
3. The Oasis was re-connected to the grid, so that the grid was supplying the load and the batteries were being charged. A faulty switching device was simulated by mechanically holding the contactor in the closed position. The grid supply was then disconnected. The internal switching device could not open, and the inverter within the Oasis did not start. An "AC Connection Error" fault message was displayed on the Oasis HMI.
4. The Oasis was reset so that it was running off the batteries, supplying the load. The internal contactor was then forced closed. The inverter within the Oasis stopped switching immediately and an "AC Connection Error" fault message was displayed on the Oasis HMI.

Tests verified as accurate: _____

Dr. Johan Beukes