

Report Number: PL1591-2



Test Report

DATE ISSUED: 17 January 2018 *

DEVICE TESTED: AusProof 1.1 kV 60 A Plug and Receptacle
Sample identification numbers:
Job # 17/0069, S.ID. 1708A7 and S. ID. 1708A8

CLIENT'S NAME: AusProof Pty Ltd
6 Shona Avenue
Gladstone
Queensland 4680
Australia

CLIENT'S REFERENCE: Email: Frank Lantry

TEST SPECIFICATION: Clauses 3.3.10 and 3.3.11 of AS/NZS 1299:2009
incorporating amendment 1.

DATE OF TEST COMPLETION: 11 December 2017

SUMMARY OF RESULTS: The sample device tested complied with the
requirements of the above test specification.



IANZ
ACCREDITED LABORATORY

All tests reported herein
have been performed in
accordance with the
Laboratory's terms of
registration Laboratory
Registration Number: 42

IANZ Signatory: K Manson



Checked By: G I Dix



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*This report replaces previous reports numbered PL1591. Power factor transcription error corrected from 0.3 pf to 0.5 pf for the test to clause 3.3.10, and 3.3.11. Peak currents included

Testing notes

The following personnel were present during testing:

Client Representative(s): Frank Lantry
Laboratory staff: K Manson and G I Dix

Tests Performed

Short-circuit (through-fault) test (see Clause 3.3.10 AS/NZS 1299)
Earth-circuit (through-fault) test (see Clause 3.3.11 AS/NZS 1299)

Test Laboratory Atmospheric Conditions

Temperature 25 (\pm) $^{\circ}$ C.
Pressure 1006 (\pm 5) mbar
(Approximate height above local sea level is 30 m).

Laboratory Equipment

Tektronix TDS3034 Four Channel digitizing oscilloscope
11 kV/440 V short circuit transformer
20,000/5 CT
4000/5 CT
Laboratory constructed point on wave switch
Inductors and Resistors
Fluke 287 DVM
Fluke 87 III DVM
Laboratory manufactured current viewing resistor; and
Miscellaneous laboratory equipment including: assman hygrometer, barometer, and a mercury-in-glass thermometer.

Measurement Uncertainties

Refer to the Laboratory accreditation details at www.ianz.govt.nz for information on measurement uncertainty.

Cable terminations and test enclosure

The sample device assembly tested was terminated with Client supplied cables, type 10 mm² type 241.1 mining cable.

Although these are required for testing, they are not considered to be part of the sample device tested.

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AS/NZS 1299 tests

Clause 3.3.10 Short-circuit (through-fault) test

Each phase was subjected to the following current waveform by use of a step down transformer and inductors from an 11 kV supply and a phase controlled on switch and time controlled off circuit breaker:

0.20 s, 3.2 kA, 5.6 kAp (first peak), $n=1.75$, power factor = 0.5, 50 Hz, applied 2 times with 10 minutes between.

(the required current waveform is 0.2 s, 3.2 kA, $n=1.7$, $pf=0.5$)

After two applications, there was no visible disturbance, pitting or burning.

The test sample complied with the requirements of the test specification.

Result

Complies

Clause 3.3.11 Earth-circuit (through-fault) test

The earth continuity circuit was subjected to the following current waveform by use of a step down transformer and inductors from an 11kV supply and a phase controlled on switch and time controlled off circuit breaker:

0.20 s, 1.1 kA, 1.9 kAp (first peak), $n=1.73$, power factor =0.5, 50 Hz, applied 2 times with 10 minutes between.

(the required current waveform is 0.2 s, 1.0 kA, $n=1.7$, $pf=0.5$)

The earth continuity was measured on test completion.

After 2 applications the measured continuity was 0.0007 Ω which is less than the allowed maximum of <0.01 Ω .

The test sample complied with the requirements of the test specification.

Result

Complies

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Photographs:



Test sample assembly

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After Clause 3.3.10 test



After clause 3.3.11 test