



AUSTRALIAN NATIONAL TESTING
LABORATORIES PTY. LTD.

Traffic Control Equipment Power Measurements

Test Report # 4699.11

Customer Name: Micro Connect – Craig Price

Address: 22 Gardenia Place,
Forest Glenn,
QLD, 4556

Date: 22.11.2017

A handwritten signature in black ink, appearing to read 'Jeff Profke', is shown within a light gray rectangular box.

Report Written By:
Jeff Profke

A handwritten signature in black ink, appearing to read 'Richard Unwin', is shown in a cursive style.

APPROVED SIGNATORY
Richard Unwin

The Tests, calibrations or measurements covered by this document have been performed in accordance with Nata requirements which include the requirements of ISO/IEC 17025 and are traceable to Australian national standards of measurement. This document shall not be reproduced except in full. Although to the best knowledge of Australian National Testing Laboratories the results are correct, no legal responsibility is accepted. Results reported herein relate only to the actual sample/samples tested.



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1 Introduction

Australian National Testing Laboratory (ANTL) was commissioned to carry out testing on traffic control equipment to determine the power usage in accordance with the NEM Load Table (Unmetered Loads) requirements.



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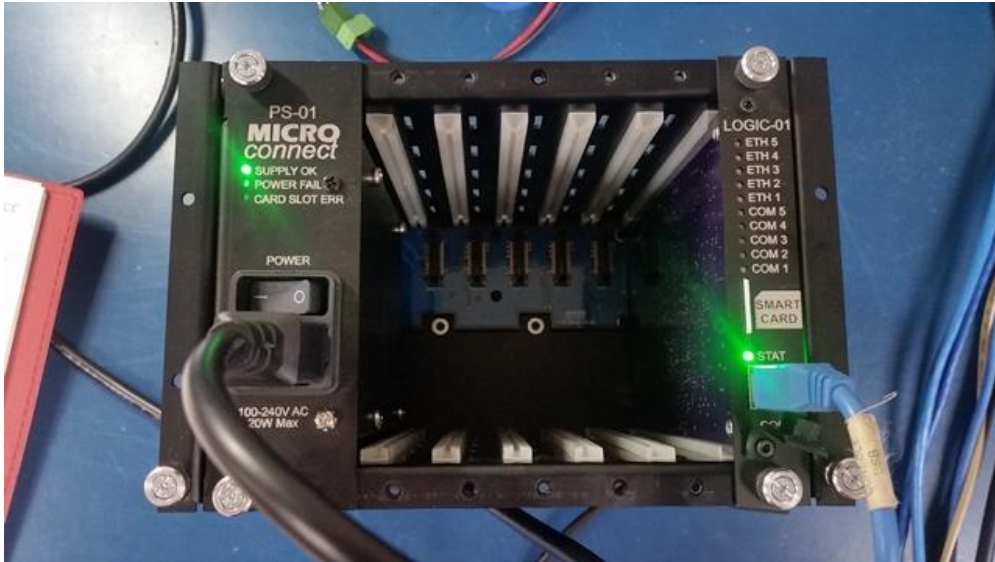
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2 Photographs of Tested Equipment

2.1.1 Item 1- Main Rack Unit – Base configuration comprises

PS-01 and Logic -01 fitted into rack.



2.1.2 Item 2 – Additional items are fitted to the base configuration





3 Instrumentation

The table below shows the instrumentation used to carry out the test.

Parameter	Instrument Make	ANTL Instrument #
Ambient Air Temperature and Humidity	Datataker DT80	ER74
Power	EDMI MK6 class 0.2	ER051
Power Factor	EDMI MK6 class 0.2	ER051
Current	EDMI MK6 class 0.2	ER051
Voltage	Tektronic 6.5 Digit DMM	ER084
Resistance	Agilent U1242A	ER 082
Wind Speed	Testo 510	ER 095

The units under test were preconditioned for a period of 1hrs before power measurements were taken, each unit was connected to power and a simulated data connection was used to ensure that the system was under load, for the units with additional communication links these were inserted into the base unit to provide individual measurements of each additional card, in deployed use a combination of cards would be possible with each card adding to the power use.

The laboratory temp was 24.5 deg C and 65% relative humidity during the tests.



4 Test Results

4.1 Power Measurements- AS/NZS 60335.1 clause 10

Model	Volts	Current (A)	Power Factor	Watts
PS-01 and Logic 01	250	0.0110	0.889	3.1
TSC-01	250	0.0014	0.889	0.4
BT-01	250	0.0028	0.889	0.8
ETH4-01	250	0.0046	0.889	1.3
SFP2	250	0.0068	0.889	1.9
SPAT	250	0.0092	0.889	2.6
EDA	250	0.0092	0.889	2.6
XDSL-01	250	0.0103	0.889	2.9
RE-HL	250	0.0057	0.889	1.6
4G-01	250	0.0071	0.889	2
SFP-G	250	0.0021	0.889	0.6
SFP-G with GIG SFP	250	0.0057	0.889	1.6
SFP with NBN	250	0.0124	0.889	3.5

Note: when calculating power use of a system, the base module (PS-01 and Logic 01) may be used with additional cards in the rack slot positions, thus total energy use will = Base Module + Power use of each extra card used.



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5 Uncertainty In Measurement

The uncertainty of the measurement has been calculated in accordance with the principals in the ISO Guide to the Expressions of Uncertainty in Measurement.

For temperature measurements the uncertainty in the performance result is +/- 0.5deg C @ 95% confidence (coverage factor = 2).

For power measurements the uncertainty in the performance result is +/- 0.2% @ 95% confidence (coverage factor = 2).

For power factor measurements the uncertainty in the performance result is +/- 0.2% @ 95% confidence (coverage factor = 2).

For voltage measurements the uncertainty in the performance result is +/- 0.5% @ 95% confidence (coverage factor = 2).



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