



# Test Manual

## Links to Other Documents

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<http://www.rmspl.com.au/spdl/1b230.htm>

## Test Certification

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Made in Australia by Relay Monitoring Systems Pty Ltd.

This is to certify that the equipment detailed below has been manufactured, inspected & tested in accordance with a Quality System which complies with the requirements of AS/NZS ISO9001-2008.

Order Number	Firmware Loaded	Serial Number

Only valid when the "Passed" box has been signed off by Production Personnel.

## Version Control

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Issue	Date	Summary of changes
A	23/06/2003	Initial issue.

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ARF	DG	DG	

**1.0 HARDWARE SPECIFICATIONS – 1B230K82 [A][A][A][B][B][A][B][B]**

<b>1.1</b>	<b>Auxiliary Supply</b> Auxiliary Supply Voltage	[A]	20 - 70 VDC
<b>1.2</b>	<b>Counter</b>	[A]	Not fitted
<b>1.3</b>	<b>Series Initiate Input</b>	[A]	Not fitted
<b>1.4</b>	<b>Status Input 4</b> CB Auxiliary Switch	[B]	24 – 80 V AC/DC
<b>1.5</b>	<b>Status Input 5</b> Drive To Lockout + Reset Lockout	[B]	24 – 80 V AC/DC
<b>1.6</b>	<b>Status Input 6</b> Line Volt Monitor	[A]	Not fitted
<b>1.7</b>	<b>Status Input 7</b> Spring Charge + Safe To Close	[B]	24 – 80 V AC/DC
<b>1.8</b>	<b>Status Input 8</b> Main Protection Shunt	[B]	24 – 80 V AC/DC
<b>1.9</b>	<b>Non-Standard Features</b> Hardware specifications not described in Data Sheet.		None

**2.0 TEST PROCEDURE****2.1 Test Equipment Required**

High Voltage Test Equipment.

Calibrated Test Set

A PC with Windows 98 or later and at least one COM port.

Atmel 'AVR Studio' software.

The correct serial cable.

**2.2 Associated Documents**

151-230-182	Wiring Diagram
151-230-800	Work Instruction
660-341-202	Primary PCB circuit diagram
660-342-201	Secondary PCB circuit diagram

**2.3 High Voltage Testing**

- a) Apply 2KV RMS between the terminal groups as listed in A & B below for 1 minute.
- b) Apply three 5KV 1/50usec pulses of each polarity as listed in A & B below.

GROUP A	GROUP B
1,3,5,7,9,11,12,13,15,17,19,20,21,22	23,25,27,30,32,34,36,38,40,42,44,46,48,50,52,54
1,3,5,7,9,11,12,23,25,27,30,32,34,36,38	13,15,17,19,20,21,22,40,42,44,46,48,50,52,54
1,3,9,11,12,17,19,20,23,25,27,34,36,38,46, 48,50	5,7,13,15,21,22,30,32,40,42,44,52,54
1,3,13,15,23,25,27,40,42,44	9,11,12,21,22,34,36,38,52,54
All	Frame

**2.4 Hardware Verification**

Verify hardware as to 151-230-800

a) Verify Switch Mode Power Supply

SMPS verified to PCI 146.

VERIFY

b) Verify I/O functions.

All relay outputs.

VERIFY

All isolated inputs.

VERIFY

c) Verify HMI.

Potentiometers

VERIFY

LEDs

VERIFY

**2.8 General**

a) Check workmanship to 903-000-026

VERIFY

PASSED BY	DATE

CONNECTION DIAGRAM

