



The Leader in Safety Testing

Company : Joint Venture Electronic
Services (Pty) Ltd

Sample : Diamond Parking Guidance System

Specification: IEC 60950-1:2005 + A1:2010
SANS 60950-1:2010

Report Number: WCT 13/0646

Date of Issue: 2013-06-20

The sample complied with all the requirements of the above- mentioned specification.



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Test Report

IEC 60950-1:2005

Information technology equipment - Safety requirements

TEST REPORT #: WCT 13/0646

CLIENT:

*Joint Ventures Electronic Services (Pty) Ltd
PO Box 1502
Highlands North
2037*

Attention: Mr Danny Marom

*Order #: Application Form
Date of Order: 13 June 2013*

SAMPLE:

Parking Guidance System

TEST SPECIFICATION:

*IEC 60950-1:2005 + A1:2012/
SANS 60950-1:2010*

SUMMARY OF RESULTS:

Complied

DATED STARTED:

2013-06-13

DATED COMPLETED:

2013-06-20

DATE OF ISSUE:

2013-06-20

TESTED:

GH Holtzhausen (Technical Signatory)

APPROVED:

LP Kuisis (Jnr) (Technical Signatory)

NOTE:

"The South African National Accreditation System (SANAS) is a member of the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). This Arrangement allows for the mutual recognition of technical test and calibration data by the member accreditation bodies worldwide. For more information on the Arrangement please consult www.ilac.org"

SABS IEC 60950-1-2005v2

1. DESCRIPTION OF SAMPLE

MANUFACTURER:	<i>Joint Ventures Electronic Services (Pty) Ltd</i>
MODEL:	<i>Diamond Parking Guidance System</i>
SERIAL #:	-
COUNTRY OF ORIGIN:	<i>Republic of South Africa</i>
RATED INPUT:	<i>Class I Power Supply - 1,0 A/ 3 Digit Display - 0,5 A Max</i>
RATED VOLTAGE:	<i>180 - 240 V 50 - 60 Hz</i>

2. ABBREVIATIONS:

TEST DOES NOT APPLY:	N/A
SAMPLE MEET REQUIREMENTS(COMPLY):	C
SAMPLE DOES NOT MEET REQUIREMENTS(FAIL):	F
NOT TESTED:	N/T

3. SYMBOLS

Tests are not included in the SANAS Accreditation Schedule for our laboratory.

- Results from sub-contracted tests and other accredited test laboratories.
- Opinions and interpretations expressed herein are outside the scope of SANAS accreditation

4. GENERAL REMARKS

- * Only a brief description of the requirements, measurements, etc. is given to indicate the nature of these. Consult the specification for details.
- * The sections and subsections refer to in this report, are numbered as the test specification.
- * This document shall not be reproduced in full unless approved by T.E.S.T. Africa.
- * For sample identification, please see Appendix 1.

5. TEST CONDITIONS

Climatic conditions that prevailed during the tests:

	Maximum	Minimum	Limits
Ambient temperature	25 °C	20 °C	25 °C ± 10 °C
Relative humidity	56 %	35 %	Below 75 % RH

6. CONDITION OF SAMPLE(S)

New sample in working condition.

NOTE:

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Particulars: test item vs. test requirements

Equipment mobility	movable / hand-held / transportable /stationary / direct plug-in / <u>for building-in</u>
Connection to mains	<u>pluggable equipment: type A/ type B</u> permanent connection/ detachable power supply cord/ non-detachable power supply cord/ not directly connected to mains
Operating condition	<u>continuous</u> / short-time / intermittent
Mains supply tolerance (%)	162 V to 254 Vac
Tested for IT power systems	Yes / <u>No</u>
IT testing, phase-phase voltage (V):	-
Overvoltage Category	<u>OVC I/ OVC II/ OVC III/ OVC IV/ other :</u>
Pollution Degree	<u>PD 1/ PD 2/ PD 3</u>
Class of equipment	<u>Class I / Class II / Class III</u>
Mass of equipment (kg)	10,4 kg
Protection against ingress of water	Ordinary

General product information:**The system consisted of the following components:**

- 3 Digit Display with Mean Well Power Supply
- Power Supply with Lenovo Power Supply
- Sensor Array consisting of
 - Parking Guidance System - Sensor T
 - PGS Indicator
 - Parking Guidance System - Sensor/ Indicator
 - Parking Guidance System - Zone Buzzer

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1	GENERAL		C
1.5	Components		C
1.5.1	General		C
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	C
1.5.2	Evaluation and testing of components		C
1.5.3	Thermal controls		N/A
1.5.4	Transformers	PSU Certified	N/A
1.5.5	Interconnecting cables	Low Voltage	C
1.5.6	Capacitors in primary circuits	PSU Certified	C
1.5.7	Double insulation or reinforced insulation bridged by components	PSU Certified	C
1.5.7.1	General		C
1.5.7.2	Bridging capacitors		C
1.5.7.3	Bridging resistors		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems	Not for IT Power Systems	N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		C
1.6.1	AC power distribution systems		C
1.6.2	Input current	(see appended table 1.6.2)	C
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		C

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.7	Marking and instructions		C
1.7.1	Power rating and identification markings		C
	Rated voltage(s) or voltage range(s) (V)	180 - 240 Vac	C
	Symbol for nature of supply, for d.c. only	Output - Clearly Marked	C
	Rated frequency or rated frequency range (Hz) :	50 - 60	C
	Rated current (mA or A)	1,0/ 0,5 A Max	C
	Manufacturer's name or trademark or identification mark	Joint Ventures Electronic Services	C
	Type/model or type reference	Diamond	C
	Symbol for Class II equipment only	Class I	N/A
	Other symbols		N/A
	Certification marks		N/A
1.7.2	Safety instructions	Provided	C
1.7.2.1	General		C
1.7.2.2	Disconnect devices	Part of Equipment	N/A
1.7.2.3	Overcurrent protective device	PSU Certified	C
1.7.2.4	IT power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles	Continuous Operation	N/A
1.7.4	Supply voltage adjustment	Auto Ranging	N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	PSU Certified	C
1.7.6	Fuse identification	Clearly Marked	C
1.7.7	Wiring terminals	Clearly Marked	C
1.7.7.1	Protective earthing and bonding terminals		C
1.7.7.2	Terminal for a.c. mains supply conductors	Mean Well PSU	C
1.7.7.3	Terminals for d.c. mains supply conductors		C
1.7.8	Controls and indicators		C
1.7.8.1	Identifications, location and marking		C
1.7.8.2	Colours.....:		C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.7.8.3	Symbols according to IEC 60417		N/A
1.7.8.4	Markings using figures	Polarity	C
1.7.9	Isolation of multiple power sources	Single Power Source	N/A
1.7.10	Thermostats and other regulating devices	None	N/A
1.7.11	Durability	Label	C
1.7.12	Removable parts	Not on Removable Parts	C
1.7.13	Replaceable batteries		N/A
	Language	No Batteries	—
1.7.14	Equipment for restricted access locations	Not for RAL	N/A

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2	PROTECTION FROM HAZARDS		C
2.1	Protection from electric shock and energy hazards		C
2.1.1	Protection in operator access areas		C
2.1.1.1	Access to energized parts		C
	Test by inspection		C
	Test with test finger (Figure 2A).....		C
	Test with test pin (Figure 2B).....		C
	Test with test probe (Figure 2C).....		N/A
2.1.1.2	Battery compartments	No TNV	N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V); minimum distance (mm) through insulation	(see appended table 2.10.5)	—
2.1.1.4	Access to hazardous voltage circuit wiring	Not Operator Accessible	C
2.1.1.5	Energy hazards	(see appended table 2.1.1.5 c1 & 2.1.1.5 c2)	N/A
2.1.1.6	Manual controls		C
2.1.1.7	Discharge of capacitors in equipment		C
	Time-constant (s); measured voltage (V)	PSU Certified	—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply:		N/A
	b) Internal battery connected to the d.c. mains supply		N/A
2.1.1.9	Audio amplifiers		N/A
2.1.2	Protection in service access areas	No Service Areas	N/A
2.1.3	Protection in restricted access locations	Not for RAL	N/A
2.2	SELV circuits		C
2.2.1	General requirements	(see appended table 2.2)	C
2.2.2	Voltages under normal conditions (V)		C
2.2.3	Voltages under fault conditions (V)		C
2.2.4	Connection of SELV circuits to other circuits	All SELV Connection	C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.3	TNV circuits		N/A
2.3.1	Limits	No TNV	N/A
	Type of TNV circuits		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		N/A
2.4.1	General requirements	No LCC	N/A
2.4.2	Limit values	(see appended table 2.4.2)	N/A
	Frequency (Hz)		—
	Measured current (mA)		—
	Measured voltage (V)		—
	Measured capacitance (: F)		—
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	Limited power sources		N/A
	Inherently limited output	No LPS	N/A
	Impedance limited output		N/A
	Overcurrent protective device limited output		N/A
	Regulating network limited output under normal operating and single fault condition		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition	(see appended table 2.5)	N/A
	Output voltage (V), output current (A), apparent power (VA)		—
	Current rating of overcurrent protective device (A)		—

2.6	Provisions for earthing and bonding		C
2.6.1	Protective earthing	PSU Certified	C
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		C
2.6.3.1	General		C
2.6.3.2	Size of protective earthing conductors		C
	Rated current (A), cross-sectional area (mm ²), AWG	1,0 A; 0,75 mm ²	—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.4	Resistance (S) of earthing conductors and their terminations, test current (A)	(see appended table 2.6.3.4)	C
2.6.3.5	Colour of insulation	Green/ Yellow	C
2.6.4	Terminals		C
2.6.4.1	General		C
2.6.4.2	Protective earthing and bonding terminals		C
	Rated current (A), type of nominal thread diameter (mm)	1,0 A; 3,5 mm	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		C
2.6.5.1	Interconnection of equipment		C
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		C
2.6.5.7	Screws for protective bonding		C
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	Overcurrent and earth fault protection in primary circuits		C
2.7.1	Basic requirements	PSU Certified	C
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		C
2.7.3	Short-circuit backup protection		C
2.7.4	Number of location of protective devices		C
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles	No Interlocks	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits(mm).....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test	(see appended table 5.2	N/A
2.8.8	Mechanical actuators		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.9	Electrical insulation		C
2.9.1	Properties of insulating materials		C
2.9.2	Humidity conditioning		C
	Humidity (%)	91 - 95	—
	Temperature (°C)	30	—
2.9.3	Grade of insulation	Basic	C
2.9.4	Separation from hazardous voltages		C
	Method(s) used	Method 3)	C

2.10	Clearances, creepage distances and distances through insulation		C
2.10.1	General		C
2.10.1.1	Frequency	50 - 60	C
2.10.1.2	Pollution degrees	II	C
2.10.1.3	Reduced values for functional insulation		N/A
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation in circuits generating starting pulses		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	(see appended table 2.10.2)	C
2.10.2.1	General		C
2.10.2.2	RMS working voltage	PSU Certified	C
2.10.2.3	Peak working voltage	PSU Certified	C
2.10.3	Clearances		C
2.10.3.1	General		C
2.10.3.2	Mains transient voltages	(see appended table 2.10.3 and 2.10.4)	C
	a) AC mains supply	2 500	C
	b) Earthed d.c. mains supplies		N/A
	c) Unearthed d.c. mains supplies		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuit	(see appended table 2.10.3 and 2.10.4)	C
2.10.3.4	Clearances in secondary circuits	(see appended table 2.10.3 and 2.10.4)	C
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply		C
2.10.3.7	Transients form d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems	No TNV	N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	C
2.10.4.1	General		C
2.10.4.2	Material group and comparative tracking index	IIIb	C
	CTI tests		—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	C
2.10.5	Solid insulation		C
2.10.5.1	General		C
2.10.5.2	Distance through insulation		C
2.10.5.3	Insulation compound as solid insulation		C
2.10.5.4	Semiconductor devices		N/A
2.10.5.5	Cemented joints	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.5.6	Thin sheet material - General		C
2.10.5.7	Separable thin sheet material	PSU Certified	C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Number of layers (pcs)		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material - standard test procedure		C
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.10	Thin sheet material - alternative test procedure		N/A
	Electric strength	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage		N/A
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation ..		N/A
	c) Compliance with Annex U		N/A
	Two wires in contact inside wound component; angle between 45° and 90°		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength	(see appended table 2.10.5)	—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage		N/A
	a) Basic insulation not under stress		N/A
	b) Supplementary, reinforced insulation		N/A
2.10.6	Construction printed boards		C
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	C
2.10.6.2	Coated printed boards	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.6.3	Insulation between conductors on the same inner surface of printed board	(see appended table 2.10.3 and 2.10.4)	N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
2.10.6.4	Insulation between conductors on different layers of a printed board		C
	Distance through insulation	(see appended table 2.10.5)	—
	Number of insulations layers (pcs)	Double Sided	C
2.10.7	Component external terminations	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength	(see appended table 5.2)	—
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulation compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts	PSU Certified	C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
3	WIRING, CONNECTIONS AND SUPPLY		C
3.1	General		C
3.1.1	Current rating and overcurrent protection	Adequate	C
3.1.2	Protection against mechanical damage		C
3.1.3	Securing of internal wiring	Well Secured	C
3.1.4	Insulation of conductors	(see appended table 5.2)	C
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure	Mean Well PSU	C
3.1.7	Insulating materials in electrical connections		C
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		C
	10 N pull test		C
3.1.10	Sleeving on wiring		N/A

3.2	Connection to an a.c. mains supply or a d.c. mains supply		C
3.2.1	Means of connection	Mains Plug	C
3.2.1.1	Connection to an a.c. mains supply		C
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		C
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter (mm) of cable and conduits		—
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		C
3.2.5.1	AC power supply cords		C
	Type	H03VV-F	—
	Rated current (A), cross-sectional area (mm ²), AWG	1,0 A; 0,75 mm ²	—
3.2.5.2	DC power supply cords		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
3.2.6	Cord anchorage and strain relief		C
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
3.2.7	Protection against mechanical damage		C
3.2.8	Cord guards		N/A
	D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		C

3.3	Wiring terminals for connection of external conductors		C
3.3.1	Wiring terminals	Mean Well PSU	C
3.3.2	Connection of non-detachable power supply cords		C
3.3.3	Screw terminals		C
3.3.4	Conductor sizes to be connected		C
	Rated current (A), cord/cable type, cross-sectional area (mm ²)	1,0 A; 0,75 mm ²	—
3.3.5	Wiring terminal sizes		C
	Rated current (A), type and nominal thread diameter (mm)	1,0 A; 3,9 mm	—
3.3.6	Wiring terminals design		C
3.3.7	Grouping of wiring terminals		C
3.3.8	Stranded wire		C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

3.4	Disconnection from the mains supply		C
3.4.1	General requirements		C
3.4.2	Disconnect devices		C
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Single-phase equipment and d.c. equipment		C
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		C
3.4.10	Interconnected equipment		C
3.4.11	Multiple power sources		C

3.5	Interconnection of equipment		C
3.5.1	General requirements		C
3.5.2	Types of interconnection circuits	SELV	C
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		N/A

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4	PHYSICAL REQUIREMENTS		C
4.1	Stability		C
	Angle of 10/		N/A
	Test: force (N)		N/A

4.2	Mechanical strength		C
4.2.1	General		C
4.2.2	Steady force test, 10 N		C
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		C
4.2.5	Impact test		C
	Fall test		C
	Swing test		C
4.2.6	Drop test	For Built-in	N/A
4.2.7	Stress relief test	70 ° C 7 hrs	C
4.2.8	Cathode ray tubes	No CRT	N/A
	Picture tube separately certified	(see separate test report or attached certificate)	N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ...:	50	C

4.3	Design and construction		C
4.3.1	Edges and corners	Well Rounded	C
4.3.2	Handles and manual controls; force (N)		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		C
4.3.5	Connection of plugs and sockets		C
4.3.6	Direct plug-in equipment		N/A
	Dimensions (mm) of mains plug for direct plug-in		N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm)		N/A

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4.3.7	Heating elements in earthed equipment	No Heating Elements	N/A
4.3.8	Batteries	(see appended table 4.3.8)	N/A
	Overcharging of a rechargeable battery	No Batteries	N/A
	Unintentional charging of a non-rechargeable battery		N/A
	Reverse charging of a rechargeable battery		N/A
	Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	No Oil or Grease	N/A
4.3.10	Dust, powders, liquids and gases	No Dust, Powders, Liquids or Gases Produced	N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids	None	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation; type of radiation	No Hazardous Radiation Produced	N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation:		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A
4.3.13.5.1	Laser (including laser diodes)	(see separate test report of IEC/EN 60825-1 / IEC/EN 60825-2)	N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)		—
4.3.13.6	Other types		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

4.4	Protection against hazardous moving parts		N/A
4.4.1	General	No Moving Parts	N/A
4.4.2	Protection in operator access areas		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury a).....:		N/A
	Is considered to cause pain, not injury b).....:		N/A
	Considered to cause injury c)		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

4.5	Thermal requirements		C
4.5.1	General		C
4.5.2	Temperature test		C
	Normal load condition per Annex I	Considered	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	C
4.5.4	Touch temperature limits	(see appended table 4.5)	C
4.5.5	Resistance to abnormal heat		C

4.6	Openings in enclosures		C
4.6.1	Top and side openings	(see appended table 4.6.1 & 4.6.2)	C
	Dimensions (mm)		—
4.6.2	Bottoms of fire enclosures	(see appended table 4.6.1 & 4.6.2)	C
	Construction of the bottom		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm):		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (\mathcal{C})/time (weeks):		—

4.7	Resistance to fire		C
4.7.1	Reducing the risk of ignition and spread of flame		C
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	C
	Method 2, application of all of simulated fault condition tests	(see appended table 5.3)	N/A
4.7.2	Conditions for a fire enclosure		C
4.7.2.1	Parts requiring a fire enclosure		C
4.7.2.2	Parts not requiring a fire enclosure		C
4.7.3	Materials		C
4.7.3.1	General	Thermoplastics/ Metal	C
4.7.3.2	Materials for fire enclosures		C
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		C
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		C
5.1	Touch current and protective conductor current		C
5.1.1	General		C
5.1.2	Equipment under test (EUT)		C
5.1.2.1	Single connection to an a.c. mains supply		C
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		C
5.1.3	Test circuit		C
5.1.4	Application of measuring instrument		C
5.1.5	Test procedure		C
5.1.6	Test measurements	(see appended table 5.1.6)	C
5.1.7	Equipment with touch current exceeding 3,5mA:		N/A
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N/A
	Test voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
5.2	Electric strength		C
5.2.1	General	(see appended table 5.2)	C
5.2.2	Test procedure	(see appended table 5.2)	C
5.3	Abnormal operating and fault conditions		C
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	C
5.3.2	Motors	(see appended Annex B)	N/A
5.3.3	Transformers	(see appended Annex C)	C
5.3.4	Functional insulation		C
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in information technology equipment		N/A
5.3.7	Simulation of faults		C
5.3.8	Unattended equipment		C
5.3.9	Compliance criteria for abnormal operating and fault conditions		C
5.3.9.1	During the test		C
5.3.9.2	After the test		C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	(see appended table 5.2)	N/A
	Test voltage (V)		—
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		N/A
6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test	(see appended table 5.2)	N/A
6.2.2.2	Steady-state test	(see appended table 5.2)	N/A
6.2.2.3	Compliance criteria		N/A
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. Output current (A)		—
	Current limiting method		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test	(see appended table 5.2)	N/A
7.4.3	Impulse test	(see appended table 5.2)	N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		C
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		C
A.2.1	Samples, material	Thermoplastics/ All Metal	—
	Wall thickness (mm)	Data Inspected	—
A.2.2	Conditioning of samples		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame		N/A
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

A.3.3	Compliance criterion		N/A
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B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures	(see appended table 5.3)	N/A
B.4	Running overload test	(see appended table 5.3)	N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	Test procedure	(see appended table 5.3)	N/A
B.7.2	Alternative test procedure; test time (h)		N/A
B.7.3	Electric strength test	(see appended table 5.2)	N/A
B.8	Test for motors with capacitors	(see appended table 5.3)	N/A
B.9	Test for three-phase motors	(see appended table 5.3)	N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		C
	Position	PSU Certified	—
	Manufacturer	-	—
	Type	-	—
	Rated values	-	—
	Method of protection	-	—
C.1	Overload test	(see appended table 5.3)	C

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
C.2	Insulation	(see appended table 5.2)	C
	Protection from displacement of windings		C
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS		C
D.1	Measuring instruments		C
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)		C
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V):		N/A
G.5	Measurement of transient levels (V)		N/A
G.6	Determination of minimum clearances		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		C
	Metal used	Fe/	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation	(see appended table 5.3)	N/A

L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)		C
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		C

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz)		—
M.3.1.2	Voltage (V)		—
M.3.1.3	Cadence; time (s), voltage (V)		—
M.3.1.4	Single fault current (mA)		—
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
N	ANNEX N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		C
Q	ANNEX Q, VOLTAGE DEPENDANT RESISTORS (VDR's) (see 1.5.9.1)		N/A
	a) Preferred climatic categories		N/A
	b) Maximum continuous voltage		N/A
	c) Pulse current		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
		See separate test report	—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
		See separate test report	—

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		Noted
V.1	Introduction		Noted
V.2	TN power distribution systems		Noted
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		C
W.1	Touch current from electronic circuits		C
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		C
W.2	Interconnection of several equipments		C
W.2.1	Isolation		C
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		C
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		C
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—

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IEC 60950-1 / SANS 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
CC	ANNEX CC, EVALUATION OF INTEGRATED CIRCUIT (IC) CURRENT LIMITERS		N/A
CC.1	General		N/A
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A
DD	ANNEX DD, REQUIREMENTS FOR THE MOUNTING MEANS OF RACK-MOUNTED EQUIPMENT		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....:		N/A
DD.3	Mechanical strength test, 250N, including end stops.....:		N/A
DD.4	Compliance.....:		N/A
EE	ANNEX EE, HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....:		N/A
	Information of user instructions, maintenance and/or servicing instructions.....:		N/A
EE.3	Inadvertent reactivation test.....:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A).....:		N/A
	Test with wedge probe (Figure EE1 and EE2)....:		N/A

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1.5.1		TABLE: list of critical components				C
object / part No.	Manufacturer / trademark	type / model	technical data	standard	mark (s) of conformity ¹⁾	
Ballast	Helvar	L11D	230 V 50 Hz	-	ENEC	
Mains Plug	Crabtree	1048	16 A 250 V ~	SANS 164-1	SABS	
Mains Cord	Linetek	H05VV-F	3G0,75	-	D,S,FI,N	
PSU 1	Mean Well	RS-25-3.3	100 - 240 V ac 0,7 A	-	TÜV; UL	
PSU 2	Lenovo	42T4432	100 - 240 v ~ 1,5 A	-	TÜV; UL	

¹⁾ an asterisk indicates a mark which assures the agreed level of surveillance

1.6.2		TABLE: electrical data (in normal conditions)					C
fuse #	Irated (A)	U (V)	P (W)	I (mA)	Ifuse (mA)	conditions / status	
Complete System							
-	-	162	21	148	148	Normal Operation	
-	-	180	25	171	171	Normal Operation	
-	-	240	37	256	256	Normal Operation	
-	-	254	45	300	300	Normal Operation	
3 Digit Display							
-	-	162	16	152	152	Normal Operation	
1	1,0	180	19	187	187	Normal Operation	
1	1,0	240	32	306	306	Normal Operation	
-	-	254	36	341	341	Normal Operation	
Power Supply							
-	-	162	4	67	67	Normal Operation	
1	1,0	180	4	71	71	Normal Operation	
1	1,0	240	4	87	87	Normal Operation	
-	-	254	4	91	91	Normal Operation	

2.1.1.5 c1)		TABLE: max. V, A, VA test			N/A
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
All Enclosed					

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Supplementary information:

2.1.1.5 c2)	TABLE: stored energy	N/A
Capacitance C (: F)	Voltage U (V)	Energy E (J)
All Enclosed		
Supplementary information:		

2.2	TABLE: evaluation of voltage limiting components in SELV circuits	C	
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V Peak	V dc	
PSU Certified			
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)		
Supplementary information:			

2.4.2	TABLE: limited current circuit measurement	N/A			
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
Notes:					

2.5	TABLE: limited power sources	N/A		
Component (measured between)	I sc		VA	
	Measured	Limit	Measured	Limit

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

Supplementary information:				

2.6.3.4	TABLE: ground continue test			C
Location		Resistance measured (mΩ)	Comments	
Terminals and Chassis		0,023	Pass	

2.10.2	Table: working voltage measurement			C
Location		Peak voltage (V)	RMS voltage (V)	Comments
PSU Certified				
Supplementary information:				

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					C	
clearance cl and creepage distance dcr at / of:		Up (V)	Ur.m.s (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
Indicator Circuit		12		0,8	3,5	1,3	3,5
Sensor Circuit		12		0,8	4,7	1,3	5,2

2.10.5	TABLE: distance through insulation measurements				C
distance through insulation di at/of:		Up (V)	test voltage (V)	required di (mm)	di (mm)
PCB		12	500	-	-

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

4.3.8	TABLE: Batteries								N/A	
The tests of 4.3.8 are applicable only when appropriate battery data is not available								N/A		
Is it possible to install the battery in a reverse polarity position?								N/A		
	Non-Rechargeable batteries			Rechargeable batteries						
	Discharging		Unintentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf Specs		Meas. current	Manuf Specs	Meas. current	Manuf Specs	Meas. current	Manuf Specs	
Max. current during normal condition										
Max. current during fault condition										
Test results:										
- Chemical leaks								N/A		
- Explosion of the battery								N/A		
- Emission of flame or expulsion of molten metal								N/A		
- Electric strength tests of equipment after completion of tests								N/A		
Supplementary information:										
Battery category :										
-										
Manufacturer :										
-										
Type / model :										
-										
Voltage :										
-										
Capacity :										
-										
Tested and Certified by (incl. Ref. No.) :										
-										

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

Circuit protection diagram:

MARKINGS AND INSTRUCTIONS (1.7.12, 1.7.15)	
Location of replaceable battery	
	Language(s):
Close to the battery	
In the servicing instructions	
In the operating instructions	

4.5	TABLE: maximum temperatures						C
	test voltage (V):	254					-
	t amb1 (°C):	25					-
	t amb2 (°C):	25					-
maximum temperature T of part/att:		T (°C)				allowed T _{max} (°C)	
3 Digit Display							
PSU 1 - Terminals		13					85
- Transformer		27					85(120 - 35)
- Capacitor X		13					80(105 - 25)
PCB 1 - Capacitor 1		22					60
- Coil 1		19					85(120 - 35)
- Capacitor 2		21					60
- Terminals		16					85
Ballast		43					85
Power Supply							
PCB 2 - Coil 1		8					85(120 - 35)
- Capacitor 2		11					60
- IC		7					No Limit
- Capacitor 1		17					60
Sensor Array							
Zone Buffer - Capacitor		14					60
Sensor T - Coil		4					85(120 - 35)
Sensor/ Indicator - Capacitor		6					60
temperature T of winding		R1 (S)	R2 (S)	T (°C)	allowed T _{max} (°C)	insulation class	

4.5.5	TABLE: ball pressure test of thermoplastic parts			N/A
	allowed impression diameter (mm)	:	# 2 mm	-
Part			test temperature (°C)	impression diameter (mm)

Note: This report relates only to the specific sample(s) tested as identified herein. The test results do not apply to any similar item that has not been tested.

4.6.1, 4.6.2	Table: enclosure openings		C
Location	Size (mm)	Comments	
No Openings			
Notes:			

4.7	TABLE: resistance to fire			C
part	manufacturer of material	type of material	thickness (mm)	flammability class
3 Digit Display	-	Metal	2,1	pass
Power Supply	-	Thermoplastic	3,4	pass

5.1	TABLE: touch current measurement			C
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
Live Parts and Earth	0,39	3,5	Pass	
supplementary information:				

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests		C
test voltage applied between:	test voltage (V) a.c. / d.c.	breakdown Yes / No	
Live parts and Earth	1 500	No	
supplementary information:			

5.3	TABLE: fault conditions tests						C
	ambient temperature (°C)				24		-
	model/type of power supply				-		-
	manufacturer of power supply				-		-
	rated markings of power supply				-		-
component No.	fault	test voltage (V)	test time	fuse No.	Fuse current (A)	result	
3 Digit Display - Polarity	Reversed	12	30 min	-	-	No Hazard	
Power Supply - Polarity	Reversed	20	30 min	-	-	No Hazard	
supplementary information:							

END OF REPORT

T.E.S.T. Africa

WCT (PTY) LTD T/A T.E.S.T. Africa

Appendix 1

Report number :WCT 13/0646	Page 1 of 10
Trading name :DIAMOND PARKING GUIDANCE SYSTEM	
Model number :DIAMOND PARKING GUIDANCE SYSTEM	
Figure 1 :Front view	
Figure 2 : Indicator	
Figure 3 : Sensor	
Figure 4 : Sensor indicator	
Figure 5 : Zone buffer	
Figure 6 : Digit display - Front view	
Figure 7 : Digit display - Rating label	
Figure 8 : Digit display - Internal layout 1	
Figure 9 : Digit display -Internal layout 2	
Figure 10 : Digit display - Internal layout 3	
Figure 11 : Digit display - PSU marking	
Figure 12 : Digit display - Ballast	
Figure 13 :Power supply - Front view	
Figure 14 : Power supply - Rating label	
Figure 15 : Power supply - Internal layout 1	
Figure 16 : Power supply - Internal layout 2	
Figure 17 : Power supply - PSU marking	

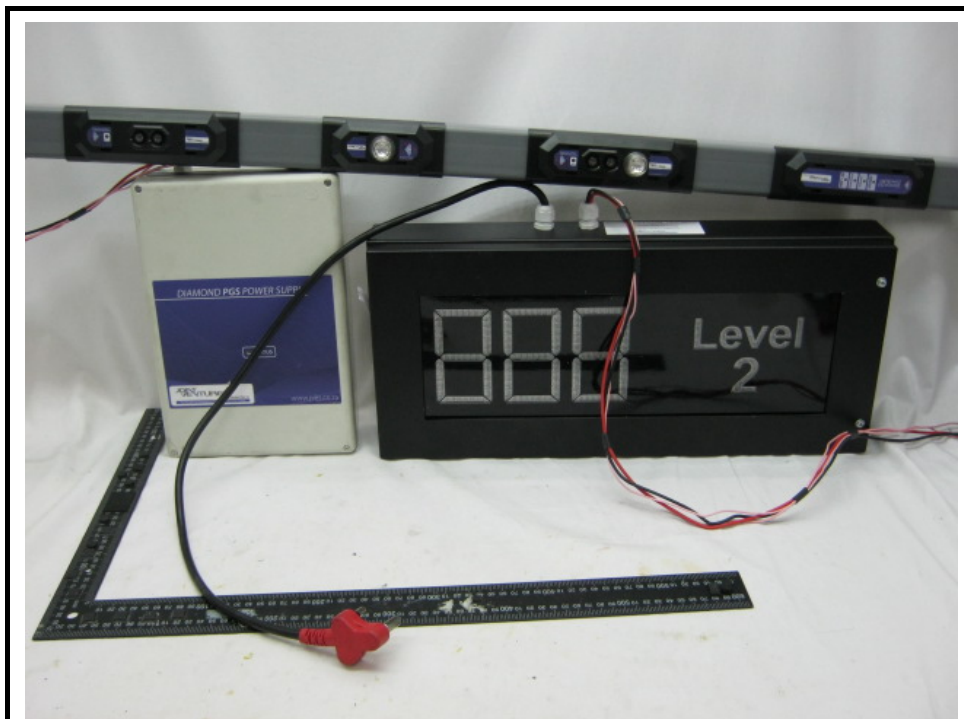


Figure 1

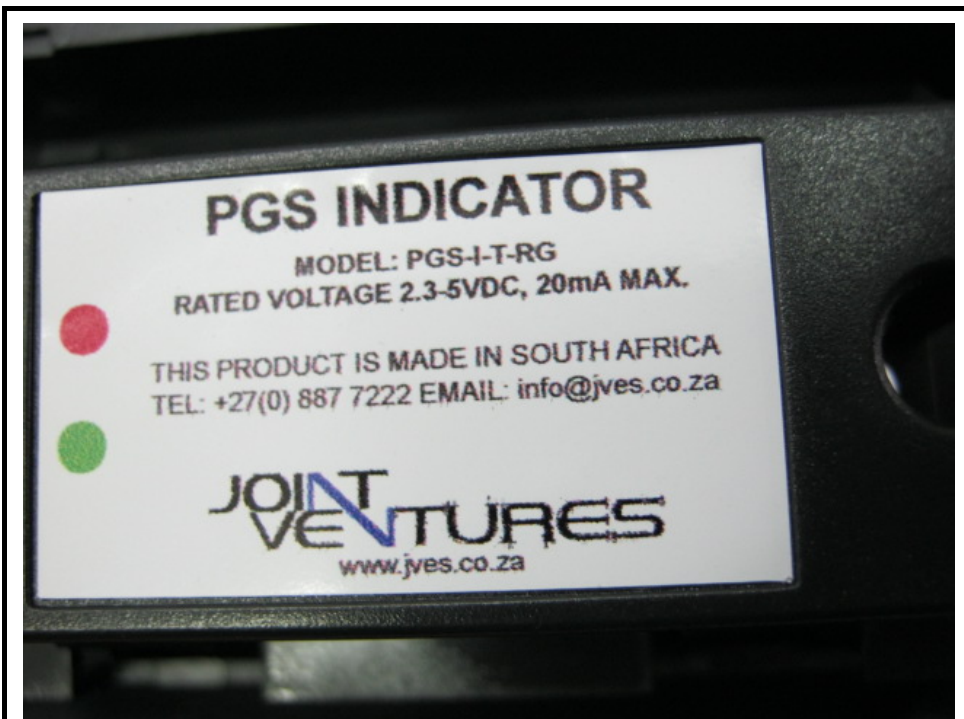


Figure 2



Figure 3



Figure 4



Figure 5

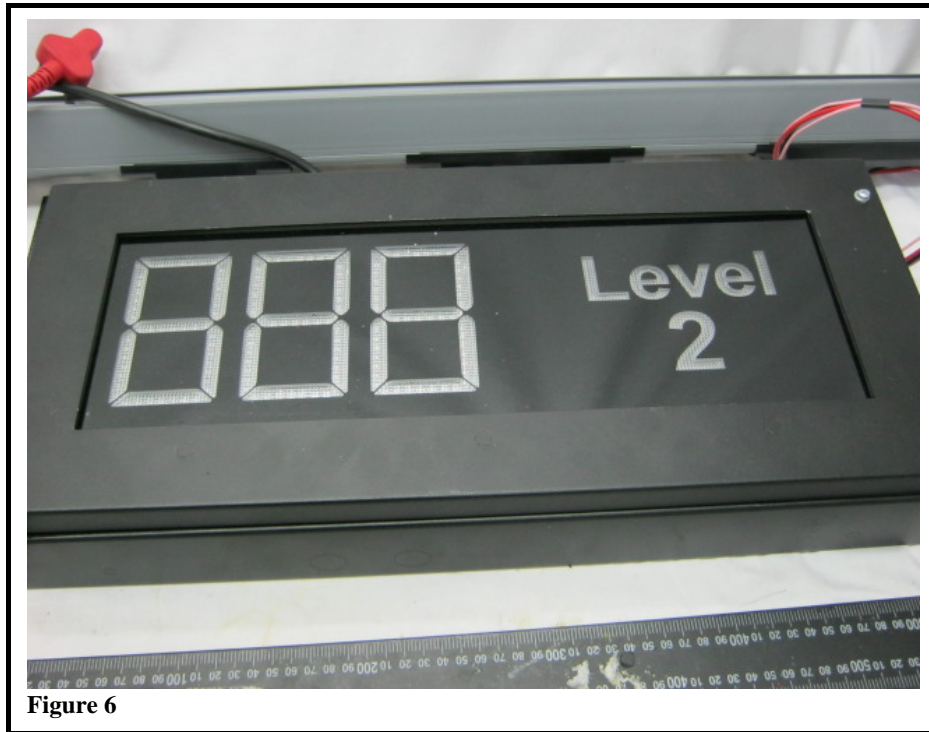


Figure 6



Figure 7

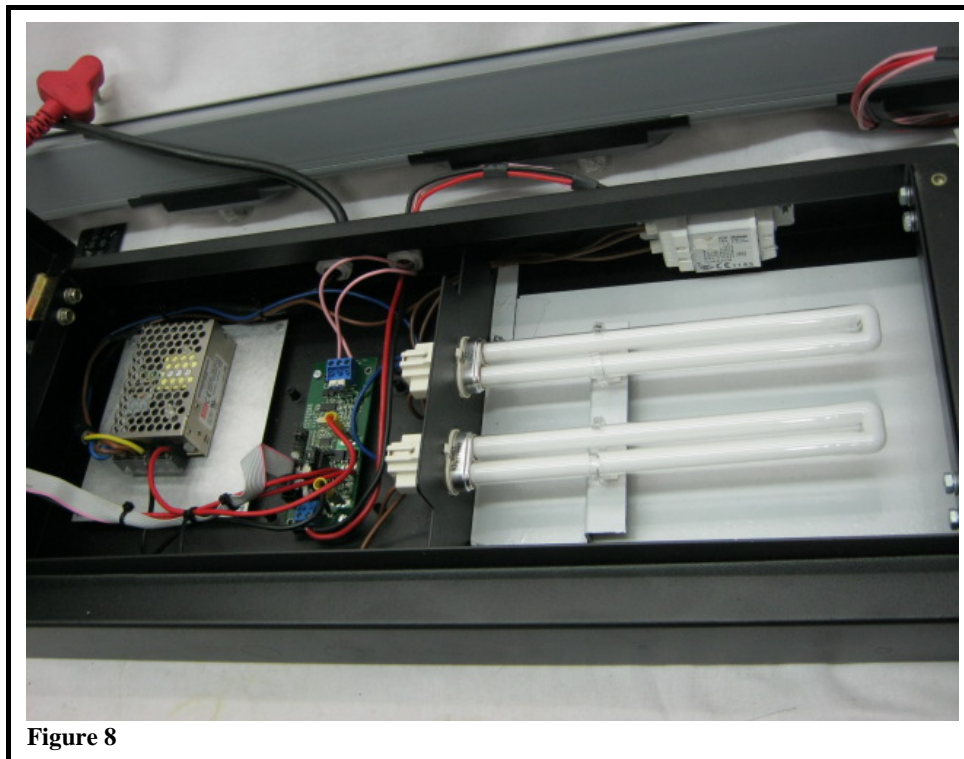


Figure 8

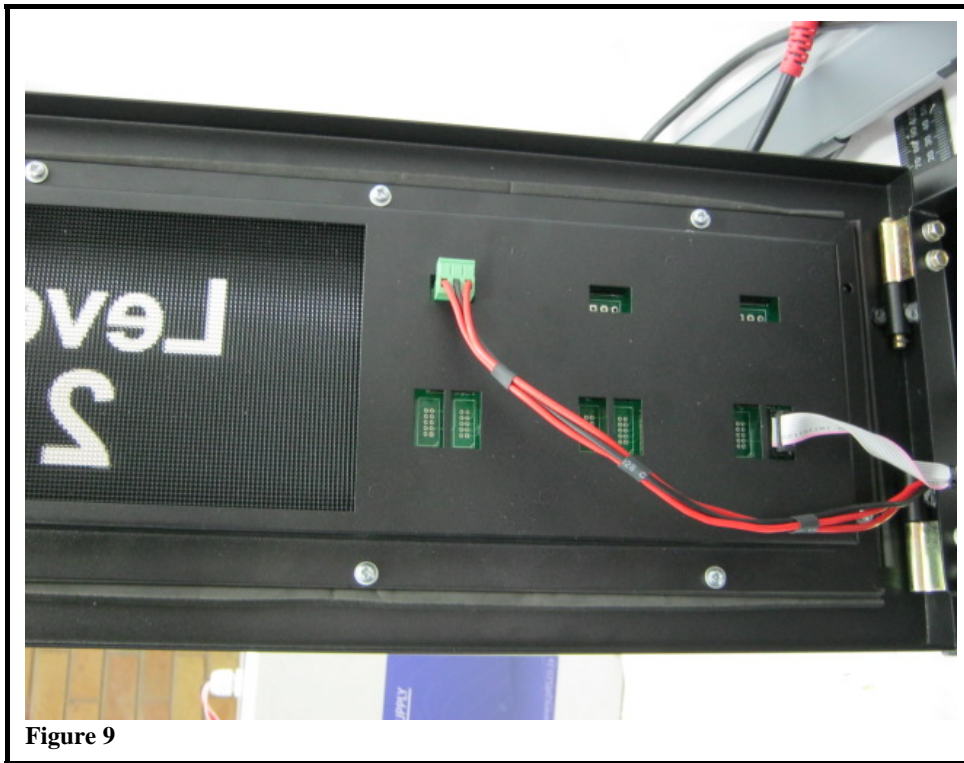


Figure 9

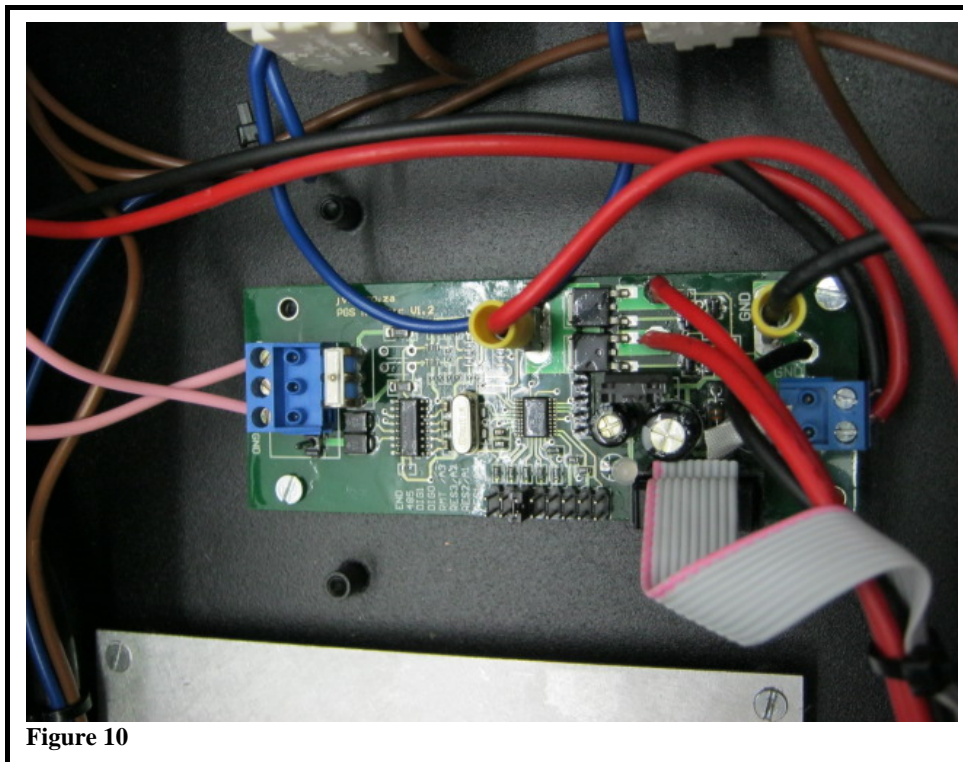


Figure 10



Figure 11



Figure 12



Figure 13



Figure 14

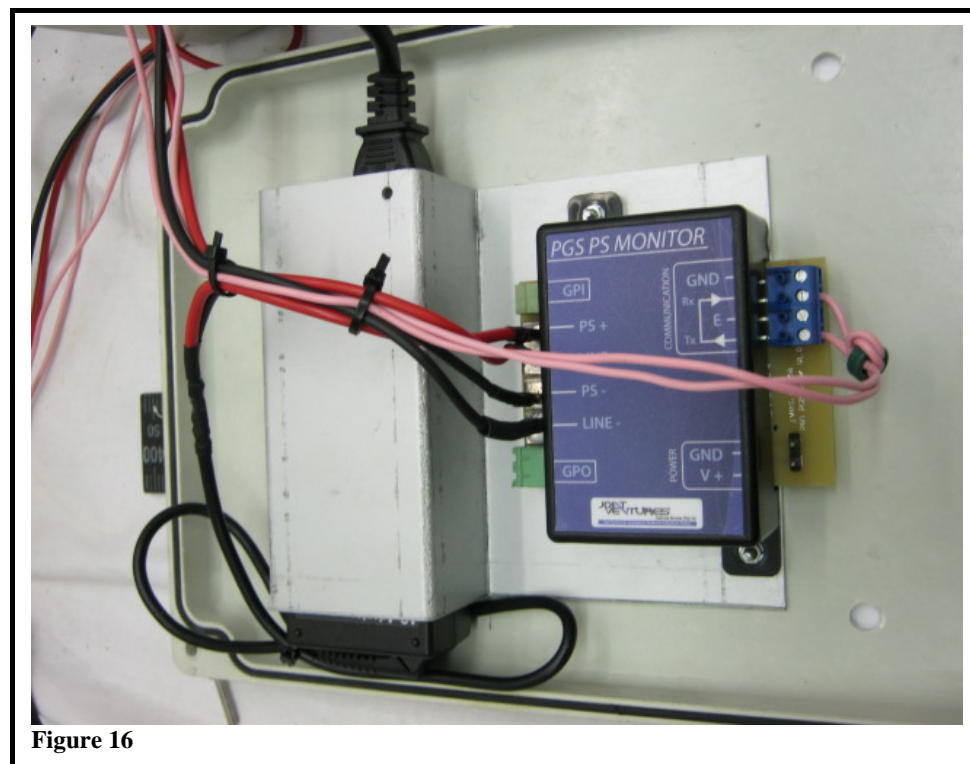
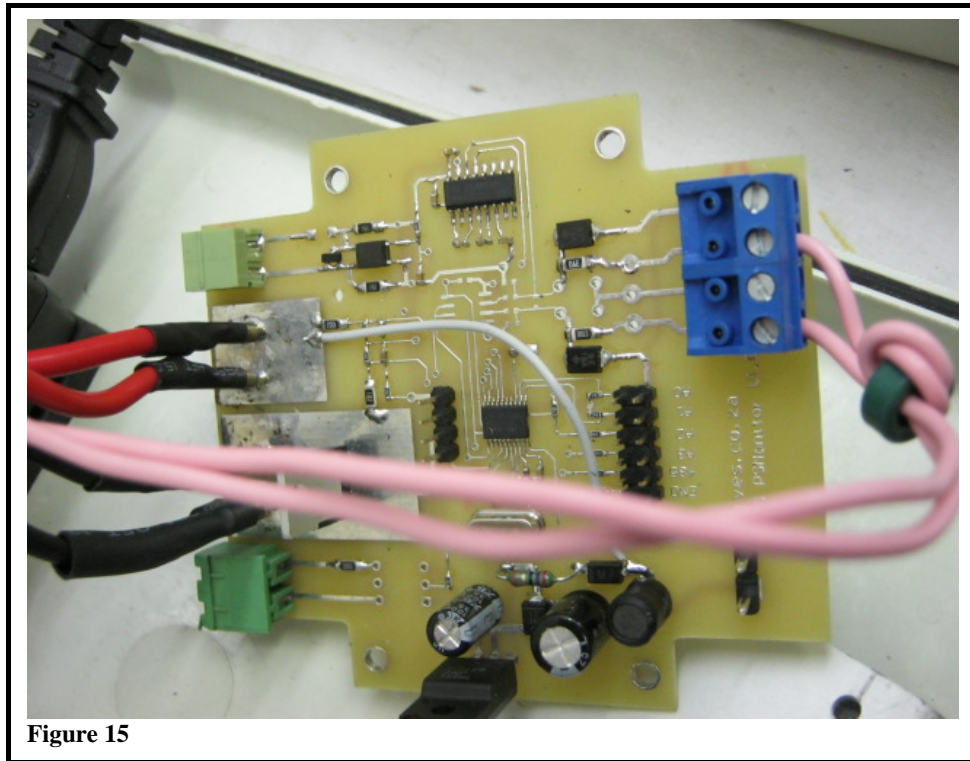




Figure 17