Ref. Certif. No.

US/11942/UL

IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ESSAIS DE CONFORMITE ET DE CERTIFICATION DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product
Produit

Ethernet Device

Name and address of the applicant
Nom et adresse du demandeur

Digi International Inc
11001 Bren Rd E
Minnetonka, MN 55343, USA

Name and address of the manufacturer
Nom et adresse du fabricant

Digi International Inc
11001 Bren Rd E
Minnetonka, MN 55343, USA

Name and address of the factory
Nom et adresse de l'usine

Digi International GmbH
Breisach, Kueferstr 8
79206 Breisach, Germany

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Electrical ratings not required (not for direct connection to the supply mains).

Trademark (if any)
Marque de fabrique (si elle existe)

Model / Type Ref.
Ref. de type

ConnectCore 9P 9215 XXX and CC9P 9215XXX P/N: 3XXX or 6XXX. Where X may be any alphanumeric character or blank indicating changes in SELV circuitry.

Additional information (if necessary)
Information complémentaire (si nécessaire)

This Report comprises 4 Enclosures.

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

PUBLICATION	EDITION
IEC 60950-1 (2001)	**First Edition,**

Additional evaluation to CENELEC Common Modifications also included.
See Test Report for National Differences.

as shown in the Test Report Ref. No.
which forms part of this Certificate
comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

E165880-A41-CB-1

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

Underwriters Laboratories Inc.®

Underwriters Laboratories Inc. / Certification Programs Office, USA
333 Pfingsten Road, Northbrook, IL 60062-2096
United States of America
TEL INT* +1 847 664 3008, FAX INT* +1 847 313 3008
email: jolanta.m.wroblewska@us.ul.com

Date: Issued: 2007 September 24

Signature:

Jolanta M. Wroblewska

COVER PAGE FOR TEST REPORT

Test Item Description:	Ethernet Device
Model/Type Reference:	ConnectCore 9P 9215 XXX and CC9P 9215XXX P/N: 3XXX or 6XXX. Where X may be any alphanumeric character or blank indicating changes in SELV circuitry.
Rating(s):	Not required
Standards:	IEC 60950-1:2001, First Edition
Applicant Name and Address:	DIGI INTERNATIONAL INC 11001 BREN RD E MINNETONKA MN 55343
Factory Location(s):	DIGI INTERNATIONAL GMBH BREISACH KUEFERSTR 8 79206 BREISACH GERMANY

This Report includes the following parts, in addition to this cover page:

1. Specific Technical Criteria
2. Clause Verdicts
3. Critical Components
4. Test Results
5. Enclosures
    a. National Differences
    b. Marking Plate
    c. Photographs
    d. Miscellaneous

All applicable tests according to the above standard(s) have been carried out.
Test results are valid only for the tested equipment.
This Test Report can be reproduced only in whole.
Amendments and corrections can be reproduced only with the original CB Test Report.
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Test Report issued under the responsibility of:

Underwriters Laboratories Inc.

TEST REPORT
IEC 60950-1,First Edition
Information technology equipment-Safety
Part 1:General Requirements

Report Reference No ..... :	E165880-A41-CB-1
Date of issue ..... :	2007-09-21
Total number of pages ..... :	40
CB Testing Laboratory ..... :	Underwriters Laboratories Inc.
Address ..... :	333 Pfingsten Road, Northbrook, IL, 60062-2096, USA
Applicant's name ..... :	DIGI INTERNATIONAL INC
Address ..... :	11001 BREN RD E MINNETONKA MN 55343
Test specification:	
Standard ..... :	IEC 60950-1:2001, First Edition
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60950_1B
Test Report Form originator ..... :	SGS Fimko Ltd
Master TRF ..... :	dated 2003-03

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	Ethernet Device
Trade Mark ..... :	
Model/Type reference ..... :	ConnectCore 9P 9215 XXX and CC9P 9215XXX P/N: 3XXX or 6XXX. Where X may be any alphanumeric character or blank indicating changes in SELV circuitry.
Manufacturer ..... :	DIGI INTERNATIONAL INC. 11001 BREN ROAD EAST MINNETONKA, MN 55343, USA
Rating ..... :	Not required

Testing procedure and testing location:			
[ ]	**CB Testing Laboratory**		
	Testing location / address..... :		
[x]	**Associated CB Test Laboratory**		
	Testing location / address..... :	Underwriters Laboratories Inc. 3550 Labore Road, Suite 1, Vadnais Heights, MN, 55110, USA	
	Tested by (name + signature) ..... :	Scott Shepler	Scott Shepler
	Approved by (+ signature) ..... :	Jim Kleinke	Jim Kleinke
[ ]	**Testing Procedure: TMP**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: WMT**		
	Tested by (name + signature) ..... :		
	Witnessed by (+ signature)..... :		
	Approved by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: SMT**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Supervised by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: RMT**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Supervised by (+ signature) ..... :		
	Testing location / address..... :		

Summary of Testing:
Unless otherwise indicated, all tests were conducted at Underwriters Laboratories Inc. 3550 Labore Road, Suite 1, Vadnais Heights, MN, 55110, USA.

Tests performed (name of test and test clause)	Testing location / Comments
End Product Reference Page	
Heating (4.5.1, 1.4.12, 1.4.13)	

Summary of Compliance with National Differences:

AR, AT, AU, BE, CA, CH, CN, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IL, IN, IT, JP, KE, KR, MY, NL, NO, NZ, PL, PT, SE, SG, SI, SK, US

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :	
Equipment mobility	for building-in
Operating condition	continuous
Mains supply tolerance (%)	N/A
Tested for IT power systems	No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class III (supplied by SELV).
Mass of equipment (kg)	0.01 kg
Protection against ingress of water	IPX0
Possible test case verdicts:	
- test case does not apply to the test object	N / A
- test object does meet the requirement	P(Pass)
- test object does not meet the requirement	F(Fail)
Testing:	
Date(s) of receipt of test item	2007-09-05
Date(s) of Performance of tests	2007-09-18

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Refer to the Cover Page For Test Report for a list of all Factory Locations.

GENERAL PRODUCT INFORMATION:

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

Product Description

The product is an CPU/USB/ethernet device and is a component for use in a Certified product.

Model Differences

ConnectCore 9P 9215 XXX and CC9P 9215XXX P/N: 3XXX or 6XXX. Where X may be any alphanumeric character or blank indicating changes in SELV circuitry. The Models are identical to each other except for aesthetics and SELV changes.

Additional Information

N/A

Technical Considerations

Manufacturer assumes responsibility for providing manuals and markings in the official language of the country in which the equipment is installed.

Device does not employ TNV, batteries or laser devices.

The unit is intended to be supplied by a SELV non-energy hazaradous power source.

The manufacturer's maximum recommended ambient (Tma) is 85° C. See the Supplementary Information to Table 4.5 for further details.

The Marking Label provided in the Marking Plate Enclosure is representative of all Models.

Tests were conducted on Model CC9P9215. Testing of Model CC9P9215 was considered representative of all Models.

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

The need for reconducting the heat test shall be evaluated in the end product.

The unit shall be installed in an electrical and fire enclosure.

Separation of circuits shall be evaluated in the end product.

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1	**GENERAL**		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950 and the relevant component standard. Components, for which no relevant IEC standard exsists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950.	Pass
1.5.3	Thermal controls	No thermal controls provided.	N/A
1.5.4	Transformers	No mains transformers provided.	N/A
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors in primary circuits ..... :	Class III equipment. None provided.	N/A
1.5.7	Double insulation or reinforced insulation bridged by components	Class III equipment. None provided.	N/A
1.5.7.1	General		N/A
1.5.7.2	Bridging capacitors	Class III equipment. None provided.	N/A
1.5.7.3	Bridging resistors	Class III equipment. None provided.	N/A
1.5.7.4	Accessible parts	Class III equipment. None provided.	N/A
1.5.8	Components in equipment for IT power systems	Equipment not intended for IT power systems.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6	**Power interface**		N/A
1.6.1	AC power distribution systems	Class III equipment. No direct connection to AC power distribution system.	N/A
1.6.2	Input current	To be evaluated in the end product.	N/A
1.6.3	Voltage limit of hand-held equipment	Equipment is not hand-held.	N/A
1.6.4	Neutral conductor	Class III equipment. None provided.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.7	**Marking and instructions**		Pass
1.7.1	Power rating	Not required	N/A
	Rated voltage(s) or voltage range(s) (V) ..... :	Not required	N/A
	Symbol for nature of supply, for d.c. only ..... :	Not required	N/A
	Rated frequency or rated frequency range (Hz) .... :	Not required.	N/A
	Rated current (mA or A)..... :	Not required	N/A
	Manufacturer's name or trademark or identification mark ..... :	Digi International Inc.	Pass
	Type/model or type reference..... :	ConnectCore 9P 9215 XXX and CC9P 9215XXX P/N: 3XXX or 6XXX. Where X may be any alphanumeric character or blank indicating changes in SELV circuitry.	Pass
	Symbol for Class II equipment only ..... :	Class III equipment.	N/A
	Other symbols..... :	None provided.	N/A
	Certification marks ..... :	UL, c-UL	Pass
1.7.2	Safety instructions	Evaluated English only. Manufacturer assumes responsibility of providing manuals and markings in the official language of the country in which the equipment is installed. See Miscellaneous Enclosure for manufacturer's letter of assurance.	Pass
1.7.3	Short duty cycles	Equipment intended for continuous operation.	N/A
1.7.4	Supply voltage adjustment..... :	Equipment is designed for single voltage range operation.	N/A
1.7.5	Power outlets on the equipment ..... :	Class III equipment. No power outlets provided.	N/A
1.7.6	Fuse identification..... :	No fuses provided for safety.	N/A
1.7.7	Wiring terminals	Class III equipment. None provided.	N/A
1.7.7.1	Protective earthing and bonding terminals ..... :	Class III equipment. No protective earthing terminals.	N/A
1.7.7.2	Terminal for a.c. mains supply conductors	Class III equipment. No a.c. mains supply terminals.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.7.3	Terminals for d.c. mains supply conductors	Marking adjacent to power connection indicates polarity.	N/A
1.7.8	Controls and indicators	No switches, controls, or indicators affecting safety are provided.	N/A
1.7.8.1	Identification, location and marking ..... :	No controls, switches, or indicators affecting safety are provided or required.	N/A
1.7.8.2	Colours..... :	No indicators, switches or controls affecting safety provided or required.	N/A
1.7.8.3	Symbols according to IEC 60417 ..... :	No symbols on controls affecting safety provided.	N/A
1.7.8.4	Markings using figures..... :	No markings using figures provided.	N/A
1.7.9	Isolation of multiple power sources ..... :	One power source.	N/A
1.7.10	IT power distribution systems	Equipment not intended for IT power systems.	N/A
1.7.11	Thermostats and other regulating devices	No thermostats or similar regulating devices provided.	N/A
1.7.12	Language..... :	Evaluated English only. Manufacturer assumes responsibility of providing manuals and markings in the official language of the country in which the equipment is installed. See Miscellaneous Enclosure for manufacturer's letter of assurance.	-
1.7.13	Durability		Pass
1.7.14	Removable parts		Pass
1.7.15	Replaceable batteries	No batteries provided.	N/A
	Language..... :		-
1.7.16	Operator access with a tool ..... :	No hazard in operator access area.	N/A
1.7.17	Equipment for restricted access locations..... :	Equipment not intended to be installed in restricted access locations.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2	**PROTECTION FROM HAZARDS**		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas	Device intended to be powered by a SELV non-energy hazardous supply source. No hazard.	Pass
2.1.1.1	Access to energized parts	Device intended to be powered by a SELV non-energy hazardous supply source. No hazard.	Pass
	Test by inspection..... :	Inspection	Pass
	Test with test finger..... :	Device is intended to be installed in an enclosure. Access to hazardous voltages shall be evaluated in the end product.	N/A
	Test with test pin..... :	Device is intended to be installed in an enclosure. Access to hazardous voltages shall be evaluated in the end product.	N/A
	Test with test probe ..... :	Device is intended to be installed in an enclosure. Access to hazardous voltages shall be evaluated in the end product.	N/A
2.1.1.2	Battery compartments..... :	No battery compartments provided.	N/A
2.1.1.3	Access to ELV wiring	No internal wiring at ELV.	N/A
	Working voltage (V); minimum distance (mm) through insulation ..... :		-
2.1.1.4	Access to hazardous voltage circuit wiring	No internal wiring accessible to the user.	N/A
2.1.1.5	Energy hazards..... :	Device is intended to be installed in an enclosure. Access to hazardous voltages shall be evaluated in the end product.	N/A
2.1.1.6	Manual controls	No shafts or knobs, etc. at ELV, TNV or hazardous voltage.	N/A
2.1.1.7	Discharge of capacitors in equipment	Class III equipment. No	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		primary circuits.	
	Time-constant (s); measured voltage (V) ..... :	Class III equipment. No primary circuits.	-
2.1.2	Protection in service access areas	To be evaluated in the end product.	N/A
2.1.3	Protection in restricted access locations	Equipment not intended to be installed in restricted access locations.	N/A
2.2	**SELV circuits**		Pass
2.2.1	General requirements	Equipment is intended to be powered by a SELV source.	Pass
2.2.2	Voltages under normal conditions (V) ..... :	Equipment is intended to be supplied from a SELV supply source.	Pass
2.2.3	Voltages under fault conditions (V)..... :	Equipment to be supplied from a SELV supply source.	Pass
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)	SELV circuits are only connected to other secondary circuits.	Pass
2.2.3.2	Separation by earthed screen (method 2)		N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		N/A
2.2.4	Connection of SELV circuits to other circuits..... :	SELV circuits are only connected to other SELV circuits. SELV circuit and all interconnected circuits separated by double or reinforced insulation, which is to be provided by external power supply to be evaluated in the end product.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuits provided	N/A
	Type of TNV circuits ..... :		-
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed..... :		-
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 limited current circuits provided.	N/A
2.4.2	Limit values		N/A
	Frequency (Hz) ..... :		-
	Measured current (mA)..... :		-
	Measured voltage (V) ..... :		-
	Measured capacitance (mF) ..... :		-
2.4.3	Connection of limited current circuits to other circuits		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.5	**Limited power sources**		N/A
	Inherently limited output		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
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA): ..... :		-
	Current rating of overcurrent protective device (A) :		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing	Class III equipment.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm2), AWG .....:		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm2), AWG .....:		-
2.6.3.4	Resistance (Ohm) of earthing conductors and their terminations, test current (A) .....:		N/A
2.6.3.5	Colour of insulation.....:		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type and nominal thread diameter (mm) .....:		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
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		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	**Overcurrent and earth fault protection in primary circuits**		N/A
2.7.1	Basic requirements	Class III equipment. No primary circuits provided.	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices..... :		N/A
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 safety interlocks provided.	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		N/A
2.8.7.1	Contact gaps (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		N/A
2.8.8	Mechanical actuators		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.9	**Electrical insulation**		Pass
2.9.1	Properties of insulating materials		Pass
2.9.2	Humidity conditioning	Class III equipment.	N/A
	Humidity (%) ..... :		-
	Temperature (°C) ..... :		-
2.9.3	Grade of insulation		Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10	**Clearances, creepage distances and distances through insulation**		Pass
2.10.1	General		Pass
2.10.2	Determination of working voltage		Pass
2.10.3	Clearances	See Sub-Clause 5.3.4 and appended table 2.10.3 and 2.10.4.	Pass
2.10.3.1	General		Pass
2.10.3.2	Clearances in primary circuit	Class III equipment. No primary circuits. Device is intended to be installed in Certified ITE equipment.	N/A
2.10.3.3	Clearances in secondary circuits	See Sub-Clause 5.3.4 and appended table 2.10.3 and 2.10.4.	Pass
2.10.3.4	Measurement of transient voltage levels	Class III equipment.	N/A
2.10.4	Creepage distances	See Sub-Clause 5.3.4 and appended table 2.10.3 and 2.10.4.	Pass
	CTI tests..... :	Material group IIIb.	-
2.10.5	Solid insulation		N/A
2.10.5.1	Minimum distance through insulation		N/A
2.10.5.2	Thin sheet material		N/A
	Number of layers (pcs) ..... :		-
	Electric strength test ..... :		-
2.10.5.3	Printed boards	No supplementary or reinforced insulation on printed wiring boards.	N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material ..... :		-
	Number of layers (pcs) ..... :		N/A
2.10.5.4	Wound components		N/A
	Number of layers (pcs) ..... :		N/A
	Two wires in contact inside wound component; angle between 45° and 90° ..... :		N/A
2.10.6	Coated printed boards	No coated printed boards	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		provided.	
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A
2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C) ..... :		N/A
2.10.6.5	Electric strength test ..... :		-
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test ..... :		-
2.10.7	Enclosed and sealed parts ..... :	No enclosed or sealed parts.	N/A
	Temperature T1=T2 = Tma - Tamb +10K (°C)..... :		N/A
2.10.8	Spacings filled by insulating compound..... :	No spacings filled by insulating compound.	N/A
	Electric strength test ..... :		-
2.10.9	Component external terminations	None provided.	N/A
2.10.10	Insulation with varying dimensions	No insulation with varying dimensions.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3	**WIRING, CONNECTIONS AND SUPPLY**		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection		Pass
3.1.2	Protection against mechanical damage		Pass
3.1.3	Securing of internal wiring	No internal wiring provided.	N/A
3.1.4	Insulation of conductors		Pass
3.1.5	Beads and ceramic insulators	No beads or ceramic insulators provided.	N/A
3.1.6	Screws for electrical contact pressure	None provided.	N/A
3.1.7	Insulating materials in electrical connections	The equipment does not have any electrical connections that rely on insulating material for adequate contact pressure.	N/A
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections.	N/A
3.1.9	Termination of conductors	No internal wiring provided.	N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring	None provided.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	**Connection to an a.c. mains supply or a d.c. mains supply**		N/A
3.2.1	Means of connection	Class III equipment. No a.c. mains connection.	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
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		N/A
3.2.5.1	AC power supply cords		N/A
	Type.....:		-
	Rated current (A), cross-sectional area (mm^2), AWG .....:		-
3.2.5.2	DC power supply cords	No supply cord provided.	N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) .....:		-
	Longitudinal displacement (mm).....:		-
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	D (mm); test mass (g).....:		-
	Radius of curvature of cord (mm) .....:		-
3.2.9	Supply wiring space		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Class III equipment. No a.c. mains connection.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) ..... :		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm) ..... :		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	**Disconnection from the mains supply**		N/A
3.4.1	General requirement	Class III equipment. No a.c. mains connection.	N/A
3.4.2	Disconnect devices		N/A
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		N/A
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.5	**Interconnection of equipment**		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits ..... :	SELV to SELV only.	Pass
3.5.3	ELV circuits as interconnection circuits	No ELV circuits provided.	N/A

4	**PHYSICAL REQUIREMENTS**		Pass
4.1	Stability		N/A
	Angle of 10°	Device intended to be installed in Certifed equipment.	N/A
	Test: force (N) ..... :		N/A

4.2	**Mechanical strength**		N/A
4.2.1	General		N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N	The equipment does not have any internal enclosures.	N/A
4.2.4	Steady force test, 250 N	Device intended to be installed in Certifed equipment.	N/A
4.2.5	Impact test	Device intended to be installed in an electrical enclosure.	N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test	Equipment is not hand-held.	N/A
4.2.7	Stress relief test	Device intended to be installed in Certifed equipment.	N/A
4.2.8	Cathode ray tubes	Equipment does not employ a CRT.	N/A
	Picture tube separately certified ..... :		N/A
4.2.9	High pressure lamps	No high pressure lamps provided.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ..... :	Equipment is not intended to be wall or ceiling mounted.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.3	**Design and construction**		Pass
4.3.1	Edges and corners		Pass
4.3.2	Handles and manual controls; force (N) ..... :	No handles or manual controls provided.	N/A
4.3.3	Adjustable controls	No adjustable controls provided.	N/A
4.3.4	Securing of parts		Pass
4.3.5	Connection of plugs and sockets	None provided	N/A
4.3.6	Direct plug-in equipment	Equipment is not direct plug-in.	N/A
	Dimensions (mm) of mains plug for direct plug-in . :	Equipment is not direct plug-in.	N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N) ..... :	Equipment is not direct plug-in.	N/A
4.3.7	Heating elements in earthed equipment	No heating elements provided.	N/A
4.3.8	Batteries	No batteries provided.	N/A
4.3.9	Oil and grease	No oil or grease provided.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment does not produce dust or employ powders, liquids or gases.	N/A
4.3.11	Containers for liquids or gases	No liquids or gases provided.	N/A
4.3.12	Flammable liquids ..... :	No flammable liquids provided.	N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A
4.3.13	Radiation; type of radiation	Equipment does not generate ionizing radiation or ultarviolet light. Device employs low power indicating LED's only. LED's used for indicating purposes are Class I devices and operate in the range of 400-710 nm wavelength.	Pass
4.3.13.1	General		Pass
4.3.13.2	Ionizing radiation	Equipment does not generate ionizing radiation.	N/A
	Measured radiation (pA/kg) ..... :		-
	Measured high-voltage (kV) ..... :		-
	Measured focus voltage (kV) ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict
	CRT markings ..... :		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	Equipment does not generate UV radiation.	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	Laser (including LEDs)	The product covered by this report employs indicating LEDs only. The product was not evaluated to IEC 60825-1. See Table 1.5.1 and Miscellaneous Enclosure for manufacturer's data sheets showing emission measurements.	Pass
	Laser class..... :	LED's used for indicating purposes are Class I devices and operate in the range of 400-710 nm wavelength.	-
4.3.13.6	Other types ..... :	No other types of radiation provided.	N/A
4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General	No moving parts provided.	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
4.5	**Thermal requirements**		Pass
4.5.1	Maximum temperatures		Pass
	Normal load condition per Annex L ..... :	Passing data in loopback.	Pass
4.5.2	Resistance to abnormal heat	No parts at hazardous voltage.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.6	**Openings in enclosures**		N/A
4.6.1	Top and side openings	Device is intended to be installed in an enclosure. To be evaluated in the end product.	N/A
	Dimensions (mm)..... :		-
4.6.2	Bottoms of fire enclosures	Device is intended to be installed in an enclosure. To be evaluated in the end product.	N/A
	Construction of the bottom..... :		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	Equipment is not transportable.	N/A
4.6.5	Adhesives for constructional purposes	No adhesives provided.	N/A
	Conditioning temperature (°C)/time (weeks) ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

4.7	**Resistance to fire**		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Device is intended to be installed in an enclosure. To be evaluated in the end product.	N/A
	Method 1, selection and application of components wiring and materials		N/A
	Method 2, application of all of simulated fault condition tests	Method 1 used.	N/A
4.7.2	Conditions for a fire enclosure	Device is intended to be installed in an enclosure. To be evaluated in the end product.	N/A
4.7.2.1	Parts requiring a fire enclosure		N/A
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General		Pass
4.7.3.2	Materials for fire enclosures	Device is intended to be installed in an enclosure. To be evaluated in the end product.	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures	Device is intended to be installed in an enclosure. To be evaluated in the end product.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better	Pass
4.7.3.5	Materials for air filter assemblies	No air filter assemblies provided.	N/A
4.7.3.6	Materials used in high-voltage components	No high voltage components provided.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General	Class III equipment.	N/A
5.1.2	Equipment under test (EUT)		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Test voltage (V) ..... :		-
	Measured touch current (mA) ..... :		-
	Max. allowed touch current (mA) ..... :		-
	Measured protective conductor current (mA) ..... :		-
	Max. allowed protective conductor current (mA) ... :		-
5.1.7	Equipment with touch current exceeding 3.5 mA .. :		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

5.2	**Electric strength**		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	**Abnormal operating and fault conditions**		Pass
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	Pass
5.3.2	Motors	No motors provided.	N/A
5.3.3	Transformers	None provided	N/A
5.3.4	Functional insulation ..... :	Method C.	Pass
5.3.5	Electromechanical components	None provided.	N/A
5.3.6	Simulation of faults		Pass
5.3.7	Unattended equipment	No thermostats, temperature limiters, or thermal cut-outs provided.	N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions		Pass

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	No TNV circuits	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	No TNV circuits	N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) ..... :	No TNV circuits	-
	Current limiting method..... :		-

7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system	None provided.	N/A
7.3	Insulation between primary circuits and cable distribution systems		N/A
7.3.1	General		N/A
7.3.2	Voltage surge test		N/A
7.3.3	Impulse test		N/A

A	**Annex A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
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)..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

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)**		N/A
A.2.1	Samples, material ..... :		-
	Wall thickness (mm) ..... :		-
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
A.3.3	Compliance criterion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

B	**Annex B, MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)**		N/A
B.1	General requirements	No motors provided.	N/A
	Position ..... :		-
	Manufacturer ..... :		-
	Type ..... :		-
	Rated values ..... :		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		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		N/A
B.7.2	Alternative test procedure; test time (h) ..... :		N/A
B.7.3	Electric strength test		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V) ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict
C	**Annex C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		N/A
	Position ..... :	None provided.	-
	Manufacturer ..... :		-
	Type ..... :		-
	Rated values ..... :		-
	Method of protection ..... :		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings ..... :		N/A
D	**Annex D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS**		N/A
D.1	Measuring instrument		N/A
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)**		Pass

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Clause	Requirement + Test	Result - Remark	Verdict

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)**		N/A
	Metal used ..... :	No protective earthing.	-

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)**		N/A
K.1	Making and breaking capacity	None provided.	N/A
K.2	Thermostat reliability; operating voltage (V) ..... :		N/A
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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

L	**Annex L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)**		Pass
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	Passing data in loopback.	Pass

M	**Annex M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A	No ringing signals generated.	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

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

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Clause	Requirement + Test	Result - Remark	Verdict
P	**Annex P, NORMATIVE REFERENCES**		Pass
Q	**Annex Q, BIBLIOGRAPHY**		Pass
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)**		Pass
	..... :	IPX0	-
U	**Annex U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A
	..... :	No triple insulated wire provided.	-

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: list of critical components**				Pass
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity[1])
Nameplate	3M	7816	Adhesive backed label	UL969. Evaluated in the end product to IEC 60950-1	UL, UL
SELV Connectors	Various	Various	-	UL1977. Evaluated in the end product to IEC 60950-1	UL, UL
Printed wiring board	Various	Various	V-0 rated 130 C.	UL796. Evaluated in the end product to IEC 60950-1	UL, UL
LED	Vishay	TLMC310	575 nm	Evaluated in the end product to IEC 60950-1	-, -
[1]) an asterisk indicates a mark which assures the agreed level of surveillance					

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	**TABLE: electrical data (in normal conditions)**					N/A
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status
supplementary information:						

2.10.3 and 2.10.4	**TABLE: clearance and creepage distance measurements**					Pass
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
See Supplementary information.						
supplementary information:						
Method C of 5.3.4 for secondary circuits.						

2.10.5	**TABLE: distance through insulation measurements**			N/A
distance through insulation di at/of:	Up (V)	test voltage (V)	required di (mm)	di (mm)
supplementary information:				

4.5	**TABLE: temperature rise measurements**						Pass
	test voltage (V).....	3.3 V dc					—
	t1 (°C).....	-					—
	t2 (°C).....	86.5					—
maximum temperature T of part/at:		T (°C)					allowed Tmax (°C)
IC U10		92.4					130
IC U1		103.6					130
Inductor L8		94.4					130
Osc. Q3		90.2					130
IC U9		92.6					130

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Clause	Requirement + Test	Result - Remark	Verdict

IC U7	93.8					130
temperature T of winding:		R_1 (Ω)	R_2 (Ω)	T (°C)	allowed Tmax (°C)	insulation class
supplementary information:						
Maximum temperatures measured were recorded in the table above. The manufacturer's maximum recommended ambient (Tma) of 85° C was taken into consideration for compliance with Tmax as noted above.						

4.5.2	**TABLE: ball pressure test of thermoplastics**		N/A
	allowed impression diameter (mm) ..... :		—
part		test temperature (°C)	impression diameter (mm)
supplementary information:			
No parts at hazardous voltages provided.			

4.7	**TABLE: resistance to fire**			Pass
part	manufacturer of material	type of material	thickness(mm)	flammability class
supplementary information:				
See Critical Components Table				

5.2	**TABLE: electric strength tests, impulse tests and voltage surge tests**		N/A
test voltage applied between:		test voltage (V) a.c./d.c.	breakdown Yes / No
supplementary information:			

5.3	**TABLE: fault condition tests**		Pass
	ambient temperature (°C) ..... :	See Supplementary information.	—
	model/type of power supply ..... :	-	—

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Clause	Requirement + Test	Result - Remark	Verdict

	manufacturer of power supply ..... :				-	—
	rated markings of power supply ..... :				-	—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
supplementary information:						
Method C of 5.3.4 was used						

Enclosure

National Differences

Argentina*
Australia / New Zealand
Austria**
Belgium**
China*
Czech Republic**
Denmark
Finland
France**
Germany
Greece**
Group
Hungary*
India*
Ireland*
Israel*
Italy*
Japan*
Kenya*
Korea
Malaysia*
Netherlands**
Norway
Poland*
Portugal*
Singapore*
Slovakia**
Slovenia*
Spain*
Sweden
Switzerland**
USA / Canada
United Kingdom

* No National Differences Declared
** Only Group Differences

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SubClause	Difference + Test	Result - Remark	Verdict

Australia / New Zealand - Differences to IEC 60950-1:2001, First Edition			
1.2.12.11	POTENTIAL IGNITION SOURCE Possible fault which can starts a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15VA. Such a faulty contact or interruption in an electrical connection includes those which may occur in conductive patterns on printed boards. Note 201: An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE.		N/A
1.5.1	Add to the first paragraph: "or the relevant Australian / New Zealand Standard".		Pass
1.5.2	Add to the first and third dashed items after the words "IEC Component Standard": "or the relevant Australian / New Zealand Standard".		Pass
1.6.1	Add: AC power distribution systems classified as TT or IT are not allowed		N/A
1.7.12	Add to the first paragraph: All safety instructions and safety markings shall be in English.		Pass
3.2.5	Substitute for Table 3B: Sizes of Conductors --- Rated Current of Equipment (A) / Nominal cross-sectional area (mm²) --- 0.2 <= 3 — 0.5* 3 <= 7.5 — 0.75 7.5 <= 10 — (0.75) 1.00 10 <= 16 — (1,0) 1.5 16 <= 25 — 2.5 25 <= 32 — 4 32 <= 40 — 6 40 <= 63 — 10 63 <= 80 — 16 80 <= 100 — 25 100 <= 125 — 35 125 <= 160 — 50 160 <= 190 — 70 190 <= 230 — 95 230 <= 260 — 120		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	260 <= 300 150 300 <= 340 185 340 <= 400 240 400 <= 460 300 --- * This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord or cord guard, enters the appliance, and the entry to the plug, does not exceed 2 m (0.5 mm² three-core supply flexible cords are not permitted; see Note 2 to Table 2.17 of AS/NZS 3191).		
4.3.6	Replace the third paragraph: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112, shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.		N/A
4.3.13	For the purpose of this standard compliance with AS/NZS 2211.1 is deemed to be compliance with IEC60825.1	Equipment does not generate ionizing radiation or ultarviolet light. Device employs low power indicating LED's only. LED's used for indicating purposes are Class I devices and operate in the range of 400-710 nm wavelength.	Pass
4.7	Add after the clause: For alternative resistance to fire tests, refer to Annex YY.		Pass
6.2.1	Replace item c) with: An SELV circuit, a TNV-2 circuit or a Limited Current Circuit provided for connection of other equipment. The requirement for separation applies whether or not this circuit is accessible.		N/A
6.2.2	Replace the first paragraph by: In Australia (not in New Zealand), compliance with 6.2.2 is checked by the tests of both 6.2.2.1 and 6.2.2.2.		N/A
6.2.2.1	Replace 6.2.2.1 with: In Australia (not in New Zealand), the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator of Annex N for 10/700µs impulses. The interval between successive impulses is 60 s and the initial voltage, Uc is: - for 6.2.1a): 7.0 kV for hand-held telephones		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	and for headsets; 2.5 kV for other equipment; for 6.2.1b) and 6.2.1c): 1.5 kV. NOTE 1 - The 7 kV impulse is to simulate lightning surges on typical rural and semi-rural network lines. NOTE 2 - The value of 2.5 kV for 6.2.1a) was chosen to ensure adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.		
6.2.2.2	Replace the first and second paragraphs of 6.2.2.2 with: In Australia (not New Zealand), the electrical separation is subjected to an electric strength test according to 5.2.2. The a.c. test voltage is: - for 6.2.1a) 3 kV - for 6.2.1b) and 6.2.1c) 1.5 kV NOTE 1 - Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 2 - The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
Denmark - Differences to IEC 60950-1:2001, First Edition			
1.2.4.1	Certain types of Class I appliances (see sub-clause 3.2.1.1) may be provided with plug not establishing earthing continuity when inserted into Danish socket-outlets.	Class III device. No cord provided.	N/A
1.7.2	Supply cords of Class I equipment, which is delivered without a plug, must be provided with a visible tag with the following text: "Vigtigt ! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket (IEC 417, No. 5019) eller (IEC 417, No. 5017)." If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: "For tilslutning af de øvrige ledere, se medfølgende installationsvejledning".	Class III device. No cord provided.	N/A
1.7.5	Socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For stationary equipment, the socket0outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.	Class III equipment.	N/A
1.7.5	Class II equipment shall not be fitted with socket-outlets for providing power to other equipment.	Class III equipment.	N/A
3.2.1.1	Supply cord of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. Class I equipment provided with socket-outlets with earth contact or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a rated current exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current	Class III device. No cord provided.	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	Regulations, Section 107-2-D1 or EN 60309-2.		

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

Finland - Differences to IEC 60950-1:2001, First Edition			
1.7.2	Class I Pluggable Equipment Type A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan"	Class III equipment.	N/A
6.1.2.1	Add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0.4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition: - passes the tests and inspection criteria of IEC 60950-1, 2.10.8 with an electric strength test of 1.5 kV multiplied by 1.6 (the electric strength test of 2.10.7 shall be performed using 1.5 kV), and - is subject to routing testing for electric strength during manufacturing, using a test voltage of 1.5 kV. It is permitted to bridge this insulation with a capacitor complying with IEC 60384-14:1993, subclass Y2. A capacitor classified Y3 according to IEC 60384-14:1993, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by IEC 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2.5 kV defined in EN	No TNV circuits	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	60950-1, subclause 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in IEC 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in IEC 60384-14, in the sequence of tests as described in IEC 60384-14.		
6.1.2.2	The exclusions are applicable for permanently connected equipment and pluggable equipment type B and equipment intended to be used in a restricted access location where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected protective earthing conductor and is provided with instructions for the installation of that conductor by a service person.	No TNV circuits	N/A
7.1	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term telecommunication network in 6.1.2 being replaced by the term cable distribution system.	None provided.	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
Germany - Differences to IEC 60950-1:2001, First Edition			
1.7.12	(Gesetz uber technische Arbeitsmittel (Garatesicherheitsgesetz) [Law of technical labour equipment {Equipment safety law}], of 23rd October 1992, Article 3, 3rd paragraph, 2nd sentence, together with the "Allgemeine Verwaltungsvorschrift zur Durchfuhrung des Zweiten Abschritts des Geratesicherheitsgesetzes" [General administrative regulation on the execution of the Second Section of the Equipment safety law], of 10th January 1996, article 2, the paragraph, item 2). Directions for use with rules to prevent certain hazards for (among others) maintenance of the technical labour equipment, also for imported technical labour equipment shall be written in the German language. NOTE: Of this requirement, rules for use even only by service personnel are not exempted.	Evaluated English only. Manufacturer assumes responsibility of providing manuals and markings in the official language of the country in which the equipment is installed. See MiscellaneousEnclosure for manufacturer's Letter of Assurance.	Pass
H	(Regulation on protection against hazards by X-ray,of 8th January 1987, Article 5 [operation of X-ray emission source], clauses 1 to 4) a) A licence is required by those who operate an X-ray emission source. b) A licence in accordance with Cl. 1 is not required by those who operate an X-ray emission source on which the electron acceleration voltage does not exceed 20 kV if 1) the local dose rate at a distance of 0,1 m from the surface does not exceed 1 µSv/h and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated ii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer. c) A licence in accordance with Cl. 1 is also not required by persons who operate an X-ray emission source on which the electron acceleration voltage exceeds 20 kV if 1) the X-ray emission source has been granted a type approval and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated ii) the device stipulated by the manufacturer or importer guarantees that the maximum	None provided.	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	permissible local dose rate in accordance with the type approval is not exceeded and iii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer. d) Furthermore, a licence in accordance with Cl. 1 is also not required by persons who operate X-ray emission sources on which the electron acceleration voltage does not exceed 30 kV if 1) the X-rays are generated only by intrinsically safe CRTs complying with Enclosure III, No. 6, 2) the values stipulated in accordance with Enclosure III, No. 6.2 are limited by technical measures and specified in the device and 3) it is adequately indicated on the X-ray emission source that the X-rays generated are adequately screened by the intrinsically safe CRT.		

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
Group - Differences to IEC 60950-1:2001, First Edition			
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in primary circuits, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	No primary circuits.	N/A
2.7.2	Void		N/A
2.10.2	Replace the first line "(see also 1.4.7)" by "(see also 1.4.8)".		Pass
3.2.3	Delete NOTE 1, and in table 3A delete the conduit sizes in parentheses.	Class III device. No cord provided.	N/A
3.2.5	Replace: "60245 IEC 53" by "H05 RR-F" "60227 IEC 52" by "H03 VV-F or H03 VVH2-F" "60227 IEC 53" by "H05 VV-F or H05 VVH2-F" In table 3B, replace the first four lines by the following: Up to and including 6 0.75 [1] Over 6 up to and including 10 0.75 [2] 1.0 Over 10 up to and including 16 1.0 [3] 1.5 In the Conditions applicable to table 3B, delete the	None provided.	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	words "in some countries" in condition [1]. In Note 1, delete the second sentence.		
3.3.4	In table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: "Over 10 up to and including 16 1.5 to 2.5 1.5 to by 4" Delete the fifth line: conductor sizes for 13 to 16A.	Class III device. No cord provided.	N/A
4.3.13.6	Add the following note: NOTE - Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this recommendation are currently under development.		N/A
General	Delete all the "country" notes in the reference document according to the following list: 1.5.1 Note 2 1.5.8 Note 2 1.6.1 Note 1.7.2 Note 4 1.7.12 Note 2 2.1 Note 2.2.3 Note 2.2.4 Note 2.3.2 Note 2, 7, 8 2.3.3 Note 1, 2 2.3.4 Note 2,3 2.7.1 Note 2.10.3.1 Note 4 3.2.1.1 Note 3.2.3 Note 1, 2 3.2.5.1 Note 2 4.3.6 Note 1,2 4.7.2.2 Note 4.7.3.1 Note 2 6.1.2.1 Note 6.1.2.2 Note 6.2.2 Note 6.2.2.1 Note 2 6.2.2.2 Note 7 Note 4 7.1 Note G2.1 Note 1, 2 H Note 2		N/A
H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the operator access area, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see note). Account is taken of the background level. Replace the notes as follows: NOTE - These values appear in Directive 96/29/Euratom. Delete Note 2.	No CRT provided.	N/A
P	Replace the text of this annex by: See annex ZA		Pass
Q	Replace the title of IEC 61032 by "Protection of persons and equipment by enclosures - Probes for verification". Add the following notes for the standards indicated: IEC 60127 NOTE Harmonized as EN 60127		Pass

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	(Series) (not modified) IEC 60269-2-1 NOTE Harmonized as HD 630.2.1 S4:2000 (modified) IEC 60529 NOTE Harmonized as EN 60529:1991 (not modified) IEC 61032 NOTE Harmonized as EN 61032:1998 (not modified) IEC 61140 NOTE Harmonized as EN 61140:2001 (not modified) ITU-T Recommendation K.31 NOTE in Europe, the suggested document is EN 50083-1.		

Korea - Differences to IEC 60950-1:2001, First Edition			
1.5.101	Addition: Plugs for the connection of the apparatus to the supply mains comply with the Korean requirement (KSC 8305).		N/A
7	Addition: EMC - The apparatus shall complies with the relevant CISPR standards.	See Miscellaneous Enclosure for manufacturer's letter of assurance.	Pass

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
Norway - Differences to IEC 60950-1:2001, First Edition			
1.5.8	Due to the IT power system used (see annex V, figure V.7), capacitors are required to be rated for the applicable phase-to-phase voltage (230 V).	Class III equipment.	N/A
1.7.2	Class I Pluggable Equipment Type A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Apparatet må tilkoples jordet stikkontakt"	Class III equipment.	N/A
2.2.4	Requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	Class III equipment.	Pass
2.3.2	Requirements according to this annex, 6.1.2.1 apply.	No TNV circuits provided	N/A
2.3.3	Requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	No TNV circuits provided	N/A
2.3.4	Requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	Class III equipment. No TNV circuits provided	N/A
2.10.3.1	Due to the IT power distribution system used (see annex V, figure V.7), the A.C. mains supply voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault.	Class III equipment.	N/A
6.1.2.1	Add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0.4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with	No TNV circuits	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	the compliance clause below and in addition: - passes the tests and inspection criteria of IEC 60950-1, 2.10.8 with an electric strength test of 1.5 kV multiplied by 1.6 (the electric strength test of 2.10.7 shall be performed using 1.5 kV), and - is subject to routing testing for electric strength during manufacturing, using a test voltage of 1.5 kV. It is permitted to bridge this insulation with a capacitor complying with IEC 60384-14:1993, subclass Y2. A capacitor classified Y3 according to IEC 60384-14:1993, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by IEC 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1, subclause 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in IEC 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in IEC 60384-14, in the sequence of tests as described in IEC 60384-14.		
6.1.2.2	The exclusions are applicable for permanently connected equipment and pluggable equipment type B and equipment intended to be used in a restricted access location where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected protective earthing conductor and is provided with instructions for the installation of that conductor by a service person.	No TNV circuits	N/A
7.1	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term telecommunication network in 6.1.2 being replaced by the term cable distribution system.	None provided.	N/A
G.2.1	Due to the IT power distribution system used (see annex V, figure V.7), the A.C. mains supply voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault.	Class III equipment.	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

Sweden - Differences to IEC 60950-1:2001, First Edition			
1.5.1	(Ordinance (1990:944)) Add NOTE: Switches containing mercury such as thermostats, relays and level controllers are not allowed.	No mercury employed.	N/A
1.7.2	Class I Pluggable Equipment Type A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Apparaten skall anslutas till jordat uttag"	Class III equipment.	N/A
6.1.2.1	Add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0.4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition: - passes the tests and inspection criteria of IEC 60950-1, 2.10.8 with an electric strength test of 1.5 kV multiplied by 1.6 (the electric strength test of 2.10.7 shall be performed using 1.5 kV), and - is subject to routing testing for electric strength during manufacturing, using a test voltage of 1.5 kV. It is permitted to bridge this insulation with a capacitor complying with IEC 60384-14:1993, subclass Y2. A capacitor classified Y3 according to IEC 60384-14:1993, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by	No TNV circuits	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	having a capacitor classified Y3 as defined by IEC 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1, subclause 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in IEC 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in IEC 60384-14, in the sequence of tests as described in IEC 60384-14.		
6.1.2.2	The exclusions are applicable for permanently connected equipment and pluggable equipment type B and equipment intended to be used in a restricted access location where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected protective earthing conductor and is provided with instructions for the installation of that conductor by a service person.	No TNV circuits	N/A
7.1	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term telecommunication network in 6.1.2 being replaced by the term cable distribution system.	None provided.	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2001, First Edition			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.		Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		Pass
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20 A.		N/A
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.		Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.		Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		N/A
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	circuit classification requirements (e.g., TNV-2)		
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.	No lamps provided.	N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor.	Class III equipment.	N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.	Class III equipment.	N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.	Class III equipment.	N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.	Class III equipment	N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1	Screw shell of Edison-base lampholder tied to the neutral conductor.	None provided.	N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.	No TNV circuits.	N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.	No TNV circuits provided	N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.	No TNV circuits provided	N/A
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.	No TNV circuits provided	N/A
2.3.2	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and routine testing.	No TNV circuits provided	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
2.3.2	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.	No TNV circuits provided	N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.	None provided.	N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.3.3	For Pluggable Equipment Type A, if neither a) or b) are applicable, the current rating of the circuit is taken as 20 A.		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.		N/A
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.4	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.4 and Annex U.		N/A
3.1.1	Permissible combinations of internal wiring/external		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	cable sizes for overcurrent and short circuit protection.		
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		Pass
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		N/A
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection.	Class III equipment. No cord provided.	N/A
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.	No laser devices provided.	N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.	No CRT provided.	N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	Part 1.		
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm²) and not less than 152 mm in length for connection of field installed wiring.		N/A
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5 m unless shorter length used when intended for a special installation.		N/A
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other then LPS or Class 2 circuits also comply with 3.3.		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than those specified in 3.3 if wiring is reliably separated.		N/A
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm²) or smaller conductor if provided with upturned lugs, cupped		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	washer or equivalent retention.		
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.	Class III device.	N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.		N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).		N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.	Does not produce x-radiation.	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
4.3.13.5	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370).	The product covered by this report employs indicating LEDs only. The product was not evaluated to IEC 60825-1. See Table 1.5.1 and Miscellaneous Enclosure for manufacturer's data sheets showing emission measurements.	Pass
4.7	Automated information storage equipment intended to contain more than 0.76 m^3 of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m^2 or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.		N/A
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.	Class III equipment.	N/A
5.3.6	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		Pass
5.3.6	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.8.1	Test interrupted by opening of wire or trace subject to certain conditions.	Equipment is not direct plug-in.	N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications	Class III equipment. No TNV circuits	N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	network.		
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.	Class III equipment. No TNV circuits	N/A
6.2.1	Special requirements for enameled wiring used as electrical separation provided between parts connected to telecommunication network and telecommunication circuitry intentionally isolated from network.	No TNV circuits.	N/A
6.2.1	Digital line termination equipment (e.g., NCTE) subject to separation requirements.	No TNV circuits.	N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.	None provided.	N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.	Class III device.	N/A
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).	No TNV circuits.	N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
6.5	Acoustic pressure from an ear piece less than 136 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets, and 121 dBA for insert earphones, for long duration disturbances.	Class III equipment.	N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.	No TNV circuits.	N/A
NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions.		N/A
NAF	Household/Home Office Document Shredders		N/A
NAF.1.7	Markings and instructions alert the user to key safety considerations related to use of shredders, including not intended to be used by children, avoid touching document feed opening, avoid clothes and hair entanglement, and avoid aerosol products.		N/A
NAF.2.8.3	Safety interlock cannot be inadvertently activated by the articulated accessibility probe (figure NAF.1).		N/A
NAF.3.4	Provided with an isolating switch complying with 3.4.2, including 3 mm contact gap, with appropriate markings associated with the switch.		N/A
NAF.4.4	Hazardous moving parts are not accessible to the user, as determined using the articulated accessibility probe (figure NAF.1) and the accessibility probe/wedge (figures NAF.2/NAF.3).		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

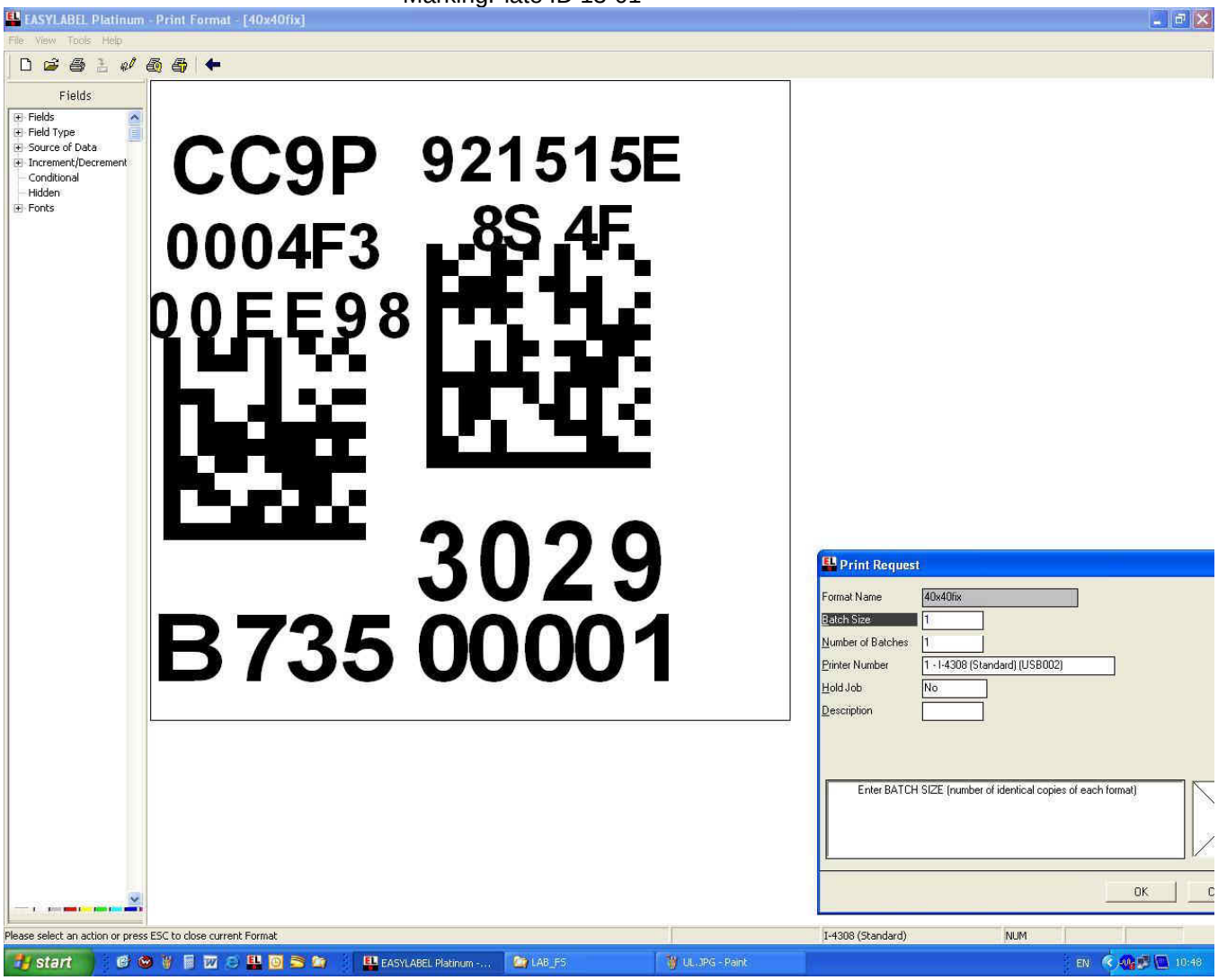
United Kingdom - Differences to IEC 60950-1:2001, First Edition			
2.6.3.3	The current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, protective device shall be included as integral parts of the direct plug-in equipment.	No primary circuits.	N/A
3.2.1.1	Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a "standard plug" in accordance with Statutory Instrument 1786: 1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE: "Standard plug" is defined in SI 1786: 1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	Class III equipment. No supply cord provided.	N/A
3.2.5.1	A power supply cord with conductor of 1.25 mm² is allowed for equipment with a rated current over 10A and up to and including 13A.	Class III equipment. No supply cord provided.	N/A
3.3.4	The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current of over 10 A up to and including 13 A is 1.25 mm² to 1.5 mm² nominal cross-sectional area.	Class III equipment. No supply cord provided.	N/A
4.3.6	The torque test is performed using a socket outlet complying with BS 1363 and the plug part of Direct Plug-In Equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C.	No socket-outlets provided.	N/A

Enclosure

Marking Plate

Supplement Id	Description
13-01	Marking Plate label

MarkingPlate ID 13-01

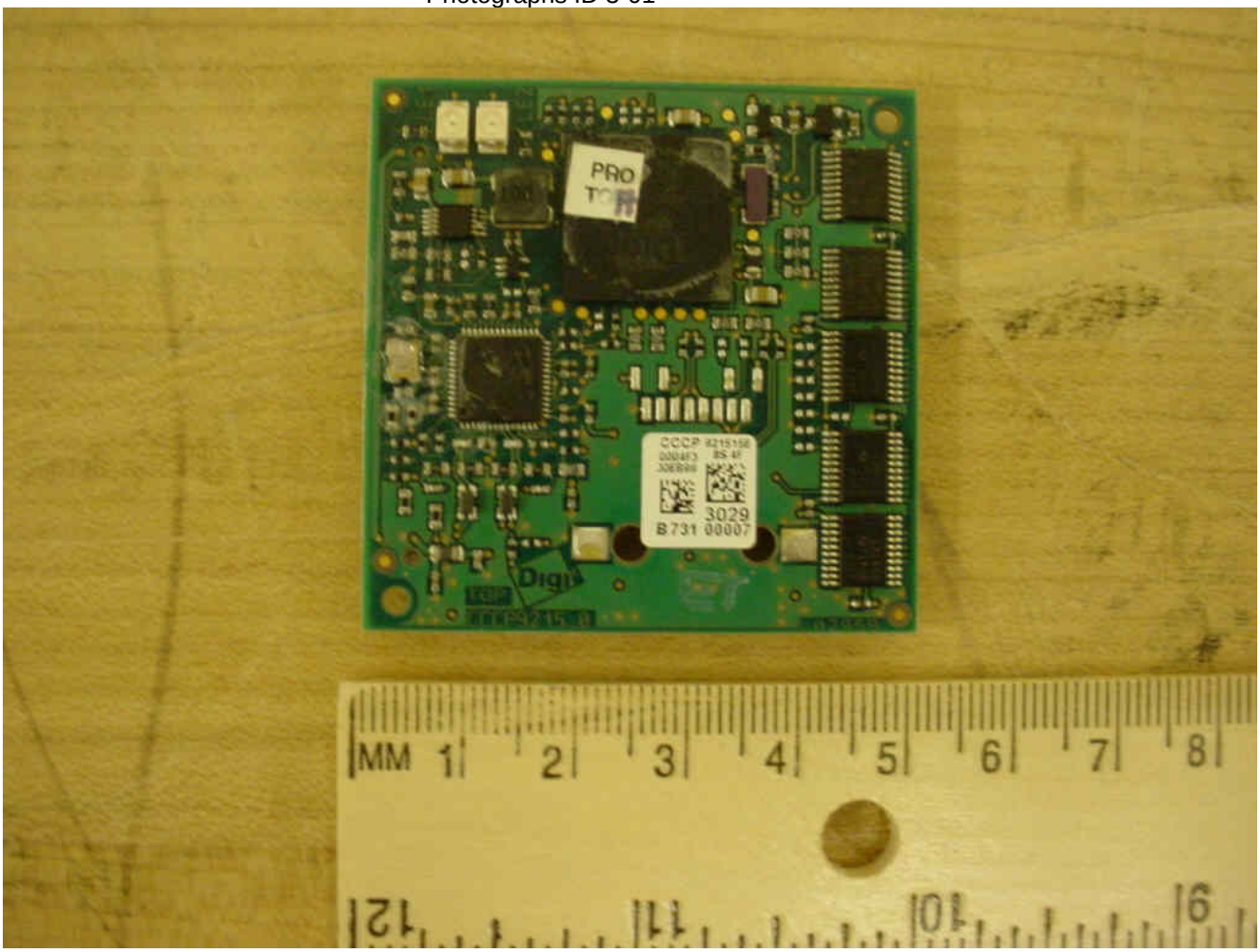


Enclosure

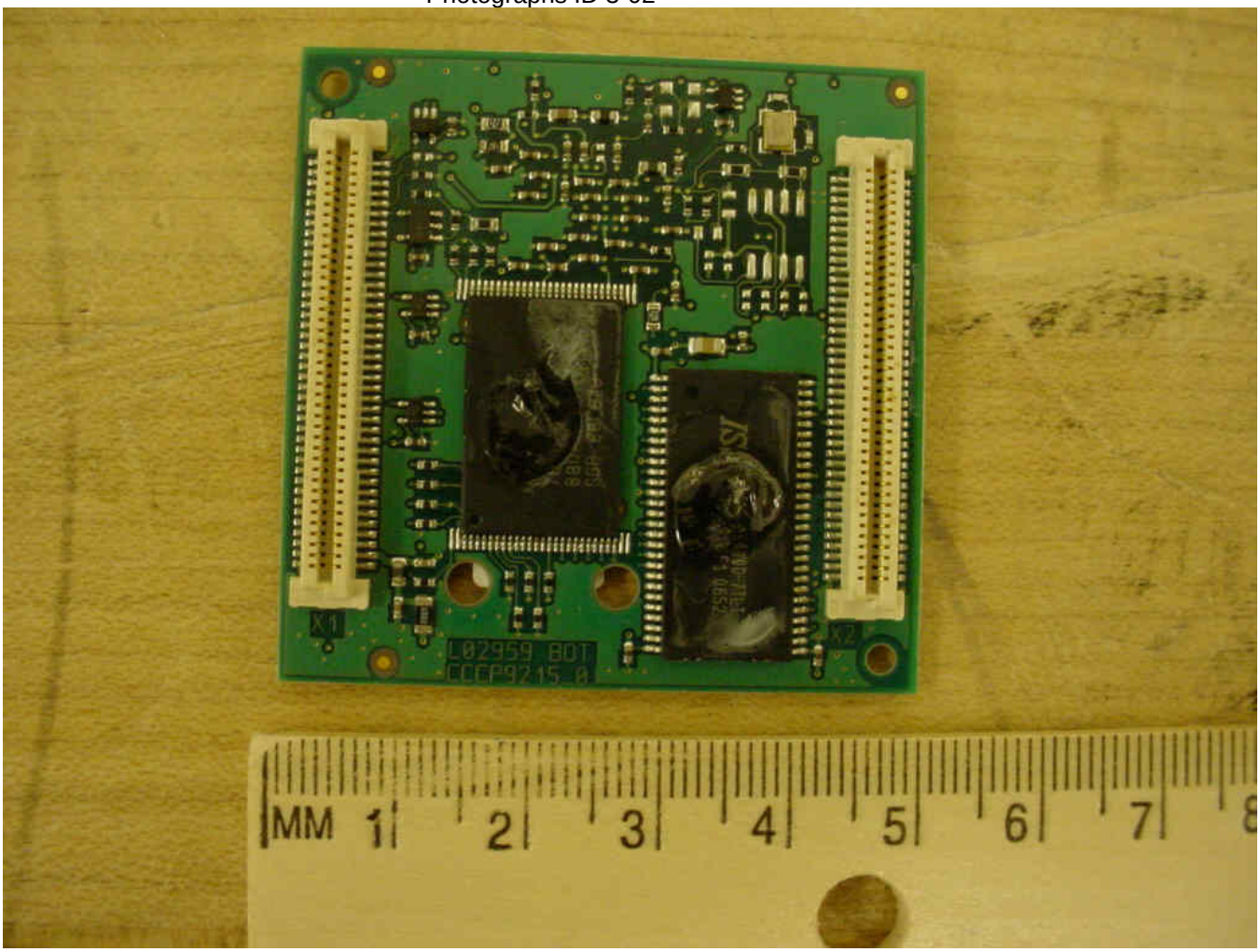
Photographs

Supplement Id	Description
3-01	Top
3-02	Bottom

Photographs ID 3-01



Photographs ID 3-02



Enclosure

Miscellaneous

Supplement Id	Description
7-01	Letter of Assurance
7-05	LED Specs

Misc ID 7-01

Digi International
11001 Bren Road East
Minnetonka, MN 55343

Ph. (952) 912-3444
Fax (952) 912-4955

August 29th, 2007

To: (Erick Salvador)
Underwriters Laboratories, Inc.

Fax: (631) 736-1389

Subject: Letter of Assurance - National Differences

Dear (Erick Salvador):

This document confirms that **Digi International** was advised about the following items:

Lithium Batteries - Equipment for use in Switzerland must comply with Annex 4.10 of the latest edition of Swiss Ordinance SR 814.013 - relative to the disposal, transport of equipment containing lithium batteries, or any other applicable requirements in the said Ordinance relative to lithium batteries.

Markings and Safety Instructions - Safety instructions and markings in the language suitable for countries listed in the attached report will be provided at the time the CB Report is submitted to any Recognized NCBs to obtain Certification on the National level.

Power Supply Cords and Plugs - All Power Cord and plug accessories will be certified and suitable for use in the particular countries when provided with the product. The recognized NCB may require certification.

EMC Test Report -Where specified in the National Difference, an EMC Test Report or Declaration of Conformity will accompany this product when sent to the Recognized NCB who requires EMC testing.

Sincerely,

Trish Huynh
Digi International Inc
11001 Bren Rd East
Minnetonka, MN 55343
Phone (952) 912-3387
Fax: (952) 912-4955

Misc ID 7-05

TLMC310.

Vishay Semiconductors

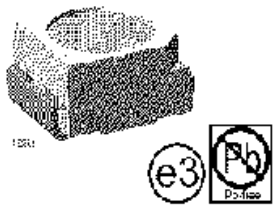
Low Current SMD LED

Description

These new devices have been designed to meet the increasing demand for low current SMD LEDs.

The package of the TLMC310. is the PLCC-2 (equivalent to a size B tantalum capacitor).

It consists of a lead frame which is embedded in a white thermoplast. The reflector inside this package is filled up with clear epoxy.



Features

- SMD - LED with exceptional brightness
- Compatible with automatic placement equipment
- EIA and ICE standard package
- Compatible with infrared, vapor phase and wave solder processes according to CECC
- Available in 8 mm tape
- Low profile package
- Non-diffused lens: excellent for coupling to light pipes and backlighting
- Very low power consumption
- Luminous intensity ratio in one packaging unit $I_{V\,max}/I_{V\,min} \leq 2.0$
- Lead-free device

Applications

Automotive: Backlighting in dashboards and switches

Telecommunication: Indicator and backlighting in telephone and fax

Indicator and backlight for audio and video equipment

Indicator and backlight for battery driven equipment

Small indicator for outdoor applications

Indicator and backlight in office equipment

Flat backlight for LCDs, switches and symbols

General use

Parts Table

Part	Color, Luminous Intensity	Angle of Half Intensity (±φ)	Technology
TLMC3100	Green, $I_V \geq 63$ mcd	60°	GaP on GaP
TLMC3101	Green, $I_V \geq 1$ mcd	60°	GaP on GaP

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified
TLMC310.

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	6	V
DC Forward current		I_F	7	mA
Surge forward current	$t_p \leq 10\ \mu s$	I_{FSM}	75	mA
Power dissipation	$T_{amb} \leq 85$ °C	P_V	20	mW
Junction temperature		T_j	100	°C
Operating temperature range		T_{amb}	-40 to +100	°C

Misc ID 7-05

TLMC310.

Vishay Semiconductors

Parameter	Test condition	Symbol	Value	Unit
Storage temperature range		T_{stg}	-55 to +100	°C
Soldering temperature	t ≤ 5 s	T_{sd}	260	°C
Thermal resistance junction/ ambient	mounted on PC board (pad size > 16 mm²)	R_{thJA}	500	K/W

Optical and Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Green

TLMC310.

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Luminous intensity [2]	I_F = 2 mA	TLMC3100	I_V	0.63	1.6		mcd
		TLMC3101	I_V	1.0	1.6		mcd
Dominant wavelength	I_F = 2 mA		λ_d	563		575	nm
Peak wavelength	I_F = 2 mA		λ_p		565		nm
Angle of half intensity	I_F = 2 mA		φ		± 50		deg
Forward voltage	I_F = 2 mA		V_F		1.9	2.4	V
Reverse voltage	I_R = 10 µA		V_R	6	15		V
Junction capacitance	V_R = 0, f = 1 MHz		C_j		50		pF

[2] In one packing unit $I_{Vmax}/I_{Vmin} \leq 2.0$

Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)

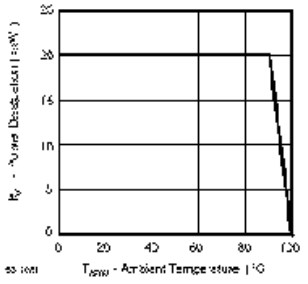


Figure 1. Power Dissipation vs. Ambient Temperature

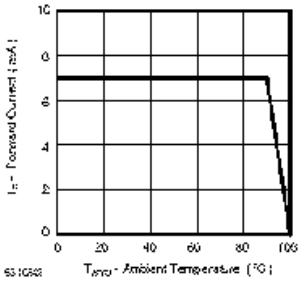


Figure 2. Forward Current vs. Ambient Temperature

Misc ID 7-05

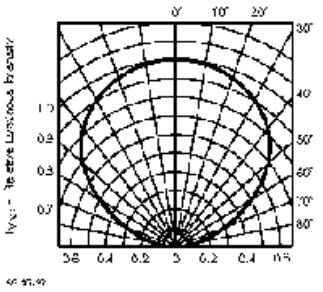


Figure 3. Rel. Luminous Intensity vs. Angular Displacement

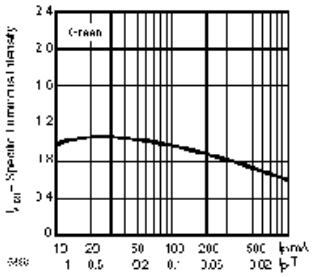


Figure 5. Rel. Lumin. Intensity vs. Forw. Current/Duty Cycle

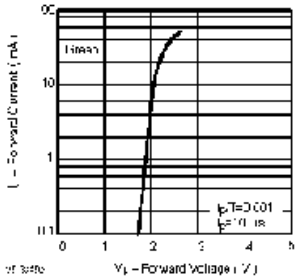


Figure 4. Forward Current vs. Forward Voltage

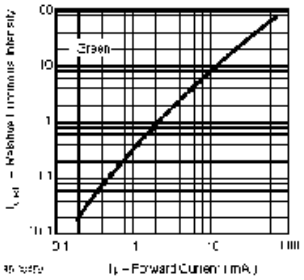


Figure 7. Relative Luminous Intensity vs. Forward Current

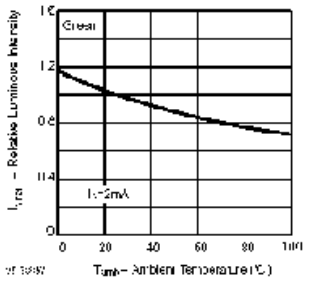


Figure 6. Rel. Luminous Intensity vs. Ambient Temperature

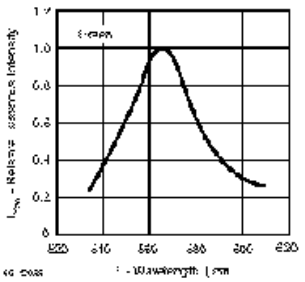


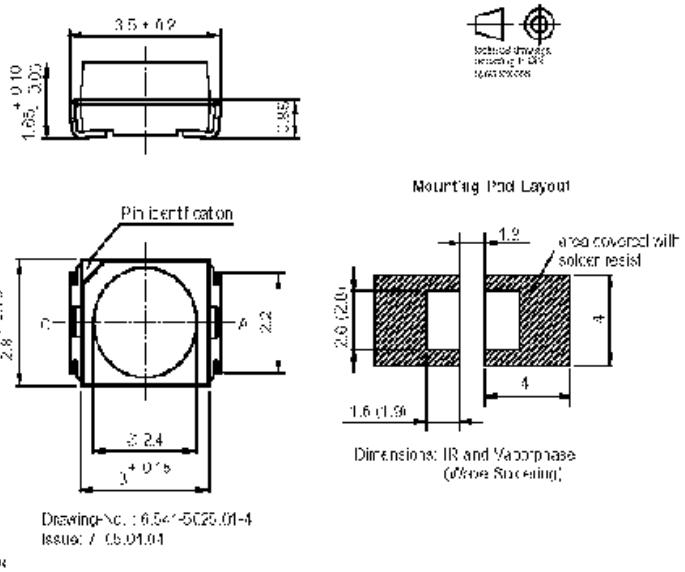
Figure 8. Relative Intensity vs. Wavelength

Misc ID 7-05

TLMC310.

Vishay Semiconductors

Package Dimensions in mm



Drawing-No.: 6.541-5025.01-4
Issue: 7; 05.01.04

Misc ID 7-05

Ozone Depleting Substances Policy Statement

It s the policy of **Vishay Semiconductor GmbH** to

1. Meet all present and future national and international statutory requirements
2. Regularly and continuously improve the performance of our products, processes, distribution and operatingsyste ms with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It s particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montrea Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use with n the next ten years. Various nationa and internat onal initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances

Vishay Semiconductor GmbH, P.O.B. 3535, D-74025 Heilbronn, Germany
Telephone: 49 (0)7131 67 2831, Fax number: 49 (0)7131 67 2423