



Test Report issued under the responsibility of:



TEST REPORT
IEC 60950-22
Information technology equipment – Safety –
Part 22: Equipment to be installed outdoors

Report Number..... : E324690-4790059780-1-Original

Date of issue..... : 2021-09-14

Total number of pages ..... : 24

Name of Testing Laboratory preparing the Report ..... : Underwriters Laboratories Taiwan Co., Ltd.
260 Da-Yeh Road, TW-112 Peitou, Taipei City, Chinese Taipei

Applicant's name ..... : VIVOTEK INC

Address..... : 6TH FL, 192 LIEN CHENG RD, CHUNG HO DISTRICT, NEW
TAIPEI, 235 TAIWAN

Test specification:

Standard ..... : IEC 60950-22:2016 for use in conjunction with
IEC 60950-1:2005, AMD1:2009, AMD2:2013

Test procedure ..... : CB Scheme

Non-standard test method ..... : N/A

Test Report Form No. .... : IEC60950\_22C

Test Report Form(s) Originator .... : The Standards Institution of Israel

Master TRF ..... : Dated 2019-09-29

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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.

General disclaimer:

The test results presented in this report relate only to the object tested.

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<b>Test item description</b> ..... :	Network Camera
<b>Trade Mark(s)</b> .....	VIVOTEK
<b>Original Product/Equipment Manufacturer</b> .....	VIVOTEK INC 6TH FL, 192 LIEN CHENG RD, CHUNG HO DISTRICT, NEW TAIPEI, 235 TAIWAN
<b>Branding Manufacturer(s)</b> .....	
<b>Model/Type reference</b> .....	FD9389-EHV-v2, FD9389-EHTV-v2
<b>Ratings</b> .....	(Optional) PoE 37-57Vdc, 0.33-0.21A


Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	<b>CB Testing Laboratory:</b>	Underwriters Laboratories Taiwan Co., Ltd.
<b>Testing location/ address.....:</b>		260 Da-Yeh Road, TW-112 Peitou, Taipei City, Chinese Taipei
<b>Tested by (name, function, signature).....:</b>		Eddie Chen Project Handler 
<b>Approved by (name, function, signature)....:</b>		Stanley Tsai Reviewer 
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 1:</b>	
<b>Testing location/ address.....:</b>		
<b>Tested by (name, function, signature).....:</b>		
<b>Approved by (name, function, signature)....:</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 2:</b>	
<b>Testing location/ address.....:</b>		
<b>Tested by (name + signature).....:</b>		
<b>Witnessed by (name, function, signature) .:</b>		
<b>Approved by (name, function, signature)....:</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 3:</b>	
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 4:</b>	
<b>Testing location/ address.....:</b>		
<b>Tested by (name, function, signature).....:</b>		
<b>Witnessed by (name, function, signature) .:</b>		
<b>Approved by (name, function, signature)....:</b>		
<b>Supervised by (name, function, signature) :</b>		


<p><b>List of Attachments (including a total number of pages in each attachment):</b> National Differences (7 pages)</p>	
<p><b>Summary of testing:</b> - The results reported relate only to the items tested. - The following tests were conducted according to CAN/CSA C22.2 NO. 60950-22-17 Edition 2, Revision Date 2017/03/31, UL 60950-22 Edition 2, Revision Date 2017/03/31, and IEC 60950-22 Edition 2, Issue Date 2016-01-01.</p>	
<p><b>Tests performed (name of test and test clause):</b> 4.2.5, 4.2.1, PART 22 10.2 – IMPACT TEST PART 22, 9.1, ANNEX B – WATER SPRAY TEST PART 22, 8.5, ANNEX D.2 – TENSILE STRENGTH AND ELONGATION</p>	<p><b>Testing location:</b> Underwriters Laboratories Taiwan Co., Ltd. / 260 Da-Yeh Road, TW-112 Peitou Taipei City, Chinese Taipei</p>
<p><b>Summary of compliance with National Differences (List of countries addressed):</b>  Countries outside the CB Scheme membership may also accept this report. List of countries addressed: CA, US, EU.</p> <p><input checked="" type="checkbox"/> The product fulfils the requirements of <u>EN 60950-22:2017</u> .  <input checked="" type="checkbox"/> The product fulfils the requirements of <u>UL 60950-22 Edition 2</u> .  <input checked="" type="checkbox"/> The product fulfils the requirements of <u>CAN/CSA C22.2 NO. 60950-22-17 Edition 2</u> .</p>	
<p><b>Statement concerning the uncertainty of the measurement systems used for the tests</b> (may be required by the product standard or client)</p> <p><input type="checkbox"/> Internal procedure used for type testing through which traceability of the measuring uncertainty has been established: <b>Procedure number, issue date and title:</b></p> <p>Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.</p> <p><input checked="" type="checkbox"/> <b>Statement not required by the standard used for type testing</b></p> <p>(Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)</p>	


Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

**FD9389-EHV-v2**  
Network Camera

**MAC:XXXXXXXXXXXX**  


**EAN:4710469352553**  


**P/N:XXXXXXXXXX**  


**VIVOTEK**


**CE** **FC** **RoHS** **IEC** **EAC**


IS 13252 (Part 1)/ IEC 60950-1  
R-41089311  
www.bis.gov.in


PoE 37-57V=0.33-0.21A

Brand Owner Add.: 6F., No.192, Lien-Cheng Rd., Chung-Ho, New Taipei City, 235, Taiwan, R.O.C.  
M.F.G. Add.:5F., 5F.-1, 5F.-2, No.168, LianCheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan, R.O.C.  
www.vivotek.com Made in Taiwan **XXX**

**FD9389-EHTV-v2**  
Network Camera

**MAC:XXXXXXXXXXXX**  


**EAN:4710469352560**  


**P/N:XXXXXXXXXX**  


**VIVOTEK**

**CE** **FC** **RoHS** **IEC** **EAC**

IS 13252 (Part 1)/ IEC 60950-1  
R-41089311  
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Brand Owner Add.: 6F., No.192, Lien-Cheng Rd., Chung-Ho, New Taipei City, 235, Taiwan, R.O.C.  
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www.vivotek.com Made in Taiwan **XXX**

<b>Test item particulars</b> .....	See below
<b>Classification of installation and use</b> .....	Stationary
<b>Supply Connection</b> .....	not directly connect to the mains
<b>Temperature range</b> .....	-40 to 50 °C
<b>Overvoltage category</b> .....	<input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV
<b>IP protection class</b> .....	IPX0
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing</b> ..... :	
<b>Date of receipt of test item</b> .....	: 2018-06-25, 2019-08-13
<b>Date (s) of performance of tests</b> .....	: 2018-07-09, 2019-08-15 to 2019-08-16
<b>General remarks:</b>	
"(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 <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	

**Manufacturer's Declaration per sub-clause 4.2.5 of IEC60950:**

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....

- Yes**  
 **Not applicable**

**When differences exist; they shall be identified in the General product information section.**

**Name and address of factory (ies)..... :** VIVOTEK INC

5TH FL, 168 LIEN CHENG RD CHUNG HO  
 DISTRICT NEW TAIPEI, 235 TAIWAN

**General product information and other remarks:****Report Summary:**

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

**Product Description:**

The equipment is a Class III Network Camera, intended for used with information technology equipment and installed outdoors.

**Model Difference:**

Model FD9389-EHV-v2 is similar to model FD9389-EHTV-v2 except for lens type. Model FD9389-EHV-v2 is with fixed lens, and model FD9389-EHTV-v2 is with remote lens.

<b>4</b>	<b>CONDITIONS FOR OUTDOOR EQUIPMENT</b>		P
<b>4.1</b>	<b>Ambient air temperature</b>		P
	Suitability for use at any temperature in the range specified by the manufacturer. If not specified by the manufacturer, the range is taken as -33°C to +40°C	-40 to 50 °C The worst range "-50 to 55 °C" was taken, requested by the manufacturer.	P
<b>4.2</b>	<b>Mains supply</b>		N/A
4.2.1	General	Not directly connected to mains.	N/A
	Suitability for the highest mains transient voltage expected in the installation location		N/A
	Components within outdoor equipment that reduce mains transient voltage or the prospective fault current comply with IEC 61643-series		N/A
4.2.2	Mains transient voltage on AC mains supply		N/A
4.2.3	Mains transient voltage on DC mains supply		N/A
<b>4.3</b>	<b>Rise of earth potential</b>		N/A
	Special earthing conditions	Class III equipment	N/A
	Reference to installation instructions .....		N/A
<b>5</b>	<b>MARKING AND INSTRUCTIONS</b>		P
	Special installation features for protection from conditions in the outdoor location (see 1.7.2 of IEC 60950-1:2005)		P
	outdoor enclosure classification according to IEC 60529 (IP Code)		N/A
<b>6</b>	<b>PROTECTION FROM ELECTRICAL SHOCK IN AN OUTDOOR LOCATION</b>		P
<b>6.1</b>	<b>Voltage limits of user-accessible parts in outdoor locations</b> (2.2.2 and 2.2.3 of IEC 60950-1:2005/AMD2:2013 with voltage limits of IEC60950-22)		P
	Voltages under normal conditions (V) .....	Accessible parts are less than 21.2 Vp or 30Vdc and are classified as SELV.	P
	Voltages under fault conditions (V).....	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 15 V a.c., 21.2 V peak, or 30 V d.c. for longer than 0.2 s under single fault conditions.	P
<b>6.2</b>	<b>Limited current circuits in outdoor locations</b>		N/A
	The requirements of 2.4 of IEC60950-1:2005/AMD1:2009/AMD2:2013 apply without change		N/A
<b>6.3</b>	<b>Protection for socket-outlet in outdoor locations</b>		N/A

	Use of residual current protective device (RCD) with rated residual operating current not exceeding 30 mA in the mains supply to socket-outlets intended for general use and with a rated current not exceeding 20 A.	Not directly connected to mains.	N/A
	RCD is an integral part of the equipment		N/A
	RCD is part of the building installation (installation instructions)		N/A
<b>7</b>	<b>WIRING TERMINALS FOR CONNECTION OF EXTERNAL CONDUCTORS</b>		N/A
	The mains supply terminations powered via the normal building installation wiring are as specified in 3.3 of IEC 60950-1:2005/AMD2:2013	Not directly connected to mains.	N/A
	The mains supply terminations powered directly from the mains distribution system are as specified in IEC 60364		N/A
	NOTE: For other terminals, IEC 60950-1 applies.		N/A
<b>8</b>	<b>CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES</b>		P
<b>8.1</b>	<b>General</b>		P
	Protection against corrosion by use of suitable materials or by application of a protective coating	Enclosure was made of plastic and aluminium-alloy.	P
	Parts serving as a functional part of an outdoor enclosure (e.g., dials, connectors, etc.) comply with the same environmental protection requirements as for the outdoor enclosure	All relevant parts comply with applicable requirements	P
	Use of outdoor enclosure to carry current during normal operation	Outdoor enclosure does not carry current during normal operation.	P
	Connection of a conductive part of an outdoor enclosure to protective earth for carrying fault currents (see 2.6 of IEC60950-1:2005/ AMD1:2009/ AMD2:2013 and 8.3 of this standard)		N/A
<b>8.2</b>	<b>Resistance to ultra-violet radiation</b>		P
	Resistance of non-metallic parts of an outdoor enclosure to degradation by ultra-violet (UV) radiation	Enclosure was made of plastic and aluminium-alloy. The plastic enclosure was certified by UL in accordance with UL 746C and resistant to degradation by ultra-violet (UV) radiation.	P
	Parts providing mechanical support:		N/A
	Tensile strength test (ISO 527)		N/A
	Flexural strength test (ISO 178)		N/A
	Parts providing impact resistance:		N/A
	Charpy impact test (ISO 179)		N/A
	Izod impact test (ISO 180)		N/A
	Tensile impact test (ISO 8256)		N/A

	All parts:		N/A
	Flammability classification (1.2.12 and annex A of IEC 60950-1:2005)		N/A
<b>8.3</b>	<b>Resistance to corrosion</b>		N/A
8.3.1	General	Enclosure was made of plastic and aluminium-alloy.	N/A
	Resistance of metallic parts of an outdoor enclosure to the effects of water-borne contaminants		N/A
	Alternate method for 8.3.2-8.3.4 (IEC 61587-1)		N/A
8.3.2	Test apparatus		N/A
	Salt-spray test (IEC 60068-2-11)		N/A
	Test in a water-saturated sulphur dioxide atmosphere (water-saturated sulphur dioxide atmosphere as described in Annex A; chamber as described in ISO 3231)		N/A
8.3.3	Test procedure		N/A
	Alternate test procedure		N/A
8.3.4	Compliance criteria:		N/A
	No rust other than surface corrosion of the protective coating; no cracking or other deterioration that will jeopardize the safety aspects as follows:		N/A
	– continued protection against access to hazardous parts, including after mechanical strength tests; and		N/A
	– continued protection against ingress of dust and water; and		N/A
	– continued provision of earth continuity		N/A
<b>8.4</b>	<b>Bottoms of fire enclosures</b>		N/A
	Comply with 4.6.2 of IEC 60950-1:2005	No bottom openings.	N/A
	Bottom of fire enclosure of outdoor equipment mounted directly and permanently on a non-combustible surface (e.g., concrete or metal)		N/A
<b>8.5</b>	<b>Gaskets</b>		P
8.5.1	General	See Annex D.2.	P
8.5.2	Oil resistance		N/A
8.5.3	Securing means	Mechanical means used.	P
<b>9</b>	<b>PROTECTION OF EQUIPMENT WITHIN AN OUTDOOR ENCLOSURE</b>		P
<b>9.1</b>	<b>Protection from moisture</b>		P
	Adequate protection from the effect of moisture on the enclosed equipment (see Table 2)	Pollution degree 3 considered, after test, no water has entered to enclosure.	P
<b>9.2</b>	<b>Protection from plants and vermin</b>		N/A

	Adequate protection if entry by plants and vermin is a consideration	No openings on the enclosure	N/A
<b>9.3</b>	<b>Protection from excessive dust</b>		N/A
9.3.1	General		N/A
	Adequate protection against the ingress of the dust through the use of an appropriately rated IP5X or IP6X enclosure, or equivalent		N/A
9.3.2	IP5X equipment		N/A
9.3.3	IP6X equipment		N/A
<b>10</b>	<b>MECHANICAL STRENGTH OF ENCLOSURES</b>		P
<b>10.1</b>	<b>General</b>		P
	Adequate mechanical strength and protection against access to energized parts and other hazards within the equipment throughout the intended ambient operating range		P
<b>10.2</b>	<b>Impact test (4.2.5 of IEC 60950-1)</b>		P
	Low temperature conditioning for polymeric enclosures	-50 °C / 24 hours	P
	Compliance criteria:	Conduct Impact Test before Water Spray.	P
	- after test the level of protection remains in accordance with 9.1 of this standard		P
	- after test the requirements of 4.2.1 of IEC 60950-1: 2005/AMD1:2009/AMD2:2013 are met		P
<b>11</b>	<b>OUTDOOR EQUIPMENT CONTAINING VENTED BATTERIES</b>		N/A
<b>11.1</b>	<b>Risk of explosion from lead acid, NiCd and NiMH batteries</b>		N/A
	Adequate ventilation in the compartment housing a valve regulated or vented battery, where gassing is possible during normal usage or over-charging	No such battery was provided	N/A
	Protection against the risk of ignition of local concentrations of hydrogen and oxygen in a compartment containing both a battery and electrical components		N/A
	Construction of the ventilation system to ensure explosive gases venting in case of any potential fault, including distortion of the battery cases due to overheating or thermal runaway		N/A
	Ventilation tubes used for conducting explosive gas from the battery cases to the outside air		N/A
	Adequate ventilation under single-fault failure conditions in case of mechanical or forced-air ventilation		N/A
	Enclosures with mechanical or electromechanical dampers		N/A
<b>11.2</b>	<b>Ventilation preventing an explosive gas concentration</b>		N/A

	Comply with M.7 of IEC 62368-1:2014		N/A
<b>11.3</b>	<b>Ventilation test</b>		N/A
	Measured hydrogen gas concentration (% by volume) .....		N/A
	Max. allowed gas concentration for the mixture location in proximity to an ignition source (% by volume) .....		N/A
	Max. allowed gas concentration for the mixture location not in proximity to an ignition source (% by volume) .....		N/A
	Overcharging of rechargeable battery (see 4.3.8 of IEC 60950-1:2005/AMD2:2013)		N/A
<b>A</b>	<b>ANNEX A, WATER-SATURATED SULPHUR DIOXIDE ATMOSPHERE (see 8.3.2 and 8.3.3)</b>		N/A
	Test chamber .....		N/A
	Test method .....		N/A
<b>B</b>	<b>ANNEX B, WATER SPRAY TEST (see 9.1)</b>		P
	Test apparatus .....	See Figs. B.1 and B.2.	P
	Test method .....	The enclosure was exposed to a uniform water spray over the entire surface of the enclosure for 1 h.	P
<b>C</b>	<b>ANNEX C, ULTRAVIOLET LIGHT CONDITIONING TEST (see 8.2)</b>		N/A
C.1	Test apparatus .....		N/A
C.2	Mounting of test samples .....		N/A
C.3	Carbon-arc light-exposure apparatus .....		N/A
C.4	Xenon-arc light-exposure apparatus .....		N/A
<b>D</b>	<b>ANNEX D, GASKET TESTS (see 8.5)</b>		P
D.1	Gasket tests		P
D.2	Tensile strength and elongation tests (for gaskets that can stretch)	Test material for Gasket/O- ring: Momentive Performance Materials Japan L L C., Type TSE2186U(aq) and TSE221-5U(ad)	P
	Tensile strength (%) .....	More than 75% of original condition.	P
	Elongation (%) .....	More than 60% of original condition.	P
	Visible deterioration, deformation, melting, cracking or hardening of the material .....	There was no visible cracking or other adverse effect of the conditioned material.	P
D.3	Compression test (for gaskets with closed cell construction)		N/A
	Initial thickness of the specimen (mm) .....		N/A

	Thickness of the specimen after test a) (mm), compression set after test a) (%) .....		N/A
	Thickness of the specimen after test b) (mm), compression set after test b) (%) .....		N/A
	Thickness of the specimen after test c) (mm), compression set after test c) (%) .....		N/A
D.4	Oil immersion test		N/A
	Swelling (%)..... :		N/A
	Shrinking (%)..... :		N/A
<b>E</b>	<b>ANNEX E, RATIONALE</b>		—
E.1	General		—
E.2	Electric shock		—
E.3	Energy related hazards		—
E.4	Fire		—
E.5	Mechanical hazards		—
E.6	Heat related hazards		—
E.7	Radiation		—
E.8	Chemical hazards		—
E.9	Biological hazards		—
E.10	Explosion hazards		—

















TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1)</sup>
(see separate test report IEC/UL 60950-1 or IEC/UL 62368-1)					
--	--	--	--	--	--
--	--	--	--	--	--
Supplementary information: <sup>1)</sup> Provided evidence ensures the agreed level of compliance. See OD-CB2039.					



**Statement of Measurement Uncertainty**

The Test Report shall include a statement concerning the uncertainty of the measurement systems used for the tests conducted when it is required by the standard, client or other authorities.  
In such cases, the table below is to be used for reporting U of M.

This page may be removed from the final Test Report when not required. See also clause 4.8 in OD 2020 for more details.

<b>Clause #</b>	<b>Parameter/ Measurement / test method</b>	<b>Requirement % or k</b>	<b>Calculated U of M*</b>

\*Note: Calculations leading to the reported value are on file with the NCB

**ATTACHMENT**

IEC60950_22A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ATTACHMENT TO TEST REPORT</b> <b>IEC 60950-22:2005</b> <b>EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES</b> Information technology equipment – Safety – Part 22: Equipment to be installed outdoors			
Differences according to .....: EN 60950-22:2006 + A11:2008			
Attachment Form No.....: EU_GD_IEC60950_22A			
Attachment Originator .....: TÜV SÜD Product Service GmbH			
Master Attachment.....: 2019-10-22			
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	CENELEC COMMON MODIFICATIONS (EN)	
Contents	Add the following annexes: <b>Annex ZA (normative)</b> Normative references to international publications with their corresponding European publications <b>Annex ZB (normative)</b> Special national conditions	N/A
General	Delete all the "country" notes in the reference document according to the following list: – 4.1 Note 3 – 4.3 Note – 8.5 Note – 10.2 Note – D.3 Note – D.4 Note	N/A

IEC60950_22A ATTACHMENT																																																														
Clause	Requirement + Test			Result - Remark	Verdict																																																									
Bibliography	<p><b>Add</b> the following notes for the standards indicated:</p> <p>IEC 60364-1 NOTE Harmonized as HD 384.1 S2:2001 (modified).</p> <p>IEC 60364-4-44 NOTE Partly harmonized as HD 60364-4-443:2006 (modified), HD 384.4.442 S1:1997 (related) and R064-004:1999 (IEC 60364-4-444:1996, modified).</p> <p>IEC 60439-5 NOTE Harmonized as EN 60439-5:1996 + A1:1998 (not modified).</p> <p>IEC 60664-1 NOTE Harmonized as EN 60664-1:2003 (not modified).</p> <p>IEC 60721-3-4 NOTE Harmonized as EN 60721-3-4:1995 (not modified).</p> <p>IEC 61587-1 NOTE Harmonized as EN 61587-1:1999 (not modified).</p> <p>IEC 61969-3 NOTE Harmonized as EN 61969-3:2001 (not modified).</p>				P																																																									
<b>ZA</b>	<p><b>ANNEX ZA (normative) — NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS</b></p> <p>The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendment) applies.</p> <p>NOTE When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.</p>				P																																																									
	<table border="1"> <thead> <tr> <th><u>Publication</u></th> <th><u>Year</u></th> <th><u>Title</u></th> <th><u>EN/HD</u></th> <th><u>Year</u></th> </tr> </thead> <tbody> <tr> <td>IEC 60068-2-11</td> <td>1981</td> <td>Environmental testing Part 2: Tests - Test Ka: Salt mist</td> <td>EN 60068-2-11</td> <td>1999</td> </tr> <tr> <td>IEC 60364 (mod)</td> <td>Series</td> <td>Electrical installations of buildings</td> <td>HD 384/ HD 60364</td> <td>Series</td> </tr> <tr> <td>IEC 60364-4-43</td> <td>2001</td> <td>Part 4-43: Protection for safety - Protection against overcurrent</td> <td>- <sup>1)</sup></td> <td>-</td> </tr> <tr> <td>IEC 60529</td> <td>- <sup>2)</sup></td> <td>Degrees of protection provided by enclosures (IP Code)</td> <td>EN 60529 + corr. May</td> <td>1991 <sup>3)</sup> 1993</td> </tr> <tr> <td>IEC 60950-1 (mod)</td> <td>2005</td> <td>Information technology equipment - Safety Part 1: General requirements</td> <td>EN 60950-1</td> <td>2006</td> </tr> <tr> <td>IEC 61643 (mod)</td> <td>Series</td> <td>Low-voltage surge protective device</td> <td>EN 61643</td> <td>Series</td> </tr> <tr> <td>ISO 178</td> <td>- <sup>2)</sup></td> <td>Plastics - Determination of flexural properties</td> <td>EN ISO 178</td> <td>2003 <sup>3)</sup></td> </tr> <tr> <td>ISO 179</td> <td>Series</td> <td>Plastics - Determination of Charpy impact strength</td> <td>EN ISO 179</td> <td>Series</td> </tr> <tr> <td>ISO 180</td> <td>- <sup>2)</sup></td> <td>Plastics - Determination of Izod impact strength</td> <td>EN ISO 180</td> <td>2000 <sup>3)</sup></td> </tr> <tr> <td>ISO 527</td> <td>Series</td> <td>Plastics - Determination of tensile properties</td> <td>EN ISO 527</td> <td>Series</td> </tr> <tr> <td>ISO 3231</td> <td>- <sup>2)</sup></td> <td>Paints and varnishes - Determination of resistance to humid atmospheres containing sulfur dioxide</td> <td>EN ISO 3231</td> <td>1997 <sup>3)</sup></td> </tr> </tbody> </table>	<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>	IEC 60068-2-11	1981	Environmental testing Part 2: Tests - Test Ka: Salt mist	EN 60068-2-11	1999	IEC 60364 (mod)	Series	Electrical installations of buildings	HD 384/ HD 60364	Series	IEC 60364-4-43	2001	Part 4-43: Protection for safety - Protection against overcurrent	- <sup>1)</sup>	-	IEC 60529	- <sup>2)</sup>	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 <sup>3)</sup> 1993	IEC 60950-1 (mod)	2005	Information technology equipment - Safety Part 1: General requirements	EN 60950-1	2006	IEC 61643 (mod)	Series	Low-voltage surge protective device	EN 61643	Series	ISO 178	- <sup>2)</sup>	Plastics - Determination of flexural properties	EN ISO 178	2003 <sup>3)</sup>	ISO 179	Series	Plastics - Determination of Charpy impact strength	EN ISO 179	Series	ISO 180	- <sup>2)</sup>	Plastics - Determination of Izod impact strength	EN ISO 180	2000 <sup>3)</sup>	ISO 527	Series	Plastics - Determination of tensile properties	EN ISO 527	Series	ISO 3231	- <sup>2)</sup>	Paints and varnishes - Determination of resistance to humid atmospheres containing sulfur dioxide	EN ISO 3231	1997 <sup>3)</sup>	—
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IEC60950_22A ATTACHMENT						
Clause	Requirement + Test			Result - Remark		Verdict
	<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>	—
	ISO 4628-3	- <sup>2)</sup>	Paints and varnishes - Evaluation of degradation of paint coatings - Designation of intensity, quantity and size of common types of defect Part 3: Designation of degree of rusting	EN ISO 4628-3	2003 <sup>3)</sup>	
	ISO 4892-1	- <sup>2)</sup>	Plastics - Methods of exposure to laboratory light sources Part 1: General guidance	EN ISO 4892-1	2000 <sup>3)</sup>	
	ISO 4892-2	- <sup>2)</sup>	Part 2: Xenon-arc sources	EN ISO 4892-2	1999 <sup>3)</sup>	
	ISO 4892-4	- <sup>2)</sup>	Part 4: Open-flame carbon-arc lamps	—	—	
	ISO 8256	- <sup>2)</sup>	Plastics - Determination of tensile-impact strength	EN ISO 8256	2004 <sup>3)</sup>	
	ISO 18173	2005	Non-destructive testing - General terms and definitions	—	—	
	<sup>1)</sup> IEC 60364-4-43:1977 + A1:1997 (modified) are harmonized as HD 384.4.43 S2:2001. <sup>2)</sup> Undated reference. <sup>3)</sup> Valid edition at date of issue.					
<b>ZB</b>	<b>ANNEX ZB (normative) – SPECIAL NATIONAL CONDITIONS (EN)</b> National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. NOTE If it affects harmonization, it forms part of the European Standard or Harmonization Document. For the countries in which the relevant special national condition apply these provisions are normative, for other countries they are informative.					N/A
(A11:2008)	In Annex ZB, <b>delete</b> the special national conditions for Finland, Norway and Sweden regarding Subclauses 4.1, 10.2 & D.3 and <b>add</b> "There are no special national conditions for this European Standard"					N/A
4.1	In <b>Finland, Norway and Sweden</b> , the temperature in winter may be extremely low. For OUTDOOR EQUIPMENT this will demand special design so that the equipment can withstand transport, erection and operation/service at temperatures down to -50 °C.					DELETE D
10.2	In <b>Finland, Norway and Sweden</b> there are additional requirements for the minimum ambient temperature. See 4.1 of this annex.					DELETE D
D.3	In <b>Finland, Norway and Sweden</b> there are additional requirements for the minimum ambient temperature. See 4.1 of this annex.					DELETE D

IEC60950_22A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ATTACHMENT TO TEST REPORT</b> <b>IEC 60950-22</b> <b>Canada NATIONAL DIFFERENCES</b> Information technology equipment – Safety – Part 22: Equipment to be installed outdoors			
Differences according to .....: CAN/CSA-C22.2 No. 60950-22-07			
Attachment Form No.....: CA_ND_IEC60950_22A			
Attachment Originator .....: CSA Group			
Master Attachment.....: 2020-04-16			
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—	<b>SPECIAL NATIONAL CONDITIONS</b> The following is a summary of the key national differences based on national regulatory requirements, such as the Canadian electrical Code (CEC) Part 1 and the Canadian Building Code, which are referenced in legislation and which form the basis for the rules and practices followed in electrical and building installations.		—
4	Applicable parts of Rules 54 and 60 of the CEC, may be applicable to ITE installed outdoors with connections to communication systems.		P
4.2	Power supply cords are to be suitable outdoor use type as required by Rule 4-012 of the CEC, i.e., marked “water resistant,” “outdoor,” “W” or “W-A.”		N/A
4.2	Surge Arrestors and Transient Voltage Surge Suppressors installed external to the ITE are required to comply with the appropriate CEC requirements.		N/A
5	Outdoor Enclosures are required to be classified and marked in accordance with CAN/CSA C22.2 No. 94.		N/A
7	Applicable parts of the Canadian Electrical Code, Part I, CSA C22.1; Canadian Electrical Code, Part III, CSA C22.3, are required, as appropriate.		N/A
7	Wiring terminals intended to supply Class 2 outputs are required per Rule 16 of the CEC to be marked.		N/A
11	Requires stationary installations of storage batteries external to the ITE to comply with Rule 26-540 of the CEC.		N/A

IEC60950_22A ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
—	<b>OTHER DIFFERENCES</b> The following key national differences are based on requirements other than national regulatory requirements.		—
1.2	For protection of ITE against direct lightning strikes, reference is made to CAN/CSA-B72-M87 (R2003) for additional requirements.		P
2	All references to IEC 60950-1 in this standard are replaced by the equivalent CSA 60950-1 Standard.  All relevant Standards referenced in the Part 1 Standard (Annex P, including P.1 and P.2) also apply to this Part -22 Standard and are not listed below.  All references to clauses and subclauses in IEC 60950-1 are to the second edition. If the relevant clause or subclause has been renumbered in IEC 60950-1, second edition, the first edition reference is identified in parentheses directly after the second edition reference.		P  P  P

IEC60950_22C ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ATTACHMENT TO TEST REPORT</b> <b>IEC 60950-22:2016</b> <b>United States of America NATIONAL DIFFERENCES</b> Information technology equipment – Safety – Part 22: Equipment to be installed outdoors			
<b>Differences according to</b> ..... : CSA/UL 60950-22:2017 Second Edition			
<b>TRF template used:</b> ..... : IECEE OD-2020-F3, Ed. 1.1			
<b>Attachment Form No.</b> ..... : US_ND_IEC60950_22C			
<b>Attachment Originator</b> ..... : UL(US)			
<b>Master Attachment</b> ..... : 2020-11-19			
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	<b>Special national conditions</b>		
4	Applicable parts of Chapter 8 of the NEC may be applicable to ITE installed outdoors with connections to communication systems.		P
4.2	Power supply cords are to be suitable outdoor use type as required by Section 400-4 of the NEC, i.e., marked "water resistant," "outdoor," "W" or "W-A."		N/A
4.2	Surge Arrestors and Transient Voltage Surge Suppressors installed external to the ITE are required to comply with the appropriate NEC requirements.		N/A
4.2.1	As an alternative, components installed inside the equipment used to reduce the overvoltage category may comply with ANSI/IEEE C62.11, CSA Certification Notice No. 516, CSA C22.2 No. 1, or UL 1449. Suitability of the component for the application shall be determined for the intended installation.		N/A
5	Outdoor Enclosures are required to be classified and marked in accordance with UL 50 and CAN/CSA C22.2 No. 94.		N/A
7	Applicable parts of the NEC, NFPA 70; and the National Electrical Safety Code, ANSI/IEEE C2, Canadian Electrical Code, Part I, CSA C22.1; Canadian Electrical Code, Part III, CSA C22.3 are required, as appropriate.		N/A
7	Wiring terminals intended to supply Class 2 outputs are required per Article 725 of the NEC to be marked.		N/A

11	Requires stationary installations of storage batteries external to the ITE to comply with Article 480 of the NEC		N/A
	<b>OTHER DIFFERENCES</b>		
1.2	For protection of ITE against direct lightning strikes, reference is made to NFPA 780 for additional requirements.		P
2	<p>All references to IEC 60950-1 in this standard are replaced by the equivalent UL 60950-1 Standards.</p> <p>All relevant Standards referenced in the Part 1 Standard (Annex P, including P.1 and P.2) also apply to this Part 22 Standard and are not listed below.</p> <p>All references to clauses and subclauses in IEC 60950-1 are to the second edition.</p>		P