



TEST REPORT
NEMA 250-2020 Enclosures for Electrical Equipment
(1000 Volts Maximum)

Report Reference No.: 4789941411
Date of issue: 2021-07-12
Total number of pages: 10

Testing Laboratory: Underwriters Laboratories Taiwan Co., Ltd.
Address: 1st Fl, 260 Da-Yeh Road, Peitou, Taipei City, Taiwan 112

Applicant's name: VIVOTEK INC
Address: 6TH FL, 192 LIEN CHENG RD CHUNG HO DISTRICT
NEW TAIPEI, 235, TW

Test specification:
Standard: NEMA 250-2020 Enclosures for Electrical Equipment (1000 Volts Maximum)
Test procedure: NEMA TYPE 4X Evaluation
Non-standard test method: N/A

Test Report Form No.: NEMA 250 V2.0
Test Report Form(s) Originator: Underwriters Laboratories Taiwan Co., Ltd
Master TRF: 2020-01



General Information

Information conveyed by this Report applies only to the test sample(s) actually tested. Underwriters Laboratories Taiwan Co., Ltd. did not select the sample(s), determine whether the sample(s) was representative of production sample(s), nor was UL provided with information relative to the formulation or identification of component materials used in the test sample(s).

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UL's verdict of compliance or non-compliance to NEMA 250-2020, Enclosures for Electrical Equipment (1000 Volts Maximum), in no way implies a verdict of compliance or non-compliance to ANSI/UL 50, CSA C22.2 No. 94.1, Enclosures for Electrical Equipment, Non-Environmental Considerations, or ANSI/UL 50E, CSA C22.2 No. 94.2, Enclosures for Electrical Equipment, Environmental Considerations.



Statement of Compliance

Applicant: VIVOTEK INC
Product: Outdoor camera
Model No.: IB9367-EHT-v2

Standards Used : NEMA 250-2020 Enclosures for Electrical Equipment (1000 Volts Maximum)


Evaluation Item: Environment Type 4X Evaluation

The device described above was verified by Underwriters Laboratories Taiwan Co., Ltd.

Report Issued : 2021-07-12

Project Handle by :

Reviewed by :

Test item description :	Type 4X Evaluation (See Test Table for Test Item detail)
Trade Mark	 ; VIVOTEK
Manufacturer..... :	VIVOTEK INC 6TH FL, 192 LIEN CHENG RD CHUNG HO DISTRICT NEW TAIPEI, 235, TW
Model/Type reference..... :	IB9367-EHT-v2
Ratings..... :	Type 4X

Testing procedure and testing location:	
<input checked="" type="checkbox"/> UL Testing Laboratory:	
Testing location/ address..... :	Underwriters Laboratories Taiwan Co., Ltd. 1st Fl, 260 Da-Yeh Road, Peitou, Taipei City, Taiwan 112
<input type="checkbox"/> Witness Testing Laboratory:	
Testing location/ address..... :	N/A

Summary of testing:	
Tests performed (name of test and test clause): NEMA 250 - <ul style="list-style-type: none">5.7 Test for Protection against Ingress of Water (Hosedown)5.10 Corrosion Protection - Type 3X, 3RX, 3SX, 4X, or 6P Enclosures <p>Note: All Test Methods refer UL Standard which are identical as NEMA 250.</p> <p>Note: Aging of adhesive between breathable membrane and metal enclosure had not been conducted and evaluated before Hosedown Test was performed.</p>	Testing location: Underwriters Laboratories Taiwan Co., Ltd. 1st Fl, 260 Da-Yeh Road, Peitou, Taipei City, Taiwan 112
The following tests were waived: <ul style="list-style-type: none">3.4 Materials - Polymeric5.14 Gasket Material Tests	Rationale for Waiving: Impact Test refer to report numbers E324690-4789885117-Original Other mechanical tests are determined by end product standard. Tensile Strength And Elongation Test for Gasket refer to report numbers E324690-4788519029.1-1 Original and E324690-4789394164-1.1 Original.
Copy of marking plate N/A	

Test item particulars:	
Equipment under test	Outdoor camera
Intended equipment location	<input type="checkbox"/> stand-alone <input checked="" type="checkbox"/> Others <input type="checkbox"/> panel mount
Type Rating	Type 4X
(Exclude Type 7, 8, 9, 10)	
Ventilation	<input type="checkbox"/> ventilated <input checked="" type="checkbox"/> non-ventilated
Other particulars	
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 of receipt of test item	2021-05-18
Date(s) of performance of tests	2021-04-19 to 2021-04-27; 2021-06-15 to 2021-06-24



General remarks:

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

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“(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 ☐ comma / ☒ point is used as the decimal separator.

General product information:

IB9367-EHT-v2 is Outdoor Camera intended to be installed in outdoor environment.

3	CONSTRUCTION		Pass
3.1	GENERAL		Pass
3.2	UNITS OF MEASUREMENT		Pass
3.3	MATERIALS—GENERAL Enclosures shall be made of metal or polymeric materials that meet the requirements of subsection 3.4.		Pass
3.4	MATERIALS—POLYMERIC	Plastic lens cover Impact Test results refer to E324690-4789885117-Original, other mechanical considerations determined by end product standard. (see appendix for details). Aging of adhesive between breathable membrane and metal enclosure had not been conducted and evaluated before Hosedown Test was performed.	Pass
3.5	CORROSION PROTECTION—GENERAL Enclosures shall not be constructed of metals in any combination such as to cause galvanic action that will adversely affect any part of the equipment exposed to moisture.	Aluminium alloy is compliance with 5.9 Outdoor Corrosion Protection requirement.	Pass
3.5.1	Indoor Corrosion Protection	Aluminium alloy is coated and compliance with requirement	Pass
3.5.2	Outdoor Corrosion Protection	Aluminium alloy is coated and compliance with requirement	Pass
3.5.2.1	Galvanized G90		N/A
3.5.2.2	Zinc Coating		N/A
3.5.2.3	Zinc Coating with Paint		N/A
3.5.2.3.1	Galvanized G60		N/A
3.5.2.4	Paint Paint may be accepted when the applicable requirements for Organic Coatings for Steel Enclosures for Outdoor Use Electrical Equipment, UL 1332 indicate that it provides equivalent protection.		N/A
3.5.3	Annealed Coating		N/A
3.5.4	Bends and Forms on Zinc Coatings		N/A
3.5.5	Hot Dipped Galvanized Damage		N/A
3.5.5.1	Uncoated Cross-Sectional Surfaces		N/A

3.5.5.2	Base Metal		N/A
3.5.5.3	Sheet Steel		N/A
3.5.6	Cast Iron		N/A
3.5.7	Corrosion Protection for Type 3X, 3RX, 3SX, 4X, and 6P Enclosures	Additional corrosion test has conducted. Pass 200-Hour Salt Spray Test.	Pass
3.6	OPENINGS		N/A
3.6.1	Equipment Openings		N/A
3.6.2	Ventilation		N/A
3.6.3	Drainage Openings		N/A
3.7	MOUNTING		N/A
3.8	CONDUIT CONNECTION		N/A
3.9	HUBS AND FITTINGS		N/A
3.10	KNOCKOUTS		N/A
3.11	EXTERNAL OPERATING MECHANISMS		N/A
3.12	ACCESS TO INTERIOR		N/A
3.13	CLOSING HARDWARE		N/A
3.14	GASKETS	Aging Conditioning results refer to report numbers E324690-4788519029.1-1 Original and E324690-4789394164-1.1 Original. (see appendix for details)	Pass
3.15	OBSERVATION WINDOWS	Plastic lens cover with 77 mm in diameter and >1.5 mm in thickness Impact Test results refer to E324690-4789885117-Original, other mechanical considerations determined by end product standard. (see appendix for details).	Pass
3.16	EDGE SHARPNESS ON ENCLOSURES	No sharp edges	N/A

4	MARKING		Pass
4.2	SUPPLEMENTAL MARKINGS		Pass
4.3	LOCATION OF MARKINGS		Pass
4.4	ENCLOSURE ORIENTATION		N/A
4.5	CONDUIT HUBS AND CLOSURE PLATES		N/A
4.6	EQUIPMENT OPENINGS		N/A



4.7	DRAINAGE OPENINGS		N/A
5	DESIGN TESTS The detail test information is appear in Test table and appendix	See next page and attachment information for detail	Pass

Test Table and Appendix (**Supplementary Documents or Test Datasheet will be attached**)

Test No.	Done	Test Name	[x] Comments/Parameters
1	X	HOSEDWON TEST	PASSED
2	X	ADDITIONAL CORROSION TEST	PASSED

Appendix Items –

No.	Description
1	Test Datasheet - HOSEDOWN TEST Note: The Test Method followed UL 50E Requirements which are identical as NEMA 250 Requirement.
2	Test Datasheet - ADDITIONAL CORROSION TEST Note: The Test Method followed UL 50E Requirements which are identical as NEMA 250 Requirement.
3 to 4	Test Datasheet - GASKET TEST – TENSILE STRENGTH AND ELONGATION (refer to numbers E324690-4788519029.1-1 Original and E324690-4789394164-1.1 Original) Note: The Test Method followed IEC 60950-22 Requirements which are identical as NEMA 250 Requirement.
5	Test Datasheet - IMPACT TEST (refer to E324690-4789885117-Original) Note: The Test Method followed IEC 60950-22 Requirements which are identical as NEMA 250 Requirement.
6 to 9	Dimension illustration of Overall View
10 to 14	Gasket dimension and location
15	Breathable membrane