

Amendment to Test Report

This Amendment is valid only together with the main Test Report

Report Number..... : KES-SA-22T0082-R1

Main Report Number. : KES-SA-22T0082

Date of issue : 2022-06-23

Total number of pages : 10 pages

Name of Testing Laboratory preparing the Report : KES Co., Ltd.
473-21, Gayeo-ro, Yeoju-si, Gyeonggi-do, 12658, Korea, Republic of

Applicant's name : Hanwha Techwin Co., Ltd.

Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongman-si, Gyeonggi-do, Republic of Korea

Test specification:

Standard : EN IEC 62368-1:2020+A11:2020

Test procedure..... : -

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

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General disclaimer:

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

This test report is not related to KS Q ISO/IEC 17025 and KOLAS.

This test report complies with the recognition standards of KOLAS and KS Q ISO/IEC 17025.
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The authenticity of the test report, contact shchoi@kes.co.kr

Test item description	NETWORK VIDEO RECORDER
Trade Mark(s)	Hanwha Techwin Co., Ltd.
Manufacturer	Hanwha Techwin Co., Ltd. 6, Pangyo-ro, 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488, Republic of Korea
Model/Type reference	PRO-7410B6, PRO-7310B6
Ratings	AC 100-240 V~, 50/60 Hz, 10 A



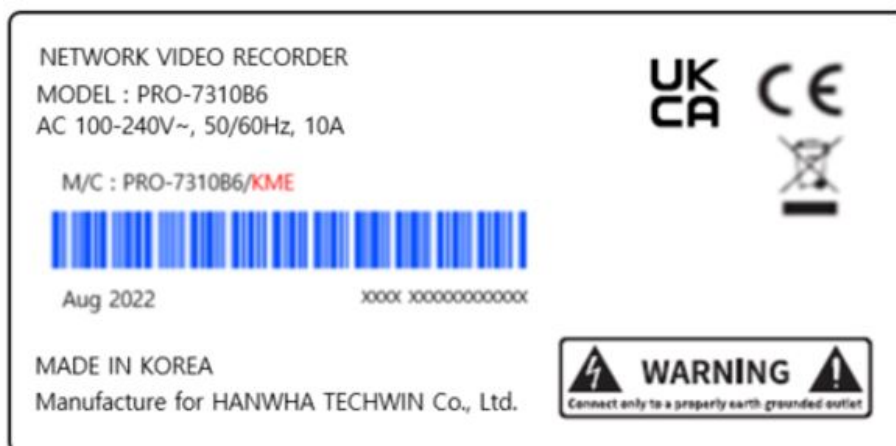
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	CB Testing Laboratory:	KES Co., Ltd.
Testing location/ address..... :		473-21, Gayeo-ro, Yeoju-si, Gyeonggi-do, 12658, Korea, Republic of
Tested by (name, function, signature)		Youngmin, Ji 
Approved by (name, function, signature) .. :		Jaekwan, Cha 
☐	Testing procedure: CTF Stage 1:	
Testing location/ address..... :		
Tested by (name, function, signature)		
Approved by (name, function, signature) .. :		
☐	Testing procedure: CTF Stage 2:	
Testing location/ address..... :		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
☐	Testing procedure: CTF Stage 3:	
☐	Testing procedure: CTF Stage 4:	
Testing location/ address..... :		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): N/A	
Summary of testing:	
Tests performed (name of test and test clause): N/A	Testing location: N/A
Summary of compliance with National Differences (List of countries addressed): ☒ The product fulfils the requirements of IEC 62368-1:2018 and EN IEC 62368-1:2020+A11:2020. The European Group Differences and National Differences for EN IEC 62368-1:2020+A11:2020 is attached in end of this test report as appendix.	
Statement concerning the uncertainty of the measurement systems used for the tests (may be required by the product standard or client) ☐ Internal procedure used for type testing through which traceability of the measuring uncertainty has been established: Procedure number, issue date and title: Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing. ☒ Statement not required by the standard used for type testing (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)	



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.



KES

Test item particulars:			
Product group	☒ end product	☐ built-in component	
Classification of use by	☐ Ordinary person	☐ Children likely present	
	☒ Instructed person		
	☒ Skilled person		
Supply connection.....	☒ AC mains	☐ DC mains	
	☐ External Circuit - not mains connected		
	☒ ES1	☐ ES2	☐ ES3
Supply tolerance	☒ +10%/-10%		
	☐ +20%/-15%		
	☐ + %/ - %		
	☐ None		
Supply connection – type	☒ pluggable equipment type A -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☐ direct plug-in		
	☐ pluggable equipment type B -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☐ permanent connection		
	☐ mating connector	☐ other:	
Considered current rating of protective device.....	☒ 16 A;		
	Location: ☒ building	☐ equipment	
	☐ N/A		
Equipment mobility	☒ movable	☐ hand-held	☐ transportable
	☐ direct plug-in	☐ stationary	☐ for building-in
	☐ wall/ceiling-mounted	☐ SRME/rack-mounted	
	☐ other:		
Overvoltage category (OVC)	☐ OVC I	☒ OVC II	☐ OVC III
	☐ OVC IV	☐ other:	
Class of equipment	☒ Class I	☐ Class II	☐ Class III
	☐ Not classified		
Special installation location	☒ N/A	☐ restricted access area	
	☐ outdoor location		
Pollution degree (PD)	☐ PD 1	☒ PD 2	☐ PD 3
Manufacturer's specified T _{ma}	40 °C	☐ Outdoor: minimum	°C
IP protection class	☒ IPX0	☐ IP__	
Power systems	☒ TN	☐ TT	☐ IT - V _{L-L}
	☐ not AC mains		
Altitude during operation (m)	☒ 2000 m or less	☐ m	
Altitude of test laboratory (m)	☒ 2000 m or less	☐ m	
Mass of equipment (kg)	Approx. 34.5 kg (with HDD)		

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 : N/A Date (s) of performance of tests : N/A	
General remarks: "(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.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60335-1:	
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) : DREAM I SYSTEM CO., LTD #510, Daerung Post Tower 6. 50-3 Gasan-dong, Geumcheon-gu, Seoul, Korea	



General product information and other remarks:

This amendment test report, **KES-SA-22T0082-R1** is covering the added variant model **PRO-7310B6**.

The model, **PRO-7310B6** is identical to previously tested model, PRO-7410B6 except for add LAN card.

Model	RAM board	LAN board
PRO-7410B6	16 GB RAM board 2 EA mounted	None
PRO-7310B6	16 GB RAM board 1 EA mounted	1 EA mounted

LAN card is mounted on the ES1 and PS3 circuits. However, the LAN card installed in the non-hazardous (ES1) live part does not affect the safeguard, and does not exceed the permissible temperature rise limit in normal operation, abnormal operation and single fault condition. Therefore, additional test is not necessary for new variant model, **PRO-7310B6**.

This amendment test report **KES-SA-22T0082-R1** must always be presented together with the main test report **KES-SA-22T0082**.

PROJECT HISTORY:

Report Number:	Modification to the appliances:	Changes/ Modifications in clause(s):
KES-SA-22T0082	Main test report	-
KES-SA-22T0082-R1	Addition of new variant model, PRO-7310B6	Copy of marking plate, General product information, Project history and Annex F.



IEC 62368-1			
Clause	Requirement + Test		Verdict
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General		P
	Language	English	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Used letter symbols according to IEC 60027-1 in label and user manual.	P
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific	Used graphic symbols according to IEC, ISO standard.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The equipment markings are located on the outside surface of the equipment.	P
F.3.2	Equipment identification markings	See below;	P
F.3.2.1	Manufacturer identification	Hanwha Techwin Co., Ltd.	—
F.3.2.2	Model identification	PRO-7410B6, PRO-7310B6	—
F.3.3	Equipment rating markings	See below;	P
F.3.3.1	Equipment with direct connection to mains	(See Annex F.3.3.3 to F.3.3.6)	P
F.3.3.2	Equipment without direct connection to mains	Equipment with direct connection to mains.	N/A
F.3.3.3	Nature of the supply voltage.....	The symbol (IEC 60417-1-5032) is used for ac mains.	—
F.3.3.4	Rated voltage	100-240 V~	P
F.3.3.5	Rated frequency	50/60 Hz	P
F.3.3.6	Rated current or rated power	10 A	P
F.3.3.7	Equipment with multiple supply connections	Only one supply connection.	N/A
F.3.4	Voltage setting device	No voltage setting device in the equipment.	N/A
F.3.5	Terminals and operating devices	See below;	P
F.3.5.1	Mains appliance outlet and socket-outlet markings :	No mains appliance outlet and socket-outlet in the equipment.	N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.5.2	Switch position identification marking	No disconnect switch in the equipment, but stand-by switch is used. The symbol (IEC 60417-1-5009) is used for stand-by switch.	P
F.3.5.3	Replacement fuse identification and rating markings	Evaluated in the approved PSU (See PSU test report)	P
	Instructional safeguards for neutral fuse		N/A
F.3.5.4	Replacement battery identification marking	Instructional safeguard is provided in user manual.	P
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location	(See Annex F.3.6.1)	P
F.3.6	Equipment markings related to equipment classification	See below;	P
F.3.6.1	Class I equipment	Class I equipment.	P
F.3.6.1.1	Protective earthing conductor terminal.....	Symbol  (IEC60417-5019(2006-08)) on AC inlet earth terminal	P
F.3.6.1.2	Protective bonding conductor terminals		N/A
F.3.6.2	Equipment class marking	Class I equipment	N/A
F.3.6.3	Functional earthing terminal marking		N/A
F.3.7	Equipment IP rating marking	This equipment is classified as IPX0	—
F.3.8	External power supply output marking	USB 2.0 and 3.0 terminals only.	N/A
F.3.9	Durability, legibility and permanence of marking	See below;	P
F.3.10	Test for permanence of markings	The marking withstands required tests.	P