

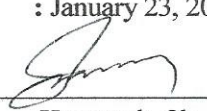


Test Report

Test Report No. : KES-RE-19T0027
Date of Issue : January 24, 2019
Description of Product : Network Camera
Model No. : SNV-L6014RM
Variant Model : -
Applicant : Hanwha Techwin Co., Ltd.
Address : 13488 6, Pangyo-ro, 319 Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do,
KOREA
Manufacturer 1 : D-TECH CO., LTD.
Address : 173-25, Saneop-ro, Gwonseon-gu, suwon-si, Gyeonggi-do, Korea (Suwon Industrial
Complex)
Manufacturer 2 : HANWHA TECHWIN(TIANJIN) CO., LTD.
Address : No.11 Weiliu Rd, Micro-Electronic Industrial park, TEDA, Tianjin, 300385, People's
Republic of China
Manufacturer 3 : HANWHA TECHWIN SECURITY VIETNAM CO., LTD.
Address : Lot O-2, Que Vo Industial Zone extended area, Nam Son commune, Bac Ninh city,
Bac Ninh province, Vietnam
Applicable Regulation : EN 50155:2007 clause 12.2.9 Insulation test

Test Date : January 23, 2019

Tested by:


Hyun seuk, Oh
Test Engineer

Reviewed by:


Kang sun, Lee
Technical Manager



Testing Laboratories for Safety and RF Compliance
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1. General information

1.1 Introduction

Company Name	KES Co., Ltd.
Name of President / CEO	Young, Kim
Address	C-3701, Simin-daero 365-40, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel	+82-31-425-6200
Fax	+82-31-424-0450
E-mail	kes@kes.co.kr

1.2 Laboratory

Address	C-3701, Simin-daero 365-40, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea 473-21, Gayeo-ro, Yeoju-si, Gyeonggi-do, 12658, Korea
Tel	+82-31-425-6200
Fax	+82-31-424-0450

2. Information of E.U.T

	1) Product : Network Camera 2) Model : SNV-L6014RM 3) Ratings : DC (37 – 57) V 4) Serial No. : ZCBQ6V2J4000 5) Use of report : For quality management
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3. Insulation test

1) General

The aim of this test is to ensure that the mounting of components, their metal connections and casings and the routing of wiring and printed board tracks, are not located too close to surrounding metal parts or fixings. In addition the test will verify the design clearances of circuits with requirements for galvanic isolation.

The test shall be carried out on fully assembled parts of equipment, and/or complete equipments dependent upon the scope of supply.

The test comprises two parts, an insulation measurement test (carried out before and after the voltage withstand test), and the voltage withstand test.

Insulation measurement and voltage withstand tests shall be carried out on one of these two alternatives:

- a) individual subracks and/or printed board assemblies, and racks and cubicles without subracks or printed board assemblies;
- b) complete racks and cubicles fitted with all subracks and printed board assemblies.

2) Insulation measurement test

The insulation resistance test shall be carried out at 500 V d.c. and the values recorded.

The test shall then be repeated after the voltage withstand test.

Test acceptance requirements:

There shall be no fundamental deterioration from the initial measurement.

3) Voltage withstand test

Whenever possible, a.c. voltage of 50 or 60 Hz shall be used. If not applicable, a d.c. voltage of a value corresponding to the a.c. voltage peak shall be used.

The test voltage shall be applied by gradually increasing the voltage amplitude to the test voltage, and maintained at the specified level for 1 min.

The nominal d.c input voltage, or a.c. input voltage, is the controlling factor for determining the test voltage.

A sinusoidal rms value of the test voltage shall be:

- 500 V for nominal battery voltages below 72 V (or 50 volts a.c.)
- 1 000 V for nominal battery voltages from 72 V up to 125 V, (or from 50 to 90 V a.c.), and
- 1 500 V for nominal battery voltages above 125 V and up to 315 V, (or from 90 to 225 V a.c.)

with the exception that the secondary circuit of power supplies which operate in a galvanically isolated mode may be tested with a voltage for the corresponding lower voltage range.

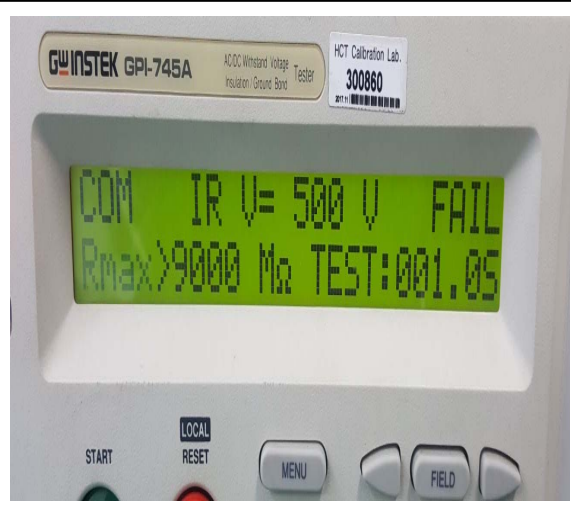
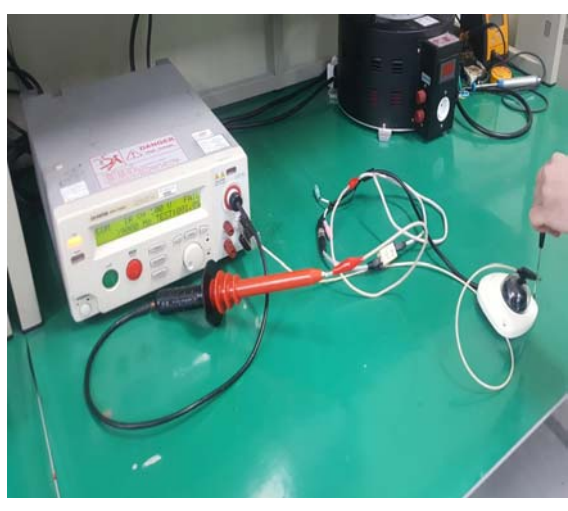
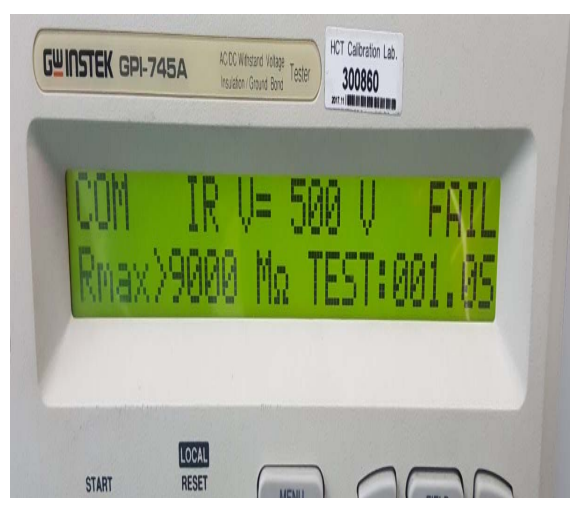
Where part of the electronic equipment is galvanically connected to a power circuit, then this part of the equipment shall be subject to the same dielectric tests as that circuit.

Test acceptance requirements:

Neither disruptive discharge nor flashover shall occur.

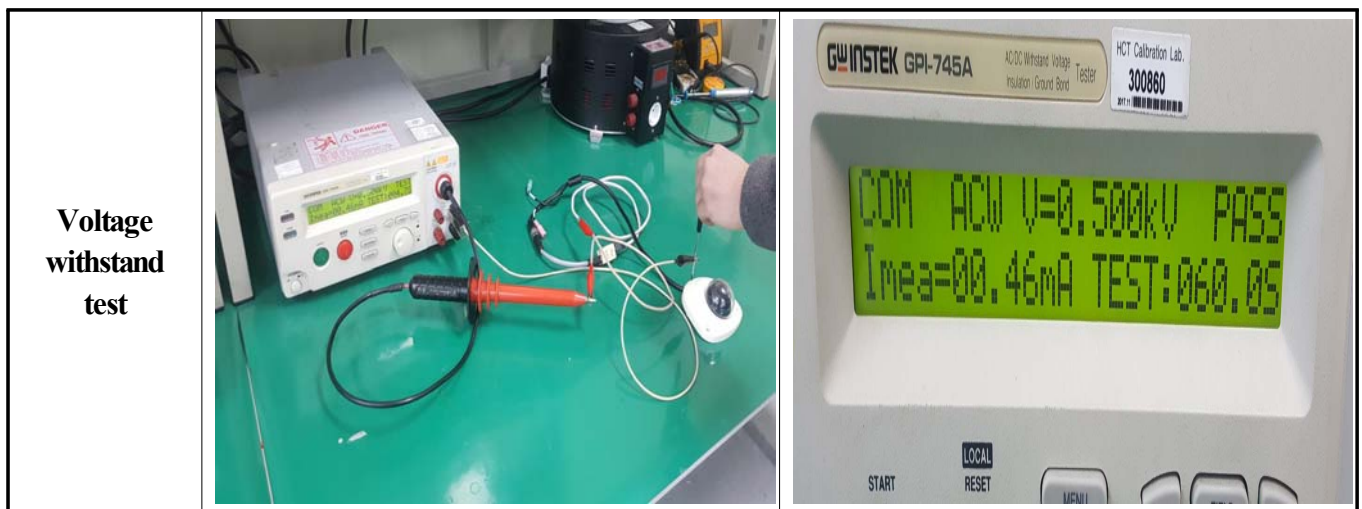
4) Insulation measurement test results

Test Items	Test standard	Test result		Remarks
Insulation measurement test	Carried out at 500 V d.c., There shall be no fundamental deterioration from the initial measurement.	Before voltage withstand test	9 000 MΩ	-
		After voltage withstand test	9 000 MΩ	

Insulation measurement test before voltage withstand test		
Insulation measurement test after voltage withstand test		

5) Voltage withstand test results

Test Items	Test standard	Test result	Remarks
Voltage withstand test	AC 500 V, 60 Hz, 1 min, Neither disruptive discharge nor flashover shall occur.	No disruptive discharge and no flashover	-



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4. Used instrument list

No	KES Management Number	Instrument Name	Mfr.	Model	Serial #	Date of Calibration	Calibration Valid Until	Calibration Cycle	Remark
1	KES-RE-057	AC/DC Withstand Voltage Insulation / Ground Bond Tester	GOODWILL	GPI-745A	EK883773	2018.05.10	2019.05.10	1 year	-

- The end of test report -

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