

TEST REPORT

 CTK Co., Ltd. The Prime Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong) 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, KOREA, REPUBLIC OF Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2021-00446 Page(1) / (22) Pages	
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1. Applicant

- Name : Hanwha Techwin Co., Ltd.
- Address..... : 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13488 KOREA
- Date of Receipt..... : 2020-06-04

2. Manufacturer

- Name : Hanwha Techwin Co., Ltd.

3. Use of Report : Quality control

4. Test sample / Model : Camera Housing / XNO-9082R

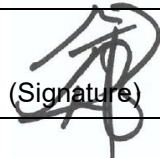
5. Date(s) of test : 2020-06-11 - 2020-06-18

NEMA 250-2014

6. Test Standard (Method) used.... : Enclosures for Electrical Equipment (1000 Volts Maximum)

7. Results : Pass

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
This report shall not be reproduced except in full without the written approval of CTK

Approval	Tested by: SooChan Bae  (Signature)	Technical Manager: YenHwang Jung  (Signature)
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2021-02-09

CTK Co., Ltd.



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Test place

Institution name	CTK Co., Ltd.
Address	142, Dongbu-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea

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Test item description.....: Camera Housing

Trade Mark.....:

WISeNET

Manufacturer: HANWHA TECHWIN SECURITY VIETNAM CO.,LTD

Lot O-2, Que Vo Industrial Zone extended area, Nam Son
commune, Bac Ninh city, Bac Ninh province, Vietnam

Model/Type reference.....: XNO-9082R

Ratings.....: Electrical : PoE(DC 48 V / 1.1 A)

Dimension : Ø 75 mm by 235.6 mm, Ø 63 mm by 197.9 mm,

Ø 87 mm by 273.3 mm, Ø 87 mm by 273.3 mm,

Ø 55 mm by 172.7 mm, Ø 149 mm by 468 mm,

Ø 79 mm by 248.1 mm

List of Attachments (including a total number of pages in each attachment):

Attachment 1: 12-14 pages (Construction Diagram including installation method)

Attachment 2: 15-20 pages (Parts List)

Attachment 3: 21-22 pages (photographs)

Summary of testing:

Tests performed (name of test and test clause):

Clause 5.7(Hose Down Test)

Testing location:

CTK Co., Ltd.

142, Dongbu-ro, Cheoin-gu, Yongin-si, Gyeonggi-
do, Republic of Korea

Copy of marking plate: The artwork above may be only a draft.

기기명칭: NETWORK CAMERA

모델명: XNO-9082R

정격전압: AC 24V ~ 50/60Hz 14.5W /DC12V 12.5W/
PoE(48V) 12.95W

M/C: XNO-9082R/KDO

DATE S/N: XXXXXXXXXXXXXXXX
MAC ADDRESS: XX-XX-XX-XX-XX-XX

인증번호: R-R-StW-XNO9082R
상호: 한화테크윈(주)

제조사/제조국가:한화테크윈(주)/한국



NETWORK CAMERA

MODEL: XNO-9082R

AC 24V ~ 50/60Hz 1.1A/DC 12V 1.1A/

PoE(48V) 0.27A

M/C: XNO-9082R/KAN Fac. ID: D

DATE S/N: XXXXXXXXXXXXXXXX

MAC ADDRESS: XX-XX-XX-XX-XX-XX

CAN ICES-3(A)/NMB-3(A)

HANWHA TECHWIN CO.,LTD.

MADE IN KOREA



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기기명칭: NETWORK CAMERA 모델명: XNO-8082R 정격전압: AC 24V ~ 50/60Hz 14.5W /DC12V 12.5W/ PoE(48V) 12.95W M/C: XNO-8082R/KDO DATE S/N: XXXXXXXXXXXXXXXX MAC ADDRESS: XX-XX-XX-XX-XX-XX 인증번호: R-R-StW-XNO9082R 상호: 한화테크윈(주) 제조사/제조국가:한화테크윈(주)/한국 	        NETWORK CAMERA MODEL: XNO-8082R AC 24V ~ 50/60Hz 1.1A/DC 12V 1.1A/ PoE(48V) 0.27A M/C: XNO-8082R/KAN Fac. ID: D DATE S/N: XXXXXXXXXXXXXXXX MAC ADDRESS: XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO.,LTD. MADE IN KOREA 
기기명칭: NETWORK CAMERA 모델명: PNO-A9081R 정격전압: DC12V 18W/ PoE(53V) 20W M/C: PNO-A9081R/KDO DATE S/N: Serial No. MAC ADDRESS: XX-XX-XX-XX-XX-XX 인증번호: R-R-StW-PNOA9081R 상호: 한화테크윈(주) 제조사/제조국가:한화테크윈(주)/한국 	      NETWORK CAMERA MODEL: PNO-A9081R DC 12V 1.5A/ PoE(53V) 0.4A M/C: PNO-A9081R/KAP Fac. ID: D DATE S/N: Serial No. MAC ADDRESS: XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO.,LTD. MADE IN KOREA 

Test item particulars.....:	Network Camera
Classification of installation and use	Outdoor(Watertight/Corrosion Resistant)
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)
- test case does not evaluated to the test object :	N/E

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. Clause numbers between brackets refer to clauses in NEMA 250-2014

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Report No.:

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Name and address of factory (ies):**1.HANWHA TECHWIN SECURITY VIETNAM CO.,LTD**

Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam

2. D-TECH CO.,LTD.

173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea (Suwon Industrial Complex)

General product information:

Applied NEMA Rating : 4X

Model XNO-9082R is basic model which was tested.

Basic Model	XNO-9082R
Series model	XNO-8082R, PNO-A9081R, PNO-A6081R

Model differences:

Series model differences are only for function not related to the quality of enclosure integrity.

Type 4X

Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against access to hazardous parts; to provide a degree of protection of the equipment inside the enclosure against ingress of solid foreign objects (falling dirt and windblown dust); to provide a degree of protection with respect to harmful effects on the equipment due to the ingress of water (rain, sleet, snow, splashing water, and hose directed water); that provides an increased level of protection against corrosion; and that will be undamaged by the external formation of ice on the enclosure.

Table 2-1
Comparison of Specific Applications of Enclosures for Indoor Nonhazardous
(Unclassified) Locations

Provides a Degree of Protection against the Following Conditions	Type of Enclosure									
	1	2	4	4X	5	6	6P	12	12K	13
Access to hazardous parts	X	X	X	X	X	X	X	X	X	X
Ingress of solid foreign objects (falling dirt)	X	X	X	X	X	X	X	X	X	X
Ingress of water (dripping and light splashing)	...	X	X	X	X	X	X	X	X	X
Ingress of solid foreign objects (circulating dust, lint, fibers, and flyings **)	...	...	X	X	...	X	X	X	X	X
Ingress of solid foreign objects (settling airborne dust, lint, fibers, and flyings **)	...	...	X	X	X	X	X	X	X	X
Ingress of water (hosedown and splashing water)	...	...	X	X	...	X	X	...	...	...
Oil and coolant seepage	...	...	...	...	...	...	...	X	X	X
Oil or coolant spraying and splashing	...	...	...	...	...	...	...	...	...	X
Corrosive agents	...	...	...	X	...	...	X	...	...	...
Ingress of water (occasional temporary submersion)	...	...	...	...	...	X	X	...	...	...
Ingress of water (occasional prolonged submersion)	...	...	...	...	...	...	X	...	...	...

** These fibers and flyings are not considered Class III type ignitable fibers or combustible flyings. For Class III type ignitable fibers or flyings see the *National Electrical Code®*, Article 500.5(D).

Table 2-2
Comparison of Specific Applications of Enclosures for Indoor & Outdoor Nonhazardous
(Unclassified) Locations

Provides a Degree of Protection Against the Following Conditions	Type of Enclosure									
	3	3X	3R	3RX	3S	3SX	4	4X	6	6P
Access to hazardous parts	X	X	X	X	X	X	X	X	X	X
Ingress of solid foreign objects (falling dirt)	X	X	X	X	X	X	X	X	X	X
Ingress of water (dripping and light splashing)	X	X	X	X	X	X	X	X	X	X
Ingress of water (rain, snow, and sleet **)	X	X	X	X	X	X	X	X	X	X
Sleet ***	...	...	...	...	X	X	...	...	...	...
Ingress of solid foreign objects (windblown dust, lint, fibers, and flyings****)	X	X	...	...	X	X	X	X	X	X
Ingress of water (hosedown and splashing water)	...	...	...	...	...	...	X	X	X	X
Corrosive agents	...	X	...	X	...	X	...	X	...	X
Ingress of water (occasional temporary submersion)	...	...	...	...	...	...	...	...	X	X
Ingress of water (occasional prolonged submersion)	...	...	...	...	...	...	...	...	...	X

** External operating mechanisms are not required to be operable when the enclosure is ice covered.

*** External operating mechanisms are operable when the enclosure is ice covered. See subsection 5.6.

**** These fibers and flyings are not considered Class III type ignitable fibers or combustible flyings. For Class III type ignitable fibers or flyings see the *National Electrical Code®*, Article 500.5(D).

Table 5-1A
Degrees of Protection Against Access to Hazardous Parts

Enclosure Type	Test Conditions	Degree of Protection		Corresponding IP First Characteristic Numeral
		Brief Description	Definition	
4X	5.7	Protected against access to hazardous parts with a wire	An access probe of 1.0 mm shall not penetrate	6

Table 5-1B
Degrees of Protection Against Solid Foreign Objects

Enclosure Type	Test Conditions	Degree of Protection		Corresponding IP First Characteristic Numeral
		Brief Description	Definition	
4X	<u>Non-vented</u> 5.7	Windblown dust protected	No ingress of dust	6
	<u>Vented</u> 5.5.1 Dust Blast Method			

Table 5-1C
Degrees of Protection against Water

Enclosure Type	Test Conditions	Degree of Protection		Corresponding IP Second Characteristic Numeral
		Brief Description	Definition	
4X	5.7	Protected against hose directed water	Water projected against the enclosure in any direction shall not enter	6 No Ingress Allowed*

Table 5-1D
Additional Protection

Enclosure Type	Test Conditions	Additional Protection		Corresponding IP Second Characteristic Numeral
		Brief Description	Definition	
4X	5.6 5.9 5.10	Special corrosion protection and undamaged by the external formation of ice	Enclosure provides increased corrosion protection and is not damaged by ice that forms on the outside	None

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NEMA 250-2014			
Clause	Requirement + Test	Result - Remark	Verdict
3	CONSTRUCTION		

3.1	General		P
3.2	Units of Measurement		P
3.3	Materials-General	Enclosures are made of metal or polymeric materials	P
3.4	Materials-Polymeric	More than 650 mm ² (1 in ²) in area Polymeric Materials used is declared as Min. HB Used to UL certified material. (See the attachment 2)	N/E
3.5	Corrosion Protection	Stainless steel and/or aluminium are declared as the materials used (See the attachment 2)	N/E
3.6	Openings	No openings in Product	N/A
3.7	Mounting	Mounting means are external to the equipment cavity (See the attachment 1)	P
3.8	Conduit Connection	No conduit connection (See the attachment 1)	N/A
3.9	Hubs and Fittings	No Hubs and Fittings	N/A
3.10	Knockouts	No Knockouts	N/A
3.11	External Operating Mechanisms	No External Operating Mechanisms	N/A
3.12	Access to Interior	Needs tool to open unit	P
3.13	Closing Hardware	No closing Hardware	N/A
3.14	Gaskets	Gaskets made of a silicone Sponge Rubber (no Elastomeric or Thermoplastic used) (See clause 5.14 and the attachment 2)	P
3.15	Observation Windows	No Observation Window	N/A

4	MARKING		
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NEMA 250-2014			
Clause	Requirement + Test	Result - Remark	Verdict
4.1	Type Designations	"Type 4X" Marking is declared to be on the product before on the market	P
4.2	Supplemental Markings	Supplemental Marking (watertight/ corrosion resistant) is declared to be used when it is on the market. The required marking shall be added on the product)	P
4.3	Location of Markings	See the Attachment 3	P
4.4	Enclosure Orientation	No Particular Mounting Orientation	N/A
4.5	Conduit Hubs and Closure Plates	No Conduit Hubs and Closure Plates	N/A
4.6	Equipment Openings	No Openings on Unit	N/A
4.7	Drainage Openings	No Drain Openings	N/A

5	DESIGN TESTS	
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5.1	General	See Table 5-1A to 5-1D and 5.1.5 in the General product information	P
5.2	Tests For Protection Against Access to Hazardous Parts	Rated 4X	N/A
5.3	Tests for Protection Against Ingress of Water (Dripping and Light Splashing)	Rated 4X	N/A
5.4	Tests for Protection Against Ingress of Water (Rain)	Rated 4X	N/A
5.5	Tests for Protection Against Ingress of Solid Foreign Objects (Setting Airborne Dust, Lint, Fibers, And Flings)	Non-vented (See clause 5.7)	N/A
5.6	External Icing Test	No external cavities to trap water when mounted in the normal position.	N/A
5.7	Tests for Protection Against Ingress of Water (Hosedown)	No entry of water See the test information	P
5.8	Indoor Corrosion Protection (Rust-Resistance Test (24-Hour Salt Spray Test))	See clause 3.5	N/E
5.9	Outdoor Corrosion Protection	See clause 3.5	N/E
5.10	Corrosion Protection-Type 3X, 3RX, 3SX, 4X Or 6P Enclosures	See clause 3.5	N/E

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NEMA 250-2014			
Clause	Requirement + Test	Result - Remark	Verdict
5.11	Test for Protection Against Ingress of Water (Temporary Submersion)	Rated 4X	N/A
5.12	Test for Protection Against Ingress of Water (Prolonged Submersion)	Rated 4X	N/A
5.13	Oil Exclusion Test	Rated 4X	N/A
5.14	GASKET MATERIAL TESTS	The product itself(including gaskets) was conditioned at 70 °C for 168 hrs according to 5.14.3(Alternate Evaluation) before performing relevant required tests.	P
5.15	Test for Sharpness of Edges	No sharp edges	P

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Test Information

	Hose Down Test : Clause 5.7	P
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Description of Test

The enclosure and its external mechanisms were subjected to a stream of water from a hose that has a 25.4 mm (1 in) inside diameter nozzle and delivers at least 240 L (65 gal) per minute.

The nozzle was held from 3.0 to 3.5 m (10 to 12 feet) from the enclosure, and the spray of water was directed at all points of potential water entry such as seams, joints, external operating mechanisms, and such. The nozzle was moved along each test point one time at a uniform rate of 6 mm/sec(1/4 in/sec).

Sample Dimension(Ø 75 mm by 235.6 mm, Ø 63 mm by 197.9 mm, Ø 87 mm by 273.3 mm,
 Ø 87 mm by 273.3 mm, Ø 55 mm by 172.7 mm, Ø 149 mm by 468 mm, Ø 79 mm by 248.1 mm)

Test Duration = 311 secs

Acceptance conditions:

The enclosure shall be considered to have met the requirements if at the conclusion of the test no water has entered the enclosure

Test Results

Sample No (Model)	Water Flow	Presence of water inside	Result
XNO-9082R	240 LPM	No	Pass

List of test equipment used:

Instr. Code	Instrument Type	Range Used	Mfr./Model	Calibration Date	
				Last	Due
S3-IP18	25.4mm Nozzle	25.4 mm	CTK/S3-IP18	-	Checked by calliper below before using
S1-SW2	Stop Watch	0.01 s	CASIO/ NONE	2019-04-03	2021-04-03
S1-D09	Steel Measuring Tape	5 m	KOMELON/KMC-74N	2019-02-25	2021-02-25
S3-IP20	Water flow meter	250LPM	Nuri tech/Z-4007	2019-07-04	2020-07-04
S1-D03	DIGITAL VERNIER CALIPER	200 mm	MITUTOYO/200 mm	2020-03-26	2021-03-26



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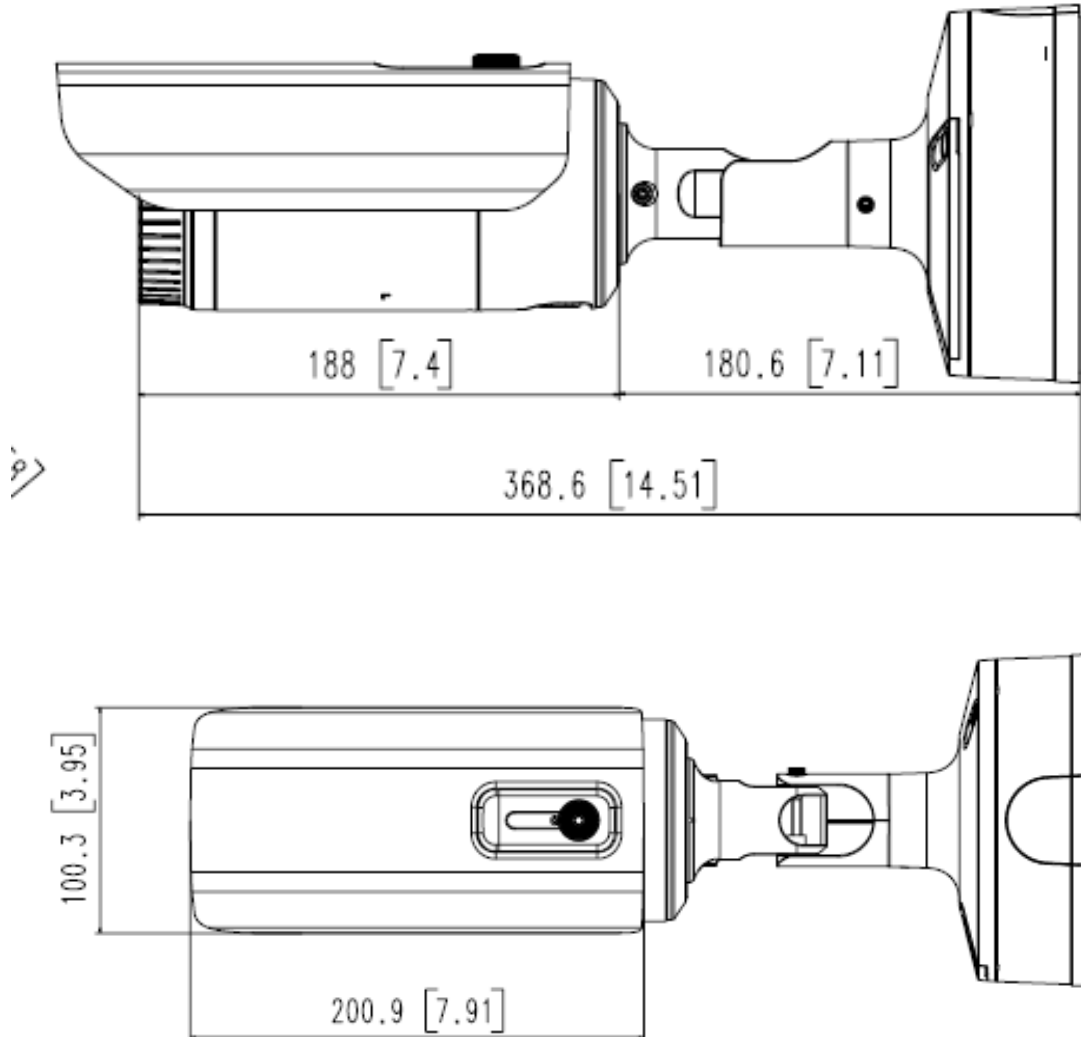
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Attachment 1 – Construction Diagram and installation method





CTK Co., Ltd.

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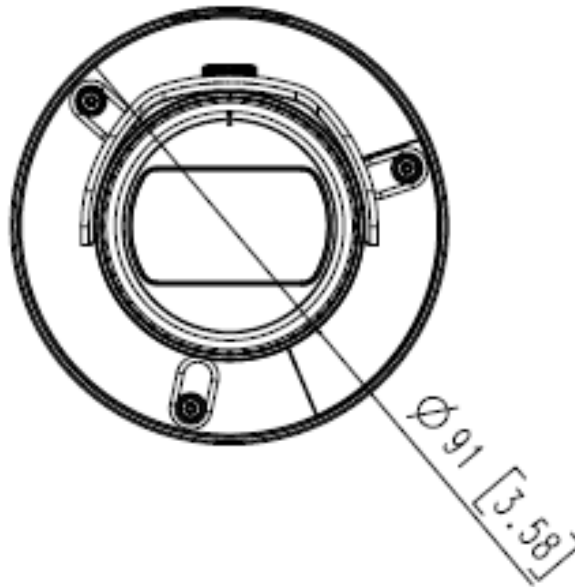
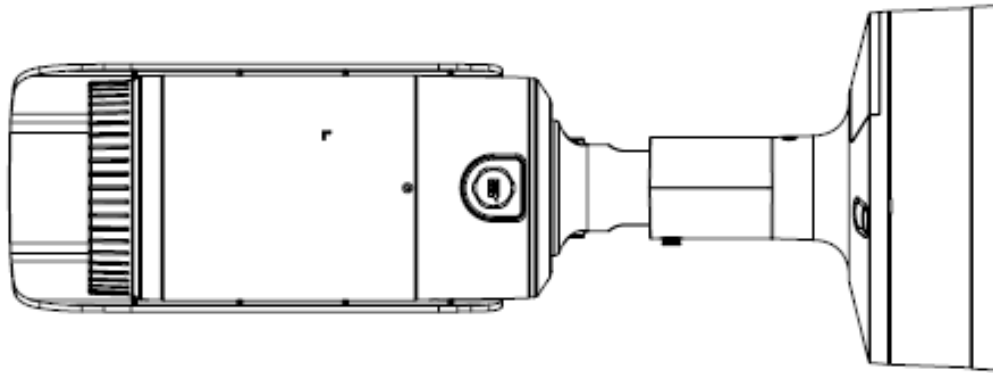
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Attachment 1 – Construction Diagram and installation method





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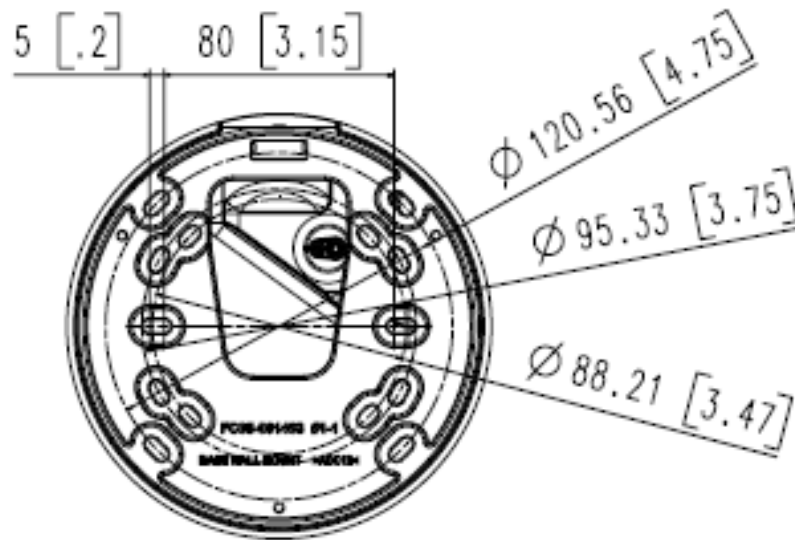
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Attachment 1 – Construction Diagram and installation method





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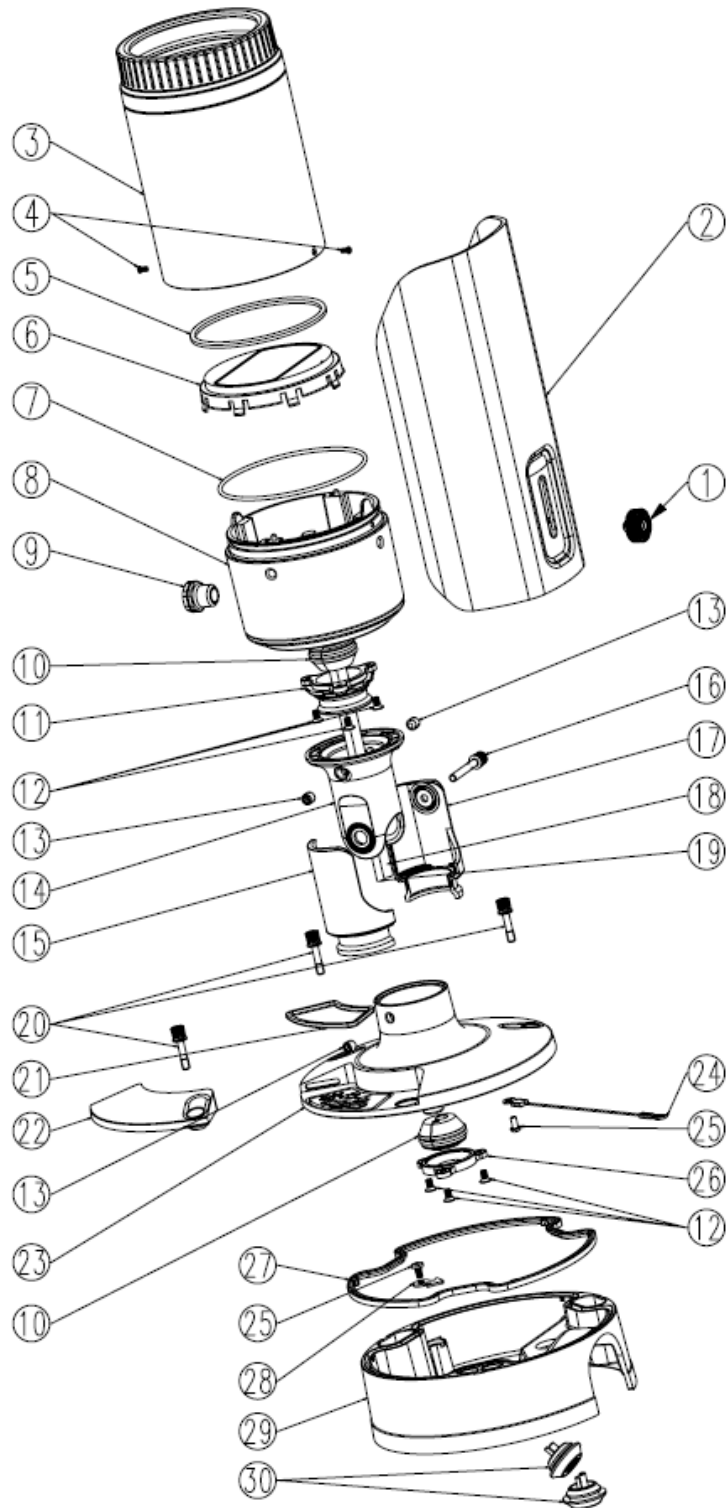
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Attachment 2 – Parts List





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Attachment 2 – Parts List

No	Part Number	Part Name	QTY	Material Type
1	FC28-002278B	KNOB-KNOB WITH SHEET	1	ALDC
2	FC28-002444H	SHIELD-SUN-XNO9082R-WISENET,PC,IR-BLACK,	1	PC, SC-1220UR
3	FC29-008670A	CASE-BODY-XNO6080R/ADC	1	ALDC
4	FC18-001043A	SCREW-MACHINE+CHM20.4,4,SUS(XM-7)	2	SUS
5	HP07-001175A	GASKET-WINDOW ORING-XNO6080R/SILICON RUB	1	SILICON RUBBER
6	AM07-008594D	ASSY-FRONT-WINDOW, 0.3T, XNO-6082R	1	PC, SC-1220UR, NH-1035
7	FC18-004615A	O-RING-D 1.78D D2-22	1	SILICON RUBBER
8	FC15-007585A	COVER-REAR-PNO-A9081R/ADC12	1	ALDC
9	HP06-001187	VENT-GORE-PMF100585/MEMBRANE,SCREW IN,PM	1	PC
10	HP07-001180A	GASKET-CABLE-XNO6080R/SILICON RUBBER	2	SILICON RUBBER
11	FC29-002436B	GUIDE-PANNING-SNO6084R/ALDC	1	ALDC
12	FC18-005184A	SCREW,MS-M3 L8 FH,0.5,2,3	6	SW CH18A
13	Z6004041101A	SETSCREW SRN M3P1L6	3	SUS
14	FC39-001271C	BODY-PANNING-XNO6085R,821KA-ZJS-1200	1	ALDC
15	FC39-001270B	BODY-TILT LEFT-SNO6084R,821KA-ZJS-1200	1	ALDC
16	Z6011000601A	HEXAGON REC M4L30	1	SUS
17	FC39-001266B	BODY-TILT RIGHT-SNO6084R,821KA-ZJS-1200	1	ALDC
18	EP02-004492B	HARNESS-XNV-6081Z/MCX,50P-50P,120MM,B	1	
19	EP02-002118A	HARNESS-SNO-6084R INTERFACE CABLE(10P)	1	
20	FC18-003309A	SCREW-MACHINE-HSHC,4.0,7.20,DOUBLE SEMS,	3	SW CH18A
21	HP07-001175A	GASKET-BUTTON-XNO6080R/SILICON RUBBER	1	SILICON RUBBER
22	FC28-002443A	DOOR-BB BUTTON-XNO6080R/ADC	1	ALDC
23	FC29-012323A	CASE-TOP-BB-PNO-A9081R	1	ALDC
24	RM01-003400A	WIRE,METALIC-SAFETY-SNO-8081R,STS 304	1	SUS
25	Z9642306007	MACHINE SCREW(M3xL6,Zh-B,보링머신)	2	SW CH18A
26	FC15-005367A	COVER-CABLE GASKET XNO-6080R/ADC	1	SILICON RUBBER
27	HP07-001485A	GASKET-BACKBOX-PNO-A9081R	1	SILICON RUBBER
28	FC09-006670A	BRACKET-WIRE-SNO-8081R,SUS304,1,2	1	SUS304
29	FC29-012322A	CASE-BOTTOM-BB-PNO-A9081R	1	ALDC
30	MC06-001042A	BUSHING-CABLE SET,SILICON,PNV-9080R	2	SILICON RUBBER



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Attachment 2 – Parts List



Component - Plastics

File Number: E115797

LOTTE CHEMICAL CORPORATION

58 GOSAN-RO

UIWANG-SI, GYEONGGI-DO 16073 Republic of Korea

INFINO: NH-1035(+)

Polycarbonate (PC), pellets

(+) - May be replaced by one, two, or three numbers and/or letter(s)



Flammability	Value	Test Method
Flame Rating		UL 94
1.5 mm, ALL	V-0	IEC 60695-11-10, -20
2.0 to 2.7 mm, ALL	V-0, 5VB	
Electrical	Value	Test Method
Hot-wire Ignition (HWI) (1.5 mm)	PLC 2	UL 746
High Amp Arc Ignition (HAI) (1.5 mm)	PLC 2	UL 746
Comparative Tracking Index (CTI)	PLC 2	UL 746
Thermal	Value	Test Method
RTI Elec		UL 746
1.5 mm	80.0 °C	
2.0 to 2.7 mm	80.0 °C	
RTI Imp		UL 746
1.5 mm	80.0 °C	
2.0 to 2.7 mm	80.0 °C	
RTI Str		UL 746
1.5 mm	80.0 °C	
2.0 to 2.7 mm	80.0 °C	



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Attachment 2 – Parts List



Component - Plastics

File Number: E115797

LOTTE CHEMICAL CORPORATION
58 GOSAN-RO
UIWANG-SI, GYEONGGI-DO 16073 Republic of Korea



INFINO: SC-122(+)

Polycarbonate (PC), pellets

(+) - May be replaced by one, two, or three numbers and/or letter(s)

Flammability	Value	Test Method
Flame Rating		UL 94
0.75 mm, ALL	V-2	IEC 60695-11-10, -20
1.5 mm, ALL	V-2	
2.0 mm, ALL	V-2	
2.5 mm, ALL	V-2	
3.0 mm, ALL	V-2	
3.2 mm, NC	V-2	
Glow Wire Flammability Index		IEC 60695-2-12
1.5 mm	900 °C	IEC 60695-2-13
2.5 mm	925 °C	
3.2 mm	925 °C	
Glow Wire Ignition Temperature		
1.5 mm	800 °C	UL 746
2.5 mm	825 °C	
3.2 mm	850 °C	
Electrical	Value	Test Method
Hot-wire Ignition (HWI)		UL 746
0.75 mm	PLC 3	UL 746
1.5 mm	PLC 3	
2.0 mm	PLC 3	
2.5 mm	PLC 3	
3.0 mm	PLC 2	
High Amp Arc Ignition (HAI)		
0.75 mm	PLC 0	UL 746
1.5 mm	PLC 0	
2.0 mm	PLC 0	
2.5 mm	PLC 0	
3.0 mm	PLC 0	
Thermal	Value	Test Method
RTI Elec		UL 746
0.75 mm	80.0 °C	UL 746
1.5 mm	80.0 °C	
2.0 mm	80.0 °C	
2.5 mm	80.0 °C	
3.0 mm	80.0 °C	
3.2 mm	80.0 °C	

Component - Plastics

File Number: E115797



Thermal	Value	Test Method
RTI Imp		UL 746
0.75 mm	80.0 °C	UL 746
1.5 mm	80.0 °C	
2.0 mm	80.0 °C	
2.5 mm	80.0 °C	
3.0 mm	80.0 °C	
3.2 mm	80.0 °C	
RTI Str		
0.75 mm	80.0 °C	UL 746
1.5 mm	80.0 °C	
2.0 mm	80.0 °C	
2.5 mm	80.0 °C	
3.0 mm	80.0 °C	
3.2 mm	80.0 °C	

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Attachment 2 – Parts List

 Component - Plastics File Number: E254551		
SICHUAN LONGHUA FILM CO LTD Feiyun Road 383 Mianyang, Sichuan 621006 China LonghuaECO-(d)(e) Polycarbonate (PC), films and sheets (d) - Replaced by any digit 00-9999 (e) - May be replaced by any letter from A to Z except for letter B		
		
Flammability	Value	Test Method
Flame Rating		UL 94
0.030 mm, NC, BK	VTM-0	ISO 9773
0.050 to 0.055 mm, NC, BK	VTM-0	
Thermal	Value	Test Method
RTI Elec		UL 746
0.030 mm	80.0 °C	
0.050 to 0.055 mm	80.0 °C	
RTI Imp		UL 746
0.030 mm	80.0 °C	
0.050 to 0.055 mm	80.0 °C	
RTI Str		UL 746
0.030 mm	80.0 °C	
0.050 to 0.055 mm	80.0 °C	



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Attachment 2 – Parts List



Component - Plastics

File Number: E121254

SAMYANG CORPORATION

407 3-Ga Palbok-Dong
Cheonju, YKCheonbuk 560-200 Korea, Republic of

TRIEX: 3025G-(y)

Polycarbonate (PC), pellets

(y) - Represents any number 10-19 incl.



Flammability	Value	Test Method
Flame Rating		UL 94
1.5 mm, ALL	V-0	IEC 60695-11-10, -20
3.0 mm, ALL	V-0	
6.0 mm, ALL	V-0	
Electrical	Value	Test Method
Hot-wire Ignition (HWI)		UL 746
1.5 mm	PLC 2	
3.0 mm	PLC 2	
6.0 mm	PLC 1	
High Amp Arc Ignition (HAI)		UL 746
1.5 mm	PLC 0	
3.0 mm	PLC 0	
6.0 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 3	UL 746
Dielectric Strength	31 kV/mm	ASTM D149 IEC 60243-1
High Voltage Arc Tracking Rate (HVTR)	PLC 3	UL 746
Volume Resistivity	1.0E+15 ohms-cm	ASTM D257 IEC 60093
Arc Resistance	PLC 7	ASTM D495
Thermal	Value	Test Method
RTI Elec		UL 746
1.5 mm	130 °C	
3.0 mm	130 °C	
6.0 mm	130 °C	
RTI Imp		UL 746
1.5 mm	125 °C	
3.0 mm	125 °C	
6.0 mm	125 °C	
RTI Str		UL 746
1.5 mm	130 °C	
3.0 mm	130 °C	
6.0 mm	130 °C	
Physical	Value	Test Method
Dimensional Stability	0.0 %	ASTM D1042 ISO 2796



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Attachment 3 – Photographs

<Photo 1 > Test Unit



<Photo 2 > Test Unit





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Attachment 3 – Photographs

<Photo 3 > Hose down test



<Photo 4 > Test Result

