TEST REPORT

CTK Co., Ltd.
5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,
Gyeonggi-do, Republic of Korea
Tel: 1551-9871
Fax: +82-31-624-9501

REPORT No.:
CTK-2026-02423

1. Applicant

- Name : Hanwha Vision Co., Ltd.
- Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt : Aug. 05, 2026

2. Manufacturer

- Name : HANWHA VISION VIETNAM COMPANY LIMITED
- Address : Lot O-2, Que Vo Industrial Zone extended area, Nam Son ward, Bac Ninh province, Vietnam

3. Use of Report : Quality control

4. Test sample / Model : NETWORK CAMERA / PNM-32084RQZ

5. Date(s) of test : Aug. 11, 2026

6. Test Standard (Method) used : NEMA 250-2020
Enclosures for Electrical Equipment (1000 Volts Maximum)

7. Testing Environment : Temperature: (25 ± 10) ℃, Humidity: (50 ± 25) % R.H.
Pressure: (96 ± 10) kPa

8. Test Results : Refer to the test results

9. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing
(5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea)

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
This report cannot be reproduced or copied without the written consent of CTK.

Approval	Tested by Name: HongBeom Jeon (Signature)	Technical Manager Name: HoHyun Lee (Signature)

Remark. This report is not related to ISO/IEC 17025, KOLAS accreditation and relevant regulation.

Aug. 28, 2026

CTK Co., Ltd.

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1. Testing laboratory

1.1 Testing laboratory information

Lab. Name	CTK Co., Ltd.
Representative	Young Joseph Seungwon
Address	5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea
Tel.	1551-9871
Fax.	+82-31-624-9501
E-Mail	all.youngin@element.com
Website	www.elementkorea.kr

1.2 Testing laboratory accreditation status

Country	Classification	Accreditation Number	Logo
International	KOLAS	TESTING NO. KT119	

2. Sample description and equipment information

2.1 Sample description

Sample Name	Model Name	S/N	Date of Manufacture	Quantity	Comment
NETWORK CAMERA	PNM-A32084RQZ	ZXLQ6V4L70000RH	Jul. 2026	1 EA	-

2.2 Model description

Basic Model .....:	PNM-A32084RQZ
Series model ..... .:	PNM-A20084RQZ, PNM-A24084RTZ,PNM-A15084RTZ
Model differences .....:	PNM-A24084RTZ : Difference in Len module quantity PNM-A20084RQZ : Image sensor differences PNM-A15084RTZ : Differences in lens module quantity and image sensors

2.3 Manufacturer information

Test item description .....:	NETWORK CAMERA
Trade Mark .....:	Hanwha Vision
Manufacturer .....:	Lot O-2, Que Vo Industrial Zone extended area, Nam Son ward, Bac Ninh province, Vietnam
Model/Type reference .....:	PNM-A32084RQZ
Ratings .....:	Electrical PNM-A32084RQZ PoE 55 V ⎓ 36.5 W / PoE 55 V ⎓ 0.67 A PNM-A24084RTZ PoE 55 V ⎓ 28.9 W / PoE 55 V ⎓ 0.53 A PNM-A20084RQZ PoE 55 V ⎓ 38.1 W / PoE 55 V ⎓ 0.7 A PNM-A15084RTZ PoE 55 V ⎓ 30.5 W / PoE 55 V ⎓ 0.56 A Dimension: Ø 315 mm by 989.1 mm, Ø 77.5 mm by 243.35 mm, Ø200.2 mm * by 628.62 mm, Ø 4 mm * 6 by 75.36 mm, Ø16 mm * 2 by 100.48 mm

List of Attachments (including a total number of pages in each attachment):
Attachment 1: 9-10 pages (Construction Diagram including installation method)
Attachment 2: 17-25 pages (Parts List)
Attachment 3: 27-29 pages (photographs)

Summary of testing:

Tests performed (name of test and test clause): **Clause 5.7(Hose Down Test)**	**Testing location:** CTK Co., Ltd. 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea

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



2.4 Equipment information

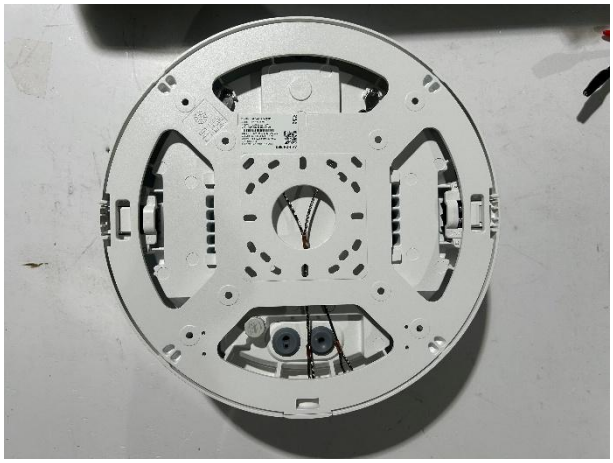
Testing equipment	Model Name	Manufacturer	Manufacturing Number	Next Cal. Date
25.4mm Nozzle	S3-IP18	CTK	S3-IP18	-
Area flow meter	Z-6504	FLOWTECH	0064	Jan. 19, 2027
Steel measuring meter	5.5 m	KOMELON	225851	Jan. 13, 2028
Stop Watch	NONE	Casio	612Q01R-1	Jan. 15, 2027
Digital Vernier Calipers	100 mm	MITUTOYO	A17179462	-

2.5 Pre-test sample images

2.5.1 Test sample



Top



Bottom



Front



Rear



Left side



Right side

2.6 Testing equipment images

2.6.1 Test equipment



25.4mm Nozzle



Digital Vernier Calipers



Area flow meter



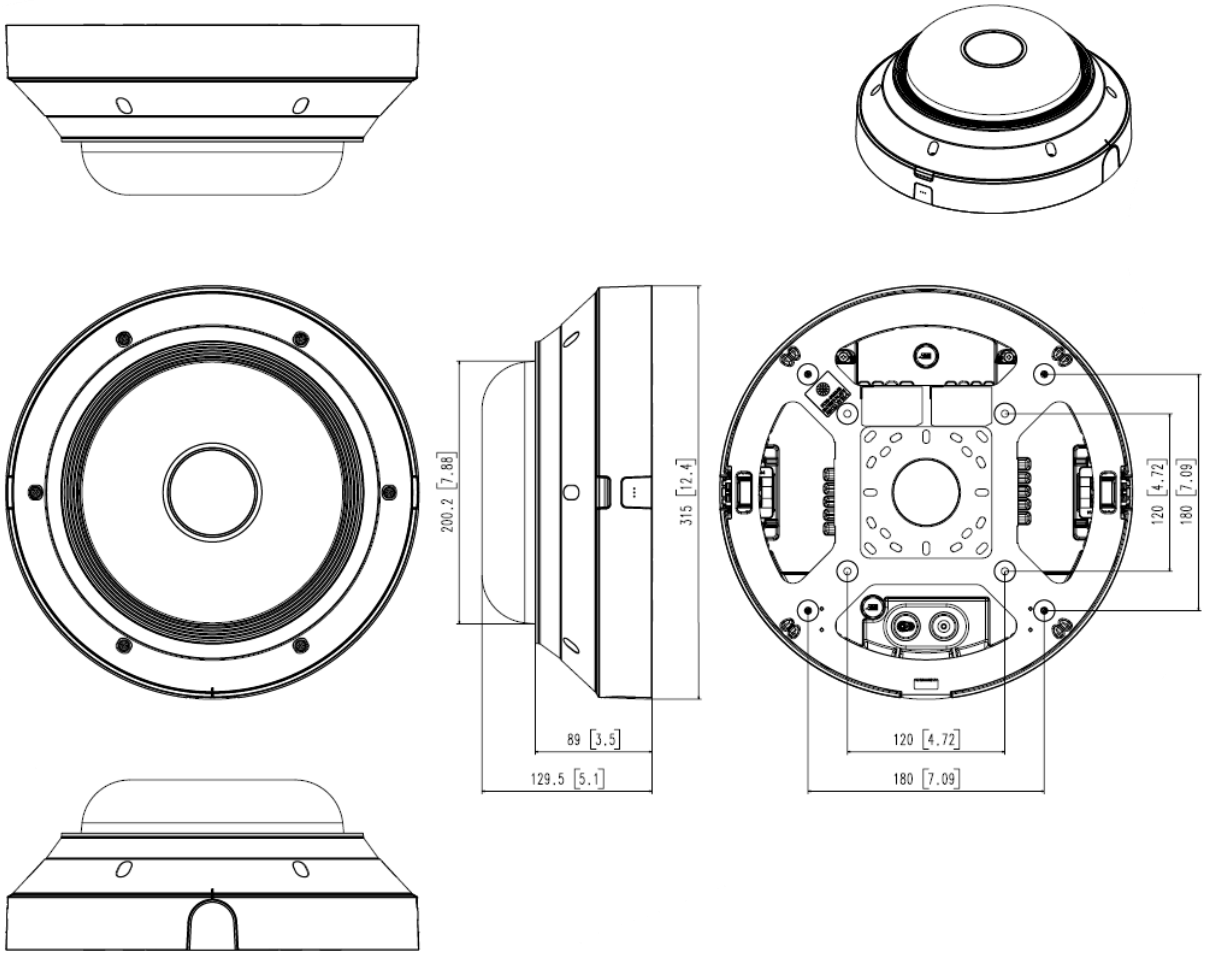
Steel measuring meter



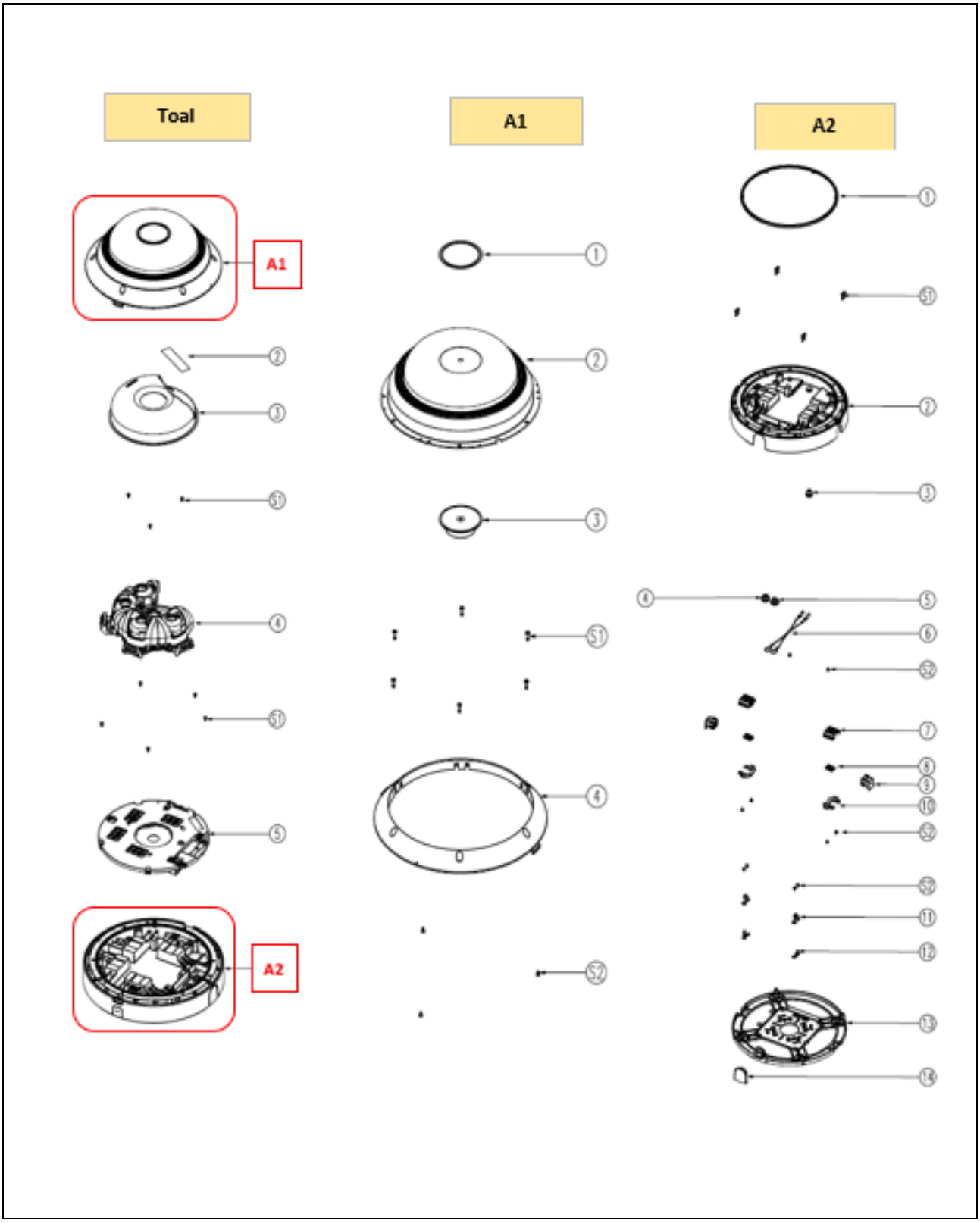
Stop Watch

2.7 Sample appearance

Enclosure dimensions [unit : mm]



2.8 Construction Diagram including installation method



3. Test Information

3.1 Test item particulars and Possible test case verdicts

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 evaluate to the test object:	N/E

3.2 General remarks and factory information

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 250-2020

Name and address of factory (ies):

1. HANWHA VISION VIETNAM COMPANY LIMITED

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

2. D-TECH CO., LTD.

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

3.3 Type 4X Test information

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	Non-vented 5.7 Vented 5.5.1 Dust Blast Method	Windblown dust protected	No ingress of dust	6

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

3.4 NEMA 250-2020 Test list

NEMA 250-2020			
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. V-2 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	P
3.7	Mounting	Mounting means are external to the equipment cavity (See the attachment 1)	N/A
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

NEMA 250-2020			
Clause	**Requirement + Test**	**Result – Remark**	**Verdict**
3.14	Gaskets	Gaskets made of a silicone Sponge Rubber (no Elastomeric or Thermoplastic used) (See clause 5.14 and the attachment 2)	N/E
3.15	Observation Windows	No Observation Window	N/A

4	**MARKING**		
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**		
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

NEMA 250-2020			
Clause	**Requirement + Test**	**Result – Remark**	**Verdict**
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/A
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 ℃ for 168 h according to 5.14.3(Alternate Evaluation) before performing relevant required tests.	N/E
5.15	Test for Sharpness of Edges	No sharp edges	P

3.5 Parts List

3.5.1 Parts List (1)

No.	Code	Name	Q'ty
A1	AM07-018269B	ASSY,CASE-TOP-MD-PNM-A32084RQZ	1
2	PT03-003797A	STICKER-BLISTER C32083RQZ;TAPE	1
3	PM02-007672A	PACKING,BLISTER-PNM-A32083RQZ	1
4	AM07-018364A	ASSY-MECHA-PNM-A32084RQZ	1
5	AM07-018272A	ASSY-HALF-MAIN-PNM-A32084RQZ	1
A2	AM07-018270A	ASSY,CASE-BOTTOM-PNM-A32084RQZ	1
S1	Z6001049601A	SCREW-MACHINE;6001-000128,BH,+,M3,L6,NI	8

No.	Code	Name	Q'ty
1	FC15-013213A	COVER-DOME-DECO-PNM-A32084RQZ	1
2	AM07-018110A	ASSY,COVER-DOME-PNM-A32084RQZ	1
3	FC15-013214A	COVER-GHOST-PNM-A32084RQZ	1
4	FC29-019692A	CASE-TOP-MD-PNM-A32084RQZ	1
S1	FC18-004000A	SCREW-SPECIAL : PH,TR20,M4,L7+5,SUS,FP	6
S2	Z6003013801A	SCREW-TAPTITE:BH,+,M3,L8,BLK,B-TYPE	3

3.5.2 Parts List (2)

No.	Code	Name	Q'ty
1	HP07-002158A	GASKET-BOTTOM-PNM-A32084RQZ	1
2	FC29-019239B	CASE-BOTTOM-T2.5-PNM-A32084RQZ	1
3	HP06-001351	VENT-GORE-PMF100586,WHT	1
4	MC06-001203A	BUSHING-CABLE-FLEXIBLE;SILICON	1
5	MC06-001189A	BUSHING-CABLE 2 HOLE;SILICONE,GRAY	1
6	EP24-001020B	WIRE-SAFETY,PNM-A32084RQZ;SUS304	1
7	FC09-016574A	BRACKET-SWITCH-BTM;PNM-C32084RQZ;PC	2
8	FC38-001373A	SPRING,ETC-SWITCH-BTM;PNM-C32084RQZ;SUS3	4
9	FC29-016993A	HOLDER-SWITCH-BTM;PNM-C32083RQZ;PC	2
10	FC15-010514A	COVER-SWITCH-BTM;PNM-C32084RQZ;ALDC,.	2
11	FC29-015085A	HOLDER-SAFETY_WIRE;PD,1.5,SUS304	2
12	FC38-001316A	SPRING,PLT-SAFETY_WIRE_9084RQZ;SUS304CSP	2
13	FC39-008343A	MOUNT-PLATE-PNM-A32084RQZ	1
14	FC15-009322A	COVER-CONDUIT_C32083RVQ;PC,MD	1
S1	FC18-004000A	SCREW-SPECIAL : PH,TR20,M4,L7+5,SUS,FP	4
S2	Z6001047201A	SCREW_TH_M3L6	10

3.5.3 Parts List (3)

Component - Plastics
File Number: E115797

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

INFINO: HN-1068(+)(f1)

Polycarbonate (PC), pellets

(+) - May be replaced by one, two, or three numbers and/or letter(s)
(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

Flammability	Value	Test Method
Flame Rating		UL 94 IEC 60695-11-10, -20
1.5 mm, ALL	V-0	
3.0 mm, ALL	V-0	
Glow Wire Flammability Index		IEC 60695-2-12
1.5 mm	960 °C	
3.0 mm	960 °C	
Glow Wire Ignition Temperature		IEC 60695-2-13
1.5 mm	825 °C	
3.0 mm	825 °C	
Electrical	**Value**	**Test Method**
Hot-wire Ignition (HWI) (1.5 mm)	PLC 3	UL 746
High Amp Arc Ignition (HAI) (1.5 mm)	PLC 3	UL 746
Comparative Tracking Index (CTI)	PLC 3	UL 746
Dielectric Strength	32 kV/mm	ASTM D149 IEC 60243-1
Volume Resistivity	1.0E+17 ohms·cm	ASTM D257 IEC 60093
Thermal	**Value**	**Test Method**
RTI Elec		UL 746
1.5 mm	130 °C	
3.0 mm	130 °C	
RTI Imp		UL 746
1.5 mm	130 °C	
3.0 mm	130 °C	
RTI Str		UL 746
1.5 mm	130 °C	
3.0 mm	130 °C	
Ball Pressure Test (130°C, 3.00 mm)	Pass	IEC 60695-10-2
Physical	**Value**	**Test Method**
Outdoor Suitability	f1	UL 746C

3.5.4 Parts List (4)

Component - Plastics

S-2000V+(f1), S-2001V+(f1)

Yellow Card™

MITSUBISHI ENGINEERING-PLASTICS CORP
ENVIRONMENT & QUALITY ASSURANCE DEPT
SHIODOME SUMITOMO-BLDG 25TH FL
1-9-2 HIGASHI-SHINBASHI
MINATO-KU, Tokyo 105-0021 Japan

File Number: E41179

S-2000V+(f1), S-2001V+(f1)

Polycarbonate (PC), unreinforced, pellets

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

+ - Suffix optional, exceptions: The following cannot be used as optional suffixes: "N" for grade MB2112+, "S1" for grade F20-54, "V" for grades S-2000+(f1), S-2001+(f1), S-2003+(f1), the last letter "L" for grade CFH2520+, "W" for ELV2010 included in Grade ELV20(a5)+, "V" for grade MB2210+, "K1" for grade EKD3206+ included in Grade EKD32(a6)+, "K2" for grade EKD2213+ included in Grade EKD22(a12)+, "DC" and "UDC" for grade MB4303+, ¿B9¿ for grades HL-30(#)(#)+(f1), HL-40(#)(#)+(f1), HL-50(#)(#)+(f1), HL-70(#)(#)+(f1), HL-80(#)(#)+(f1), HL-85(#)(#)+(f1), HL-90(#)(#)+(f1).

c UL us
ALSO CERTIFIED TO IEC REQUIREMENTS

Flammability	Value	Test Method
Flame Rating		UL 94 IEC 60695-11-10, -20
0.38 mm, ALL	V-2	
1.5 mm, ALL	V-2	
3.0 mm, ALL	V-2	
Electrical	**Value**	**Test Method**
Hot-wire Ignition (HWI)		UL 746A
1.5 mm	PLC 3	
3.0 mm	PLC 3	
High Amp Arc Ignition (HAI)		UL 746A
1.5 mm	PLC 0	
3.0 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 2	UL 746A
Dielectric Strength	20 kV/mm	ASTM D149
High Voltage Arc Tracking Rate (HVTR)	PLC 0	UL 746A
Volume Resistivity	1.0E+7 ohms·cm	ASTM D257 IEC 60093
Arc Resistance	PLC 5	ASTM D495

3.5.5 Parts List (5)

Component - Plastics

S-2000V+(f1), S-2001V+(f1)

Thermal	Value	Test Method
RTI Elec		UL 746B
0.38 mm	80.0 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	
RTI Imp		UL 746B
0.38 mm	80.0 °C	
1.5 mm	115 °C	
3.0 mm	115 °C	
RTI Str		UL 746B
0.38 mm	80.0 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	
Physical	**Value**	**Test Method**
Dimensional Change	0.0 %	ASTM D1042 ISO 2796
Outdoor Suitability	f1	UL 746C

3.5.6 Parts List (6)

Component - Plastics

EXL9330(X)(f1)(GG)(B1)(IP), EXL9330B(X)(f1)(GG)(B1)(IP)(T N 18)

Yellow Card™

SABIC JAPAN L L C
PACIFIC GRADES - RESIN
2-2 KINUGAOKA
MOKA-SHI, Tochigi 321-4392 Japan

File Number: E207780

Lexan, ELCRES, ELCRIN: EXL9330(X)(f1)(GG)(B1)(IP), EXL9330B(X)(f1)(GG)(B1)(IP)(T N 18)

PC/Siloxane, pellets

(B1) - Represents color code BK1E526, BK1E649 and BK1E519
(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.
(GG) - Denotes a global grade formulation previously in File E161759.
(IP) - Inclined Plane Tracking per UL746A, average time to track at 1.5 kV is 60+ minutes.
(T N 18) - Trade name Lexan, ELCRES represent EXL9330 and ELCRIN represens EXL9330B
(X) - All colors except natural.
NOTE - Material designation may be followed by a color nomenclature consisting of either an alpha/numeric or numeric/alpha combination.

c UL us
ALSO CERTIFIED TO IEC REQUIREMENTS

Flammability	Value	Test Method
Flame Rating		
0.70 mm, ALL	HB	UL 94
0.8 mm, (B1)	V-1	UL 94 IEC 60695-11-10, -20
1.5 mm, (X)	V-0	UL 94 IEC 60695-11-10, -20
2.0 mm, (X)	V-0	UL 94 IEC 60695-11-10, -20
2.3 mm, (X)	V-0	UL 94 IEC 60695-11-10, -20
2.5 mm, BK, GY	V-0, 5VB	UL 94 IEC 60695-11-10, -20
3.0 mm, (X)	V-0, 5VA	UL 94 IEC 60695-11-10, -20
0.70 mm, ALL	HB75	IEC 60695-11-10, -20
Glow Wire Flammability Index		IEC 60695-2-12
1.0 mm	960 °C	
1.5 mm	960 °C	
2.0 mm	960 °C	
2.3 mm	960 °C	
2.5 mm	960 °C	
3.0 mm	960 °C	
Glow Wire Ignition Temperature		IEC 60695-2-13
1.0 mm	825 °C	
1.5 mm	825 °C	
2.0 mm	825 °C	
2.3 mm	825 °C	
2.5 mm	825 °C	
3.0 mm	825 °C	

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3.5.7 Parts List (7)

Component - Plastics

S-2000V+(f1), S-2001V+(f1)

Thermal	Value	Test Method
RTI Elec		UL 746B
0.38 mm	80.0 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	
RTI Imp		UL 746B
0.38 mm	80.0 °C	
1.5 mm	115 °C	
3.0 mm	115 °C	
RTI Str		UL 746B
0.38 mm	80.0 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	
Physical	**Value**	**Test Method**
Dimensional Change	0.0 %	ASTM D1042 ISO 2796
Outdoor Suitability	f1	UL 746C

3.5.8 Parts List (8)

Component - Plastics
2400 + (z)(f1), 2407 + (z)(f1), 2407 + RE(f1), 2408 + (z), 2456 + (z), 2458 + (z), 2458 + RE,AL2447 + (f1), AL2447 + MAS402 (f1),

Yellow Card™

Covestro Deutschland AG [PC Resins]
Chempark
Gebaeude B207
Leverkusen, 51368 Germany

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Makrolon: 2400 + (z)(f1), 2407 + (z)(f1), 2407 + RE(f1), 2408 + (z), 2456 + (z), 2458 + (z), 2458 + RE,AL2447 + (f1), AL2447 + MAS402 (f1),

Polycarbonate (PC), pellets

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.
(z) - Material designation and color code may be followed by up to three letters and/or three numbers (does not include grades which are separately recognized with above material designation and suffix)
+ - Material designations may be followed by a six digit numerical code denoting color.

c UL us
ALSO CERTIFIED TO IEC REQUIREMENTS

Flammability	Value	Test Method
Flame Rating		
2.7 mm, ALL	HB	UL 94
3.0 mm, ALL	HB	UL 94
6.0 mm, ALL	HB	UL 94
0.75 mm, ALL	V-2	UL 94 IEC 60695-11-10, -20
1.5 to 2.6 mm, ALL	V-2	UL 94 IEC 60695-11-10, -20
3.0 mm, ALL	HB40	IEC 60695-11-10, -20
6.0 mm, ALL	HB40	IEC 60695-11-10, -20
2.7 mm, ALL	HB75	IEC 60695-11-10, -20
Electrical	**Value**	**Test Method**
Hot-wire Ignition (HWI)		UL 746A
1.5 to 2.6 mm	PLC 3	
2.7 mm	PLC 3	
3.0 mm	PLC 2	
6.0 mm	PLC 0	
High Amp Arc Ignition (HAI)		UL 746A
1.5 to 2.6 mm	PLC 0	
2.7 mm	PLC 0	
3.0 mm	PLC 0	
6.0 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 2	UL 746A
Dielectric Strength	25 kV/mm	ASTM D149
High Voltage Arc Tracking Rate (HVTR)	PLC 0	UL 746A
Volume Resistivity	1.0E+15 ohms-cm	ASTM D257 IEC 60093
Arc Resistance	PLC 5	ASTM D495

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3.5.9 Parts List (9)

Component - Plastics

2400 + (z)(f1), 2407 + (z)(f1), 2407 + RE(f1), 2408 + (z), 2456 + (z), 2458 + (z), 2458 + RE,AL2447 + (f1), AL2447 + MAS402 (f1),

Thermal	Value	Test Method
RTI Elec		UL 746B
0.75 mm	125 °C	
1.5 to 2.6 mm	125 °C	
2.7 mm	125 °C	
3.0 mm	125 °C	
6.0 mm	125 °C	
RTI Imp		UL 746B
0.75 mm	115 °C	
1.5 to 2.6 mm	115 °C	
2.7 mm	115 °C	
3.0 mm	115 °C	
6.0 mm	115 °C	
RTI Str		UL 746B
0.75 mm	125 °C	
1.5 to 2.6 mm	125 °C	
2.7 mm	125 °C	
3.0 mm	125 °C	
6.0 mm	125 °C	
Physical	**Value**	**Test Method**
Dimensional Change	0.0 %	ASTM D1042 ISO 2796
Outdoor Suitability	f1	UL 746C

4. Hose Down Test (Clause 5.7)

4.1 Test date and environmental conditions

4.1.1 Test date: Aug. 11, 2026

4.1.2 Measured Environmental Conditions

Item	Temperature (℃)	Humidity (% R.H.)	Pressure (kPa)
Measurement	26.8	59.6	100.3

4.2 Test Conditions and methods

4.2.1 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/min (65 gal). 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/s (1/4 in/s).

4.2.2 Sample Dimension

Ø 315 mm by 989.1 mm, Ø 77.5 mm by 243.35 mm,
Ø200.2 mm * by 628.62 mm, Ø 4 mm * 6 by 75.36 mm,
Ø16 mm * 2 by 100.48 mm
Test Duration = 339.485 s

4.2.3 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

4.3 Test Setup and During test sample images

4.3.1 Evidence of test setting



4.4 Test result

4.4.1 Test result table

Sample No (Model)	Water Flow	Presence of water inside	Result
PNM-A32084RQZ	240 L/min	**No**	Pass

※ Refer to the sample photos after the completion of testing in section 4.5.

4.5 Post-test sample images

4.5.1 Test sample image





- End -