



File E158873

Vol X13

Authorization Page 1

Issued: 2020-07-22

Revised: 2023-05-02

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT
(AZOT, AZOT7)

Manufacturer:	SEE ADDENDUM FOR MANUFACTURER LOCATIONS
Applicant: (813307-003)	105140 (Party Site) Hanwha Vision Co Ltd 6, Pangyo-ro 319beon-gil, Bundang-gu Seongnam-si Gyeonggi-do 13488 KR
Listee/Classified Company: (813307-003)	105140 (Party Site) SAME AS APPLICANT

Use of the Mark

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party. The UL Contracting Party for Follow-Up Services is listed in the addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

It is the responsibility of the Applicant, Manufacturer(s), and Listee/Classified Company to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

Additional Responsibilities

Additional responsibilities, duties and requirements for the Applicant and Manufacturers are defined under Additional Resources at the following website: <https://www.ul.com/fus>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the Follow-Up Service Terms referenced below, please contact UL's Customer Service at <https://www.ul.com/aboutul/locations/>, select a location and enter your request, or call the number listed for that location.

Acceptance of Follow-Up Services

The Applicant and the specified Manufacturer(s) and any Listee/Classified Company in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable service agreement is a Global Services Agreement ("GSA"), the Applicant, the specified Manufacturer(s), and any Listee/Classified Company will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of a) use of the prescribed UL Mark, b) acceptance of the factory inspection, or c) payment of the Follow-Up Service fees. The Service Agreement incorporates such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking the following link: <https://www.ul.com/resources/contracts/follow-up-service-terms>. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

Use and Ownership of the Follow-Up Service Procedure

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the Applicant, the specified Manufacturer(s), and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding

that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Definition of Terms

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

No Third Party Liability

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

Certification Body

UL LLC has signed below solely in its capacity as the certification body to indicate that this Follow-Up Service Procedure fulfills the requirements for certification documentation issued by the certification body. The certification body's accreditation status for the applicable certification scheme and identification of the accreditation body can be found at <https://www.ul.com/resources/accreditation>.

Deborah Jennings-Conner
VP Regulatory Services
UL LLC

LOCATION

135422 (Party Site)
D-TECH CO LTD
173-25 Saneop-ro Gwonseon-gu
Suwon-si Gyeonggi-do 16648 KR
Factory ID: D
UL Contracting Party for above site is: UL GmbH

1846102 (Party Site)
HANWHA VISION VIETNAM COMPANY LIMITED
Lot O-2 Que Vo Industrial Zone extended area Nam Son Ward
Bac Ninh VN
Factory ID: V
UL Contracting Party for above site is: UL GmbH

2467434 (Party Site)
KCE Co Ltd
KCE B/D 34, Annam-ro 369beon-gil Bupyeong-gu
Incheon 21312 KR
Factory ID: C
UL Contracting Party for above site is: UL GmbH

(100578-786) 241273 (Party Site)
OIC KOREA CO LTD
5F, 12 Annam-ro 369beon-gil Bupyeong-gu
Incheon 21312 KR
Factory ID: O
UL Contracting Party for above site is: UL GmbH

2637173 (Party Site)
KOSTEM CO.,Ltd.
4-74, 228, Haan-ro
Gwangmyeong-si Gyeonggi-do KR
Factory ID: KOS
UL Contracting Party for above site is: UL GmbH



Multiple Listing Correlation Sheet

ML FILE NO. E482654

Issued: 2022-11-30
Revised: 2023-03-21

MULTIPLE LISTING
of
AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT
(AZOT, AZOT7)
for

[1566244] QOGNIFY LTD

Basically Listed for:

[105140] HANWHA VISION CO LTD

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, file number, Trademark / Tradename, when applicable, and product designation. The Control Number remains 9T96.

LITERATURE: If literature is packaged with the Multiple Listed product(s) it shall be in compliance with the requirements outlined in the appropriate UL Standard(s).

Basically Listed products covered by Procedure and/or Reports under File No. E158873, Volume X13

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designation
NETWORK VIDEO ENCODER	A6125-UL	SPE-1630	NVE4016

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Product Type	Model/Type Reference	Report Reference #	Status
NETWORK VIDEO RECORDER	XRN-6410B4, XRN-3210B4	E158873-A6027-UL	
NETWORK VIDEO RECORDER	PRN-6410B4, PRN-3210B4, XRP-4210B4, PRN-6400B4, PRN-3200B4	E158873-A6028-UL	
NETWORK VIDEO RECORDER	XRN-6410DB4	E158873-A6029-UL	
NETWORK VIDEO RECORDER	PRN-6410DB4, XRP-4310DB4, PRN-6400DB4	E158873-A6030-UL	
NETWORK CAMERA	PNM-9002VQ	E158873-A6031-UL	
NETWORK CAMERA	XNF-9010RV, XNF-9010RVM, XNF-9010RS	E158873-A6032-UL	
NETWORK CAMERA	PNM-9000QB	E158873-A6033-UL	
NETWORK CAMERA	XNP-9300RW, XNP-8300RW, XNP-6400RW	E158873-A6034-UL	
NETWORK CAMERA	TNV-8010C, TNV-8011C	E158873-A6035-UL	
OUTDOOR NETWORK CAMERA	PNM-8082VT	E158873-A6036-UL	
THERMAL CAMERA	TNM-3620TDY, TNM-C3620TDR, TNM-C3622TDR	E158873-A6037-UL	
DIGITAL VIDEO RECORDER	HRX-1621* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A6038-UL	
NETWORK CAMERA	PNM-9022V	E158873-A6039-UL	
NETWORK CAMERA	PNM-9322VQP	E158873-A6040-UL	
DIGITAL VIDEO RECORDER	HRX-821* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A6041-UL	
NETWORK I/O BOX	SPM-4210	E158873-A6042-UL	
NETWORK VIDEO RECORDER	XRN-2011*, XRN-2010*, XRN-3010*, XRN-1610*, XRN-2010P/DM, XRN-3010P/DM, XRN-3010A, XRN-2011A, XRN-2010A, XRN-1610A (* is blank or N or P: N=NTSC, P=PAL)	E158873-A6043-UL	
PUBLIC VIEW MONITOR	SMT-2730PV	E158873-A6044-UL	
PUBLIC VIEW MONITOR	SMT-3230PV	E158873-A6045-UL	
CAMERA HOUSING	SHB-9000H	E158873-A6046-UL	
PUBLIC VIEW MONITOR	SMT-1030PV	E158873-A6047-UL	
NETWORK CAMERA	XNP-9250R, XNP-8250R, XNP-6400R	E158873-A6049-UL	
NETWORK CAMERA	XNP-9250, XNP-8250, XNP-6400	E158873-A6050-UL	
NETWORK CAMERA	ONO-9081R	E158873-A6051-UL	
NETWORK CAMERA	ONV-9081R	E158873-A6052-UL	
NETWORK VIDEO RECORDER	XRN-1620B2	E158873-A6053-UL	

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NETWORK VIDEO RECORDER	XRN-1620SB1	E158873-A6054-UL	
NETWORK VIDEO RECORDER	XRN-820S	E158873-A6055-UL	
NETWORK CAMERA	SCO-6020	E158873-A6056-UL	
NETWORK CAMERA	TNF-9010	E158873-A6057-UL	
NETWORK VIDEO RECORDER	PRN-3210B2, PRN-1610B2, XRN-6410RB2, XRN-3210RB2, XRN-6410B2, XRN-3210B2, PRN-3200B2, PRN-3205B2, PRN-1600B2, PRN-1605B2	E158873-A6058-UL	
NETWORK CAMERA	PNB-A6001	E158873-A6059-UL	
NETWORK CAMERA	PND-A6081RV, PND-A6081RF	E158873-A6060-UL	
NETWORK CAMERA	PNO-A6081R	E158873-A6061-UL	
LENS MODULE	SLA-T2480*, SLA-T2480V*, SLA-T4680*, SLA-T4680V*, SLA-T4680D, SLA-T4680DW, SLA-T4680DS, SLA-T2415, SLA-T2815B, SLA-T2480A, SLA-T2480VA, SLA-T4680A, SLA-T4680VA (* is blank or N or P: N = NTSC, P=PAL)	E158873-A6062-UL	
NETWORK CAMERA	PNV-A6081R	E158873-A6063-UL	
NETWORK CAMERA	XNB-6001*, XNB-H6240A, XNB-H6242A	E158873-A6064-UL	
NETWORK THERMAL CAMERA	TNO-3030T, TNO-3020T, TNO-3010T, TNO-3040T, TNO-3050T	E158873-A6067-UL	
NETWORK CAMERA	QNP-6320, QNP-6250, QNP-6251	E158873-A6068-UL	
NETWORK CAMERA	QNP-6320H, QNP-6250H, QNP-6251H	E158873-A6069-UL	
NETWORK CAMERA	XNV-C9083R, XNV-C8083R, XNV-C7083R, XNV-C6083R, XNV-C6083	E158873-A6070-UL	
NETWORK CAMERA	TID-600R	E158873-A6071-UL	
DIGITAL VIDEO RECORDER	HRX-1632, HRX-835	E158873-A6072-UL	
LED MONITOR	SMT-4343	E158873-A6073-UL	
NETWORK CAMERA	TNO-7180R, TNO-7180RLP	E158873-A6075-UL	
NETWORK CAMERA	XND-C9083RV, XND-C8083RV, XND-C7083RV, XND-C6083RV	E158873-A6076-UL	
NETWORK CAMERA	PNM-9031RV	E158873-A6077-UL	
NETWORK CAMERA	QNO-7082R	E158873-A6078-UL	
NETWORK CAMERA	QND-7082R	E158873-A6080-UL	
NETWORK CAMERA	QNV-7082R	E158873-A6081-UL	
NETWORK CAMERA	XNO-C9083R, XNO-C8083R, XNO-C7083R, XNO-C6083R	E158873-A6082-UL	
NETWORK CAMERA	XNV-9083R, XNV-8083R, XNV-8093R, XNV-6083R	E158873-A6083-UL	
NETWORK CAMERA	XND-9083RV, XND-8083RV, XND-8093RV, XND-6083RV	E158873-A6084-UL	
NETWORK CAMERA	QNO-7032R, QNO-7022R, QNO-7012R	E158873-A6088-UL	

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NETWORK CAMERA	XNB-9003, XNB-8003, XNB-6003	E158873-A6089-UL	
NETWORK CAMERA	XNO-9083R, XNO-8083R, XNO-6083R	E158873-A6091-UL	
NETWORK CAMERA	QNV-7012R, QNV-7022R, QNV-7032R	E158873-A6092-UL	
NETWORK CAMERA	QND-7012R, QND-7022R, QND-7032R	E158873-A6093-UL	
NETWORK CAMERA	QNP-6320R, QNP-6250R	E158873-A6094-UL	
NETWORK CAMERA	XNV-6123R	E158873-A6100-UL	
NETWORK CAMERA	XNO-6123R	E158873-A6101-UL	
NETWORK CAMERA	LNO-6072R	E158873-A6102-UL	
NETWORK CAMERA	LVN-6012R, LVN-6022R, LVN-6032R, ANV-L6012R	E158873-A6103-UL	
NETWORK CAMERA	LVN-6072R	E158873-A6104-UL	
NETWORK CAMERA	LND-6012R, LND-6022R, LND-6032R	E158873-A6105-UL	
NETWORK CAMERA	LND-6072R	E158873-A6106-UL	
NETWORK CAMERA	LNO-6012R, LNO-6022R, LNO-6032R, ANO-L6012R, ANO-L6022R	E158873-A6107-UL	
NETWORK CAMERA	ANO-L7022R, ANO-L7012R	E158873-A6108-UL	
NETWORK CAMERA	TNV-7010RC, TNV-7011RC	E158873-A6109-UL	
NETWORK CAMERA	ANV-L7012R	E158873-A6110-UL	
NETWORK CAMERA	XNZ-6320A	E158873-A6111-UL	
NETWORK CAMERA	QNP-6320HS	E158873-A6112-UL	
NETWORK CAMERA	PNM-A9083RVD, PNM-A7083RVD, PNM-C12083RVD, PNM-C7083RVD	E158873-A6113-UL	
NETWORK VIDEO RECORDER	ARN-1610S	E158873-A6114-UL	
NETWORK CAMERA	XNZ-L6320A	E158873-A6115-UL	
NETWORK VIDEO RECORDER	QRN-1630S, XRN-815S	E158873-A6116-UL	
NETWORK CAMERA	ANO-L7082R, ANO-L6082R	E158873-A6117-UL	
THERMAL NETWORK CAMERA	TNM-C4940TD, TNM-C4950TD, TNM-C4960TD, TNM-C4940TDR, TNM-C4942TDR	E158873-A6118-UL	
NETWORK CAMERA	ANE-L7012R, ANE-L6012R	E158873-A6119-UL	
NETWORK CAMERA	PNM-12082RVD, PNM-7082RVD	E158873-A6120-UL	
NETWORK CAMERA	ANV-L7082R, ANV-L6082R	E158873-A6121-UL	
DIGITAL VIDEO RECORDER	HRX-1635	E158873-A6122-UL	
DIGITAL VIDEO RECORDER	HRX-835A	E158873-A6123-UL	
NETWORK CAMERA	XNF-9013RV	E158873-A6124-UL	
NETWORK VIDEO ENCODER	SPE-1630	E158873-A6125-UL	
NETWORK VIDEO RECORDER	QRN-430S, ARN-410S	E158873-A6126-UL	
NETWORK VIDEO RECORDER	XRN-420S	E158873-A6127-UL	

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NETWORK VIDEO RECORDER	QRN-830S	E158873-A6128-UL	
NETWORK VIDEO RECORDER	ARN-810S	E158873-A6129-UL	
NETWORK CAMERA	XNV-9083RZ, XNV-8083RZ, XNV-6083RZ	E158873-A6130-UL	
DIGITAL VIDEO RECORDER	HRX-434	E158873-A6131-UL	
NETWORK CAMERA	XNV-8083Z, XNV-6083Z	E158873-A6132-UL	
NETWORK VIDEO ENCODER	SPE-420	E158873-A6133-UL	
NETWORK CAMERA	XNB-6002, XNB-H6244A	E158873-A6134-UL	
DIGITAL VIDEO RECORDER	HRX-435	E158873-A6135-UL	
DIGITAL VIDEO RECORDER	HRX-1634	E158873-A6136-UL	
VIDEO DECODER	SPD-152	E158873-A6137-UL	
NETWORK CAMERA	PNM-C9022RV	E158873-A6138-UL	
PENDANT SPEAKER	SPA-P100W, SPA-P100B	E158873-A6139-UL	
SECURITY LED MONITOR	SMT-2212	E158873-A6140-UL	
DIGITAL VIDEO RECORDER	ARD-1610	E158873-A6142-UL	
DIGITAL VIDEO RECORDER	ARD-810, ARD-410	E158873-A6144-UL	
NETWORK CAMERA	PNV-A6081R-E2T, PNV-A6081R-E1T	E158873-A6150-UL	
USB JOYSTICK CONTROLLER	SPC-2001	E158873-A6151-UL	
NETWORK CAMERA	MGC-D8080LI, MGC-D8080	E158873-A6153-UL	
NETWORK CAMERA	QNO-C9083R, QNO-C8083R	E158873-A6154-UL	
NETWORK CAMERA	QNV-C9083R, QNV-C8083R	E158873-A6155-UL	
NETWORK CAMERA	XNP-C9303RW, XNP-C8303RW, XNP-C6403RW	E158873-A6158-UL	
NETWORK CAMERA	XNP-C9253R, XNP-C8253R, XNP-C6403R	E158873-A6159-UL	
NETWORK CAMERA	XNP-C9253, XNP-C8253, XNP-C6403	E158873-A6160-UL	
NETWORK CAMERA	TNV-C7013RC	E158873-A6161-UL	
NETWORK CAMERA	MGC-F9010LI	E158873-A6162-UL	
NETWORK CAMERA	PNM-C32083RVQ, PNM-C16083RVQ	E158873-A6163-UL	
NETWORK CAMERA	QNV-C9011R, QNV-C8011R, QNV-C8012	E158873-A6164-UL	
ANALOG CAMERA	ACE-8020R, ACE-6020R	E158873-A6165-UL	
ANALOG CAMERA	ACV-8081R, ACV-8080R	E158873-A6166-UL	
ANALOG CAMERA	ACO-8020R, ACO-6020R	E158873-A6167-UL	
NETWORK CAMERA	ANE-L7012L	E158873-A6168-UL	
NETWORK CAMERA	IFS02-B12-OIB4	E158873-A6169-UL	
NETWORK CAMERA	IFS02-D12-OIB4	E158873-A6170-UL	
NETWORK CAMERA	IFS08-D13-ATB4	E158873-A6175-UL	
NETWORK CAMERA	PNM-C34404RQPZ	E158873-A6178-UL	
NETWORK CAMERA	PNO-A9311R	E158873-A6179-UL	

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NETWORK CAMERA	PNM-C16013RVQ	E158873-A6180-UL	
LENS MODULE	SLA-T2480WDA	E158873-A6181-UL	
NETWORK CAMERA	IFS05-D12-ATB4	E158873-A6182-UL	
NETWORK CAMERA	IFS02-D12-ATB4	E158873-A6183-UL	
NETWORK CAMERA	IFS02-C10-OIB4	E158873-A6184-UL	
NETWORK CAMERA	IFS05-C10-OIB4	E158873-A6185-UL	
NETWORK CAMERA	IFS08-C23-OIB4	E158873-A6186-UL	
NETWORK CAMERA	IFS08-B13-OIB4	E158873-A6187-UL	
NETWORK CAMERA	IFS05-D12-OIB4	E158873-A6188-UL	
NETWORK CAMERA	IFS08-D13-OIB4	E158873-A6189-UL	
LENS MODULE	SLA-T2480WA	E158873-A6191-UL	
NETWORK CAMERA	IFS05-B12-OIB4	E158873-A6192-UL	
Network Video Recorder	XRN-6420DB4	E158873-A6193-UL	
Network Video Recorder	XRN-6420B4, XRN-3220B4	E158873-A6194-UL	
NETWORK CAMERA	XNP-C9310R, XNP-C7310R	E158873-A6195-UL	
NETWORK CAMERA	IFS05-B31-OIB4	E158873-A6196-UL	
Public View Monitor	SMT-2731PV	E158873-A6197-UL	
ANALOG CAMERA	HCF-8011RV	E158873-A6198-UL	
NETWORK THERMAL CAMERA	TNO-C3032TRA, TNO-C3010TRA, TNO-C3020TRA, TNO-C3030TRA, TNO-C3012TRA, TNO-C3022TRA	E158873-A6199-UL	
Public View Monitor	SMT-3231PV	E158873-A6200-UL	
AI BOX	AIB-800	E158873-A6202-UL	

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	NETWORK CAMERA
Model:	XNP-C9310R, XNP-C7310R
Rating:	PoE (55 Vdc), 1.13 A
Applicant Name and Address:	HANWHA VISION CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI GYEONGGI-DO 13488 KOREA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Lawrence Lee / Project Handler Reviewed By: SeulKi Park / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

NETWORK CAMERA is designed for outdoor or indoor use, ceiling use with mounting brackets.

It is a commercial equipment supplied from UL listed PoE (Power over Ethernet) and installed by service personnel.

Model Differences

XNP-C9310R is basic model.

XNP-C7310R is identical to basic model except model designation and image sensor.

Test Item Particulars

Product group	end product
Classification of use by	Instructed person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	PoE (Power over Ethernet)
Considered current rating of protective device	N/A
Equipment mobility	wall/ceiling-mounted
Over voltage category (OVC)	OVC I
Class of equipment	Class III
Special installation location	Outdoor location
Pollution degree (PD)	PD 2
Manufacturer's specified Tma (°C)	55 Outdoor: minimum -50
IP protection class	IP 66, 67
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	4.39

Technical Considerations

- ☐ The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 55 °C

- ☐ The product is intended for use on the following power systems : No direct connection
- ☐ Considered current rating of protective device as part of the building installation (A) : N/A
- ☐ Mains supply tolerance (%) or absolute mains supply : No direct connection
- ☐ The Risk Group of a lamp or lamp system (including LEDs) is : RG 1
- ☐ The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual
- ☐ The outdoor equipment/enclosure was evaluated for use in an ambient range of : -50 °C to 55 °C

Additional Information

4790928279

- Maximum Normal Load: Continuous operation (Operate the camera through networked equipment with IR LED on / Fan1,2 on / Motor operating) Optional features: Heater on / off.

Additional Standards

The product fulfills the requirements of: IEC 62471:2006

Markings and Instructions

Clause Title	Marking or Instruction Details
Optical radiation from lamps - Hazard-related risk group marking of equipment: Retinal thermal hazard, weak visual stimulus 780-1400 nm	"WARNING - IR emitted from this product." for Risk Group 1. "MISE EN GARDE - IR émis par ce produit." for Risk Group 1. Text on equipment is black on a yellow background. Reproduction in user manual is not required to be in color.
Optical radiation from lamps - Explanation of marking information and guidance on control measures: Retinal thermal hazard, weak visual stimulus 780-1400 nm	"Do not stare at operating lamp." for Risk Group 1. "Ne pas regarder fixement la lampe." for Risk Group 1.
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, current)
Hard Copy	A. IMPORTANT or ATTENTION or similar wording B. Please check 'Manuals' from our website, before connecting to the supply. C. Company website URL (https://www.~~) or QR code.
(Website) Manual - 1	This product is intended to be supplied by a UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from PoE (55 Vdc), 1.13 A.

(Website) Manual - 2	The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3.bt shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL 60950-1 or PS2 as defined in UL 62368-1.
Special Instructions to UL Representative N/A	

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
N/A	N/A	N/A	N/A	N/A	N/A	N/A
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All model					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All model					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.					
	All model					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
N/A	N/A	N/A	N/A	N/A	N/A

4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
FIBER PoE Injector	CREATIVE LIANJIE NETWORK TECHNOLOGY CO LTD	PT-PSE109GBRO- AH-S	Rated output 55 Vdc, 1.5 A, marked "LPS" or "Class 2"	AZOT	UL (E487558)	
Enclosure Dome cover bubble (Plastic) - PTZ	MITSUBISHI ENGINEERING- PLASTICS CORP	S-2000V+(f1)	Min. 2.5 mm thickness, rated Min. V-2, 115 deg. C	QMFZ2	UL (E41179)	
Enclosure Dome cover black (Plastic) - PTZ (Part 1)	LOTTE CHEMICAL CORPORATION	QC-122(+)(f1)	Min. 3.0 mm thickness, rated Min. V-2, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure Dome cover black (Plastic) - PTZ (Part 2)	LOTTE CHEMICAL CORPORATION	UH-1068(f1)	Min. 3.0 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure Dome IR cover black (Plastic) – PTZ	Covestro Deutschland AG [PC Resins]	2407 + (z)(f1)	Min. 2.5 mm thickness, rated Min. V-2, 115 deg. C	QMFZ2	UL (E41613)	
Enclosure Dome Insert (Plastic) – PTZ	SABIC JAPAN L L C	EXL9330(X)(f1)(GG) (B1)(IP)	Min. 2.5 mm thickness, rated Min. V-0, 110 deg. C	QMFZ2	UL (E207780)	
Enclosure Micro Cover (Plastic)	LOTTE CHEMICAL CORPORATION	UH-1068(f1)	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Bottom Enclosure (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 3.0 mm thickness.	-	-	
Enclosure PoE connect cover (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 2.2 mm thickness.	-	-	
Internal Metal	Interchangeable	Interchangeable	Aluminum, Min. 2.0 mm thickness.	-	-	

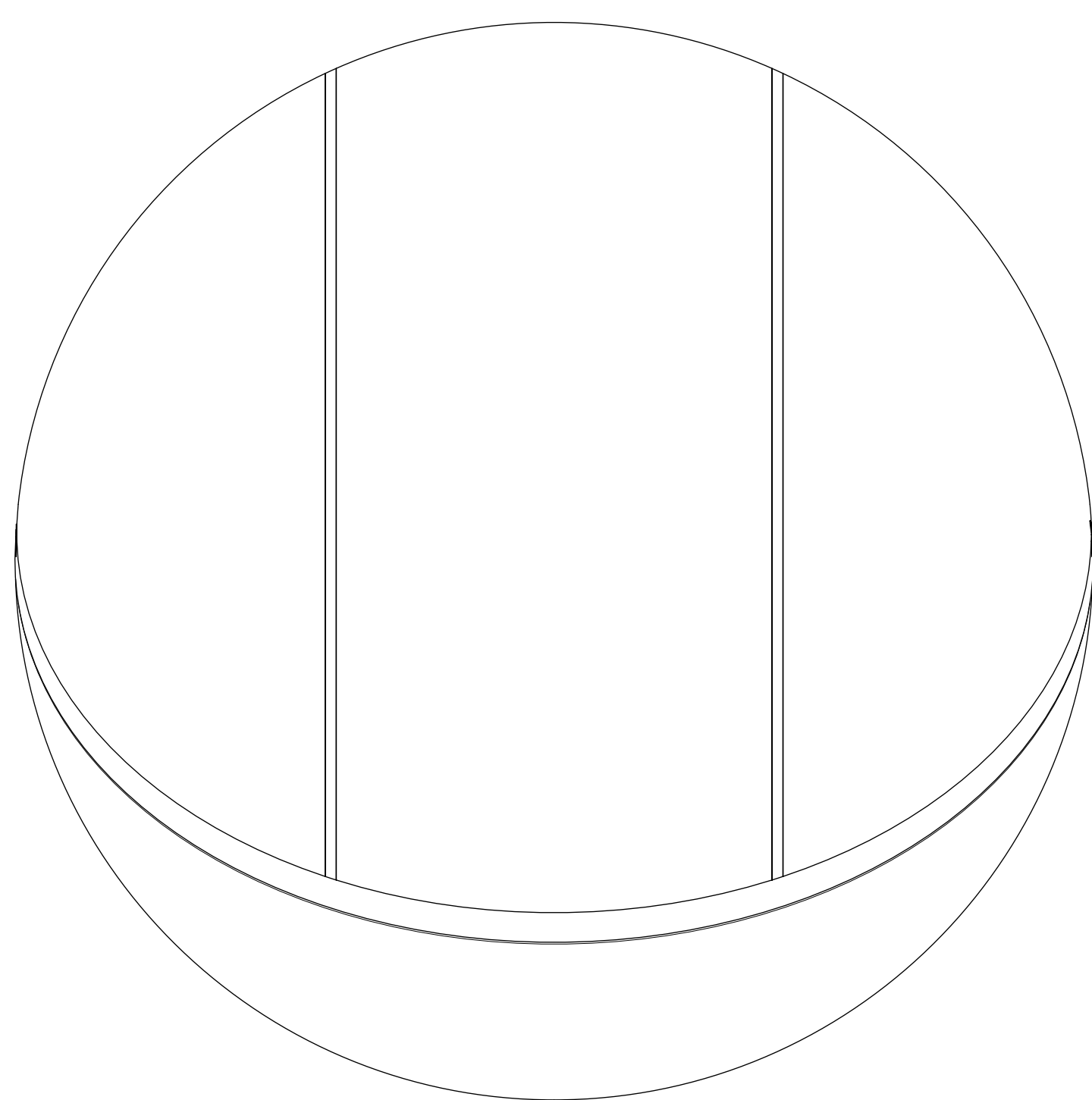
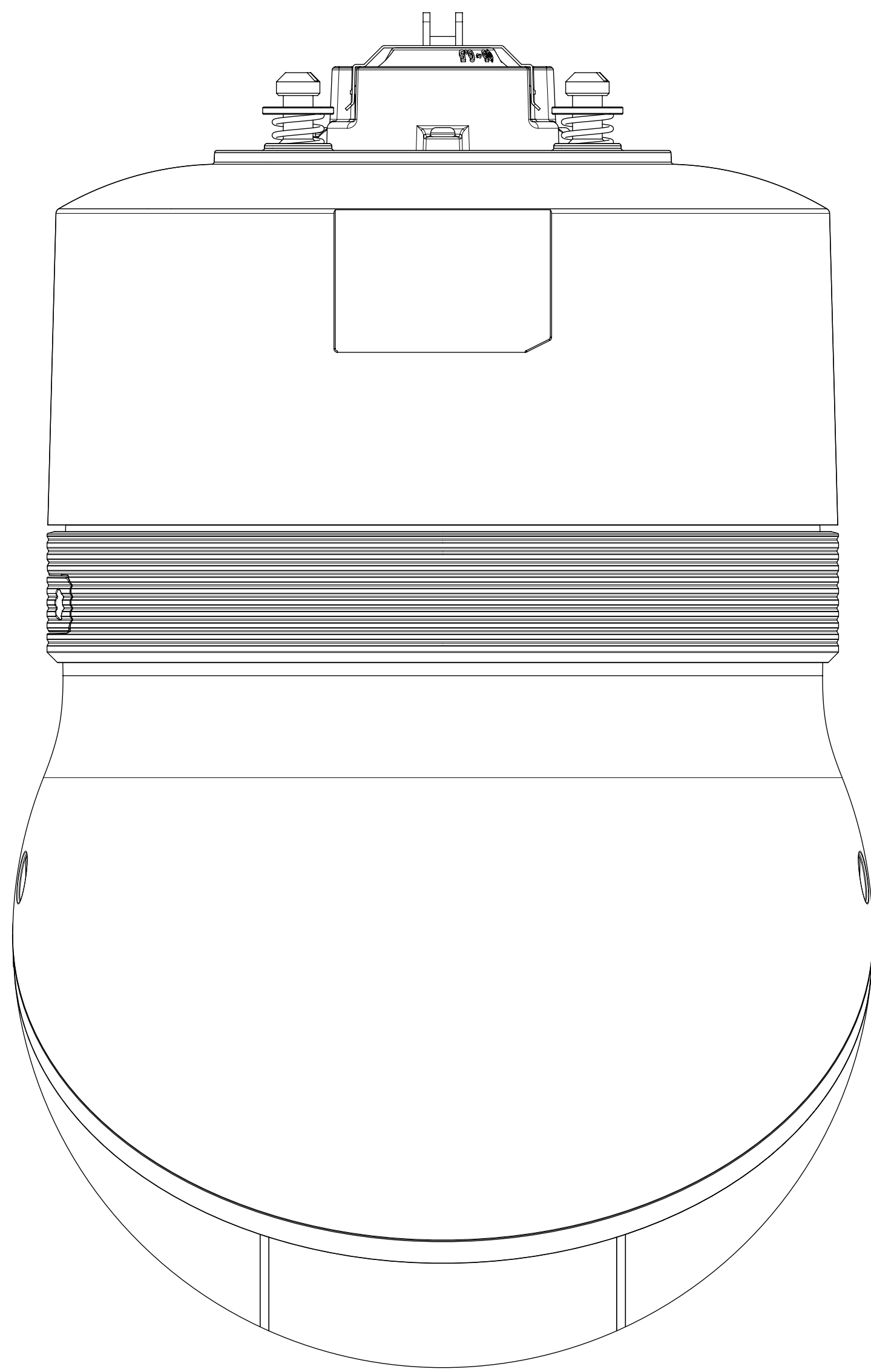
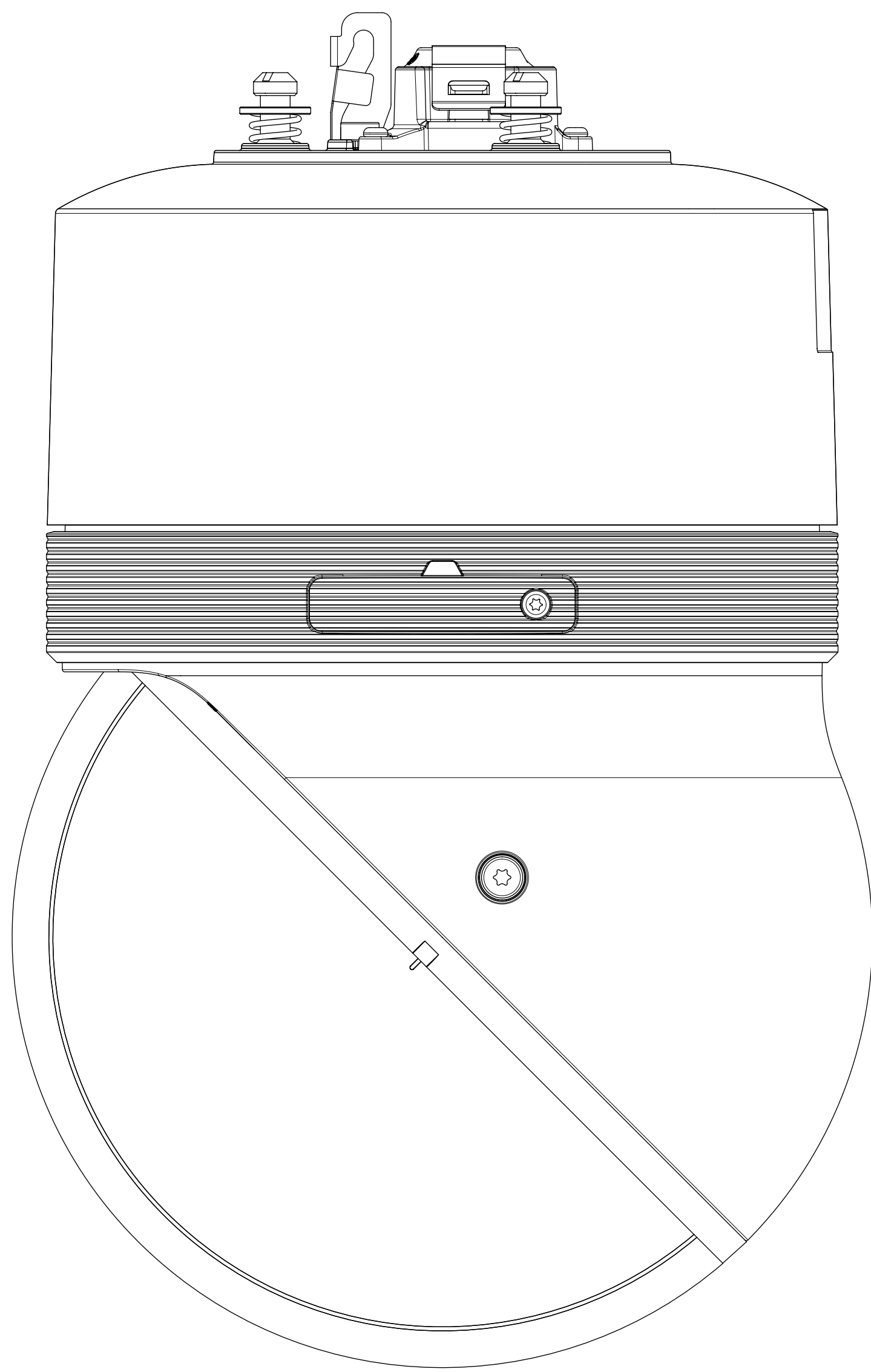
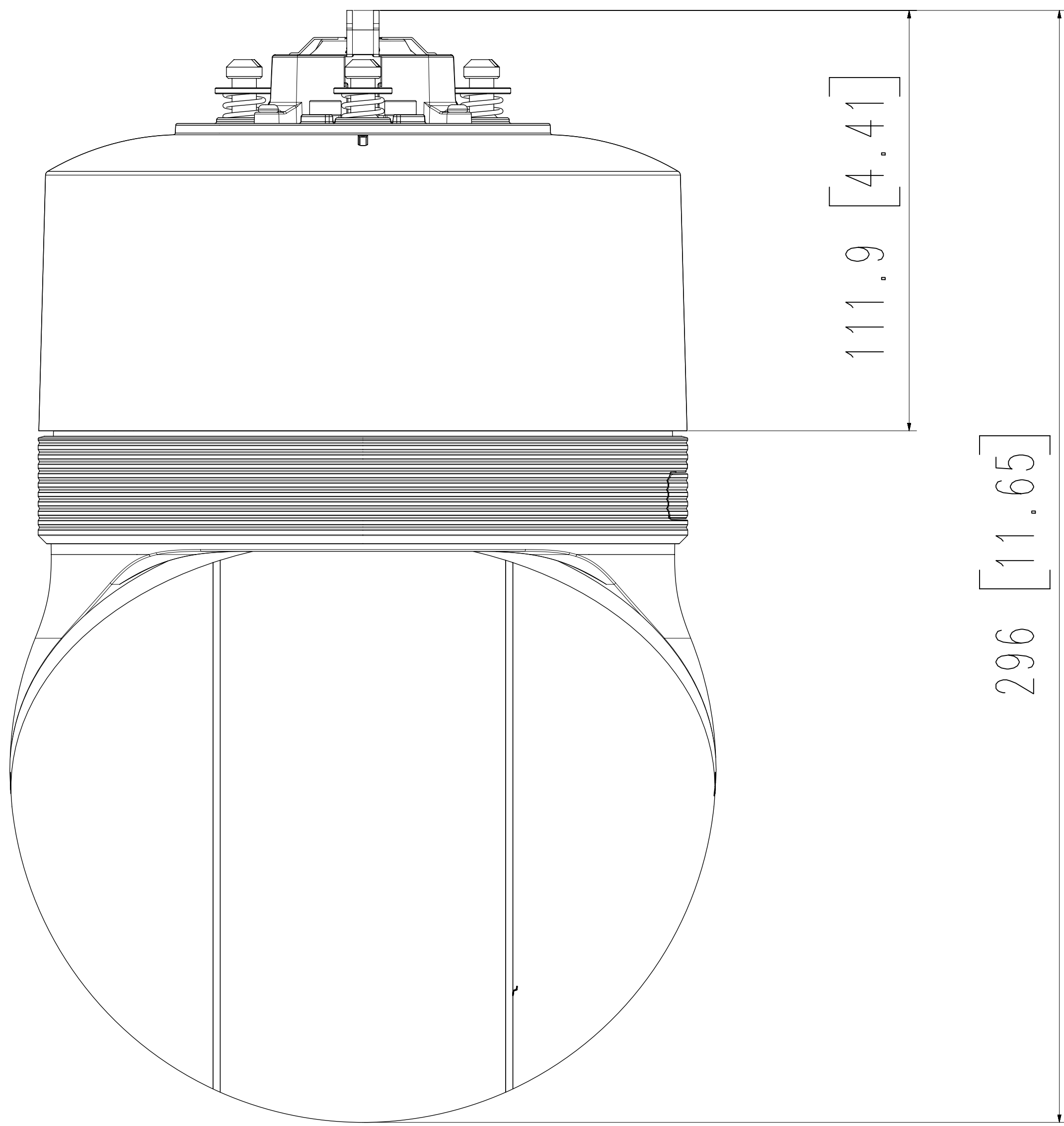
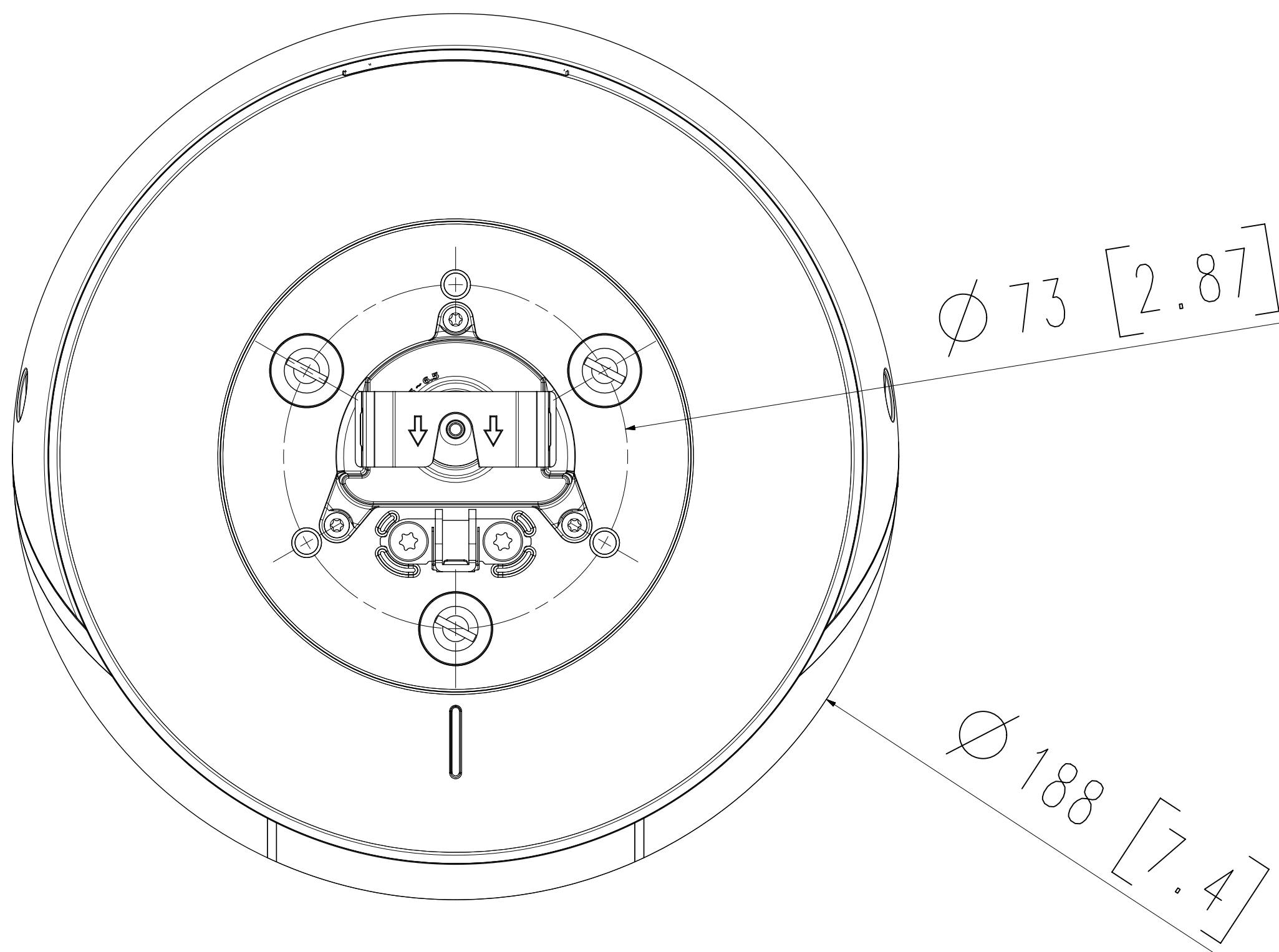
Internal Plastic	LOTTE CHEMICAL CORPORATION	HN-1068(+)(f1)	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Internal Plastic - Alternate	Interchangeable	Interchangeable	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL	
Line Filter (L5)	TNC CO., LTD	CV625180SKA	18 mH, 120 deg. C, See enclosure for more detail.	-	-	
Opto-coupler (LS2)	LITE-ON TECHNOLOGY CORP	LTV-816	Isolation Voltage: 5300. Max. Operation Temperature:110 deg. C	FPQU2	UL (E113898)	
Opto-coupler (LS2) - Alternate	COSMO ELECTRONICS CORP	K1010X*	Isolation Voltage: 5000. Max. Operation Temperature:115 deg. C	FPQU2	UL (E169586)	
Transformer(T2)	SAMWHA TECOM Co.,Ltd.	STEF25D-24V	105 deg. C, See enclosure for more detail.	-	-	
DC Fan 1	DONGGUAN PROTECHNIC ELECTRIC CO LTD	MG(a)2512(d)(e)-(f)10	12 Vdc, 0.07 A, 9500 RPM (N/15000+K/2400 = 0.6442535 < 1, N=9500, K=26.2086)	GPWV2	UL (E187236)	
DC Fan 2	SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO LTD	HA40101V4-1(Y)	12 Vdc, 0.37 A, 5000 RPM (N/15000+K/2400 = 0.339383 < 1, N=5000, K=14.52)	GPWV2	UL (E77551)	
Camera lens module	UNION OPTECH CO.,LTD	T5215-E	5.0 V ± 0.3 V	-	-	
Pan Motor (Stepping motor)	DONGGUAN SHINANO MOTOR CO., LTD.	STP-43D2212	Rated 24 Vdc, 1.0 A Hybrid stepping type.	-	-	
Tilt Motor (Stepping motor)	DONGGUAN SHINANO MOTOR CO., LTD.	STP-42D0032	Rated 24 Vdc, 0.7 A Hybrid stepping type.	-	-	

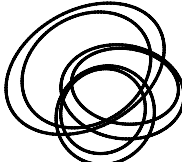
Rechargeable battery (BAT1)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	ML414H	Lithium, Rechargeable, Max Charging Voltage, 3.4 V dc, Max Charging current: 300 mA	BBCV2	UL (MH15628)	
Lithium Battery Protection Circuit	Interchangeable	Interchangeable	Diode (D3, 80 V, 100 mA) and Resistor(R13, 3.3Kohm) in series	-	-	
Heater (R1 to R24) (24ea)	Interchangeable	Interchangeable	10 ohm, 1 W each (Total: 9.6 W)	-	-	
Gasket - PTZ and Micro	Namyang Vina	O-VMQ-50-BK	Gasket Test was conducted under E158873-A6034	-	-	
Gasket - Top Enclosure and Dome	Namyang Vina	O-VMQ-50-GR	Gasket Test was conducted under E158873-A6034	-	-	
Thermal Pad	ATEKS CO LTD	ATP-20	Min. 0.2 mm thickness, rated V-0, 105 deg. C	QMFZ2	UL (E513170)	
Cable 1	Interchangeable	Interchangeable	Marked VW-1; Min. 30 V, 80 deg. C	AVLV2	UL	
Cable 2	Interchangeable	Interchangeable	Marked VW-1; Min. 300 V, 80 deg. C	AVLV2	UL	
PWB	EXPRESS ELECTRONICS LTD	14MV0	Min. V-0, 130 deg. c	ZPMV2	UL (E157925)	
PWB - Alternate	Interchangeable	Interchangeable	Min. V-0, 130 deg. C	ZPMV2	UL	
Outdoor Label	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for maximum and minimum surface temperature specified, or Min. 55 deg. C to Max.-50 deg. C if not specified.	PGJI2	UL	

LED (LED Right board, LED (LD1 to LD4), Left board (LD1 to LD4) (Total 8ea)	OSRAM	SFH4715AS	VF =Max. 4.7 V, IF=Max.3 A	-	-	
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Enclosures

Type	Supplement Id	Description
Photographs	03-01	External View - 1
Photographs	03-02	External View - 2
Photographs	03-04	Internal View - 1
Photographs	03-05	Internal View - 2
Photographs	03-06	IR LED
Photographs	03-07	IR LED Board
Photographs	03-08	Network Board - Top
Photographs	03-09	Network Board - Bottom
Photographs	03-10	Power Board - Top
Photographs	03-11	Power Board - Bottom
Photographs	03-12	Motion Board
Photographs	03-13	DC Fan - 1
Photographs	03-14	DC Fan - 2
Photographs	03-15	Lens Module
Photographs	03-16	Drive Board
Diagrams	04-01	Diagrams
Manuals	06-01	Manual
Miscellaneous	07-01	Transformer (T2) Specification
Miscellaneous	07-03	LineFilter (L5) Specification
Miscellaneous	07-04	Label
Miscellaneous	07-05	Label (Risk Group 1)
Miscellaneous	07-06	Optinal Accessories List



3		
2	XNP-C7310R	'23.10.17
1	XNP-C9310R	
No.	MODEL NAME	DATE
Unit:mm[inch] SCALE:1/1		 Hanwha Vision

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
(Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
7. Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lighting storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product is intended to be supplied by a UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from PoE(55V ) , 1.13A.
16. This product is intended to be supplied by isolation power.
17. If you use excessive force when installing the product, the camera may be damaged and malfunction.
If you forcibly install the product using non-compliant tools, the product may be damaged.
18. Do not install the product in a place where chemical substances or oil mist exists or may be generated. As edible oils such as soybean oil may damage or warp the product, do not install the product in the kitchen or near the kitchen table.
This may cause damage to the product.
19. When installing the product, be careful not to allow the surface of the product to be stained with chemical substance.
Some chemical solvents such as cleaner or adhesives may cause serious damage to the product's surface.
20. If you install/disassemble the product in a manner that has not been recommended, the production functions/ performance may not be guaranteed.
Install the product by referring to "Installation & connection" in the user manual.
21. Installing or using the product in water can cause serious damage to the product.



22. If your product works normal, the degree of preset precision is 0.07°. In the case of reboot due to outage, firmware upgrade, etc., its tolerance might have to be adjusted after checking for any changes in Preset setup.
23. The operating temperature of the product is -50°C to +55°C (-58°F ~ +131°F).
24. The heater turns on when the product's internal temperature is 15°C(64.4°F) or lower, and turns off when it is 18°C(53.6°F) or higher.

WARNING

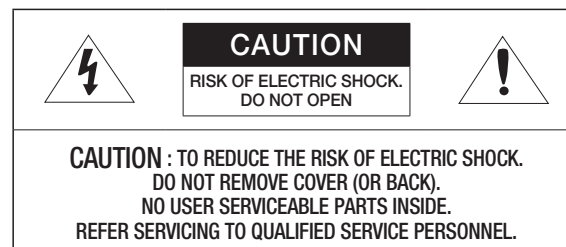
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions.

Pan/Tilt/Zoom motors and slip ring are warrantied for one year under continuous operation.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

The battery cannot be replaced.

Disconnection Device

Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.

When used outside of the U.S., it may be used HAR code with fittings of an approved agency is employed.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

ATTENTION

IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT.
METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS.

CAUTION

These servicing instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Please use the input power with just one camera and other devices must not be connected.

Remove the protective sheet on the front of the lens after the installation work is completed.

The ITE is to be connected only to PoE networks without routing to the outside plant.

The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3bt shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1 or PS2 as defined in UL62368-1.

Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102.
As such, associated Ethernet wiring shall be limited to inside the building.

Please read the following recommended safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.
- Please wear protective gloves when installing/removing the camera.
The high temperature of the product surface may cause a burn.
- When connecting the HPoE injector to the external Internet, use either one of network cable port (LAN) or fiber optic port (SFP) but not both.

User's Manual is a guidance book for how to use the products.

The meaning of the symbols are shown below.

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction

※ Please read this manual for the safety before using of goods and keep it in the safe place.

We do not guarantee the quality of third-party products (e.g. lenses, accessories) that you separately purchase.

In particular installation environments, there might be interference in radio communications. When interference of electromagnetic waves occurs between the product and radio communication device, it is recommended to keep a certain distance between the two or change the direction of the receiving antenna.

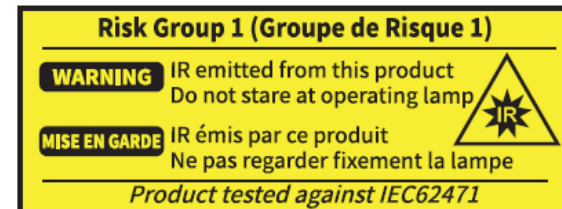
WARNING

To Prevent damage which may caused by IR LED, don't stare at operating lamp.

For below models only.

XNP-C9310R

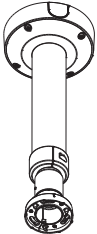
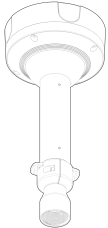
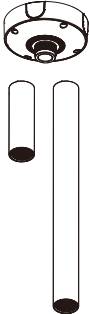
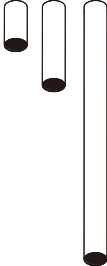
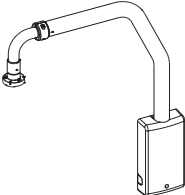
XNP-C7310R



OPTIONAL ACCESSORIES FOR INSTALLATION

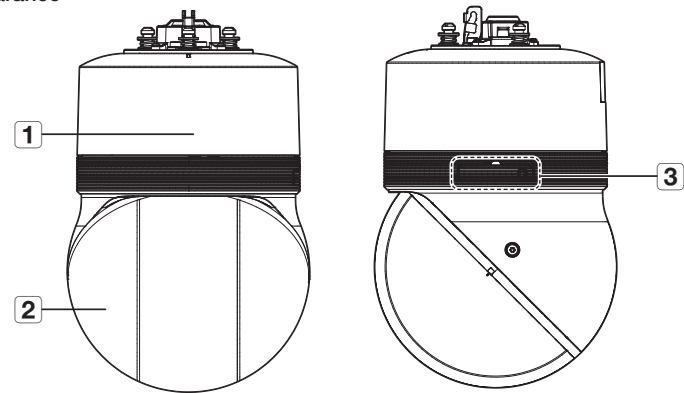
You can purchase appropriate optional accessories available.

Wall & Pole Mount		Hanging Mount	Corner Mount	Cabinet
A line drawing of a L-shaped metal bracket with a circular hole on the vertical flange and a mounting hole on the horizontal flange. SBP-156WMW (Outdoor Wall&Pole Mount) * Direct assembly: SBP-156HMMW not necessary	A line drawing of a rectangular metal bracket with a central rectangular cutout and four mounting holes at the corners. SBP-300PMW2 (Pole Mount)	A line drawing of a cylindrical metal bracket with a central hole and a small loop at the bottom. SBP-156HMMW	A line drawing of a corner bracket with two flanges, each having a circular hole and four mounting holes. SBP-156KMW A line drawing of a corner bracket with two flanges, each having a circular hole and four mounting holes. SBP-300KMW1 * Only compatible when SBP-390WMW2 is used	A line drawing of a square metal cabinet with a central circular hole and four mounting holes at the corners. SBP-300NBW

Ceiling Mount		Parapet Mount
Assembly	Individual Parts	
 SBP-156CMW (Telescopic)  SBP-300CMTS (Ball Head) * SBP-156HMW required for installation  SBP-300CMW1 SBP-900CMW * SBP-156HMW required for installation  SBP-150CMI SBP-300CMI * SBP-156HMW required for installation	 SBP-180CMB  SBP-180CMS (Ball Head)  SBP-140CMB  SBP-150CMP SBP-300CMP SBP-900CMP  SBP-C15P	 SBP-156LMW (Telescopic)

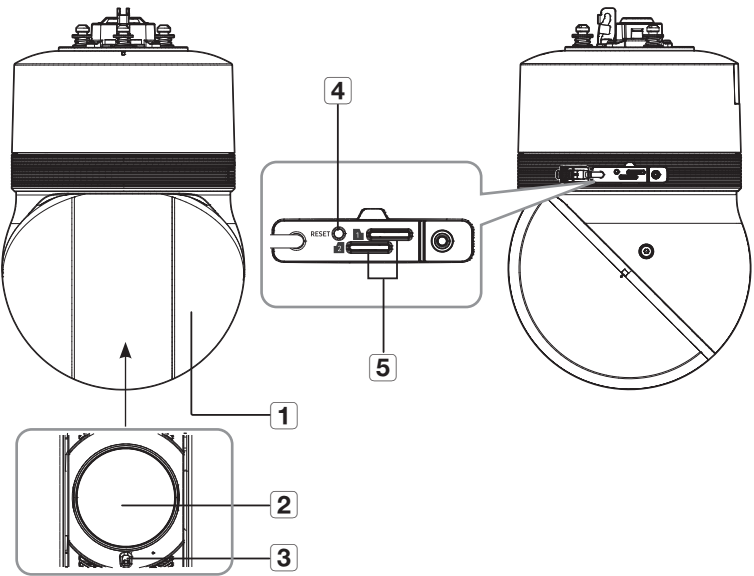
AT A GLANCE

Appearance



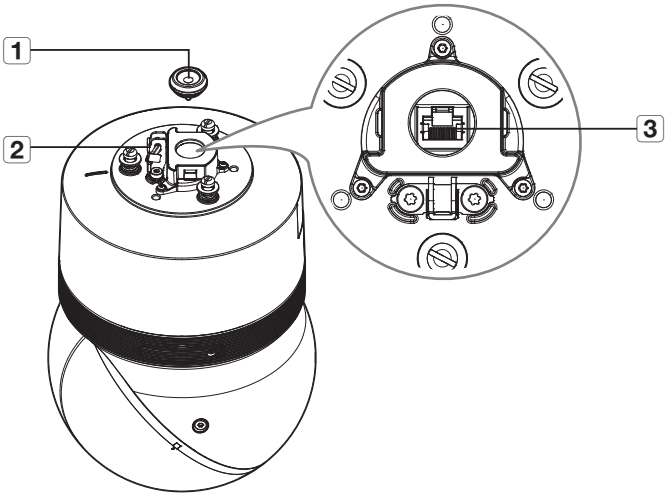
Item	Description
1 Main cover	Protects the internal PTZ mechanism from the direct sunlight, rain or external impact.
2 Dome cover	Shield cover for the lens and unit protection.
3 Micro SD Card cover	The Micro SD card slot and reset button are located inside and can be opened using Torx drivers, etc.

Inside



Item	Description
1 IR LED	These infrared LED's are controlled by the illumination sensor.
2 Lens	Lens for the camera.
3 Illumination Sensor	Detects incoming light to control the IR LED.
4 Reset button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. 1 If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the Device Manager program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.
5 Micro SD Card slot	Compartment for the Micro SD card.

Mounting surface



Item	Description
1 Cable bushing	A waterproof rubber cap, which allows a network cable to go through it.
2 Safety wire hook	Hang this hook on the safety wire of the mount when installing this product to prevent it from falling.
3 Network port	A port that connects to the HPoE injector and network cable for power and network connection.

INSTALLATION



- This camera is waterproof and in compliance with the IP67 spec, but the jack connected to the external cable is not. You are recommended to install this product below the edge of eaves to prevent the cable from being externally exposed.

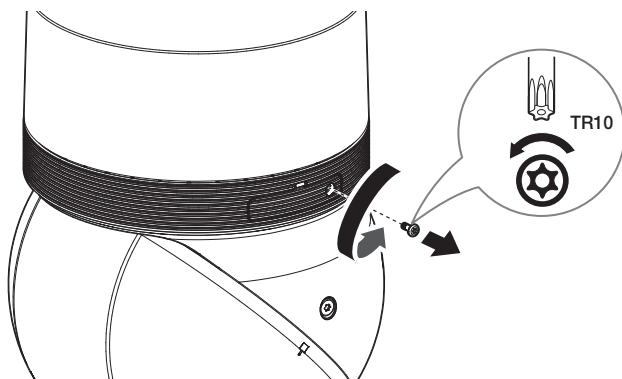
Precautions before installation

Ensure you read out the following instructions before installing the camera:

- Select an installation site that can hold at least 5 times the camera's weight.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site.
- And put aside personal belongings from the site, just in case.
- If the product is installed with excessive force, it may cause damage to the camera due to malfunction. Forcing assembly using non-compliant tools may damage the product.

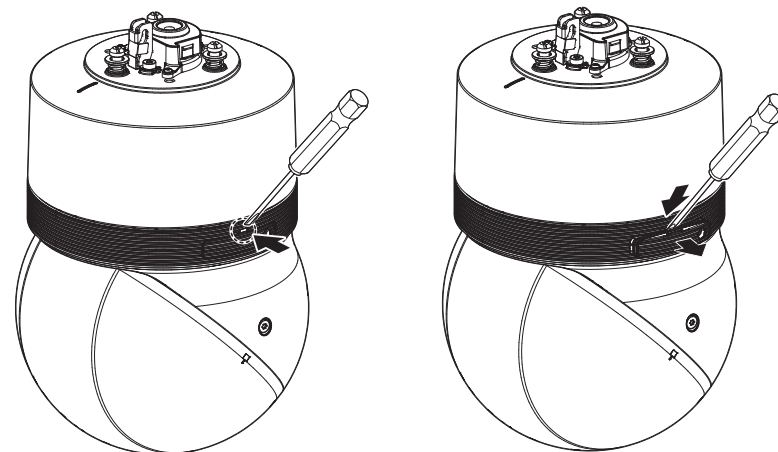
Inserting a Micro SD card

1. Unfasten the screw on the micro SD card slot cover by turning it counterclockwise using a Torx screwdriver.

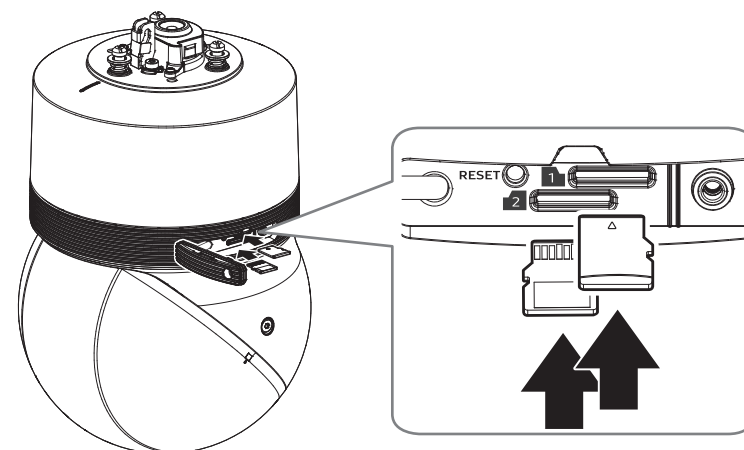


- Disconnect the power cable from the camera before inserting the Micro SD card.
- When it rains or the humidity is high, insertion or ejection of a Micro SD card is not recommended.
- When installing/removing the Micro SD card, make sure you put the product body on a flat ground before working on it in order to prevent accidents due to loss or drop of any parts.
- Do not remove the screws.

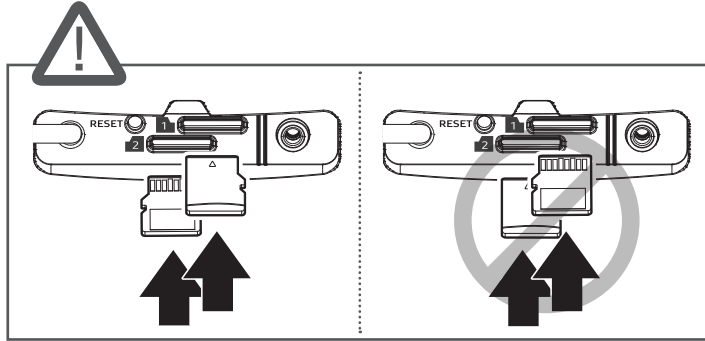
2. Slide a flathead screwdriver into the groove and flip the micro SD card slot cover open to the side.



3. Insert Micro SD cards in the direction of the arrows as shown in the figure.



- ! ■ Do not forcefully insert it in the reverse direction. It might damage your Micro SD card and your product.

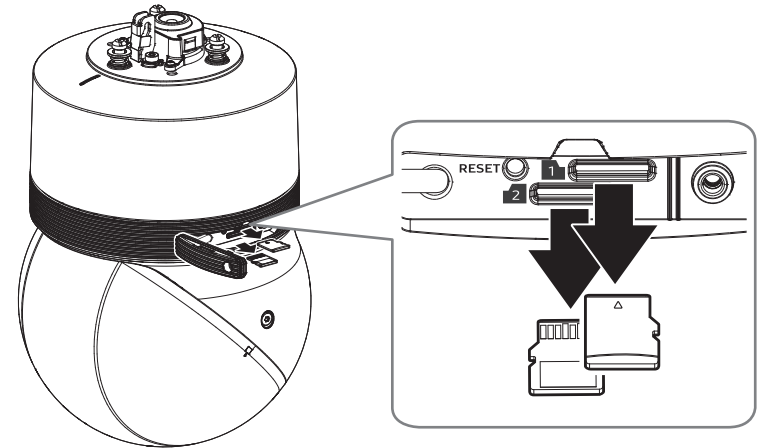


4. Close the micro SD card slot cover, then fasten it using the Torx screwdriver.

- ! ■ Make sure to tighten the screw firmly when assembling the micro SD card slot cover to ensure it's watertight.

Removing a Micro SD card

Gently press down on the exposed end of the Micro SD card as shown in the diagram to eject the Micro SD card from the slot.



- ! ■ Before removing the Micro SD card, in **<Setup (⚙)>** **<Event>** **<Storage>**, set the device to **<Off>** and press the **[Apply]** button and turn the camera off.
- If you turn off the camera or remove the Micro SD card that contains data from the product, the data may be lost or damaged.

Preparing & Installing Camera Mount

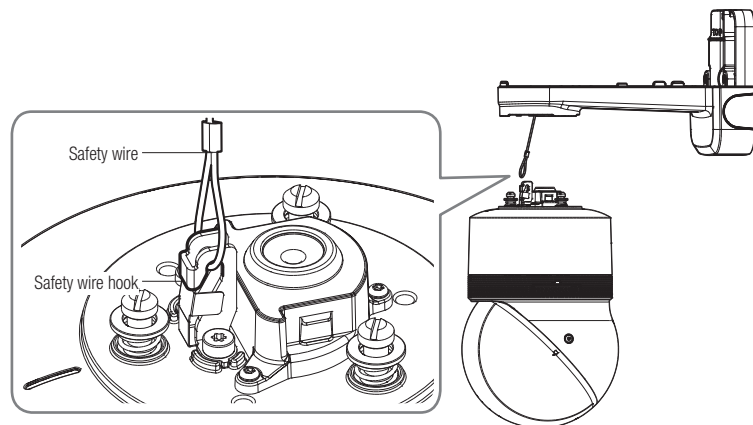
For installation guidelines for mounts, refer to the installation manual that is enclosed with the mount.

- 📄 ■ See **"Optional Accessories for Installation"** for the appearance of each mount (unbundled). (page 8)

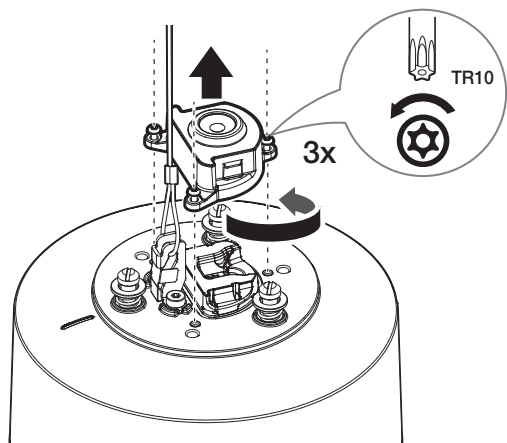
Installing using wall & pole mount

- Connect the power only after installation is complete. Supplying power while the installation is in progress may cause fire or damage the product.

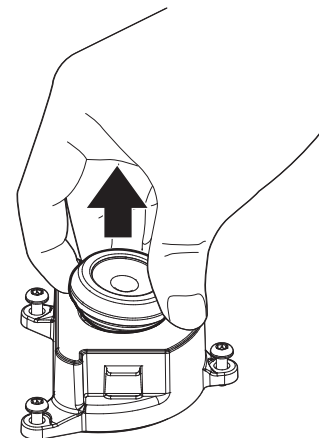
1. Hang the safety wire of the wall & pole mount on the safety wire hook of the product.



2. Remove the bushing cover from the installation surface using the Torx screwdriver.

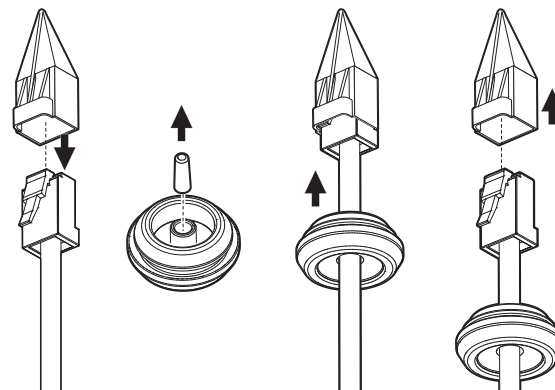


3. Remove the cable bushing from the bushing cover.



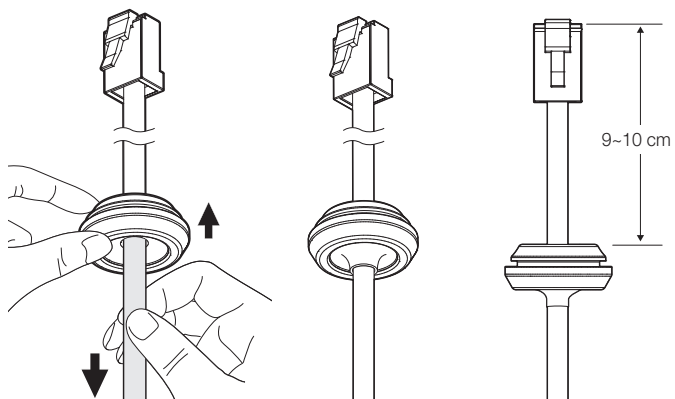
4. Pull off the extruded part of the removed cable bushing.

5. Use the cap installer to route the network cable through the cable bushing.

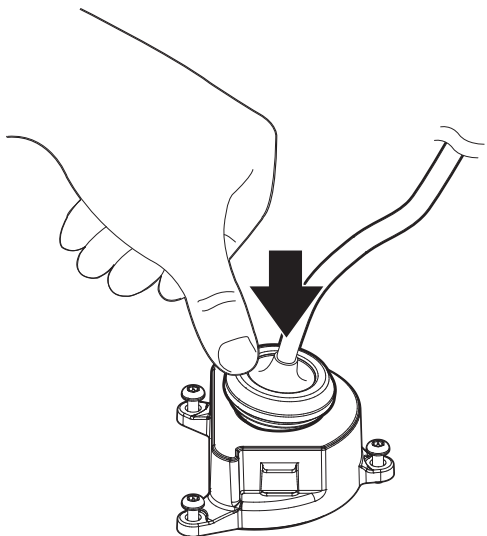


- If the cable bushing is torn, use the extra cable bushing provided.

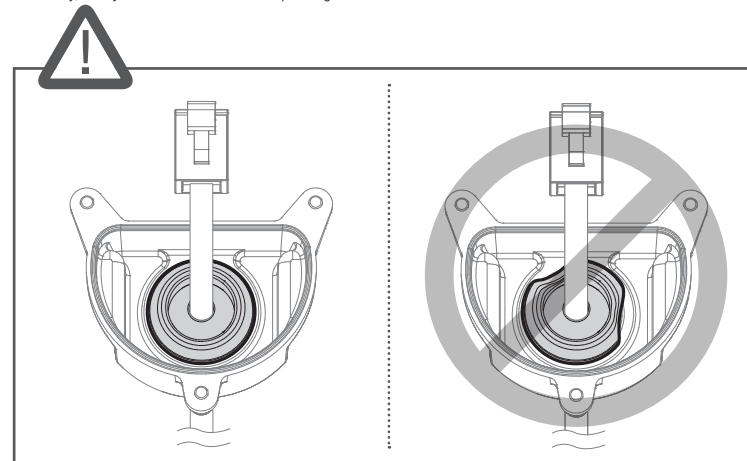
6. For waterproof protection, pull down the cable below the cable bushing as shown in the figure below.



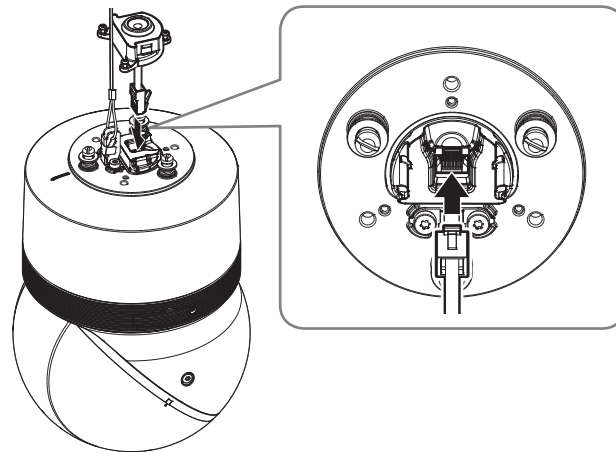
7. Insert the cable bushing, threaded with the network cable, into the hole on the bushing cover. When plugging it in, press the whole bushing area evenly so that it is properly plugged in.



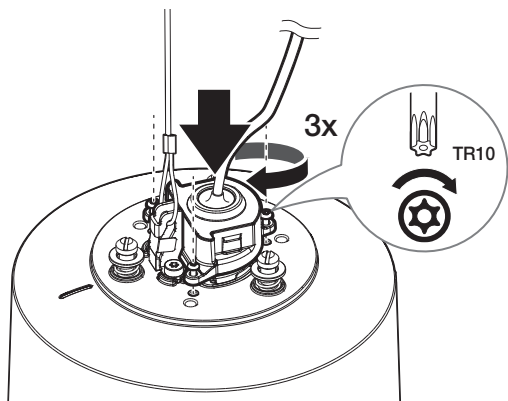
! ■ Make sure the cable bushing is also properly fitted on the inner surfaces of the bushing cover. If the cable bushing is inserted incorrectly, it may cause an issue with waterproofing.



8. Connect the network cable to the network port.

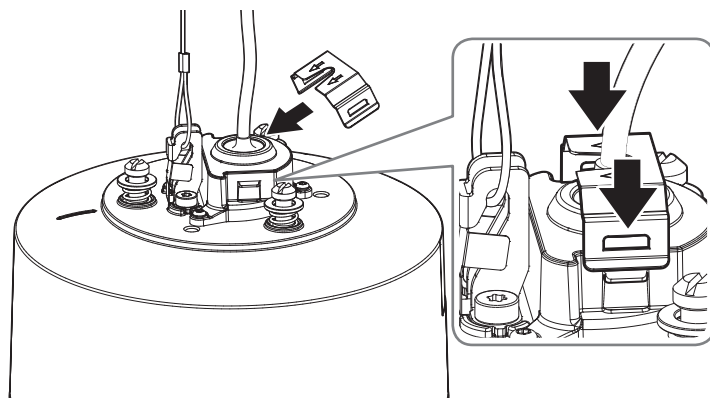


9. Attach the bushing cover to the installation surface using the Torx screwdriver.

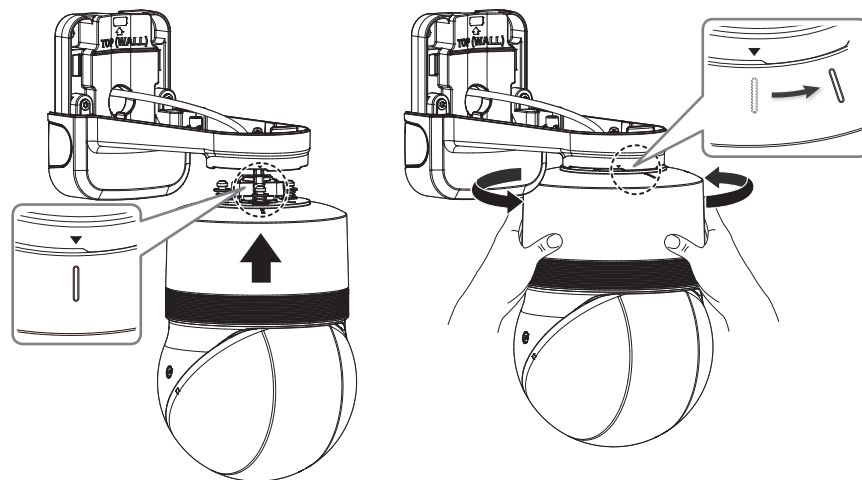


10. Install the bushing clip.

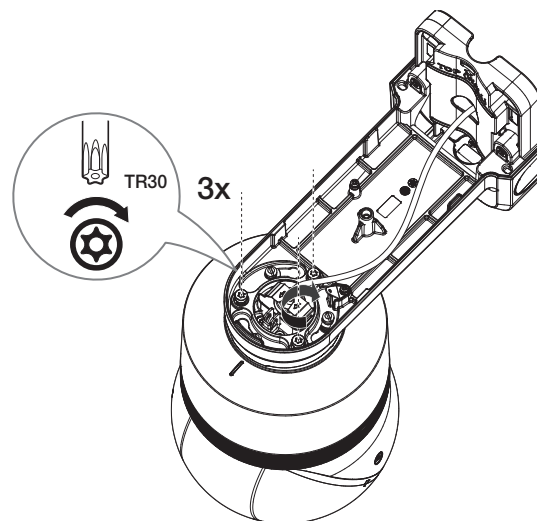
Let the arrow mark on the clip point in the direction of the safety wire hook, and click each side into place one at a time.



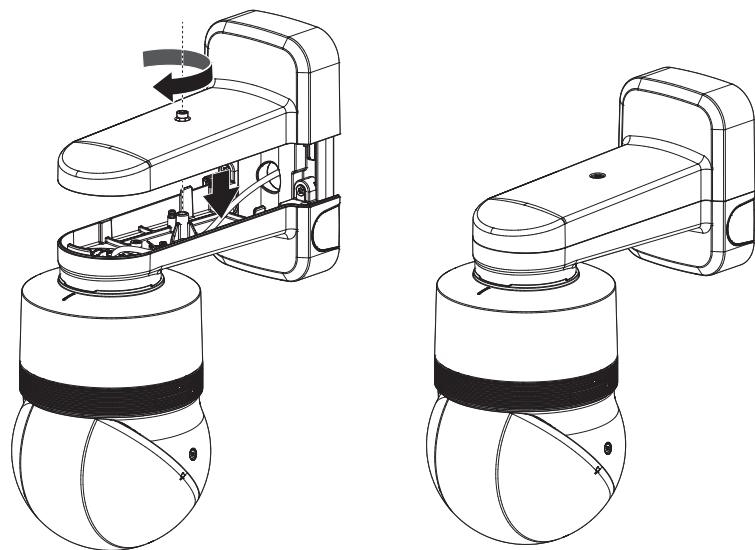
11. After aligning the installation direction guides of the camera and wall & pole mount, push the main cover upward and turn it counterclockwise until it is secured.



12. Tightly fasten the 3 mounting screws on the inside of the Wall & Pole Mount.

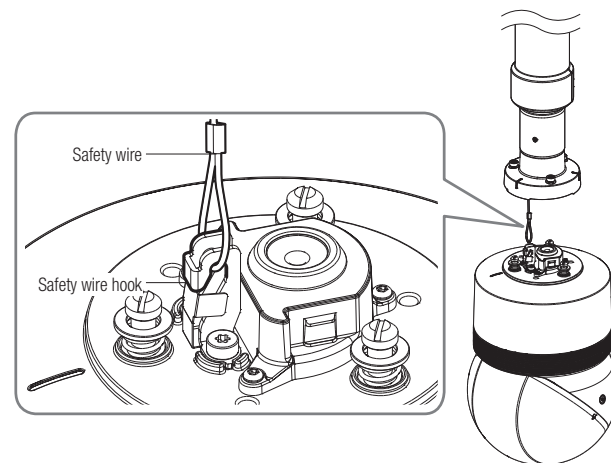


13. Join the top cover of the wall & pole mount.

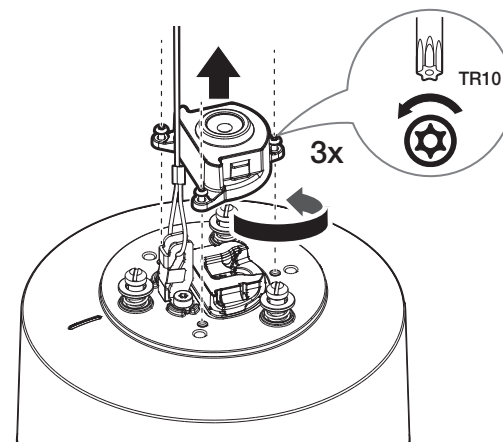


Installing using ceiling or parapet mount

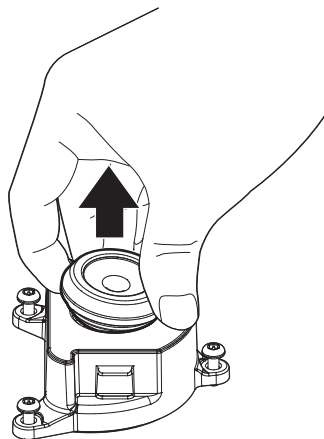
1. Hang the safety wire of the mount on the safety wire hook of the product.



2. Remove the bushing cover from the installation surface using the Torx screwdriver.

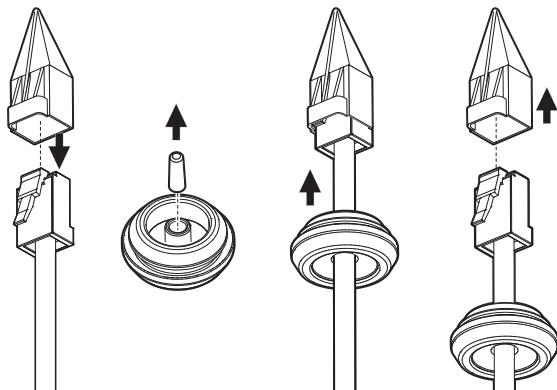


3. Remove the cable bushing from the bushing cover.



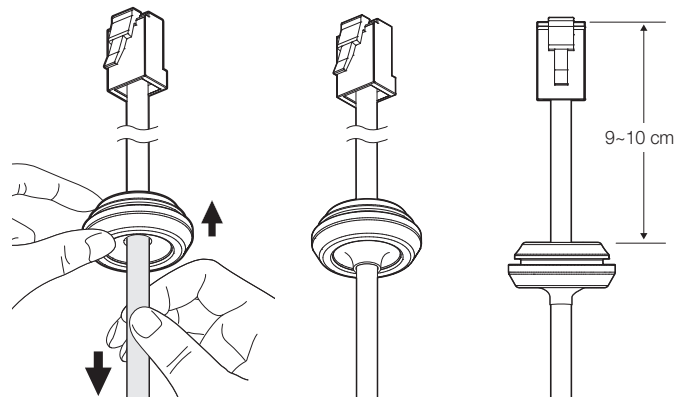
4. Pull off the extruded part of the removed cable bushing.

5. Use the cap installer to route the network cable through the cable bushing.

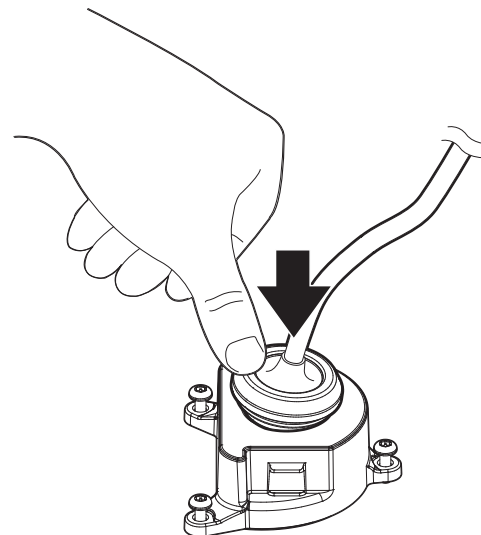


 ■ If the cable bushing is torn, use the extra cable bushing provided.

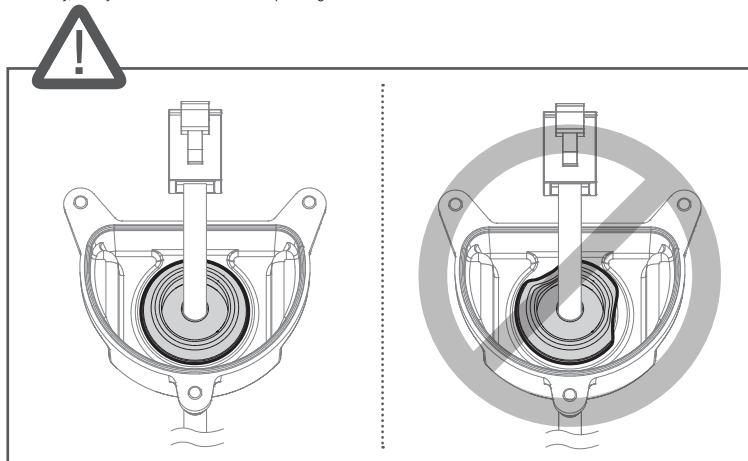
6. For waterproof protection, pull down the cable below the cable bushing as shown in the figure below.



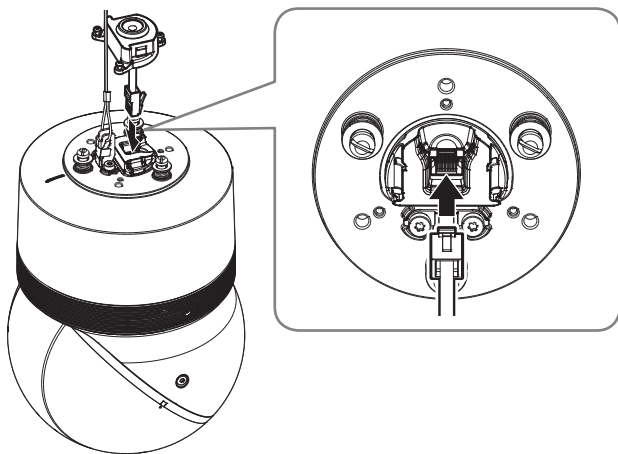
7. Insert the cable bushing, threaded with the network cable, into the hole on the bushing cover. When plugging it in, press the whole bushing area evenly so that it is properly plugged in.



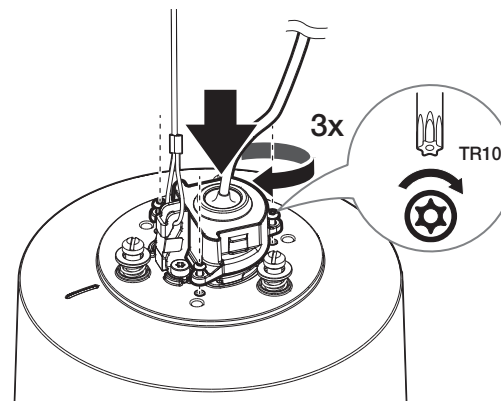
- !** ■ Make sure the cable bushing is also properly fitted on the inner surfaces of the bushing cover. If the cable bushing is inserted incorrectly, it may cause an issue with waterproofing.



8. Connect the network cable to the network port.

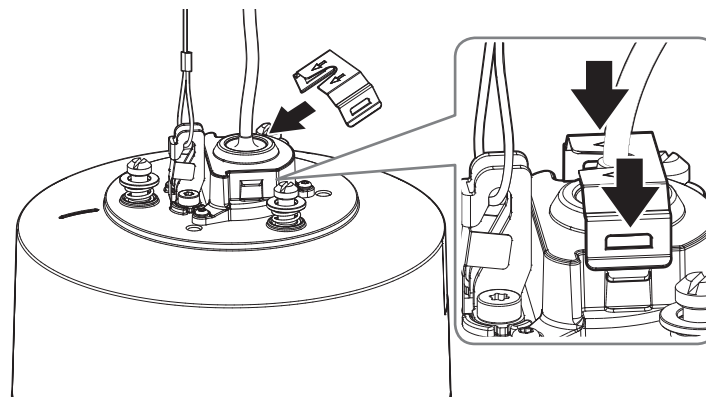


9. Attach the bushing cover to the installation surface using the Torx screwdriver.

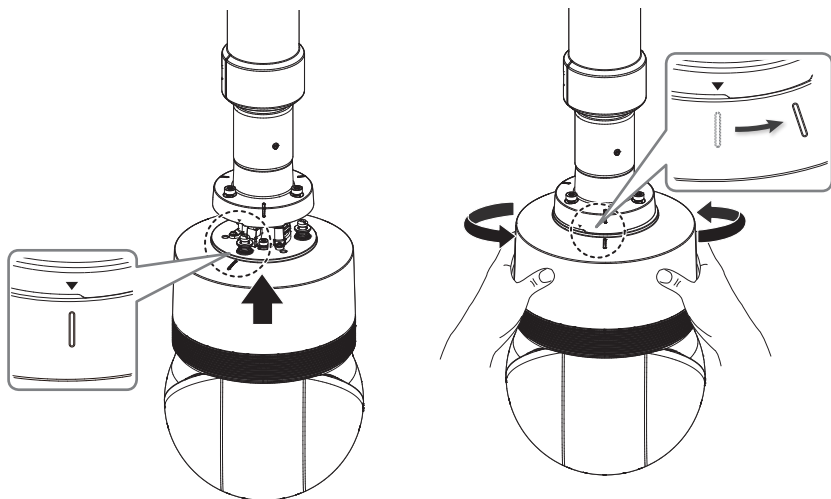


10. Install the bushing clip.

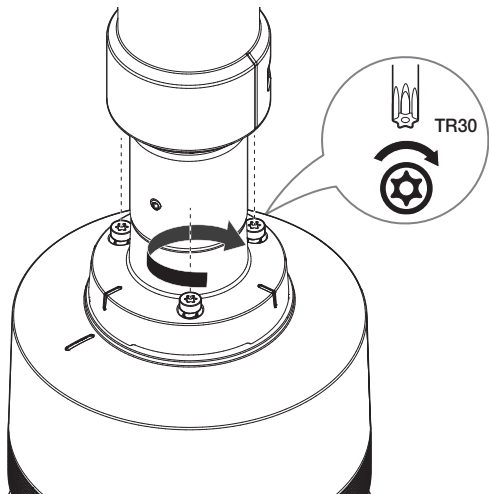
Let the arrow mark on the clip point in the direction of the safety wire hook, and click each side into place one at a time.



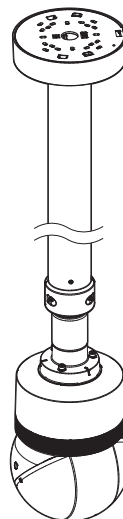
11. After aligning the installation direction guides of the hanging mount, push the main cover upward and turn it counterclockwise until it is secured.



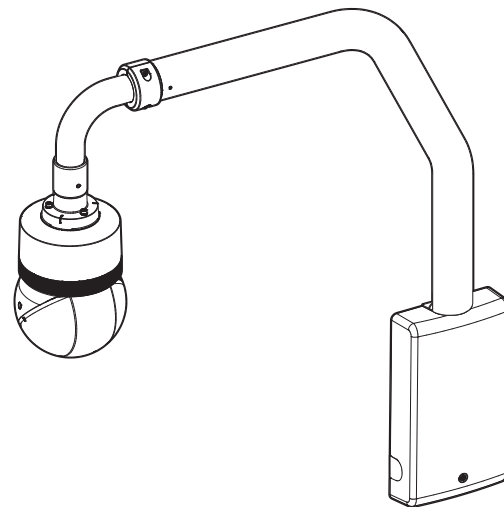
12. Tightly fasten the 3 mounting screws on the top side of the mount.



- Joined with official product mounts (ceiling/parapet)



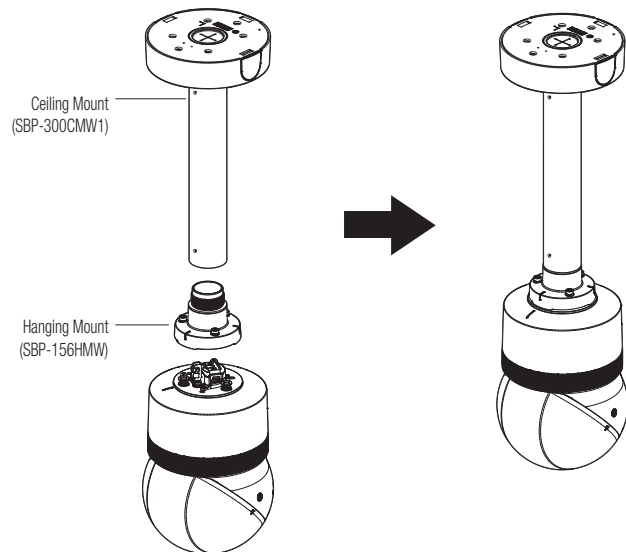
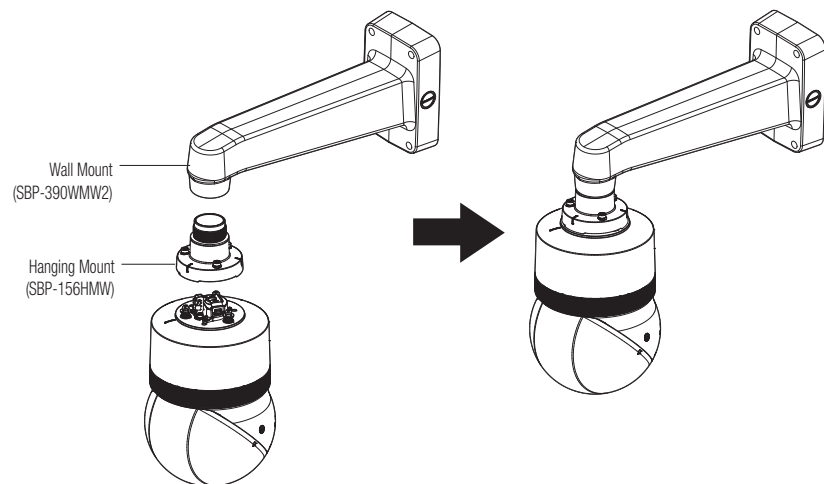
Ceiling Mount
(SBP-156CMW)



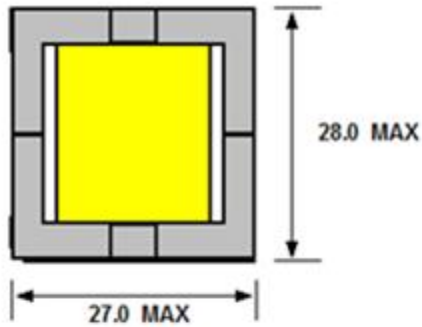
Parapet Mount
(SBP-156LMW)

- **Joined with mounts other than official product mounts**

If you use hanging mount, you can install the camera onto any mount other than the official product mount.

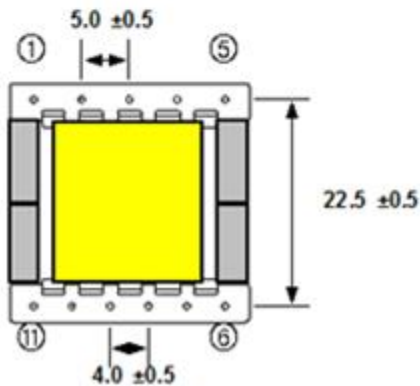
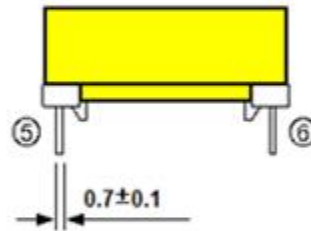
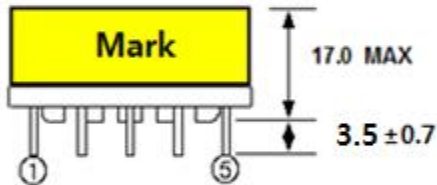


1. Dimension. [mm]

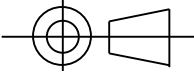


MARKING SPEC.

YEAR	WEEK
2020Y→20	1W →01
2021Y→21	2W →02
2022Y→22	3W →03
:	:
EX) $\bullet \begin{array}{c} 180 \\ 22 \ 52 \end{array}$	
PRODUCT WEEK PRODUCT YEAR	

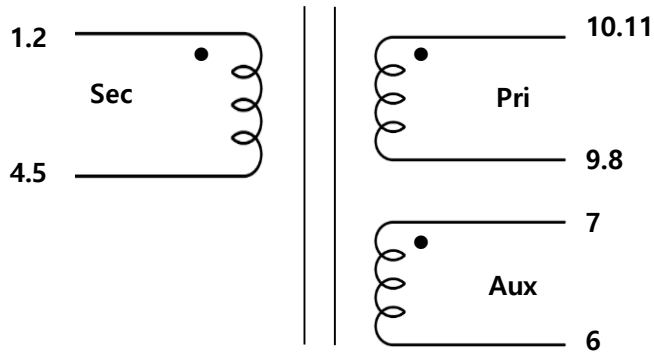


- Removed Pin No. :
- The pin length not including solder ball

Des. by	Che. by	Ins. by	App. by	Scale	Unit	Customer	HANWHA VISION
H.S Shin	J.H Lee	Y.S Kim	S.H Lee	N/A	mm	Item	TRANSFORMER
R & D Center				THIRD ANGLE PROJECT 		Part No.	EP23-001053 (STefd25D-24V)
						STDN	-

2. Winding Schematic. [Top-View]

● Mark is winding start.



3. Winding Information.

W	Barrier		Terminal		Winding			Insulation Tape	
	Pri.	Sec.	S	F	Wire	Ts	Method	Tape	Ts
W1	-	-	10,11	9,8	1UEW 0.3x4	10	Solenoid	P.E Tape(y) 0.025t/16.5mm	2
W2	-	-	1,2	4,5	1UEW 0.3x8	10	Solenoid	P.E Tape(y) 0.025t/16.5mm	2
W3	-	-	10,11	9,8	1UEW 0.3x4	10	Solenoid	P.E Tape(y) 0.025t/16.5mm	2
W4	-	-	7	⑥	1UEW 0.25	6	Space	P.E Tape(y) 0.025t/16.5mm	2
Core Round Tape : P.E Tape(y) 0.025t/8.0mm, 3Ts									

Des. by	Che. by	Ins. by	App. by	Scale	Unit	Customer	HANWHA VISION
H.S Shin	J.H Lee	Y.S Kim	S.H Lee	N/A	mm	Item	TRANSFORMER
R & D Center				THIRD ANGLE PROJECT 		Part No.	EP23-001053 (STefd25D-24V)
						STDN	-

4. Electrical Characteristics

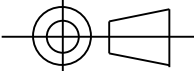
No.	Item	Terminal	Spec	Remarks
1	Inductance	10.11 – 9.8	18uH $\pm$ 15% (@Idc=0A)	HP-4263A, 4284A, LCR meter or eqv. at 100KHz, 1.0Vrms.
2	Leakage Inductance	10.11 – 9.8	1.0uH Max. (Secondary all short)	
3	D.C Resistance	10.11 – 9.8	18m Ω Max.	HIOKI3220, m Ω HI tester or eqv.
		1.2 – 4.5	18m Ω Max.	
4	Hi-pot Test (C.C=10mA)	Pri. – Sec.	DC 0.5KV for 2-3 Sec.	TOS-8750, Withstanding Voltage or eqv.

■ Operating Temperature

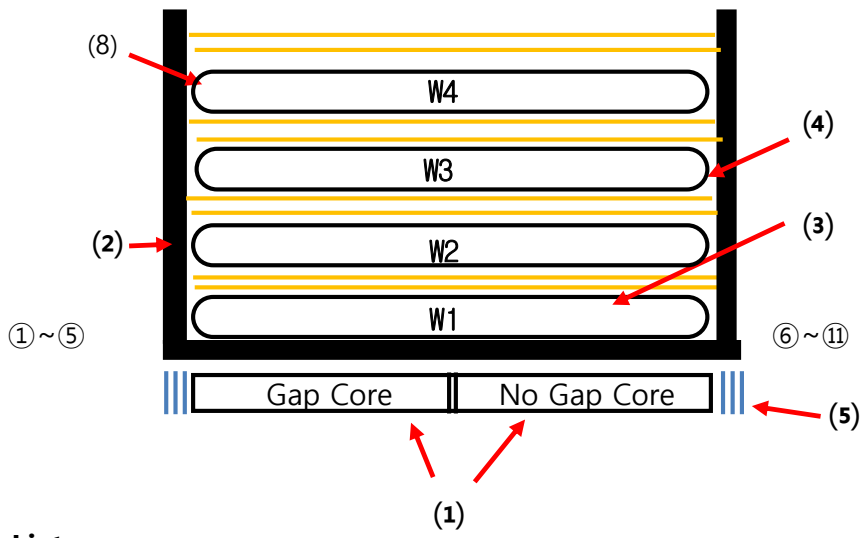
-40°C to +105°C (Including self-temperature rise)

■ Storage Temperature

* -40°C ~ 105°C

Des. by	Che. by	Ins. by	App. by	Scale	Unit	Customer	HANWHA VISION
H.S Shin	J.H Lee	Y.S Kim	S.H Lee	N/A	mm	Item	TRANSFORMER
R & D Center				THIRD ANGLE PROJECT 		Part No.	EP23-001053 (STefd25D-24V)
						STDN	-

6. Structure Figure



7. Material List.

No.	Parts Name	Material	Dimension & Type	UL File No.
1	CORE	PL13 HE6 HPP44	EFD2525	-
2	BOBBIN	Phenolic (PF2736,T375HF)	EFD2525 11P	E61040 E59481
3	WIRE	COPPER	1UEW 0.25Φ, 0.3Φ	E228267 E210918
4	INSULATION TAPE	POLYESTER TAPE	0.025t/16.5mm(Yellow) 0.025t/8.0mm(Yellow)	E105147 E56086
5	CORE ROUND TAPE	POLYESTER TAPE		
6	SOLDER	SN98CU2 LF-120	BAR	-
7	VARNISH	Epoxy	DVB-2085	E93947

Des. by	Che. by	Ins. by	App. by	Scale	Unit	Customer	HANWHA VISION
H.S Shin	J.H Lee	Y.S Kim	S.H Lee	N/A	mm	Item	TRANSFORMER
R & D Center				THIRD ANGLE PROJECT 		Part No.	EP23-001053 (STEF25D-24V)
						STDN	-

SPECIFICATIONS	ITEM	LINE FILTER	Rev
	TNC SPEC NO	CV625180SKA	0

2. ELECTRICAL CHARACTERISTIC

NO	ITEM	TERMINAL	SPECIFICATION			REMARKS
1	RATED VOLTAGE	LINE TO LINE	AC 300V			
2	RATED CURRENT	START-FINISH	2.5A			
3	INDUCTANCE	START-FINISH	16KHz	18.0mH	+ 50%, -30%	HP-4194A 1V (25℃±2℃)
4	TEMPERATURE RISE	AT RATED CURRENT	55℃ MAX			
5	DC RESISTANCE	START-FINISH	140.0 mΩ MAX			HIOKI 3540 (25℃±2℃)
6	WITHSTANDING VOLTAGE	LINE TO LINE	AC 1,500V 1 MINUTE.			TOS-5101 CUT OFF CURRENT (5mA)
7	INSULATION RESISTANCE	LINE TO COVER	DC 500V, 300MΩ MIN.			TOS-8850

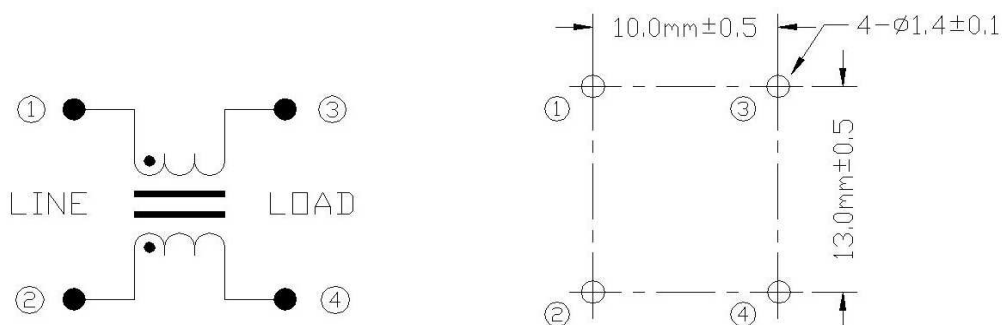
3. OPERATING TEMPERATURE RANGE

-40℃ TO +120℃ INCLUDING TEMPERATURE RISE.

4. KEEP TEMPERATURE RANGE

-40℃ ~ +120℃.

5. CIRCUIT DIAGRAM



PCB layout requirements

※PCB LAYOUT is strictly required..

TNC TNC CO.,LTD

DESIGN

CHOLJ.K
R&D

CHECK

KANG.S.W
R&D

APPROVAL

CHOLD.S
R&D

PAGE

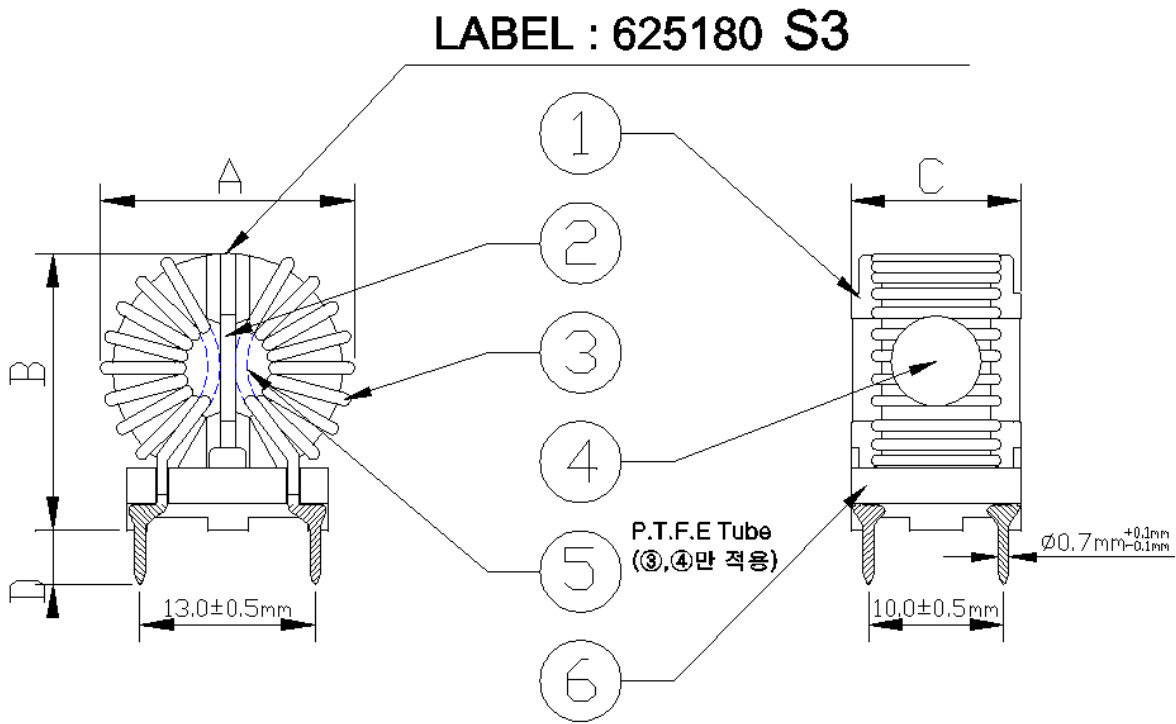
4/15

SPECIFICATIONS	ITEM	LINE FILTER	Rev
	TNC SPEC NO	CV625180SKA	0

6. WINDING SPECIFICATION

NO	TERMINAL		WIRE	TURNS	WINDING METHOD	UNBALANCE SPECIFICATION
	START	FINISH				
L1	1	3	UEW 0.55Φ	53 ±3Ts	HANDMADE	BETWEEN L1 AND L2 (0.4mH MAX)
L2	2	4				

7. SHAPE AND DIMENSION



DIMENSION	A	B	C	D
	21.0mm MAX	22.5mm MAX	16.0mm MAX	Not include solder fillet 4.0 ± 1.0mm

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DESIGN	CHECK	APPROVAL	PAGE
CHOLJ.K R&D	KANG.S.W R&D	CHOLD.S R&D	5/15

SPECIFICATIONS	ITEM	LINE FILTER	Rev
	TNC SPEC NO	CV625180SKA	0

8. MATERIAL LIST

No.	NAME	SPECIFICATION		MANUFACTURER	UL No.
1 / 2	Core Cover / Coil Separator	NYLON A 50H1(r3)(f2)		BASF Engineering Plastics (Shanghai) Co., Ltd.	E507491
		PPS 1140(a)(c)(n)		POLYPLASTICS CO LTD	E109088
3	Enamel Wire	UEW 0.55Φ / 53 ±3Ts	UEW	SIAM PACIFIC ELECTRIC WIRE & CABLE CO.,LTD	E142108
			UEW	ZHEJIANG HONGBO TECHNOLOGY CO LTD	E221719
4	Ferrite Core	MA100 R-16-10-7 M10K T16*10*7		JFE Ferrite Corp SUZHOU TIANMING MAGNETIC INDUSTRY CO.,LTD	
5	Insulation tube	P.T.F.E Tube (Teflon Tube) NOT HEAT-SHRINKABLE PTFE TUBING		SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO.,LTD	E203950
		P.T.F.E Tube (Teflon Tube) NOT HEAT-SHRINKABLE PTFE TUBING		HAN KYUNG COMPONENT TRADING CO LTD	E222852
6	Coil Base	Phenolic (PF 2736(a)(b)) UL 94 V-0 Class		Bakelite GmbH	E61040
		Phenolic (T375HF) UL 94 V-0 Class		CHANG CHUN PLASTICS CO LTD	E59481

9. MARKING

MODEL	LABEL	COLOR
CV625180SH	625180 S3	black letters on white

	DESIGN	CHECK	APPROVAL	PAGE
				6/15

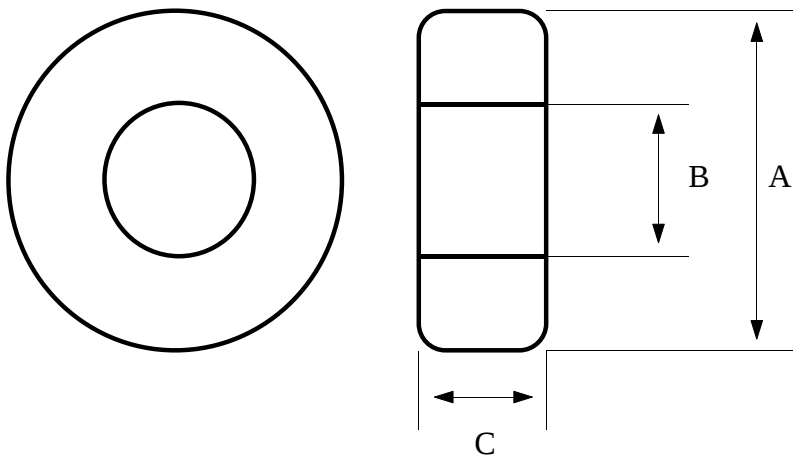
SPECIFICATIONS	ITEM	LINE FILTER	Rev
	TNC SPEC NO	CV625180SKA	0

14. FERRITE CORE SPECIFICATION

- Characteristics

Symbol	Unit	MA100 R- 16/10/7	M10K T16*10*7
μi	-	10,000±30%	10,000±30%
Bms	mT	415	410
Hcms	A/m	3.0	7.0
Brms	mT	76	140
Tc	℃	>115	>130
TANδ /μiac	*10 ⁻⁶	<1.9	<10.0
$\alpha\mu r$	*10 ⁻⁶ /℃	-0.5~2.0	0~1.5
ρ	Ω.m	0.1	0.15
d	g/cm ³	5.0	4.9

- Dimension



A: 16.0 ±0.35

B: 10.0 ±0.3

C: 7.0 ±0.3

TNC TNC CO.,LTD

DESIGN	CHECK	APPROVAL	PAGE
CHOLJ.K R&D	KANG.S.W R&D	CHOLD.S R&D	10/15



NETWORK CAMERA,XNP-C9310R
PoE(55V ) 1.13A

M/C: XNP-C9310R/KUS Fac.ID:D



2023.10 S/N: Serial No.
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA VISION CO.,LTD.
MADE IN KOREA

Rainproof/ Étanche
IP66 and IP67

Risk Group 1 (Groupe de Risque 1)

WARNING

IR emitted from this product
Do not stare at operating lamp



MISE EN GARDE

IR émis par ce produit
Ne pas regarder fixement la lampe

Product tested against IEC62471

Optional Accessories List

1	SBP-156HMW
2	SBP-140CMB
3	SBP-180CMB
4	SBP-180CMS
5	SBP-150CMP
6	SBP-300CMP
7	SBP-900CMP
8	SBP-C15P
9	SBP-150CMI
10	SBP-300CMI
11	SBP-300CMW1
12	SBP-900CMW
13	SBP-300CMTS
14	SBP-156CMW
15	SBP-156WMW
16	SBP-390WMW2
17	SBP-156KMW
18	SBP-300PMW2
19	SBP-300KMW1
20	SBP-300LMW
21	SBP-156LMW
22	SBP-300NBW
23	SBP-300BW1
24	SBP-300WM

Optional Accessories Combination List

Under list optional accessories combination unit were tested in E15887-A6195.
(See detail in E15887-A6195 Datasheet)

1	1 + 9 (2 + 5)
2	1 + 10 (2 + 6)
3	1 + 11 (3 + 6)
4	1 + 12 (4 + 7)
5	1 + 4 + 13
6	1 + 14
7	15
8	16
9	1 + 5 + 6 + 8 + 17
10	1 + 5 + 6 + 8 + 19
11	18 + 24
12	1 + 20
13	1 + 21
14	22 + 24
15	23 + 24

<Photo 1> SBP-156HMW



<Photo 2> SBP-140CMB



<Photo 3> SBP-180CMB



<Photo 4> SBP-180CMS



<Photo 5> SBP-150CMP



<Photo 6> SBP-300CMP



<Photo 7> SBP-900CMP



<Photo 8> SBP-C15P



<Photo 9> SBP-150CMI



<Photo 10> SBP-300CMI



<Photo 11> SBP-300CMW1



<Photo 12> SBP-900CMW



<Photo 13> SBP-300CMTS



<Photo 14> SBP-156CMW



<Photo 15> SBP-156WMW



<Photo 16> SBP-390WMW2



<Photo 17> SBP-156KMW



<Photo 18> SBP-300PMW2



<Photo 19> SBP-300KMW1



<Photo 20> SBP-300LMW



<Photo 21> SBP-156LMW



<Photo 22> SBP-300NBW



<Photo 23> SBP-300BW1



- SBP-300WM









