



1. **EU-TYPE EXAMINATION CERTIFICATE**

2. Equipment and Protective systems intended for use in potentially explosive atmospheres :

Directive 2014/34/EU

3. EU-Type Examination Certificate Number : KRH 21 ATEX 1007X/02

4. Equipment or protective system : Network PTZ Cameras type EZP-***** and TNU-****E* series

5. Manufacturer : Wonwoo Engineering Co., Ltd.

6. Address : 81, Magokjungang 6-ro, Gangseo-gu, Seoul, 07803, Korea

7. This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8. The KRH certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive 2014/34/EU of 26 February 2014.
The examination and test results are recorded in the confidential report listed in section 16.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014

10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11. This EU-Type Examination Certificate relates only to the design and construction of the specified equipment or protective system in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacturing process and supply of this equipment or protective systems. These are not covered by this certificate.

12. The marking of the equipment or protective system shall include the following:



II 2 GD Ex db IIC T6 Gb and Ex tb IIIC T80 °C Db

This certificate is issued at Athens on 2024-08-30, under the authority of the Hellenic Republic of Greece by KR Hellas Ltd.,
Notified Body No. 2198.



Nikolaos Katiforis
Quality Manager of KR Hellas Ltd.





13.

SCHEDULE

14. **EU-Type Examination Certificate KRH 21 ATEX 1007X/02**

15. **Description of Equipment or Protective System**

1) The network PTZ (Pan-Tilt-Zoom) Cameras, EZZP-***** and TNU-****E* series, are designed for use in industrial environment with potentially explosive atmospheres. The EZZP-***** and TNU-****E* series contain an integrated fully functional CCTV camera head system handling preset, auto-pan and patrol functions with an integrated wiper. The equipment is comprised of the following compartments: A static entry compartment base, a main body providing 360 ° continuous pan movement and either one or two camera housing with -90 ° to +90 ° tilt movement. The EZZP-***** and TNU-****E* series' housings are additionally fitted with an infra-red camera. The equipment provides one cable entry with size of NPT 3/4" (or M25xP1.5) for the end-user's connection to either cable connectors or a conduit system dependent on the application. It may be provided with an optional sun shield. The equipment provides a degree of protection IP67 in accordance with IEC 60529 after pre-conditioning by IEC 60079-0.

2) Electrical Data

- EZZP-*****-V1 and TNU-****ER: AC 100-240 V, 50/60 Hz, 1.7 A, Max. 120 W
- EZZP-*****-30 and TNU-****ER: AC 24 V, 50/60 Hz, 6/3 A, Max. 99/50 W (Two AC Sources)
- EZZP-*****-V0 and TNU-****E: AC 100-240 V, 50/60 Hz, 1.4 A, Max. 87 W
- EZZP-***** and TNU-****E: AC 24 V, 50/60 Hz, 6 A, Max. 99 W (One AC Source)

3) Model Description

EZZP – (a)(b)(cc)(d)(e) – (ww) / EZZP – (a)(b)(cc)(d)(e)

Item	Explanation	Description
(a)	IP	H (Network), M (Mega), A (Analog)
(b)	Sensor size	S (1/2"), None (1/3")
(cc)	Zoom Ratio	18 (18x), 20 (20x), 30 (30x), 36 (36x), 40 (40x), 55 (55x)
(d)	Chipset	8 (M8), 9 (M9), 5 (i550)
(e)	Resolution	F (5MP), U (4K/8MP), Q (4MP), None (2MP)
(ww)	Extension	None (None IR+24V), 30 (IR(30)+24V), V0 (None IR+Free Voltage), V1 (IR(30)+Free Voltage)

TNU – (f)(gg)(h) ER / TNU – (f)(gg)(h)E

Item	Explanation	Description
(f)	Resolution	6, 7, 8, 9





(gg)	Optical Zoom	12, 15, 20, 23, 25, 30, 32, 37, 40, 55
(h)	Version	0 ~ 9

4) Marking

Warning Markings:

WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.

The equipment shall also bear the usual markings required by the manufacturing standards applying to such equipment.

16. **Descriptive Document**

Report No.: KRH-ATEX-0035-2024

17. **Specific Conditions of Use**

- 1) The dimensions of flameproof joints are different from the values specified in the tables of the IEC 60079-1 standard. Contact the manufacturer for details of the flameproof joints.
- 2) The screws (special fasteners) used for the assembly of the various parts of explosion-proof enclosures shall be of quality higher or equal to A2-70.
- 3) For the equipment with a permanently connected cable, the user shall connect the free extremity of cable either in a non-explosive atmosphere or in an enclosure protected by a recognized protection mode adapted to the area.
- 4) Suitably certified entry or conduit devices shall be connected to the entry of this equipment.
- 5) Ambient temperature range: -40 °C to +60 °C

18. **Essential Health and Safety Requirements**

Refer to covered by standards listed at 9.

19. **Routine Verifications and Tests**

Overpressure test in accordance with clause 16.1 of EN 60079-1 shall be carried out for the following flameproof enclosures.

EZP-*****-(30/V1)	EZP-***** (None/-V0)	Overpressure test
Head Ass'y	Head Ass'y	1 850 kPa for 10 sec.
IR Ass'y	-	2 170 kPa for 10 sec.
Main IR Ass'y	-	1 860 kPa for 10 sec.
Base IR Ass'y	Base Ass'y	2 340 kPa for 10 sec.
-	Main Ass'y	2 270 kPa for 10 sec.

20. **Drawings and Documents**

[EZP-*****-*/TNU-*****ER] Drawings

Number	Issue	Date	Description
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262F6021-01	1	2024-02-26	*SET IR ASS'Y 1
262F6021-02	0	2020-02-17	SET IR ASS'Y 2
262F6021-03	0	2020-02-17	SET IR ASS'Y 3
262F6021-04	0	2020-02-17	SET IR ASS'Y 4
262F6021-05	0	2024-04-30	*SET IR ASS'Y 5
262F6021-06	0	2024-04-30	*SET IR ASS'Y 6
322062F10	0	2020-02-05	CASE FRONT HEAD
377062A00	0	2016-09-07	WINDOW
342062F20	0	2020-01-19	HOLDER WINDOW
361062A10	0	2014-02-05	WIPER SHAFT
355062A05	0	2014-02-05	PLATE OIL SEAL
377262700	0	2016-10-11	WIPER WINDOW
322062F014-01	0	2020-02-17	CASE BODY 1
322062F014-02	0	2020-02-17	CASE BODY 2
322062F16	0	2020-02-07	CASE SHAFT
322062F20	0	2020-02-10	CASE COVER
322062F30	0	2020-01-15	CASE FRONT IR
322062F10	0	2020-01-15	WINDOW IR
342062F30	0	2020-01-29	HOLDER WINDOW IR
322062F34-01	0	2020-01-29	CASE MAIN IR 1
322062F34-02	0	2020-01-29	CASE MAIN IR 2
320062F21P	1	2022-08-31	*CAP MAIN IR 1
320062F32P	2	2023-06-26	*CAP MAIN IR 2
320062F26P	0	2024-04-01	*CAP MAIN IR 3
320062F42P	0	2024-04-01	*CAP MAIN IR 4
322062F26-01	0	2020-01-29	CASE BASE 1
322062F26-02	0	2020-01-29	CASE BASE 2
322062F28	0	2020-01-29	CASE BASE 3
364062F10	0	2020-10-12	SUNSHIELD
364062F20	0	2020-10-12	SUNSHIELD IR
563162F10	0	2020-01-04	SLIPRING 24P
563162F20	0	2020-01-04	SLIPRING 36P
561462F36S	0	2020-01-04	PCBA SHAFT_1+2 ASS'Y
561462F01	0	2020-01-04	*CABLE MAIN 1
561462F00	1	2024-04-30	*CABLE MAIN 2
561462F02	0	2024-06-26	*CABLE MAIN 3
561462F12	0	2024-06-26	*CABLE MAIN 4
561462F14	0	2024-04-30	*CABLE MAIN 5
561462F24	0	2024-06-26	*CABLE MAIN 6
262F6040	0	2020-02-20	CASE FRONT HEAD ASS'Y





262F6049	0	2020-02-20	CASE FRONT IR ASS'Y
262F6043	0	2020-02-20	SHAFT TILT ASS'Y
262F6047	0	2020-02-20	SHAFT PAN ASS'Y
890201000	0	2020-02-01	O RING

[EZP-***-**/TNU-****E] Drawings**

Number	Issue	Date	Description
262F6020-01	1	2024-02-26	*SET ASS'Y 1
262F6020-02	0	2020-02-17	SET ASS'Y 2
262F6020-03	0	2020-02-17	SET ASS'Y 3
262F6020-04	0	2024-04-30	*SET ASS'Y 4
262F6020-05	0	2024-04-30	*SET ASS'Y 5
32260F10	0	2020-02-05	CASE FRONT HEAD
377062A00	0	2016-09-07	WINDOW
34262F20	0	2020-01-29	HOLDER WINDOW
36162A10	0	2014-02-05	SHAFT WIPER
355062A05	0	2014-02-05	PLATE OIL SEAL
377262700	0	2016-10-11	WIPER WINDOW
322062F14-01	0	2020-02-17	CASE BODY 1
322062F14-02	0	2020-02-17	CASE BODY 2
322062F16	0	2020-02-07	CASE SHAFT
322062F20	0	2020-02-10	CASE COVER
322062F36-01	0	2020-02-14	CASE MAIN 1
322062F36-02	0	2020-02-14	CASE MAIN 2
355062F21	1	2022-08-31	PLATE NAME
355062F32	2	2023-06-26	PLATE NAME
355062F26	0	2024-04-01	*PLATE NAME
355062F42	0	2024-04-01	*PLATE NAME
322062F26-01	0	2020-01-29	CASE BASE 1
322062F26-03	0	2024-04-01	*CASE BASE 2
322062F28	0	2020-01-29	CASE BASE 3
364062F10	0	2020-10-12	SUNSHIELD
563162F10	0	2020-01-04	SLIPRING 24P
563162F20	0	2020-01-04	SLIPRING 36P
562562F36S	0	2020-01-04	PCBA SHAFT_1+2 ASS'Y
561462F10	0	2024-04-30	*CABLE MAIN 1
561462F20	1	2024-04-30	*CABLE MAIN 2
561462F21	0	2024-06-26	*CABLE MAIN 3
561462F12	0	2024-02-26	*CABLE MAIN 4



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561462F14	0	2024-04-30	*CABLE MAIN 5
561462F24	0	2024-06-26	*CABLE MAIN 6
262F6040	0	2020-02-20	CABLE FRONT HEAD
262F6043	0	2020-02-20	SHAFT TILT ASS'Y
262F6047	0	2020-02-20	SHAFT PAN ASS'Y
890201000	0	2020-02-01	O RING

Note: An * is included before the title of documents that are new or revised.

21. **Details of Certificate Changes**

Issue No.	Issue Date	Description
0	2021-05-14	Initial Issue
1	2023-08-31	Update of nameplate drawings for certificate number and authorized representative
2	2024-08-30	Addition of new types which have free voltage input [(100-240) V]

End of Certificate

