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**Certificate No:**  
**KRH 22 ATEX 1024X**  
Issue Number: 0  
Date of initial issue: 2022-11-25  
Date of reissue:  
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## 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 22 ATEX 1024X**

4. Equipment or protective system: **Displacement Type Level Transmitter (SDT-420)**

5. Manufacturer: **SEOJIN INSTECH CO., LTD.**

6. Address: **14 Dunchon-daero 457beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, 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**

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:

**Ex II 2 G Ex db IIC T6 Gb**

This certificate is issued at Athens on 2022-11-25, under the authority of the Hellenic Republic of Greece by KR Hellas Ltd., Notified Body No. 2198.



*Dr. Nikos Katiforis*

**Quality Manager of KR Hellas Ltd**



*Any person not a party to the contract pursuant which this document is delivered may not assert a claim against KRH for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgment, fault or negligence committed by personal of KRH in establishment or issuance of this document, and in connection with any activities for which it may provide. In this provision KRH shall mean the KR Hellas Ltd. as well as all its subsidiaries, directors, officers, employees and any other acting on behalf of KR Hellas Ltd.*



13.

## SCHEDULE

14. **EU-Type Examination Certificate KRH 22 ATEX 1024X**

15. **Description of equipment or protective system**

**Displacement Type Level Transmitter (Type: SDT-420) is designed for;**

1) This Displacement Type Level Transmitter is designed for measuring not only the level of liquid but also the interface level between two different liquids. The measurement principle follows Archimedes' principle that when a part or all of an object is in a fluid (liquid or gas), a buoyant force corresponding to the weight of the fluid acts on the object as much as the volume occupied by the object.

It is possible to measure the water level, density and liquid interface level of the object to be measured by hanging a displacer with a constant cylinder shape in the liquid. The principle of operation is that the buoyancy force of the displacer is transmitted to the torsion bar through the operating rod assembly, and tensile or compressive force is applied to the load cell connected to the bar fixture and converted into an electrical signal. The Wheatstone Bridge Circuit of this load cell is consisted of a thermometer and 4 thin metallic strain gauges.

The Displacement Type Level Transmitter (SDT-420) is designed for use in potentially explosive atmosphere of gas group IIC in Zone 1. The body consists of a housing, cover, o-ring and tempered glass. The body is made of stainless steel (STS304).

This equipment has the degree of protection "IP65" in accordance with IEC 60529 standard after preconditioning according to IEC 60079-0.

2) Electrical Ratings

- General operating: DC 12 to 30 V
- Output signal: 4 to 20 mA

3) Marking

Warning Marking

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

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





**16. Descriptive documents**

Report No.: KRH-ATEX-0053-2022

**17. Specific Conditions of Use**

- 1) Ambient temperature range: -20 °C to +60 °C
- 2) Contact the manufacturer for information on the dimensions of flameproof joints.
- 3) For entries, use suitably Ex certified cable glands and blanking elements only with a minimum IP degree in accordance with the marking.
- 4) The glass of the equipment was submitted to impact tests corresponding to the low risk of mechanical danger - See instructions.

**18. Essential Health and Safety Requirements**

Covered by the 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 flameproof enclosure (15 bar)

**20. Drawings and Documents**

Number	Issue	Date	Description
SJ-M017-DWG-AS401-EX	0	2022-07-18	ASSEMBLY DRAWING
SJ-M017-DWG-AS402-EX	0	2022-07-18	ASSEMBLY SECTION DRAWING (1/2)
SJ-M017-DWG-AS402-EX	0	2022-07-18	ASSEMBLY SECTION DRAWING (2/2)
SJ-M017-DWG-RB401-EX	0	2022-07-18	TORSION BAR WELDING ASSEMBLY
SJ-M017-DWG-RB402-EX	0	2022-07-18	TORSION BAR GUARD ASS'Y
SJ-M017-DWG-RB403-EX	0	2022-07-18	HOUSING WELDING ASS'Y
SJ-M017-DWG-PB401-EX	0	2022-07-18	HOUSING
SJ-M017-DWG-PB402-EX	0	2022-07-18	STOP RING
SJ-M017-DWG-PB403-EX	0	2022-07-18	DISPLAY WINDOW
SJ-M017-DWG-PB404-EX	0	2022-07-18	COVER (A)
SJ-M017-DWG-PB405-EX	0	2022-07-18	T/B COVER (B)
SJ-M017-DWG-PB406-EX	0	2022-07-18	CONNECTOR
SJ-M017-DWG-PB407-EX	0	2022-07-18	ADJUST HOUSING
SJ-M017-DWG-PB408-EX	0	2022-07-18	ADJUST COVER



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SJ-M017-DWG-PB409-EX	0	2022-07-18	ADJUST FRAME
SJ-M017-DWG-PB410-EX	0	2022-07-18	FIXTURE CONNECTOR
SJ-M017-DWG-PB411-EX	0	2022-07-18	TORSION BAR HINGE
SJ-M017-DWG-PB412-EX	0	2022-07-18	HINGE ROD
SJ-M017-DWG-PB413-EX	0	2022-07-18	TORQUE TUBE
SJ-M017-DWG-PB414-EX	0	2022-07-18	OPERATING CONNECTOR
SJ-M017-DWG-PB415-EX	0	2022-07-18	BAR FIX NUT
SJ-M017-DWG-PB416-EX	0	2022-07-18	GASKET
SJ-M017-DWG-PB417-EX	0	2022-07-18	TORSION BAR GUARD
SJ-M017-DWG-PB418-EX	0	2022-07-18	TOP PIECE
SJ-M017-DWG-PB419-EX	0	2022-07-18	RANGE WASHER
SJ-M017-DWG-PB420-EX	0	2022-07-18	PLUG
SJ-M017-DWG-PB421-EX	0	2022-07-18	HOUSING BRACKET
SJ-M017-DWG-PB422-EX	0	2022-07-18	NAME PLATE
SJ-M017-DWG-PB423-EX	0	2022-07-18	EMI FILTER
SJ-M013-MNU-DC401	0	2021-10-27	INSTRUCTION MANUAL (SDT-420)

21. **Details of Certificate changes**

<b>Issue Number</b>	<b>Issue Date</b>	<b>Description</b>
0	2022-11-25	Initial issue

*End of Certificate*

