

Type Approval Certificate



[Gas Detector]

Initial Approval 17th February, 2016

Manufacturer GASTRON Co., Ltd.

23, Gunpocheomdansaneop 1-ro, Gunpo-si, Gyeonggi-do, 15881, Korea

Product Description Type : GTD-2000Tx (0₃)

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt.6, Ch.2, Art.301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 16th February, 2026

Issued at Busan, Korea on 24th June, 2021



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME21015114981) and certificate No.(INC15142-AE007).



KOREAN REGISTER

**General Manager of
Marine & Ocean Equipment Team**

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 24th June, 2021

A. Product Description

1. Product Specification

- 1) Power supply : DC 24V
- 2) Measuring type : Diffusion Type
- 3) Measuring gas : O₃
- 4) Measuring method : Electrochemical Cell
- 5) Measuring range : 0 to 1 ppm
- 6) Output signal : DC 4 to 20mA / Full Scale
- 7) Ex-proof grade : Ex db IIC Gb T6/T4

2. Approved Drawings and Documents

- 1) Drawing No. G-10005 Rev.0
- 2) Test procedure No. GA-2101-0002 Rev.0

3. Test Reports, etc.

- 1) Test reports
 - G1509-0001
 - KOMERI-0602-15T2819, KOMERI-0314-15T2818, KOMERI-0306-15T2816, KOMERI-0311-15T2817, KOMERI-0311-21T0331 (E)

B. Approval Condition

1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation.
- 2) The manufacturer should inform this Society of all kinds of revisions of the equipment. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 3) Degree of protection shall be complied with Rule Pt.6 Ch.1 Sec.2 201.2. (5).
- 4) The product shall not be installed in the bridge or on open decks.
- 5) Explosion-proof certification by a notified/recognized Certification Body is not covered by this certificate. Ratings and Special Conditions for Safe Use in hazardous areas are to be obtained from the relevant valid Ex-Certificate.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual product certification is not required.

3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

4. Others

- 1) Test condition (IACS UR E10 Rev.8 basis)

Test	Condition	Remark
EMC	All locations excluding the bridge and deck zone	-
Temperature	+5 ~ +55°C	-
Vibration	Acceleration ±0.7g	-

< End of Certificate >