

TYPE APPROVAL CERTIFICATE

Certificate No. : INC15142-AE004

Initial Approval : 30th June, 2009.

Product : Gas Detector

Manufacturer : GASTRON Co., Ltd.

18-8, Dogeumdanjil-gil, Sangrok-gu, Ansan-City, Gyeonggi-do, Korea

Product Description : Model : GIR-3000

- Measuring Type	: Diffusion Type
- Display	: Local Digital LCD Display
- Safe Construction	: Ex d IIC T6
- Measuring Method	: NDIR Cell
- Measuring Range	: Combustible : 0 ~ 100% LEL & 0~10,000ppm CO2 : 0 ~ 5%

" See Appendix 1 "

Approval Condition : 1) This approval is granted on the basis of the test report nos. K2826/E07(TUV NORD), N0569(Sira), Sira 08ATEX1003(Sira)
2) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.
3) Individual Product Certification is not required.

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 and entered in the "List of Approved Manufacturers and Type Approved Equipment".


Pt.6, Ch.2, Art.301 & Pt.7, Ch.1/5/6 of the Rules for Classification, Steel Ships.

This Certificate is valid until 29th June, 2019.

Issued at Incheon, Korea on 7th May, 2014.



KOREAN REGISTER OF SHIPPING


General Manager of
Incheon Branch Office

Note : 1 : The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.
2 : The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.

Appendix 1

Product Description and/or Approval Condition

Certificate No : INC15142-AE004

Date of Issue : 7th May, 2014.

1. Product Description ;

- 1) Gas Detector (Model : GIR-3000)
 - Measuring Type : Diffusion Type
 - Display : Local Digital LCD Display
 - Safe Construction : Ex d IIC T6
 - Measuring Method : NDIR Cell
 - Measuring Range : Combustible : 0 ~ 100% LEL & 0~10,000ppm
CO2 : 0 ~ 5%
 - Response Time : 90% of Reading in less than 10 secs
 - Accuracy : within $\pm 3\%$ / Full Scale
 - Design Temperature : -20 ~ +60°C
 - Design Humidity : 5 ~ 99% RH (Non-condensing)
 - Measuring Signal : 4 ~ 20mA DC/Full Scale,
RS-485 MODBUS (option)
 - Signal Cable : (CVVS or CVVSB 2.0 SQ x 3 Wires) + Shield
 - Power supply : DC 18 ~ 31V
 - Conduit Pipe : 1/2" or 3/4" PF. PT. NPT
 - Drawing No. : G-Ex0052~Ex0054, G-Ex0008~Ex0011, G-Ex0086, G-Ex0013,
G-Ex0012, G-Ex0029~Ex0044, C-000080, C-000112, C-000113,
C-000110, C-000111

2) Measuring Gas

- Flammable vapours in Annex 7B-1 of the Guidance, 2009.
- CO2

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