



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX ITS 21.0004X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 2	Issue 1 (2022-03-28) Issue 0 (2021-08-23)
Date of Issue:	2022-10-11		
Applicant:	Gas Data Limited Unit 4, Fairfield Court Seven Stars Estate Wheler Road Whitley Coventry CV3 4LJ United Kingdom		
Equipment:	GFMxxx Series of Gas Analysers		
Optional accessory:			
Type of Protection:	Intrinsic Safety 'ib'		
Marking:	Ex ib IIB T1 Gb -20°C ≤ Tamb ≤ +40°C IECEX ITS 21.0004X		

Approved for issue on behalf of the IECEx
Certification Body:

Mark Newman

Position:

Certificate Officer

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road
Leatherhead
Surrey, KT22 7SA
United Kingdom

intertek



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Manufacturer: **Gas Data Limited**
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Road
Whitley
Coventry CV3 4LJ
United Kingdom

Manufacturing locations: **Gas Data Limited**
Unit 4, Fairfield Court
Seven Stars Estate
Wheler Road
Whitley
Coventry CV3 4LJ
United Kingdom

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/ITS/ExTR20.0063/00](#)

[GB/ITS/ExTR20.0063/01](#)

[GB/ITS/ExTR20.0063/02](#)

Quality Assessment Report:

[GB/ITS/QAR19.0016/01](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Gas Data GFMxxx Series Instruments are battery powered portable multi-channel gas analysers designed to measure toxic gases, oxygen (0-21%), atmospheric pressure, flow rate and temperature, and display the data. The unit also provides an audible alarm.

The instrument part number GFMxxx has the xxx replaced by a 3 digit number. This number varies depending upon the configuration of the instrument.

The Gas Data GFM Series Instruments consist of up to 8 printed circuit boards containing electronic components, a battery pack, a keyboard, differential pressure sensors, flow sensor or absolute pressure sensor, toxic and oxygen sensors all housed within a plastic enclosure.

External connectors are provided for charging the batteries and connection to the temperature probe which must satisfy the requirements of Clauses 5.3 and 6 of IEC 60079-11:2011.

The enclosure provides a Degree of Protection of at least IP20.

The power for the unit is derived from a battery pack containing four rechargeable cells, Nickel Metal Hydride (Ni-MH).

Intrinsic safety is assured by the use of specified batteries, limitation of current, power, limitation of capacitance and inductance, and infallible segregation.

The maximum output parameters at the external connections are:

Temperature Probe

$U_o = 6.4 \text{ Vdc}$

$I_o = 1293 \text{ mA dc}$

$P_o = 1.36 \text{ W}$

$C_o = 176 \text{ mF}$

$L_o = 85 \text{ mH}$

$C_i = 474 \text{ mF}$

$L_i = 11 \text{ mH}$

Battery Charging

$U_m = 30 \text{ V}$

The equipment is also covered by trade agreement between Gas Data Limited and ECOTEC Solutions, Inc. (dba GAZOMAT North America, LLC) whereby the equipment can be marked as if they are the manufacturer.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The Gas Data GFMxxx Series must be recharged in the non-hazardous area and the unit shall be checked for normal operation prior to carrying it into the hazardous area.
- The Gas Data GFMxxx Series must not be used in or used to measure Oxygen enriched atmospheres i.e. greater than 21% by volume.
- The Gas Data GFMxxx Series must be carried in the leather case to avoid the risk of electrostatic discharge.
- The Gas Data GFMxxx Series case must be inspected for damage prior to use, and the instrument must not be used if the case is damaged.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1:

- Change of CLR tolerance values.

Issue 2 (current):

- Changes to components values and changes to IC's due to obsolescence.
- Changes to track layout on the boards to accommodate new components.
- Addition of thermal cut-out for battery pack.
- Other minor changes to the documentation.

Annex:

[IECEX ITS 21.0004X issue 2 Annex 1_1.pdf](#)



Annex to IECEx Certificate of Conformity

Certificate No:	IECEx ITS 21.0004X	Issue No. 2
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
*R-Series User Manual Pages 1-3, 8-18 & 75-77 Only.	-	A (revision 2)	01/08/2022
*GFM Intrinsically Safe Battery Pack	1_HI_4005_16457	H	18/03/2022
*GFMB1_IS_C Silkscreen Top	1_HI_4027_0	C	07/04/2022
*GFMB1_IS_C Copper Top	1_HI_4028_0	C	07/04/2022
*GFMB1_IS_C Copper Bottom	1_HI_4029_0	C	07/04/2022
*GFMB1_IS_C Component Inspection	1_HI_4030_0	C	07/04/2022
*CPU8_IS LCD Module Inspection Sheet	1_HI_4031_15939	D	07/04/2022
*GFMB1_IS_C Silkscreen Bottom	1_HI_4033_0	C	07/04/2022
*GFM3_IS_E Silkscreen Top	1_HI_4034_0	E	07/04/2022
*GFM3_IS_E Copper Top	1_HI_4035_0	E	07/04/2022
*GFM3_IS_E Inner Copper 1	1_HI_4036_0	E	07/04/2022
*GFM3_IS_E Inner Copper 2	1_HI_4037_0	E	07/04/2022
*GFM3_IS_E Copper Bottom	1_HI_4038_0	E	07/04/2022
*GFM3_IS_E Silkscreen Bottom	1_HI_4039_0	E	07/04/2022
*GFM3_IS_E Component Inspection	1_HI_4040_0	E	07/04/2022
*GFMV1_IS_D Silkscreen Top	1_HI_4041_22265	D	06/04/2022
*GFMV1_IS_D Copper Top	1_HI_4042_22265	D	06/04/2022
*GFMV1_IS_D Copper Bottom	1_HI_4043_22265	D	06/04/2022
*GFMV1_IS_D Silkscreen Bottom	1_HI_4044_22265	D	06/04/2022
*GFMV1_IS_D Component Inspection	1_HI_4045_22265	D	06/04/2022
*CPU8_IS Silkscreen Top	1_HI_4046_0_K	K	01/03/2022
*CPU8_IS Copper Top	1_HI_4047_0_K	K	01/03/2022
*CPU8_IS Inner Copper 1	1_HI_4048_0_K	K	01/03/2022
*CPU8_IS Inner Copper 2	1_HI_4049_0_K	K	01/03/2022
*CPU8_IS Copper Bottom	1_HI_4050_0_K	K	01/03/2022
*CPU8_IS Silkscreen Bottom	1_HI_4051_0_K	K	01/03/2022
*CPU8_IS Component Inspection Top	1_HI_4052_0_K	K	01/03/2022
*GFMX1_IS_B Silkscreen Top	1_HI_4053_0	B	07/04/2022
*GFMX1_IS_B Copper Top	1_HI_4054_0	B	07/04/2022
*GFMX1_IS_B Copper Bottom	1_HI_4055_0	B	07/04/2022
*GFMX1_IS_B Silkscreen Bottom	1_HI_4056_0	B	07/04/2022
*GFMX1_IS_B Component Inspection	1_HI_4057_0	B	07/04/2022
*BM2_IS_F Silkscreen Top	1_HI_4058_0	F	07/04/2022
*BM2_IS_F Copper Top	1_HI_4059_0	F	07/04/2022
*BM2_IS_F Inner Copper 1	1_HI_4060_0	F	07/04/2022
*BM2_IS_F Inner Copper 2	1_HI_4061_0	F	07/04/2022
*BM2_IS_F Copper Bottom	1_HI_4062_0	F	07/04/2022
*BM2_IS_F Silkscreen Bottom	1_HI_4063_0	F	07/04/2022
*BM2_IS_F Component Inspection	1_HI_4064_0	F	07/04/2022
*Valve Box	1_HI_4066_16339	C	28/03/2022
*GFM Instrument Battery Cover Vent Hole	1_HI_4069_0	C	25/03/2022
*GFMD1_IS_B Silkscreen Top	1_HI_4070_0	B	06/04/2022
*GFMD1_IS_B Copper Top	1_HI_4071_0	B	06/04/2022
*GFMD1_IS_B Copper Bottom	1_HI_4072_0	B	06/04/2022
*GFMD1_IS_B Silkscreen Bottom	1_HI_4073_0	B	06/04/2022

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SFT-IECEx-OP-19f (26 October 2018)



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Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
*GFMX2_IS_D Silkscreen Top	1_HI_4077_0	E	18/03/2022
*GFMX2_IS_D Copper Top	1_HI_4078_0	E	18/03/2022
*GFMX2_IS_D Copper Bottom	1_HI_4079_0	E	18/03/2022
*GFMX2_IS_D Silkscreen Bottom	1_HI_4080_0	E	18/03/2022
*GFMX2_IS_D Component Inspection	1_HI_4081_0	E	18/03/2022
*GFMX2_IS_D Copper Inner 1	1_HI_4085_0	E	18/03/2022
*GFMX2_IS_D Copper Inner 2	1_HI_4086_0	E	18/03/2022
*GFM3_IS	1_HI_4088_0_J	J	06/05/2021
*BM2_IS	1_HI_4089_0_I	I	06/05/2021
*GFMX1_IS	1_HI_4090_0_C	C	06/05/2021
*GFMX2_IS Circuit Diagram	1_HI_4091_0_E	E	18/03/2022
*GFMV1_IS	1_HI_4092_0_E	E	06/05/2021
*GFMD1_IS	1_HI_4093_0_D	D	06/05/2021
*GFMB1_IS	1_HI_4094_0_C	C	22/03/2022
*CPU8_IS_K Fuse Encapsulation	1_HI_4100_0_K	K	01/03/2022
*CPU8_IS	1_HI_4191_0_K	K	01/03/2022
*GFM4xx Aspirator Label ATEX Drawing	1_HI_4199_0	C	25/03/2022
*GFM426 Aspirator Label ATEX Drawing	1_HI_4200_0	C	25/03/2022
*GFM436 Aspirator Label ATEX Drawing	1_HI_4201_0	C	25/03/2022
GFM Series IS Keypad	1_HI_4202_22142	C	08/06/2021
*CPU8_IS Component Inspection Bottom	1_HI_4218_0_K	K	01/03/2022
*GFM4XX Comms & Charge Wiring Looms	2_HI_4008_0	C	28/03/2022
*GFM Series general Assembly	2_HI_4019_0	I	25/03/2022
*Encapsulated Valve Module	2_HI_4023_16338	C	28/03/2022

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

IECEX Certified Components on Which Conformance Depends					
Item	Description	Manufacturer	Type	Certificate No. / Standards*	Coding / Ratings
1	Fuse	Littelfuse	259.125xx 259.250xx 259.375xx	IECEX BAS 10.0098U IEC 60079-0:2011 IEC 60079-11:2011	Ex ia

* Technical Differences evaluated and found satisfactory – for detail see ExTR.