UK CA CERTIFICATE OF CONFORMITY

CERTIFICATE NO.: KBUK21.4111X

Heinrichs
KOBOLD Group

1 Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016

2 Certificate Nº: **KBUK21.4111X** **Issue 0**

3 Manufacturer: Heinrichs Messtechnik GmbH

4 Address: Robert-Perthel-Str. 9
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5 Products: **BGN** Variable Area Flow-Meter (Vertical mounting)
BGF Variable Area Flow-Meter (Horizontal mounting)

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6 In accordance to Clause 9 of the *Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 (SI 2016 No. 1107)*, self-declaration, Heinrichs Messtechnik GmbH ensures in sole responsibility that the products concerned in this certificate of conformity satisfy the requirements of this Regulation. The internal production assessment procedure performed for the above mentioned products fulfils the obligations laid down in point 3 and 4 and are compliant to the Essential Health and Safety Requirements relating to the design and construction of product intended for use in potentially explosive atmospheres.

7 The technical documentation has been submitted for a 3 year depository, according to SI 2016 No. 1107, to the Conformity Assessment Body;
SGS Baseefa Limited (UK CAB number 1180)

8 The 'X' suffix after the certificate number indicates that the equipment is subject to conditions of safe use. These are specified in section 14

9 Compliance with the Essential Health and Safety Requirements has been demonstrated through compliance with the following documents:

BS 1127-1:2019 **BS 80079-36:2016** **BS 80079-37:2016**

10 The equipment marking shall include the following:

II 2G Ex h IIC T1...T6 Gb **II 2d Ex h IIIC T85°C/T350°C Db**

Heinrichs Messtechnik GmbH
Cologne 14.04.2022

Signed:

Guido Thometzki
(Managing Director)

Joseph Burke
(Explosion Protection Representative)

11 Description

11.1 Product descriptions

The BGN and BGF are suitable for the flow-measurement of fluids or gases in pipe systems.

The BGN and BGF variable area flow meters consist of a measuring tube, through which the medium flows and a float in the centre of the flow. The float adjusting itself with increasing flow until an equilibrium is established between the buoyancy of the flowing liquid and the counterforce of the weight of the BGN float, or in the case of the BGF the strength of its return spring. The position of the float serves as a measure for the flow.

The meters momentary flow rate is transferred to the indicating unit via a magnetic follower system and indicated on an individual scale mounted into the indicating enclosure.

11.2 Model Code:

BG*- A BB - CCCC D E F G - H - I J K - L - M XXX *(* = "N" for BGN, "F" for BGF)*

A: *Wetted Parts*

B: *Nominal device size*

C: *Process Connections*

D: *Measuring range*

E: *Heating / Cooling*

F: *Damping /Spring-Stop*

G: *Self-drain*

H: *Certificates*

I: *Indicating Unit*

J: *Type of scale and print*

K: *Electrical equipment*

	Restrictions:
0 = None	T_{amb} = -40 ... 80 °C
1,2,3 or 4 = Inductive switch SJ 3,5N	T_{amb} = -40 ... 65 °C
6,7,8,9,I or K= ES transmitter	T_{amb} = -40 ... 70 °C
C or D = Micro Switch	T_{amb} = -40 ... 65 °C
E or F = SB 3,5-E2	T_{amb} = -40 ... 70 °C
G = NCB2-12GM40-Z0	T_{amb} = -25 ... 70 °C

L: *Accessories*

M: *Design*

X: *Up to 6 further non-Ex relevant positions*

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11.3 Certificate history and evaluation reports

Issue N°.	Date	Associated Reports	Notes
0	14.04.2022	EE0088-3001X	Original document submission according to BS EN 80079-36:2016

11.4 Temperatures

The equipment's temperature class, surface temperature and equipment protection levels are dependent upon the ambient and process temperatures as follows:

Ambient Temperature	Indicating unit arm extension	Process Temperature	Temperature class Gas	Temperature Class Dust
-40 ... 80 °C	No	-40 ... 85 °C	T6	85 °C
-40 ... 80 °C	No	-40 ... 100 °C	T5	100 °C
-40 ... 80 °C	No	-40 ... 135 °C	T4	135 °C
-40 ... 80 °C	Yes*	-40 ... 200 °C	T3	200 °C
-40 ... 80 °C	Yes*	-40 ... 300 °C**	T2	300 °C
-40 ... 80 °C	Yes*	-40 ... 350 °C**	T1	350 °C

* = By process temperatures ≥ 200 °C the indicating unit receives an extended sensor connection arm.

** = For meter process temperatures > 200 °C, the installation of electrical supplementary equipment is not permissible.

With the addition of electrical equipment, a further restriction of the maximum ambient and process temperature may be required. Refer to the UKCA Type Approval of the relevant electrical component and the meter operating manual for further information for the determination of the prevailing temperature class.

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12 Specific Conditions of Use

12.1 The flow meters temperature Class, assigned maximum surface temperature and maximum ambient temperature are dependent on the maximum process temperature applied by the end-user as well as any installed supplementary electrical equipment.

When the maximum process temperature is determined by the end-user, the temperature class, assigned maximum surface temperature and maximum ambient temperature shall be determined by the end-user depending on the prevailing process temperature and installed electrical equipment.

12.2 By the measurement of non-conductive medium, the earthing of the equipment is essential to ensure a build-up of static electricity within the meter is suppressed.

12.3 When installed and operated in potentially explosive dust environments, the device must be cleaned regularly in order to avoid deposits exceeding 5 mm. Clean with a damp cloth.

12.4 To prevent float hammering when the medium flow is ramped-up or shut-down, it is to be ensured that a maximum flow rate of 15 m/s is not exceeded. Solenoid valves are to be avoided

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