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[1] EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

[3] EU-Type Examination Certificate Number: **CNEX 21 ATEX 0007 X Issue 1**

[4] Equipment : **Explosion-proof Gas Turbine Flowmeter model MQMe-..**

[5] Manufacturer : **Metreg Technologies GmbH**

[6] Address : **Neckeraue 9, 71686 Remseck, Germany**

[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] CNEX-Global B.V., Notified Body number 2614, in accordance with Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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.
The examination and test results are recorded in confidential Report No. **P23121A-CS.**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-11:2012

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to specific conditions for use specified in the schedule to this certificate.

[11] This EU – Type examination certificate relates only to the design of the specified equipment or protective system. Further requirements of the Directive apply to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

II 1G Ex ia IIC T4 Ga

Certification officer : Hou Yandong
Date of issue : 2023-12-14

Signature:

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[15] Description of equipment:

The explosion-proof Gas Turbine Flowmeter model MQMe-.. consists of a metering device, a terminal box, and sensor assemblies for temperature/pressure/flow/oil pump/etc. The flowmeter is constructed in type of explosion protection intrinsic safety 'ia'. The enclosure of the main body is made of YL102 die cast aluminum alloy and is fitted with a toughened glass window on the front cover. The column is made of 6061 die-cast aluminum alloy.

The model MQMe-..flowmeters are fitted with certified cable glands for the connection of cables between the various parts of the flowmeter and for external cable connection.

The model MQMe-.. flowmeters can be powered by an external power supply or from the internal battery (model ER34615, located in the main enclosure). External electrical connections are made via five ports: External power port, HF digital output port, LF digital output port, 4~20mA signal output port, RS485 or M-BUS communication port.

Nomenclature for model MQMe-a-b-c-d-e-f:

MQMe - Product model
a - Flow range (G16…G1000)
b - Nominal diameter (DN25…DN150)
c - Correction mode:
Blanc = uncorrected
A = corrected pressure and temperature setting
B = automatic pressure detection, corrected temperature setting
C = automatic temperature detection, corrected pressure setting
D = corrected automatic temperature and pressure detection
d - Communication output configuration:
Blank = with RS485 communication (default)
M = with M-Bus communication
e - Upper limit pressure (absolute pressure, MPa)
f - Accuracy class of basic meter: Level 1.5 (default), level 1.0

Intrinsic safety input parameters for the ports:

Port Name	Ui (V)	Ii (mA)	Pi (mW)	Ci (μF)	Li (mH)
External Power port (V+,GND)	28	93	651	0.037	2.4
HF digital output port (HF,GND)	15.5	110	427	negligible	negligible
LF digital output port (LF,GND）	15.5	110	427	0.11	negligible
4~20mA signal output port (I+,I-)	28	93	651	0.062	negligible
RS485 communication port (A,B)	6.6	65	110	20.0	negligible
M-BUS communication port (M+,M-)	38	50	475	negligible	negligible

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Electrical Data:

Rated voltage …… : 12-24 Vdc

Internal power supply : one EVE® model ER34615 D 3.6V lithium battery.

Mounting Instructions:

See manufacturer's instructions.

Installation Instructions:

See manufacturer's instructions.

Routine tests:

None

[16] Descriptive Documents:

Detailed in the Test Report Cover document. (**P23121A-CS**).

[17] Specific Conditions for Use:

When used in zone 0, measures should be taken to avoid ignition by impact or friction spark.

The ambient temperature range is limited to -25°C … +55°C.

The permitted battery pack is a type ER34615 D 3.6V Primary Lithium battery made by EVE ENERGY CO., LTD.

The equipment is not capable of passing a 500V r.m.s.a.c. electric strength test in accordance with clause 6.3.13 of EN60079-11:2012 between its intrinsically safe circuits and its enclosure (which is intended to be earthed). This shall be taken into account when this equipment is being installed.

[18] Essential Health and Safety Requirements:

The Essential Health and Safety Requirements are covered by the standards listed at item [9].

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

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Additional Information:

The enclosure of the explosion-proof Gas Turbine Flowmeter model MQMe-.. successfully passed the tests for the Ingress Protection Level IP65 to EN 60529.

Changes for issue 1:

Change of manufacturing address.