

[1]

**EU-TYPE EXAMINATION CERTIFICATE**

[2] **Equipment and Protective System intended for use in potentially explosive atmospheres**  
**Directive 2014/34/EU-Annex III**

[3] Certificate Number: **EPT 17 ATEX 2608 X** issue 0

[4] Equipment: **ELECTROMAGNETIC FLOWMETERS**

Series: **MUTEX 2200 EL, MUTEX 2300, MUTEX 1000 EL, MUTEX 2400 EL,  
MUTEX 2660, MUTEX 1222**

[5] Manufacturer: **EUROMAG INTERNATIONAL S.r.l.**

[6] Address: **Via della Tecnica, n. 20 – 35035 Mestrino (Padova) - Italy**

[7] This equipment and its accepted variations are specified in the annex to this Certificate.

[8] Eurofins Product Testing Italy S.r.l., Notified Body n. 0477 in accordance with Article 21 of the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in the confidential Report N° EPT.17.REL.01/54096

[9] Compliance with the essential health and safety requirements is assured through the verification of them and by compliance with the standards:

**EN 60079-0:2012+A11:2013, EN 60079-18:2015**

[10] If the sign "X" is placed after the Certificate number, it indicates that the equipment is subject to the special conditions for safe use specified in the annex to this Certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, the exam and the tests of the specified equipment.  
Further requirements of the Directive 2014/34/EU apply to the manufacture and supply of this equipment. These requirements are not object of this Certificate.

[12] The equipment shall include the sign  and at least one of the following string:

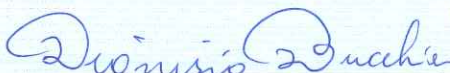
**II 2G Ex mb IIC T6...T4 Gb**

**II 2D Ex mb IIIC T85°C...T135°C Db**

**-20°C ≤ Ta ≤ +60°C**

Place and date of issue:

**Torino, 2017-03-29**



Dionisio Bucchieri  
Directive Responsible



Paolo Trisoglio  
Managing Director



**SGQ N° 133A**  
**PRD N° 119B**

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This Certificate has 3 pages and it is reproducible only in its entirety. Conditions of validity are reported below.



[13] **ANNEX**  
 [14] **EU-TYPE EXAMINATION CERTIFICATE N. EPT 17 ATEX 2608 X issue 0**

[15] **Equipment description**

The electromagnetic flowmeters are used to measure the flow rate of conductive liquid, they base their operation on the Faraday principle.

The equipment, in order to execute a flow rate measurement, must be connected to a converter.

The sensor, which is the object of the certification, is located in a hazardous area while the converter must be placed in a safe area and satisfy the manufacturer's specifications.

The electromagnetic flowmeters can be divided in two main families:

- insertion sensor;
- sensor with flow tube.

The operating principle is the same, both are protected by encapsulation "m", with a level of protection "mb". They are suitable for gas group IIC and for dust group IIIC.

Ambient temperature range:  $-20^{\circ}\text{C} \div +60^{\circ}\text{C}$ .

Process temperature range:  $-20^{\circ}\text{C} \div +80^{\circ}\text{C}$  for insertion sensor and flow tube sensor with metallic pipe coated with ebonite;

$-20^{\circ}\text{C} \div +95^{\circ}\text{C}$  for flow tube sensor with metallic pipe coated with PTFE.

Temperature class and maximum surface temperature limits:

$-20^{\circ}\text{C} \leq T_{\text{AMB}} \leq +60^{\circ}\text{C}$		
TEMPERATURE CLASS	MAX SURFACE TEMPERATURE ( $^{\circ}\text{C}$ )	PROCESS TEMPERATURE ( $^{\circ}\text{C}$ )
T6	77	70
T5	92	85
T4	102	95

$-20^{\circ}\text{C} \leq T_{\text{AMB}} \leq +60^{\circ}\text{C}$		
MAX SURFACE TEMPERATURE LIMITS	MAX SURFACE TEMPERATURE ( $^{\circ}\text{C}$ )	PROCESS TEMPERATURE ( $^{\circ}\text{C}$ )
T85 $^{\circ}\text{C}$	77	70
T100 $^{\circ}\text{C}$	92	85
T135 $^{\circ}\text{C}$	102	95

**Electrical characteristics of the equipment:**

Rated voltage: 30V;

Rated current: 70mA;

The equipment have to be protected by an external fuse which is placed in safe area.

**Electrical characteristics of the fuse:**

Rated current: 200 mA,

Rated Voltage:  $\geq 30\text{ V}$

Sensors must be supplied by the waveform indicated by the manufacturer in order to not impair the safety; This waveform is provided by the converter, installed downstream of a protective device capable to interrupt the 1500A prospective short circuit current.

**Routine test**

The manufacturer has to perform:

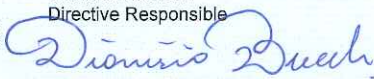
- the visual inspection in compliance to clause 9.1 of EN 60079-18;
- the dielectric strength test in compliance to clause 9.2 of EN 60079-18; the test shall be carried out at a voltage equal to 500V r.m.s. and at a frequency included between 48 Hz to 62 Hz, this voltage shall be maintained for at least 1 s; alternatively the test shall be carried out at 600 V r.m.s. for at least 100 ms.

**Warning label**

None



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[13] **ANNEX**  
 [14] **EU-TYPE EXAMINATION CERTIFICATE N. EPT 17 ATEX 2608 X issue 0**

[16] **Assessment Report n° EPT.17.REL.01/54096**

This EU-Type Examination Certificate is released after the positive result of the conformity assessment of the Council Directive 2014/34/EU and to harmonized technical standards listed in this Certificate; performed by the Notified Body Eurofins Product Testing Italy S.r.l., and reported in the Assessment Report above cited.

[17] **Special condition for a safe use**

The equipment has to be protected by a suitable external fuse as indicated in clause 8.2 and 8.3 of the safety instruction.

The safety of the equipment depends on the supply features, it may be impaired by a waveform different than the nominal one indicated by the manufacturer.

[18] **Essential Health and Safety Requirements**

Assured by compliance with harmonized standards.

[19] **Descriptive documents**

The equipment objects of this Certificate is described by the following documents.  
 Scheduled documents are indicated with the symbol "✓". They cannot be modified without the explicit authorization of the Notified Body.

Document	Name	Rev.	Date	Scheduled
FASCICOLO TECNICO ATEX	Nota Tecnica TS-105	1	2017-03-10	✓
MANUALE DI SUPPORTO SENSORI	TD 213-0	0	-	✓
RESINATURA DEL SENSORE	ISTRUZIONE – DI9T	3	2014-11-03	✓
MUTEX2200-EN-S0_ATEX-R2	D-05229	2	2017-02-23	✓
MUTEX2300-EN-S0_ATEX-R1	D-06403	1	2017-03-07	✓
MUTEX1000-EN-S0_ATEX-R2	D-05228	2	2017-03-04	✓
MUTEX2400-EN-S0_ATEX-R2	D-05227	2	2017-03-08	✓
MUTEX2660-S0_ATEX-R1	D-06623	1	2017-03-19	✓
I01000SGASX0LS-ATEX_R1	D-06404	1	2017-02-23	✓
BOBINA_A_SELLA-EX-00	D-06623	1	2017-03-01	✓
ATEX_Label	D-06624	0	2017-03-01	✓

[20] **Terms and conditions**

The product liability rests with the Manufacturer, his representative or, in the absence of a representative, with the importer, in accordance with the General Product Safety Directive 2001/95/EC.

The following conditions may render this certificate invalid:

- changes in the design or construction of the product;
- changes or amendments to the 2014/34/EU Directive;
- changes or amendments in the standards which form the basis for documenting compliance with the essential requirements of the 2014/34/EU Directive.

[21] **Certificate History**

This Certificate is at its first issue.



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End of Certificate