IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx IMQ 19.0007X

Issue No: 0

Certificate history:
Issue No. 0 (2019-07-02)

Status: **Current**

Date of Issue: **2019-07-02**

Applicant: **GICAM S.r.l.**
P.zza XI Febbraio, 2
I-22015 Gravedona ed Uniti (CO)
Italy

Equipment: **Compression load cells**

Optional accessory: *ME*/ME*-HH Series ; COL*/COL*-HH Series TOR*/TOR*-HH Series ; OT1/OT1-HH Series*

Type of Protection: **Intrinsic safety "i"**

Marking:
Ex ia IIC T6…T3 Ga ; Ex ia IIIC T75°C…T145°C Da

Approved for issue on behalf of the IECEx Certification Body: Mr. Mauro CASARI

Position: IMQ ExCB Manager

Signature:
(for printed version)

Date:

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 the Official IECEx Website.

Certificate issued by:

Istituto Italiano del Marchio di Qualità S.p.A
Via Quintiliano 43
20138 Milano
Italy

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Manufacturer: **GICAM S.r.l.**
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Additional Manufacturing location(s):

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 apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*This Certificate **does not** indicate compliance with electrical 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 Report:

IT/IMQ/ExTR19.0011/00

Quality Assessment Report:

IT/IMQ/QAR19.0002/00

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

ME*/ME*-HH, COL*/COL*-HH, TOR*/TOR*-HH and **OT1/OT1-HH** compression load cells are equipment designed to perform weight or force measurements in industrial environments and classified areas, by converting a mechanical force into an electrical signal using strain gauge sensors that measure the mechanical deformation of a metal structure to which they are applied.

The active parts (strain gauge sensors and compensation resistances/wires) are completely encapsulated by means of casting compound.

ME*/ME*-HH, COL*/COL*-HH, TOR*/TOR*-HH and OT1/OT1-HH compression load cells are composed by:
- stainless steel metal body, with active parts segregated by casting compound,
- indissociable multi-cable no longer than 50 m, retained by a cable gland.

Installation and maintenance of compression load cells shall be performed according to IEC 60079-14 and IEC 60079-17, and strictly in compliance with details listed in manufacturer's use and safety instructions.

Further details in Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Load cells must be kept cleaned to avoid dust layer deposition on equipment.
- Ambient temperature range and relevant temperature class or assigned temperature is according to intrinsic safety parameters table specified above on general product information.
- A safety barrier is required by installation to limit power supply to compression load cells, according to intrinsic safety parameters table specified above on general product information.

Annex:

IECEx IMQ 19.0007X issue No. 0 Annex.pdf

General description

ME*/ME*-HH, **COL*/COL*-HH**, **TOR*/TOR*-HH** and **OT1/OT1-HH** compression load cells are equipment designed to perform weight or force measurements in industrial environments and classified areas, by converting a mechanical force into an electrical signal using strain gauge sensors that measure the mechanical deformation of a metal structure to which they are applied.

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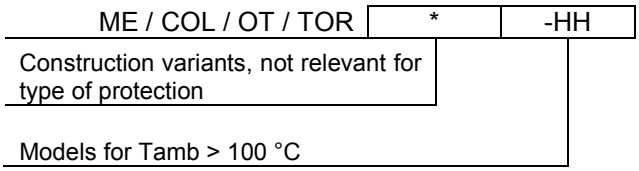
Key code

ME*/ME*-HH, COL*/COL*-HH, TOR*/TOR*-HH and **OT1/OT1-HH** compression load cells model coding system:



Models

Compression load cells models:
- ME1, ME2, ME3, ME4, ME5, ME8, MEDP
- COL1, COL2, COL3, OT1, TOR, TOR36
- ME1-HH, ME2-HH, ME3-HH, ME4-HH, ME5-HH, ME8-HH, MEDP-HH
- COL1-HH, COL2-HH, COL3-HH, OT1-HH
- TOR-HH
- TOR36-HH

Safety parameters

OPTION 1		OPTION 2	
Ui	30 V	Ui	30 V
Ii	125 mA	Ii	84 mA
Pi	1,875 W	Pi	0,834 W
Ci	≤ 10 nF	Ci	≤ 10 nF
Li	≤ 50 µH	Li	≤ 50 µH
Ri	120 Ω	Ri	120 Ω

Temperature class and rated ambient temperature

-20/-30 °C ÷ +55 °C
-20/-30 °C ÷ +60 °C
-20/-30 °C ÷ +75 °C
-20/-30 °C ÷ +110 °C
-20/-30 °C ÷ +120 °C

Intrinsic Safety parameters: Ui = 30 V ; Ii = 125 mA ; Pi = 1,875 W ; Ri = 120 Ohm				
Rated ambient temperature range (°C)	-20 °C/-30 °C ÷ +55 °C	-20 °C/-30 °C ÷ +75 °C	-20 °C/-30 °C ÷ +110 °C	-20 °C/-30 °C ÷ +120 °C
T Class (Group II)	T6	T5	T4	T3
T assigned (Group III)	T85°C	T100°C	T135°C	T145°C

Intrinsic Safety parameters: Ui = 30 V ; Ii = 84 mA ; Pi = 0,834 W ; Ri = 120 Ohm					
Rated ambient temperature range (°C)	-20 °C/-30 °C ÷ +55 °C	-20 °C/-30 °C ÷ +60 °C	-20 °C/-30 °C ÷ +75 °C	-20 °C/-30 °C ÷ +110 °C	-20 °C/-30 °C ÷ +120 °C
T Class (Group II)	T6	T6	T5	T4	T4
T assigned (Group III)	T75°C	T80°C	T95°C	T130°C	T140°C

Protection degree: IP68 (according to IEC 60529 only)

Specific conditions of use:

- Load cells must be kept cleaned to avoid dust layer deposition on equipment.
- Ambient temperature range and relevant temperature class or assigned temperature is according to intrinsic safety parameters table specified above on general product information.
- A safety barrier is required by installation to limit power supply to compression load cells, according to intrinsic safety parameters table specified above on general product information.

Manufacturer's document:

Instruction manual EX-001-05, rev. 0 dated 2019-06-09