



# 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](http://www.iecex.com)

Certificate No.: IECEx BVS 11.0084X

Issue No: 1

Certificate history:

Status: **Current**

Issue No. 1 (2018-11-27)

Issue No. 0 (2011-11-25)

Date of Issue: **2018-11-27**

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Applicant: **Heinrichs Messtechnik GmbH**  
Robert-Perthel-Strasse 9  
50739 Cologne  
Germany

Equipment: **Mass flow sensor type TM families**

Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment with equipment protection level (EPL) Ga**

Marking:

Ex ia IIC T2...T6 Ga/Gb  
See tables section 3 for details

Approved for issue on behalf of the IECEx  
Certification Body:


Jörg Koch

Position:

Head of Certification Body

Signature:  
(for printed version)

Date:

  
27.11.18

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](http://www.iecex.com).

Certificate issued by:

DEKRA EXAM GmbH  
Dinnendahlstrasse 9  
44809 Bochum  
Germany

 **DEKRA**  
DEKRA EXAM GmbH



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Manufacturer: **Heinrichs Messtechnik GmbH**  
Robert-Perthel-Strasse 9  
50739 Cologne  
Germany

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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-26 : 2014-10</b> Edition:3.0	Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

*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:

DE/BVS/ExTR11.0113/01

Quality Assessment Report:

DE/BVS/QAR11.0001/05



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### General product information

The Coriolis sensors are used in combination with a transmitter for mass-flow measurement in pipes. The mass flow sensors consisting of magnetically excited vibrating tubes, contains the electrical components, coils, resistors, temperature sensors as well as terminals and connectors for connection to the associated transmitter. The transmitter can be mounted directly on the sensor or separately connected by a cable.

The design of the sensor system is variable. The sensors can be adapted to different plant and process conditions by using a variety of materials and process connections. The Coriolis sensor can be used in applications where an explosive atmosphere can be present in the measuring tubes frequently or over a longer period of time.

Type TM-\*\*\*-\*\*\*\*\*-\*\*\*\*-L-\*\_\*\_\*  
Type TME-\*\*\*-\*\*\*\*\*-L-\*\_\*\_\*  
Type TMU-\*\*\*\*-\*\*\*\*-\*\*\*-L-\*\_\*\_\*  
Type TMR-\*\*\*-\*\*\*\*\*-\*\*\*\*-L-\*\_\*\_\*  
Type TM-SH-\*\*\*\*-\*\*\*\*-\*\*\*-L-\*\_\*\_\*  
Type TMS-\*\*\*\*-\*\*\*\*-\*\*\*-A-\*\_\*\_\*

#### Model type code

See Annex

#### Parameters

See Annex

#### SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1 If the sensor is mounted separately from the transmitter, equipotential bonding between the transmitter and the sensor must be guaranteed.
- 2 For the application of the sensor in an ambient temperature of less than -20 °C and higher than +60 °C cables and cable entries suitable for this condition shall be used.
- 3 The measuring tubes built of corrosion-resistant steel may have a thickness of < 1 mm. During installation and operation it must be ensured that risks e.g. by the medium or by mechanical damages are excluded.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Subject of this supplement are the following points:

- Introduction of new type sensors: TM-\*\*\*-\*\*\*\*\*-\*\*\*-L-\*\*-\*\* resp. TME-\*\*\*-\*\*\*\*\*-L-\*\*-\*\* resp. TMU-\*\*\*-\*\*\*\*\*-\*\*\*-L-\*\*-\*\* resp. TMR-\*\*\*-\*\*\*\*\*-\*\*\*-L-\*\*-\*\* resp. TM-SH-\*\*\*-\*\*\*\*\*-\*\*\*-L-\*\*-\*\*.
- Adjustment of the electrical parameters for the new sensors.
- Modifications of the junction box, the connection board and the limiter circuitry.
- Introduction of a new set of printed circuit boards for coil mounting in the type TM-SH-\*\*\*-\*\*\*\*\*-\*\*\*-L-\*\*-\*\*.
- Extension by alternative designs with amendments to the excitation circuit and temperature sensor.
- The sensor types TM, TME, TMU and TMR approved with the certificate IECEx BVS 11.0084X issue 0, shall no longer be produced, and are therefore no longer available for delivery
- The type TMS-\*\*\*-\*\*\*\*\*-\*\*\*-A-\*\*-\*\* remains unchanged

## Annex:

[BVS\\_11\\_0084X\\_Heinrichs\\_Annex\\_issue1.pdf](#)