IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.:	**IECEx BVS 12.0034X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2012-06-04)
Date of Issue:	2020-01-21		
Applicant:	**Heinrichs Messtechnik GmbH** Robert-Perthel-Straße 9 50739 Köln **Germany**		
Equipment:	**Flow sensor types PIT 520, PIT 571 and PIT 580**		
Optional accessory:			
Type of Protection:	**Intrinsic Safety "i", Increased Safety "e", Protection level (EPL) Ga**		
Marking:	Ex e [ia Ga] IIC T6-T3 Gb		

Approved for issue on behalf of the IECEx Certification Body: **Jörg Koch**

Position: **Head of Certification Body**

Signature: (for printed version)

Date: 21. 1. 2020

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 www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Date of issue: 2020-01-21 Issue No: 1

Manufacturer: **Heinrichs Messtechnik GmbH**
Robert-Perthel-Straße 9
50739 Köln
Germany

Additional manufacturing locations:

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 equipment 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 60079-0:2007-10 Explosive atmospheres - Part 0:Equipment - General requirements
Edition:5

IEC 60079-11:2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:5

IEC 60079-26:2006 Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
Edition:2

IEC 60079-7:2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:4

This Certificate **does not** indicate compliance with 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/ExTR12.0036/01

Quality Assessment Report:

DE/BVS/QAR11.0001/06

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Subject and type
See Annex

Description
The flow sensor type PIT-5**, designed in the type of protection Increased Safety "e" and Intrinsic Safety "i", serves the purpose of measuring the flow of conductive fluids. The sensor consists of a metallic tubular housing. The housing of some types of sensors is partly covered by PFA where it is in contact with the fluid.

The flow sensor is mounted to the side of the fluid filled tube with its flange.

The energy supply and the analysis of the measured signals will be done by the separately tested and certified transducer type UMF (IECEx BVS 12.0025X) that is directly mounted to the pipe socket of the flow sensor (compact version).

Alternatively the flow sensor can be equipped with a separately tested and certified terminal box type AL-KE 25.08 08 06 (IECEx 08.0005U) or type AD-0200 (IECEx BVS 19.0066U). The connection inside the terminal box is realised by separately tested and certified terminals type 264 (IECEx PTB 04.0003U). In this case the transducer is mounted separately and will be connected to the flow sensor by use of a cable (separated version).

Parameters
See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:
It has to be ensured, that the fluid will not harm any material of the flow sensor.

The flow sensor is suitable for usage in an ambient temperature range of -40 °C up to +60 °C. It has to be ensured that the thermal parameters will be abided.

For the flow sensor with separated transducer only cables and cable entries that are suitable for the used temperature range are allowed.

The terms of condition of the separately tested and certified transducer have to be taken into account.

If the flow sensor is connected via conduit entries which are separately certified for this purpose the auxiliary sealing devices have to be located directly at the enclosure.

The control unit of the transducer type BE is suitable for use in an ambient temperature range of -20 °C up to +70 °C.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
The separately tested and certified stainless steel enclosure type AD-0200 (IECEx BVS 19.0066U) has been included for use as an alternative terminal box to the already containing terminal box type
AL-KE 25.08 08 06 (IECEx 08.0005U).

Annex:

BVS_12_0034X_Heinrichs_Annex_issue1.pdf

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Annex

Subject and type

Flow sensor type PIT-5**

Asterisk	Description
1-2	Variant
	20 : Flange and enclosure made of stainless steel
	71 : Flange and enclosure made of stainless steel Parts in contact with fluid are PFA covered
	80 : Flange and enclosure made of stainless steel Parts in contact with fluid are made of hasteloy

Parameters

Electrical parameters

Field coil circuit			
Rated voltage	up to	60	V
Rated current		200	mA
Maximum current		250	mA
Clock		25	Hz

Electrode circuit (separated version), intrinsically safe "ia"			
Voltage	U_i	30	V
Current	I_i	160	mA
Capacitance	C_i	negligible	
Inductance	L_i	negligible	

Electrode circuit (compact version), intrinsically safe
According to certificate of the transducer

Transducer circuit
According to certificate

Pressure parameters

Maximum permitted pressure of medium		
Flow sensor type PIT-520	16	bar
Flow sensor type PIT-571	40	bar
Flow sensor type PIT-580	16	bar

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Certificate No.: **IECEx BVS 12.0034X issue No.: 1**

Annex

Thermal parameters

Type	Type of use	Max. fluid temperature	Ambient temperature range	Temperature class
PIT-520	compact version	60 °C	-40 °C up to +50 °C	T6
PIT-580				
PIT-520		80 °C	-40 °C up to +60 °C	T5
PIT-580				
PIT-520		60 °C	-20 °C up to +50 °C	T6
PIT-580				
PIT-520		80 °C	-20 °C up to +55 °C	T5
PIT-580				
PIT-571	separated version	60 °C	-40 °C up to +45 °C	T6
PIT-571		60 °C	-40 °C up to +60 °C	T5
PIT-571		100 °C	-40 °C up to +60 °C	T4
PIT-571		130 °C	-40 °C up to +60 °C	T3
PIT-571	compact version	60 °C	-40 °C up to +45 °C	T6
PIT-571		60 °C	-40 °C up to +55 °C	T5
PIT-571		100 °C	-40 °C up to +50 °C	T4
PIT-571		130 °C	-40 °C up to +50 °C	T3

Thermal parameters of the separate mounted transducer according to the related certificate of the transducer.