



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 BVS 04.0002U issue No.:2

Status: **Current**

Certificate history:
Issue No. 2 (2014-1-30)
Issue No. 1 (2007-6-21)
Issue No. 0 (2004-2-13)

Date of Issue: **2014-01-30** Page 1 of 6

Applicant: **Micro Motion, Inc.**
7070 Winchester Circle
Boulder, CO 80301
United States of America

Electrical Apparatus: **Signal processing device type 700**
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i"**

Marking: Ex ib IIB/IIC Gb

Approved for issue on behalf of the IECEx
Certification Body:

Dr. F. Eickhoff

Position: Deputy Head of Certification Body

Signature:
(for printed version)

Date:

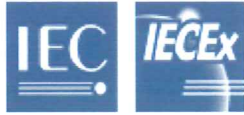
2014-01-30

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: **Micro Motion, Inc.**
7070 Winchester Circle
Boulder, CO 80301
United States of America

Additional Manufacturing location
(s):

**Emerson Process
Management Flow
Technologies Co., Ltd.**
111, Xing Min South Road,
Jiangning, Nanjing,
Jiangsu Province 211100
China

Micro Motion, Inc.
Ave. Miguel de Cervantes 111
Complejo Industrial
Chihuahua 31109
Mexico

**Emerson Process
Management Flow B.V.**
Neonstraat 1
6718 WX Ede
The Netherlands

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 electrical 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

IECEX ATR:
DE/BVS/04/2012/N1
NO/DNV/QAR07.0003/04
NO/DNV/QAR08.0005/03

File Reference:
DE/BVS/ExTR06.0006/01
NO/DNV/QAR07.0008/04
NO/DNV/QAR07.0002/04



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The signal processing device is used for the connection of sensors to transmitters. The electrical components are completely encapsulated in a plastic housing. On the top of the housing terminals for the connection of the circuits from / to the transmitter are situated and the connection of the sensor is by means of a 9 pin connector at the bottom.

Marking

The name of the manufacturer or his trademark

Type 700

Ex ib IIB/IIC Gb

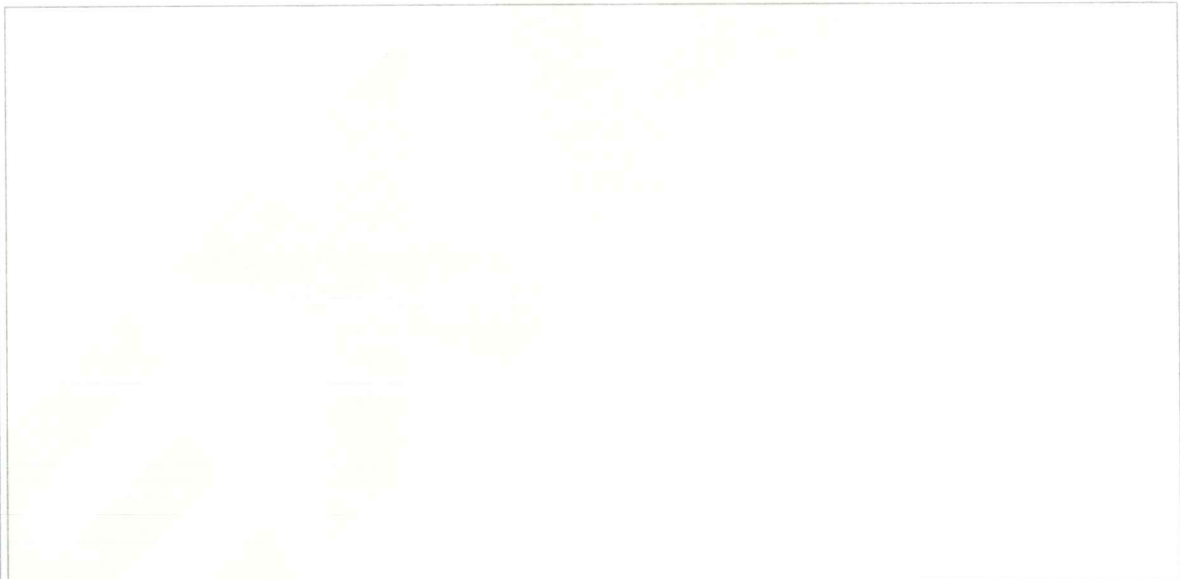
Serial number

Certificate number

Schedules of limitation

- 1 The signal processing device has to be mounted inside an enclosure degree of protection min. IP20 in accordance with IEC 60529.
- 2 The installation of the signal processing device inside an enclosure has to be done in a way that the clearances between the connection facilities and earthed metal parts are min. 3 mm.
- 3 The signal processing device is designed for use in a temperature range of -40 °C to +60 °C; the max. temperature rise (selective at the surface of the plastic enclosure) is ≤ 35 K.

CONDITIONS OF CERTIFICATION: NO





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EQUIPMENT(continued):

Parameters

1	Input circuit (terminals 1 - 4)				
	Voltage	U_i	DC	17.3	V
	Current	I_i		484	mA
	Power	P_i		2.1	W
	Effective internal capacitance	C_i		2200	pF
	Effective internal inductance	L_i		30	μ H
2	Output (sensor) circuits				
2.1	Drive circuit (pins 7 - 8)				
	Voltage	U_o	DC	10.5	V
	Current	I_o		2.45	A
	Power	P_o		2.54	W
	Internal resistance	R_i		4.32	Ω
	For group IIC				
	Max. external capacitance	C_o		2.41	μ F
	Max. external inductance	L_o		5.9	μ H
	Max. external inductance/resistance ratio	L_o/R_o		5.5	μ H/ Ω
	For group IIB				
	Max. external capacitance	C_o		16.8	μ F
	Max. external inductance	L_o		24	μ H
	Max. external inductance/resistance ratio	L_o/R_o		22	μ H/ Ω
2.2	Pick-off circuits (pins 3up to 6)				
	Voltage	U_o	DC	17.3	V
	Current	I_o		6.9	mA
	Power	P_o		30	mW
	For group IIC				
	Max. external capacitance	C_o		353	nF
	Max. external inductance	L_o		742	mH
	Max. external inductance/resistance ratio	L_o/R_o		1.19	mH/ Ω
	For group IIB				
	Max. external capacitance	C_o		2.06	μ F
	Max. external inductance	L_o		2.97	H
	Max. external inductance/resistance ratio	L_o/R_o		4.75	mH/ Ω

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

The device has been assessed in acc. with the current standard versions; a new marking is the result.
A new manufacturing location has been added.



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Additional information:

2.3 Temperature circuit (pins 1, 2 and 9)

Voltage	U_o	DC	17.3	V
Current	I_o		26	mA
Power	P_o		112	mW

For group IIC

Max. external capacitance	C_o		353	nF
Max. external inductance	L_o		52.6	mH
Max. external inductance/resistance ratio	L_o/R_o		0.32	mH/ Ω

For group IIB

Max. external capacitance	C_o		2.06	μ F
Max. external inductance	L_o		210	mH
Max. external inductance/resistance ratio	L_o/R_o		1.26	mH/ Ω

3 Ambient temperature range (temperature at mounting place) T_a		-40 °C up to +60 °C
Max. temperature rise		35 K