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 05.0010U issue No.:1

Certificate history:
Issue No. 1 (2007-8-3)
Issue No. 0 (2005-11-4)

Status: **Current**

Date of Issue: **2007-08-03** Page 1 of 5

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

Electrical Apparatus: **Signal processing device type 800**
Optional accessory:

Type of Protection: **Intrinsic safety**

Marking: **Ex ib IIB/IIC T5**

Approved for issue on behalf of the IECEx Certification Body: Dr. R. Jockers

Position: Head of Certification Body

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:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 05.0010U

Date of Issue: **2007-08-03** Issue No.: **1**

Page 2 of 5

Manufacturer:

Micro Motion Inc.
Boulder, CO. 80301
United States of America

Manufacturing location(s):

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

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Co., Ltd
1277 Xin Jin Qiao Rd
Jin Qiao Export Processing Zone
Pudong
Shanghai 201206
China

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 manufacture'rs 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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*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/ExTR06.0027/00
DE/BVS/ExTR06.0027/01

File Reference:
DE/BVS/05/2125
DE/BVS/05/2125/N1

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 05.0010U

Date of Issue: **2007-08-03** Issue No.: **1**

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 800
Ex ib IIB/IIC T5
Serial number
Certificate number
Tamb -40 °C up to +60°C

Special conditions for safe use

1 The signal processing device has to be mounted inside an enclosure degrees of protection min. IP 20 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 distance in air between the connection facilities and earthed metal parts is min. 3 mm.

CONDITIONS OF CERTIFICATION: NO

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 05.0010U

Date of Issue: **2007-08-03** Issue No.: **1**

EQUIPMENT(continued):

Parameters

1 Input circuit (terminals 1 - 4)						
Voltage	Ui	DC		17,3	V	
Current	Ii			484	mA	
Power	Pi			2,1	W	
effective internal capacitance	Ci			2200	pF	
effective internal inductance	Li			30	µH	
2 Output (sensor) circuits						
2.1 Drive circuit (pins 7 - 8)						
Voltage	Uo	DC		10,5	V	
Current	Io			2,45	A	
Power	Po			2,54	W	
Internal resistance	Ri			4,32	Ω	
external values for group			IIC	IIB		
max. external capacitance	Co		2,41	16,8	µF	
max. external inductance	Lo		5,9	24	µH	
max. external inductance/resistance ratio	Lo/Ro		5,5	22	µH/Ω	
2.2 Pick-off circuits (pins 3 - 6)						
Voltage	Uo	DC		17,3	V	
Current	Io			18,05	mA	
Power	Po			30	mW	
external values for group			IIC	IIB		
max. external capacitance	Co		0,353	2,06	µF	
max. external inductance	Lo		109	436	mH	
max. external inductance/resistance ratio	Lo/Ro		1,19	4,75	mH/Ω	
2.3 Temperature circuit (pins 1, 2 and 9)						
Voltage	Uo	DC		17,3	V	
Current	Io			4,61	mA	
Power	Po			20	mW	
external values for group			IIC	IIB		
max. external capacitance	Co		0,353	2,06	µF	
max. external inductance	Lo		1,67	6,69	H	
max. external inductance/resistance ratio	Lo/Ro		1,78	7,14	mH/Ω	
3 Ambient temperature range	Tamb		-40 °C up to +60 °C			

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 05.0010U

Date of Issue: **2007-08-03** Issue No.: **1**

Page 5 of 5

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

Issue 1

The manufacturing location Emerson Process Management Co., Ltd, Pudong Shanghai, People's Pepublic of China was added.

The manufacturer Micro Motion Inc., Boulder, United States of America changed the EXCB for quality supervision. Responsible is now DNV for all production sites.

The circuitry of the signal processing unit has been modified. Also for testing of the unit the new standard versions of IEC 60079-* have been taken as basis.