



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 06.0007

Issue No.: 1

Status:

Current

Certificate history:

Issue No. 1 (2011-3-11)

Issue No. 0 (2006-8-1)

Date of Issue:

2011-03-11

Page 1 of 4

Applicant:

ifm electronic gmbh
Friedrichstrasse 1
45128 Essen
Germany

Electrical Apparatus:
Optional accessory:

Flow Sensor type SF*2*A

Type of Protection:

Equipment protection by intrinsic safety "i"

Marking:

Ex ia IIC T4 Gb

Approved for issue on behalf of the IECEx
Certification Body:

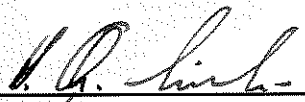
H.-Ch. Simanski

Position:

Head of Certification Body

Signature:
(for printed version)

Date:


11/3/2011

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**
DEKRA EXAM GmbH



IECEx Certificate of Conformity

Certificate No.: IECEx BVS 06.0007

Date of Issue: 2011-03-11

Issue No.: 1

Page 2 of 4

Manufacturer: **ifm prover gmbh**
Waldesch 9
88069 Tettnang
Germany

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 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 : 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

*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:

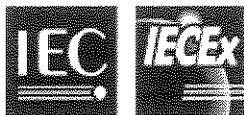
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/BVS/ExTR06.0039/01

Quality Assessment Report:

DE/BVS/QAR06.0010/03



IECEx Certificate of Conformity

Certificate No.: IECEx BVS 06.0007

Date of Issue: 2011-03-11

Issue No.: 1

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description:

In conjunction with an evaluation amplifier the flow sensor monitors flows in liquids and gases and detects whether a preset flow has been reached.

The electrical components of the sensor are fixed in a metal enclosure; the electrical connection is made via a connector (SF320A) or a permanently connected cable (type SF321A).

Electrical data:

Voltage	Ui	DC	16	V
Current	Ii		100	mA
Power	Pi		680	mW

For type SF*20A

effective internal inductance

Li 2 μ H

effective internal capacitance

Ci 0.4 nF

For type SF*21A and type SF*23A

effective internal inductance

Li 6 μ H

effective internal capacitance

Ci 1.2 nF

The values for the effective internal inductance and capacitance apply to permanently connected cables (SF121A, SF221A, SF223A, SF323A, SF521A) with a length up to 6 m; for longer cables the following values have to be added:

Inductance per meter		0.68	μ H/m
Capacitance per meter		95	pF/m

Ambient temperature range

Ta -20 °C up to +70 °C

Medium temperature range

for type SF*20A and SF*21A

-20 °C up to +70 °C

for type SF*23A

+5 °C up to +70 °C

CONDITIONS OF CERTIFICATION: NO



IECEx Certificate of Conformity

Certificate No.: IECEx BVS 06.0007

Date of Issue: 2011-03-11

Issue No.: 1

Page 4 of 4

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

Applicants address has changed from Teichstrasse 4, 45127 Essen to Friedrichstrasse 1, 45128 Essen
Manufacturers address has changed from Argenstrasse 19, 88079 Kressbronn to Waldesch 9, 88069 Tettnang.
New variations of flow sensor have been added: SF120A, SF121A, SF220A, SF221A, SF223A, SF323A, SF521A and SF620A.

The electrical components of the sensor are fixed in a metal enclosure resp. a ceramic housing (types SF223A and SF323A); the electrical connection is made via a connector (SF120A, SF220A, SF320A, SF620A) or a permanently connected cable (SF121A, SF221A, SF223A, SF323A, SF521A).

The sensors have been tested in acc. with IEC 60079-0:2007 and IEC 60079-11:2006.



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 06.0007**

Issue No.: **0**

Status: **Current**

Date of Issue: **2006-08-01**

Page 1 of 3

Applicant: **ifm electronic gmbh**
Teichstrasse 4
45127 Essen
Germany

Electrical Apparatus: **Flow Sensor type SF320A and type SF321A**
Optional accessory:

Type of Protection: **Intrinsic safety**

Marking: **Ex ia IIC T4**

Approved for issue on behalf of the IECEx
Certification Body:

Peter Migenda

Position:

Deputy Head of Certification Unit

Signature:
(for printed version)

Date:

1.8.2006

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:

EXAM BBG Prüf- und Zertifizier
GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany





IECEx Certificate of Conformity

Certificate No.: IECEx BVS 06.0007

Date of Issue: 2006-08-01

Issue No.: 0

Page 2 of 3

Manufacturer: ifm electronics gmbh
Teichstrasse 4
45127 Essen
Germany

Manufacturing location(s):

ifm prover gmbh
Argenstrasse 19
88079 Kressbronn
Germany

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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: 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

Test Report:

DE/BVS/ExTR06.0039/00

Quality Assessment Report:

DE/BVS/QAR06.0012/00



IECEx Certificate of Conformity

Certificate No.: IECEx BVS 06.0007

Date of Issue: 2006-08-01

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

In conjunction with an evaluation amplifier the flow sensor monitors flows in liquids and gases and detects whether a preset flow has been reached.

The electrical components of the sensor are fixed in a metal enclosure; the electrical connection is made via a connector (SF320A) or a permanently connected cable (type SF321A).

Electrical data:

Voltage	Ui	DC	16	V
Current	Ii		100	mA
Power	Pi		680	mW

internal inductance and capacitance:

For SF320A

internal inductance	Li	2	μH
internal capacitance	Cl	0.4	nF

For SF321A

internal inductance	Li	6	μH
internal capacitance	Cl	1.2	nF

Ambient temperature range Ta -20 °C up to +70 °C

CONDITIONS OF CERTIFICATION: NO