



# 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.:  issue No.:

Status:

Date of Issue: **2009-07-15** Page 1 of 3

Applicant: **Bopp & Reuther Messtechnik GmbH**  
Am neuen Rheinhafen 4  
67346 Speyer  
Germany

Electrical Apparatus: **Modular Flow Electronic type MFE1 or MFE2**  
*Optional accessory:*

Type of Protection: **intrinsic safety "i"**

Marking: **Ex ib IIC T4**

*Approved for issue on behalf of the IECEx  
Certification Body:* H.-Ch. Simanski

*Position:* Head of Certification Body

*Signature:  
(for printed version)*

*Date:*

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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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Certificate No.: IECEx BVS 09.0038X

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Manufacturer: **Bopp & Reuther Messtechnik GmbH**  
Am neuen Rheinhafen 4  
67346 Speyer  
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 : 2004** Electrical apparatus for explosive gas atmospheres - Part 0: General requirements  
Edition: 4.0

**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/ExTR09.0015/00](#)

Quality Assessment Report:

[DE/TPS/QAR09.0001/00](#)



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## Schedule

### EQUIPMENT:

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

#### General product information:

The flow electronic is used in combination with an oval wheel meter for volume measurement of liquids. The electronic circuitry is mounted inside a plastic enclosure, which has a window on the front side for monitoring a display. The electronic is supplied by a battery.

#### Electrical parameters

Sensor circuits for the connection of a passive contact (connections A and B and terminals X4 1 and X4 2 for type MFE2)

Voltage	Uo	DC	3.6	V
Current	Io		< 1	mA
Power	Po		< 1	mW
External capacitance	Co		1	µF
External inductance	Lo		1	mH

Open collector output (connection terminals X4 5 - X4 4, only for type MFE2)

Voltage	Ui	DC	30	V
Current	Ii		100	mA
Power	Pi		0.5	W
Internal capacitance	Ci		negligible	
Internal inductance	Li		negligible	

Ambient temperature range	Ta		-20 °C up to +70 °C	
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### CONDITIONS OF CERTIFICATION: YES as shown below:

Avoid risk from electrostatic discharge.

The apparatus carries the following warning: WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS