



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 BAS 10.0083X issue No.: 2

Status: Current

Date of Issue: 2015-07-02 Page 1 of 4

Certificate history:
Issue No. 2 (2015-7-2)
Issue No. 1 (2012-10-30)
Issue No. 0 (2011-1-27)

Applicant: **Emerson Process Management - Rosemount Analytical**
2400 Barranca Parkway
Irvine
California 92606
United States of America

Electrical Apparatus: pH/ORP Sensors
Optional accessory:

Type of Protection: Intrinsic Safety

Marking: Ex ia IIC T4 Ga or Ex ia IIC T5 Ga
See Certificate Annex for Marking details and ambient temperature ranges

Approved for issue on behalf of the IECEx
Certification Body:

R.S. Sinclair

R. D. BREARLEY

Position:

Technical Manager

Signature:
(for printed version)

Brearley

2/7/15

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](http://www.iecex.com).

Certificate issued by:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton
Derbyshire
SK17 9RZ
United Kingdom





IECEx Certificate of Conformity

Certificate No.: IECEx BAS 10.0083X

Date of Issue: 2015-07-02

Issue No.: 2

Page 2 of 4

Manufacturer: **Emerson Process Management - Rosemount Analytical**
2400 Barranca Parkway
Irvine
California 92606
United States of America

Additional 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 : 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

Test Report:

[GB/BAS/ExTR10.0255/00](#)
[GB/BAS/ExTR15.0109/00](#)

[GB/BAS/ExTR10.0256/00](#)

[GB/BAS/ExTR12.0271/00](#)

Quality Assessment Report:

[GB/BAS/QAR10.0024/03](#)



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 10.0083X

Date of Issue: 2015-07-02

Issue No.: 2

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The range of pH/ORP Sensors comprises a number of sensors. The pH Sensors convert a high impedance signal from the electrode into a low impedance signal. The ORP (oxidation-reduction potential) Sensors generate a low impedance signal.

Each sensor comprises a pH or an ORP sensing electrode. Many of the sensors also contain a temperature sensor. All sensing elements are enclosed in a housing of glass, plastic or plastic and metal. Some models additionally contain Pre-amplifier printed circuit boards encapsulated within the enclosure.

External connections are made via either an integral cable of up to 500 feet in length or a connector plug.

See annex for model details, certification markings and electrical parameters.

CONDITIONS OF CERTIFICATION: YES as shown below:

- 1) All pH/ORP sensor models with a plastic enclosure or exposed plastic parts may provide an electrostatic ignition hazard and must only be cleaned with a damp cloth to avoid the danger of ignition due to a build up of electrostatic charge.
- 2) All pH/ORP sensor models with a metallic enclosure may provide a risk of ignition by impact or friction. Care should be taken during installation to protect the sensor from this risk.
- 3) External connections to the sensor must be suitably terminated and provide a degree of protection of at least IP20.
- 4) All pH/ORP Sensor models are intended to be in contact with the process fluid and may not meet the 500V r.m.s. test to earth. This must be taken into consideration at installation.



IECEx Certificate of Conformity

Certificate No.: IECEx BAS 10.0083X

Date of Issue: 2015-07-02

Issue No.: 2

Page 4 of 4

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

Variation 2.1

To permit the addition of new variants of the Model 385, 389, 396 & 3500 pH/ORP Sensors. These variants comprise similar circuitry to the other variants listed on the certificate, but are fitted with different Pre-amplifier circuits encapsulated in the sensors. These variants have different input parameters and are marked with the following certification marking: -

Ex ia IIC T4 Ga (-20°C ≤ T_a ≤ +80°C) or

Ex ia IIC T5 Ga (-20°C ≤ T_a ≤ +40°C)

The marking section on page 1 of the certificate was updated to detail the new markings. The Certificate Annex (now Issue 1) was revised to list the new models, their certification marking and input parameters.

Variation 2.2

To permit minor circuit changes to the Smart Pre-amplifier fitted in some models of the pH/ORP Sensors not affect the original assessment.

Variation 2.3

To permit the removal of discontinued pH/ORP Sensor Model No's 370, 371, 371-72, 399VP-09, 399-14, 399-09-62 & 399-09-70 from the certification. The Certificate Annex (now Issue 1) was revised to remove the models.

Variation 2.4

To permit minor drawing changes not affecting the original assessment.

Variation 2.5

To confirm the current design of all variants of the pH/ORP Sensors have been reviewed against the requirements of IEC 60079-0: 2011 and IEC 60079-11: 2011 with respect of the differences from IEC 60079-0: 2007 and IEC 60079-11: 2006, and the differences do not affect the equipment. The standards listed on page 2 of the certificate were updated.

ExTR: GB/BAS/ExTR15.0109/00

File Reference: 15/0176