1 # EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa10ATEX0156X – Issue 2**

4 Equipment or Protective System: **pH/ORP Sensors**

5 Manufacturer: **Emerson Process Management – Rosemount Analytical**

6 Address: **2400 Barranca Parkway, Irvine, California 92606, USA**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No's. See Certificate History

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0: 2012+A11:2013 EN 60079-11:2012

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

(Ex) II 1G Ex ia IIC T4 Ga or Ex ia IIC T5 Ga – See schedule for ambient temperature ranges

Baseefa Customer Reference No. **0911**

Project File No. **15/0176**

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R S SINCLAIR pp D BREARLEY
GENERAL MANAGER
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa10ATEX0156X – Issue 2**

15 **Description of Equipment or Protective System**

The range of pH/ORP Sensors comprises a number of sensors. The pH Sensors converts 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 a Pre-amplifier printed circuit board (either a standard or Smart variant) encapsulated within the enclosure.

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

The certification code, ambient temperature range and input parameters are dependent on the sensor model and whether it contains a Pre-amplifier circuit.

The following ranges of pH/ORP Sensors are covered by the certificate: -

pH/ORP Sensors with no Pre-amplifier Fitted

Certification Marking:

⟨Ex⟩ II 1 G Ex ia IIC T4 Ga (-20°C ≤ T_a ≤ +60°C)

Input Parameters:

U_i = 13.1V
I_i = 500mA
P_i = 0.7W

The following tables define the model range and associated C_i and L_i parameters with up to 500 feet of integral cable (where applicable): -

Model	C_i	L_i
Model 328A Steam Sterilizable pH Sensor with integral cable	0.021µF	52.9µH
Model 385 Retractable pH/ORP Sensor with integral cable	0	0
Model 385+ -04 pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 389-02 pH/ORP Sensor with integral cable	0.134µF	80.4µH
Model 389VP pH/ORP Sensor with Variopol connector	0	0
Model 396 TUpH pH Sensor with integral cable	0.713µF	84.9µH
Model 396VP TUpH pH Sensor with Variopol connector	0	0
Model 396R TUpH Retractable pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 396RVP TUpH Retractable pH/ORP Sensor with Variopol connector	0	0
Model 396P-02 TUpH Polypropylene pH/ORP Sensor with integral cable	0.545µF	81.5µH
Model 396PVP TUpH Polypropylene pH/ORP Sensor with Variopol connector	0	0
Model 397 TUpH pH Sensor with integral cable	0.713µF	84.9µH
Model 398 TUpH pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 398VP TUpH pH/ORP Sensor with Variopol connector	0	0
Model 398R TUpH Retractable pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 398RVP TUpH Retractable pH/ORP Sensor with Variopol connector	0	0
Model 3200HP Flowing Junction pH Sensor with Variopol connector	0	0
Model 3300HT Insertion / Submersion pH Sensor with integral cable	0.713µF	84.9µH
Model 3300HTVP Insertion / Submersion pH Sensor with Variopol connector	0	0
Model 3400HT Retractable pH Sensor with integral cable	0.713µF	84.9µH
Model 3400HTVP Retractable pH Sensor with Variopol connector	0	0

Model	C_i	L_i
Model 3500P-02 High Performance pH Sensor with integral cable	0.713µF	84.9µH
Model 3500VP-02 High Performance pH Sensor with Variopol connector	0	0
Model 3800 Steam Sterilizable pH Sensor with Single Pole Eurocap Connector	0	0
Model 3800VP Steam Sterilizable pH Sensor with Variopol connector	0	0
Model 3900-02 pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 3900VP-02 pH/ORP Sensor with Variopol connector	0	0

pH Sensors with integral Smart Pre-amplifier Fitted

Certification Marking:

⟨Ex⟩ II 1 G Ex ia IIC T4 Ga (-20°C ≤ T_a ≤ +60°C)

Input Parameters:

U_i = 13.1V
I_i = 500mA
P_i = 0.7W

The following tables define the model range and associated C_i and L_i parameters with up to 500 feet of integral cable (where applicable): -

Model	C_i	L_i
Model 385+ - 02/03 pH Sensor with integral cable	0.969µF	84.9µH
Model 389-01 pH Sensor with integral cable	0.394µF	73.3µH
Model 389VP-70 pH Sensor with Variopol connector	0.256µF	0
Model 396VP-70 TUpH pH Sensor with Variopol connector	0.256µF	0
Model 396RVP-70 TUpH Retractable pH Sensor with Variopol connector	0.256µF	0
Model 396PVP-70 TUpH Polypropylene pH Sensor with Variopol connector	0.256µF	0
Model 398RVP-70 TUpH Retractable pH Sensor with Variopol connector	0.256µF	0
Model 3300HTVP-70 Insertion / Submersion pH Sensor with Variopol connector	0.256µF	0
Model 3400HTVP-70 Retractable pH Sensor with Variopol connector	0.256µF	0
Model 3500P-01 High Performance pH Sensor with integral cable	0.969µF	84.9µH
Model 3500VP-01 High Performance pH Sensor with Variopol connector	0.256µF	0
Model 3900-01 pH Sensor with integral cable	0.969µF	84.9µH
Model 3900VP-01 pH Sensor with Variopol connector	0.256µF	0
Model 396P-01-55 pH Sensor with integral cable	0.969µF	84.9µH

ORP Sensors with integral Standard Pre-amplifier Fitted

Certification Markings:

⟨Ex⟩ II 1 G Ex ia IIC T4 Ga (-20°C ≤ T_a ≤ +80°C) or
Ex ia IIC T5 Ga (-20°C ≤ T_a ≤ +40°C)

Input Parameters (-55 variants):

U_i = 13.1V
I_i = 250mA
P_i = 0.6W

The following tables define the model range and associated C_i and L_i parameters with up to 485 feet of integral cable (where applicable): -

Model	C_i	L_i
Model 3500P-01-12 PerpH-X ORP Sensor with integral cable	0.966µF	82.4µH
Model 3500VP-01-12 PerpH-X ORP Sensor with Variopol connector	0.275µF	0

Model	C_i	L_i
Model 396P-01-12-55 TUpH ORP Sensor with integral cable	0.409µF	71.1µH
Model 389-01-12-55 TUpH ORP Sensor with integral cable	0.409µF	71.1µH
Model 385+-03-12 ORP Sensor with integral cable	0.409µF	71.1µH

Input Parameters (-54 variants):

U_i = 20V
I_i = 300mA
P_i = 0.9W

The following tables define the model range and associated C_i and L_i parameters with up to 500 feet of integral cable: -

Model	C_i	L_i
Model 396P-01-12-54 TUpH ORP Sensor with integral cable	0.289µF	73.3µH
Model 389-01-12-54 ORP Sensor with integral cable	0.251µF	68.5µH

Input Parameters (-50: 1181 variants):

U_i = 12V
I_i = 230mA
P_i = 1.1W

The following tables define the model range and associated C_i and L_i parameters with up to 500 feet of integral cable: -

Model	C_i	L_i
Model 396P-01-12-50 TUpH ORP Sensor with integral cable	0.677µF	73.3µH
Model 389-01-12-50 ORP Sensor with integral cable	0.639µF	68.5µH

pH Sensors with integral Standard Pre-amplifier Fitted

Certification Markings:

⟨Ex⟩ II 1 G Ex ia IIC T4 Ga (-20°C ≤ T_a ≤ +80°C) or
Ex ia IIC T5 Ga (-20°C ≤ T_a ≤ +40°C)

Input Parameters (-54 variants):

U_i = 20V
I_i = 300mA
P_i = 0.9W

The following tables define the model range and associated C_i and L_i parameters with up to 500 feet of integral cable: -

Model	C_i	L_i
Model 396P-01-10/13-54 TUpH polypropylene pH Sensor with integral cable	0.289µF	73.3µH
Model 389-01-10/11-54 pH Sensor with integral cable	0.251µF	68.5µH

Input Parameters (-50: 1181 variants):

U_i = 12V
I_i = 230mA
P_i = 1.1W

The following tables define the model range and associated C_i and L_i parameters with up to 500 feet of integral cable: -

Model	C_i	L_i
Model 396P-01-10/13-50 TUpH polypropylene pH Sensor with integral cable	0.677µF	73.3µH
Model 389-01-10/11-50 pH Sensor with integral cable	0.639µF	68.5µH

16 Report Number

GB/BAS/ExTR15.0109/00

17 Specific Conditions of Use

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.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
1700685	1 & 2	B	10/20/09	Certified Product Schematic PCB, Smart pH Preamp
1700775	1 to 6	A	6/16/2015	PERpH-X Sensor Approval Drawing
1700776	1 to 8	A	6/16/2015	TUpH Sensor Approval Drawing
1700777	1 to 3	A	6/16/2015	389 Sensor Approval Drawing
1700778	1 to 4	A	6/16/2015	385 & 385+ Sensor Approval Drawing
22941-00	1 of 1	L	1/5/07	S Assy, PCB Op-Amp Pre-Amp Mod 399
22986-00	1 of 1	G	1/8/07	S Assy, PCB Pre-Amp Model 399/1054
23538-00	1 of 1	H	1/8/07	ST S Assy, PCB Dual Preamp
2400205	1 of 1	F	4/3/06	Circuit, Pre-amplifier, Model 396-10/12-50
2400209	1 & 2	D	4/12/94	Schematic, Pre-Amp Model 399 / 1054
2400267	1 of 1	D	9/28/01	Circuit, Dual Pre-amplifier, Model 396-10/12-55
32790-00	1 of 1	G	3/17/06	PCB, Op-Amp Mod 399
32915-00	1 of 5	E	9/20/93	PCB, pH Pre-Amp Model 399 / 1054
33284-00	1 of 1	G	9/28/01	PCB, Dual Preamp
9241722-00	1 of 1	B	6/16/15	Label, Information, Sensor, Baseefa

The above drawings are common to, and held with, IECEx Certificate No. IECEx BAS 10.0083X Iss. 2

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
34161-00	1 of 1	A	Jan 29 2009	PCB, Smart pH Preamp
1700702	1 & 2	A	May 21, 10	Certified Product Assy, PCB, Smart pH Preamp
1700717	1 of 1	A	11.19.10	3200HP Sensor Approval Drawing
1700718	1 of 1	A	11.19.10	328A Sensor Approval Drawing
1700721	1 & 2	A	11.19.10	3900 Sensor Approval Drawing
1700722	1 & 2	A	11-19-10	3800 Sensor Approval Drawing
9241728-00	1 of 1	A	1-27-11	Label, Sensor 3800/3800VP, Baseefa

The above drawings are common to, and held with, IECEx Certificate No. IECEx BAS 10.0083X

20 Certificate History

Certificate No.	Date	Comments
Baseefa10ATEX0156X	27 January 2011	The release of the prime certificate. The associated test and assessment is documented in Certification Report No's. GB/BAS/ExTR10.255/00 & GB/BAS/ExTR10.0256/00.
Baseefa10ATEX0156X/1	30 October 2012	To permit minor drawing changes not affecting the original assessment. The associated test and assessment is documented in Certification Report No. GB/BAS/ExTR12.0271/00.
Baseefa10ATEX0156X Issue 2	2 July 2015	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and confirms the current designs meets the requirements of EN 60079-0: 2012 +A11:2013 and EN 60079-11:2012. This issue of the certificate also permits: - i) The addition of new variants of the Model 385, 389, 396 & 3500 ORP & pH Sensors (previously covered by ATEX Certificate No. Baseefa03ATEX0416X). 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⟩ II 1 G Ex ia IIC T4 Ga (-20°C ≤ T_a ≤ +80°C) or ⟨Ex⟩ II 1 G Ex ia IIC T5 Ga (-20°C ≤ T_a ≤ +40°C) The Certificate Schedule was revised to list the new models, their certification marking and input parameters. ii) Minor circuit changes to the Smart Pre-amplifier not affecting the original assessment. iii) 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 certificate. iv) Minor drawing changes not affecting the original assessment. The associated test and assessment is documented in Certification Report No. GB/BAS/ExTR15.0109/00. Project File No. 15/0176.
For drawings applicable to each issue, see original of that issue.		

1 # SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3	Supplementary EC - Type Examination Certificate Number:	**Baseefa10ATEX0156X/1**
4	Equipment or Protective System:	**pH/ORP Sensors**
5	Manufacturer:	**Emerson Process Management – Rosemount Analytical**
6	Address:	**2400 Barranca Parkway, Irvine, California 92606, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa10ATEX0156X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

Baseefa Customer Reference No. **0911**

Project File No. **12/0830**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa

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Registered in England No. 4305578. Registered address as above.

13 **Schedule**

14 **Certificate Number Baseefa10ATEX0156X/1**

15 Description of the variation to the Equipment or Protective System

Variation 1.1

To permit minor drawing changes not affecting the original assessment.

16 Report Number

GB/BAS/ExTR12.0271/00

17 Specific Conditions of Use

None additional to those listed previously

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
1700714	1 to 5	B	09/27/12	PERpH-X Sensor Approval Drawing

The above drawing is associated and held with IECEx Certificate No. IECEx BAS 10.0083X Iss. 1

1 # EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa10ATEX0156X**

4 Equipment or Protective System: **pH/ORP Sensors**

5 Manufacturer: **Emerson Process Management – Rosemount Analytical**

6 Address: **2400 Barranca Parkway, Irvine, California 92606, USA**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR10.0255/00 & GB/BAS/ExTR10.0256/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0: 2006 EN 60079-0: 2009 EN 60079-11: 2007

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

⟨Ex⟩ II 1 G Ex ia IIC T4 Ga ($-20°C \leq T_a \leq +60°C$)

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **0911**

Project File No. **10/0143**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

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DIRECTOR
On behalf of
Baseefa

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Baseefa is a trading name of Baseefa Ltd
Registered in England No. 4305578. Registered address as above.

13 **Schedule**

14 **Certificate Number Baseefa10ATEX0156X**

15 Description of Equipment or Protective System

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 a Smart Pre-amplifier printed circuit board encapsulated within the enclosure.

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

Input Parameters:

U_i = 13.1V
I_i = 500mA
P_i = 0.7W

The C_i and L_i parameters are dependant on the sensor model and whether the sensor contains the Smart Pre-amplifier circuit.

The following tables define the model range and associated C_i and L_i parameters: -

pH/ORP Sensors (with no Smart Pre-amplifier fitted)

Model	**C_i**	**L_i**
Model 328A Steam Sterilizable pH Sensor with integral cable	0.021µF	52.9µH
Model 370 PG 13.5 Insertion, Glass Combination Eurosenz pH Sensor with Single Pole Eurocap Connector	0	0
Model 371-70 PG 13.5 Insertion Eurosenz pH/ORP Sensor with Single Pole Eurocap Connector	0	0
Model 371-72 PG 13.5 Insertion Eurosenz pH/ORP Sensor with Variopol Connector	0	0
Model 385 Retractable pH/ORP Sensor with integral cable	0	0
Model 385+ -04 pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 389-02 pH/ORP Sensor with integral cable	0.134µF	80.4µH
Model 389VP pH/ORP Sensor with Variopol connector	0	0
Model 396 TUpH pH Sensor with integral cable	0.713µF	84.9µH
Model 396VP TUpH pH Sensor with Variopol connector	0	0
Model 396R TUpH Retractable pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 396RVP TUpH Retractable pH/ORP Sensor with Variopol connector	0	0
Model 396P TUpH Polypropylene pH/ORP Sensor with integral cable	0.545µF	81.5µH
Model 396PVP TUpH Polypropylene pH/ORP Sensor with Variopol connector	0	0
Model 397 TUpH pH Sensor with integral cable	0.713µF	84.9µH
Model 398 TUpH pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 398VP TUpH pH/ORP Sensor with Variopol connector	0	0
Model 398R TUpH Retractable pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 398RVP TUpH Retractable pH/ORP Sensor with Variopol connector	0	0
Model 399-09-62 pH/ORP Insertion / Submersion Sensor with integral cable	0.134µF	80.4µH

Model	C_i	L_i
Model 399VP-09 pH/ORP Insertion / Submersion Sensor with Variopol connector	0	0
Model 3200HP Flowing Junction pH Sensor with Variopol connector	0	0
Model 3300HT Insertion / Submersion pH Sensor with integral cable	0.713µF	84.9µH
Model 3300HTVP Insertion / Submersion pH Sensor with Variopol connector	0	0
Model 3400HT Retractable pH Sensor with integral cable	0.713µF	84.9µH
Model 3400HTVP Retractable pH Sensor with Variopol connector	0	0
Model 3500-02 High Performance pH Sensor with integral cable	0.713µF	84.9µH
Model 3500VP-02 High Performance pH Sensor with Variopol connector	0	0
Model 3800 Steam Sterilizable pH Sensor with Single Pole Eurocap Connector	0	0
Model 3800VP Steam Sterilizable pH Sensor with Variopol connector	0	0
Model 3900-02 pH/ORP Sensor with integral cable	0.713µF	84.9µH
Model 3900VP-02 pH/ORP Sensor with Variopol connector	0	0

pH Sensors (with integral Smart Pre-amplifier fitted)

Model	C_i	L_i
Model 385+ -03 pH Sensor with integral cable	0.969µF	84.9µH
Model 389-01 pH Sensor with integral cable	0.394µF	73.3µH
Model 389VP-70 pH Sensor with Variopol connector	0.256µF	0
Model 396VP-70 TUpH pH Sensor with Variopol connector	0.256µF	0
Model 396RVP-70 TUpH Retractable pH Sensor with Variopol connector	0.256µF	0
Model 396PVP-70 TUpH Polypropylene pH Sensor with Variopol connector	0.256µF	0
Model 398RVP-70 TUpH Retractable pH Sensor with Variopol connector	0.256µF	0
Model 399-14 pH Insertion / Submersion Sensor with integral cable	0.394µF	73.3µH
Model 399-09-70 pH Insertion / Submersion Sensor with Variopol connector	0.256µF	0
Model 3300HTVP-70 Insertion / Submersion pH Sensor with Variopol connector	0.256µF	0
Model 3400HTVP-70 Retractable pH Sensor with Variopol connector	0.256µF	0
Model 3500-01 High Performance pH Sensor with integral cable	0.969µF	84.9µH
Model 3500VP-01 High Performance pH Sensor with Variopol connector	0.256µF	0
Model 3900-01 pH Sensor with integral cable	0.969µF	84.9µH
Model 3900VP-01 pH Sensor with Variopol connector	0.256µF	0

16 Report Number

GB/BAS/ExTR10.0255/00 & GB/BAS/ExTR10.0256/00

17 Special Conditions for Safe Use

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.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
34161-00	1 of 1	A	Jan 29 2009	PCB, Smart pH Preamp
1700685	1 & 2	A	Oct 20 2009	Certified Product Schematic PCB, Smart pH Preamp
1700702	1 & 2	A	May 21, 10	Certified Product Assy, PCB, Smart pH Preamp
1700706	1 to 3	A	11.19.10	385 and 385+ Sensor Approval Drawing
1700712	1 to 7	A	11.19.10	TUpH Sensor Approval Drawing
1700714	1 to 5	A	11.19.10	PERpH-X Sensor Approval Drawing
1700717	1 of 1	A	11.19.10	3200HP Sensor Approval Drawing
1700718	1 of 1	A	11.19.10	328A Sensor Approval Drawing
1700719	1 to 3	A	11.19.10	370, 371 Sensor Approval Drawing
1700720	1 & 2	A	11.19.10	389 Sensor Approval Drawing
1700721	1 & 2	A	11.19.10	3900 Sensor Approval Drawing
1700722	1 & 2	A	11-19-10	3800 Sensor Approval Drawing
1700724	1 & 2	A	11.19.10	399 Sensor Approval Drawing
9241722-00	1 of 1	A	1-27-11	Label Information, Sensor, Baseefa
9241728-00	1 of 1	A	1-27-11	Label, Sensor 3800/3800VP, Baseefa

The above drawings are associated and held with IECEx Certificate No. IECEx BAS 10.0083X