



EC-TYPE EXAMINATION CERTIFICATE

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

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EC-Type Examination Certificate Number : **BAS99ATEX1222**

Equipment or Protective System: **MODEL 8800 VORTEX FLOWMETER**

Manufacturer: **ROSEMOUNT INCORPORATED**

Address: **12001 Technology Drive, Eden Prairie, Minnesota 55344-3695, USA**

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

The Electrical Equipment Certification Service, notified body number 600 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 N°

99(C)0503 dated 15 September 1999

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 EN 50020: 1994 EN 50284: 1999 EN 50281-1-1: 1998
except in respect of those requirements listed at item 18 of the Schedule.

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.

This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

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

 **II 1 GD EEx ia IIC T5 (-50°C ≤ T_{amb} ≤ 40°C)**
or **EEx ia IIC T4 (-50°C ≤ T_{amb} ≤ 70°C)**

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

File No: **EECS 0914/02/068**

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances.



Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire. SK17 9JN. United Kingdom
Tel: 01298 28000 Fax: 01298 28244

I M CLEARE
DIRECTOR
22 December 1999



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Schedule

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EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX1222

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Description of Equipment or Protective System

The Model 8800 Vortex Flowmeter is designed to convert a flow rate into an electrical signal which may be 4-20mA, HART digital, or pulse output signal.

The apparatus comprises a terminal board, an output board, a sensor board, a sensor and an optional liquid crystal display board, all housed in a metal enclosure conforming to IP66. When the optional display is included the housing cover contains a glass window. External connections are made via one of two tapped holes and the installation of the external connections and plugging of the unused entry must be carried out using the appropriate EEx e or EEx n metal cable gland and metal blanking plug component certified by an EU Approved Certification Body.

The surface temperature of the enclosure under dust conditions will not exceed 80°C in ambient temperatures from -20°C to 70°C.

$$U_i = 30V$$

$$I_i = 300 \text{ mA}$$

$$P_i = 1.0W$$

The above parameters must be derived from a linear supply (resistive output).

$$C_i = 0$$

$$L_i = 40\mu H$$

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Report Nos.

99(C)0503

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SPECIAL CONDITIONS FOR SAFE USE

None



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EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX1222

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Essential Health and Safety Requirements

ESSENTIAL HEALTH & SAFETY REQUIREMENTS not covered by Standards listed at (9)		
Clause	Subject	Compliance
1.1.3	Changes in characteristics of materials and combinations thereof	Report No 99(C)0503 Clause 5.1.1.3
1.2.2	Components for incorporation or replacement	Report No 99(C)0503 Clause 5.1.2.2
1.2.5	Additional means of protection	Report No 99(C)0503 Clause 5.1.2.5
1.4.2	Withstanding attack by aggressive substances	Report No 99(C)0503 Clause 5.1.4.2

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DRAWINGS

Number	Issue	Date	Description
08800-0100 Sheets 1 to 4	AG	12.3.99	Approval drawing
08800-0108	AB	9.13.99	Schematic diagram
08800-7012	AA	4.15.99	Transformer
08800-7600 Sheets 1 & 2	AF	7.21.99	Circuit diagram, sensor board
08800-7601 Sheets 1 to 3	AE	5.12.99	Sensor board details
08800-7602	AG	7.20.99	Sensor board layout
08800-7603 Sheets 1 & 2	AC	5.6.99	Circuit diagram, output board
08800-7604 Sheets 1 to 3	AD	5.6.99	Output board details
08800-7605 Sheets 1 & 2	AE	5.6.99	Output board layout
08800-7606	AC	9.1.99	Circuit diagram, terminal board
08800-7607 Sheets 1 to 3	A	3.28.96	Terminal board details
08800-7608 Sheets 1 to 4	AD	2.1.99	Terminal block assembly
08800-7609	D	10.15.97	Circuit diagram, display board
08800-7610 Sheets 1 to 3	AA	10.15.97	LCD board layout
08800-7611 Sheets 1 & 2	AC	5.13.98	LCD board layout

The above drawings are associated with Certificate No. BAS99ATEX3221

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

BASEEFA List Keywords
2FLOWMEA



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: **BAS99ATEX1222/1**

4 Equipment or Protective System: **MODEL 8800 VORTEX FLOWMETER**

5 Manufacturer: **ROSEMOUNT INCORPORATED**

6 Address: **12001 Technology Drive, Eden Prairie, Minnesota 55344-3695, USA**

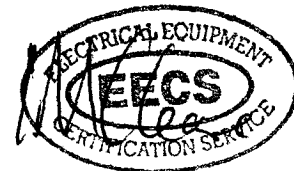
7 This supplementary certificate extends EC-Type Examination Certificate No. BAS99ATEX1222 to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This Supplementary Certificate shall be held with the original Certificate.

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

File No: EECS 0914/02/068

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Health and Safety Executive
Harpur Hill, Buxton, Derbyshire. SK17 9JN. United Kingdom
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I M CLEARE
DIRECTOR
6 June 2000



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Schedule

14 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX1222/1**

Description of the Variation to the Equipment or Protective System

VARIATION 1.1

To permit remote label detail changes.

Report No.

None

Special Conditions For Safe Use

See original certificate.

Essential Health and Safety Requirements

See original certificate.

DRAWINGS

Number	Sheet	Issue	Date	Description
08800-0100	1 to 4	AH	2.24.00	Approval Drawing

The above drawings are associated with Certificate No BAS99ATEX3221/1

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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: **BAS99ATEX1222/2**

4 Equipment or Protective System: **MODEL 8800 VORTEX FLOWMETER**

5 Manufacturer: **ROSEMOUNT INCORPORATED**

6 Address: **12001 Technology Drive, Eden Prairie, Minnesota 55344-3695, USA**

7 This supplementary certificate extends EC-Type Examination Certificate No. BAS99ATEX1222 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.

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File No: EECS 0914/02/068

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I M CLEARE
DIRECTOR
11 January 2001



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Schedule

14 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX1222/2**

Description of the Variation to the Equipment or Protective System

VARIATION 2.1

External electrical connections are made via one of two tapped holes and the installation of the external connections and plugging of the unused entry must be carried out using the appropriate EEx e or EEx n metal cable gland and metal blanking plug, component certified by an EU Approved Certification Body. Alternatively any appropriate cable gland or blanking plug certified to Ex II 2G EEx e II by an EU Approved Certification Body.

Report No.

See original certificate.

Special Conditions For Safe Use

See original certificate.

Essential Health and Safety Requirements

See original certificate.

DRAWINGS

None.

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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: **BAS99ATEX1222/3**

4 Equipment or Protective System: **MODEL 8800 VORTEX FLOWMETER**

5 Manufacturer: **ROSEMOUNT INCORPORATED**

6 Address: **12001 Technology Drive, Eden Prairie, Minnesota 55344-3695, USA**

7 This supplementary certificate extends EC-Type Examination Certificate No. BAS99ATEX1222 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.

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File No: EECS 0914/02/068

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M. CLEARE
DIRECTOR
25 June 2002



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Schedule

14 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX1222/3**

Description of the Variation to the Equipment or Protective System

VARIATION 3.1

To permit:

1. Component changes and circuit board layout changes to the sensor board and the output board.
2. Minor drawing information changes.
3. Minor mechanical changes.

Report No.

01(C)0311

Special Conditions For Safe Use

None.

Essential Health and Safety Requirements

See original certificate.

DRAWINGS

Number	Sheets	Issue	Date	Description
0880-0100	1 to 4	AJ	03.15.01	Approval Drawing
0880-7012		AB	04.03.00	Transformer
0880-7600	1 & 2	AM	08.24.01	Sensor Board Schematic
0880-7601	1 to 3	AG	09.14.00	Sensor Board PWB
0880-7602		AM	11.12.01	Sensor Board CCA
0880-7603	1 & 2	AH	11.08.01	Output Board Schematic
0880-7604	1 to 3	AF	08.06.01	Output Board PWB
0880-7605	1 & 2	AM	11.08.01	Output Board CCA
0880-7606		AE	04.05.00	Terminal Board Schematic
0880-7607	1 to 3	AA	11.29.00	Terminal Block PWB
0880-7608	1 to 4	AG	08.11.00	Terminal Block Assembly
0880-7609		AA	10.15.97	Display Board Schematic
0880-7611	1 & 2	AE	07.06.00	Display Board CCA

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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: BAS99ATEX1222/4

4 Equipment or Protective System: MODEL 8800 VORTEX FLOWMETER

5 Manufacturer: ROSEMOUNT INCORPORATED

6 Address: 12001 Technology Drive, Eden Prairie, Minnesota 55344-3695, USA

7 This supplementary certificate extends EC – Type Examination Certificate No. BAS99ATEX1222 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.

The original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. Baseefa (2001) Ltd., Notified Body Number 1180, is responsible only for the additional work relating to this supplementary certificate and any other supplementary certificate it has issued.

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

Baseefa (2001) Ltd. Customer Reference No. 0914

Project File No. 03/0262

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa (2001) Ltd.

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R S SINCLAIR
DIRECTOR
On behalf of
Baseefa (2001) Ltd.



13 **Schedule**

14 **Certificate Number BAS99ATEX1222/4**

15 **Description of the variation to the Equipment or Protective System**

Variation 4.1

To permit the apparatus to be supplied from Analog Input Modules of Type AI4H-Ex, Model AI 930 S and Analog Input Modules of Type AI4-Ex, Model AI 910 S in accordance with EC-Type Examination Certificate PTB 00 ATEX 2058.

16 **Report Number**

None

17 **Special Conditions for Safe Use**

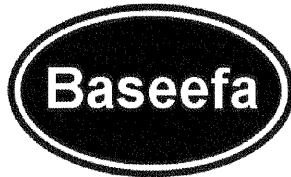
None

18 **Essential Health and Safety Requirements**

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

19 **Drawings and Documents**

None



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 **BAS99ATEX1222/5**
Examination Certificate Number:

4 Equipment or Protective System: **Model 8800 Vortex Flowmeter**

5 Manufacturer: **Rosemount Incorporated**

6 Address: **12001 Technology Drive, Eden Prairie, Minnesota 55344-3695, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. BAS99ATEX1222 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.

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Baseefa (2001) Ltd. Customer Reference No. 0914

Project File No. 03/1070

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Baseefa (2001) Ltd.

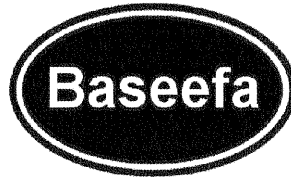
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A handwritten signature in black ink, appearing to read "R S Sinclair".

R S SINCLAIR
DIRECTOR

On behalf of
Baseefa (2001) Ltd.



13

Schedule

14

Certificate Number BAS99ATEX1222/5

15 **Description of the variation to the Equipment or Protective System**

Variation 5.1

To permit minor changes to drawings and a minor change to the output board.

16 **Report Number**

None

17 **Special Conditions for Safe Use**

None

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
08800-0100	1 to 3	AL	3/20/03	Approval Drawing
08800-0108		AC	6/10/03	Schematic Diagram
08800-7012		AE	9/30/03	Transformer
08800-7601	1 to 3	AH	1/07/02	Sensor Board Details
08800-7602		AP	9/26/03	Sensor Board Layout
08800-7603	1 & 2	AL	01/23/03	Output Board Circuit Diagram
08800-7604	1 to 3	AH	05/15/03	Output Board Details
08800-7605	1 & 2	AT	05/06/03	Output Board Layout
08800-7608	1 to 4	AK	9/20/02	Terminal Block Assembly
08800-7610	1 to 3	AB	08/21/02	Display Board Details
08800-7611	1 & 2	AF	8/21/02	Display Board Layout

The above drawings are associated with BAS99ATEX3221/3