

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: **Baseefa11ATEX0195X – Issue 3**

4 Equipment or Protective System: **Model 1066**

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 :

⊕ II 1 G Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +65°C)

Baseefa Customer Reference No. **0911**

Project File No. **15/0686**

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R S SINCLAIR
GENERAL MANAGER

On behalf of SGS Baseefa Limited

13 **Schedule**

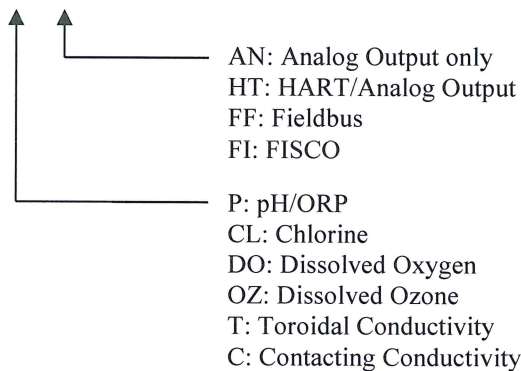
14 **Certificate Number Baseefa11ATEX0195X – Issue 3**

15 **Description of Equipment or Protective System**

The Model 1066 is designed to convert an electrical signal from a remote sensor into a 4-20mA, HART or Fieldbus compatible signal. The apparatus consists of a printed circuit board, terminal facilities and a liquid crystal display and keypad, all housed in a plastic enclosure.

The apparatus may be designated as follows:

1066-AA-BB-73



i.e. 1066-P-FF-73 is a Model 1066 intended for measuring pH/ORP with a Fieldbus output.

INPUT/OUTPUT PARAMETERS

1066-AA-AN/HT

Loop Power

TB6, terminals 1 - 3

U_i	=	30V	C_i	=	0
I_i	=	200mA	L_i	=	0
P_i	=	0.9W			

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	12.18V	C_i	=	0
I_o	=	353mA	L_i	=	0
P_o	=	420mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	1.32	0.25		88
IIB	8.4	0.75		355
IIA	33	2.10		711

Note: The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than 1 μ F for Group IIB and 600nF for Group IIC.

Analog Out 2

TB7, terminals 1 & 2

$$\begin{array}{ll} U_i = 30V & C_i = 0 \\ I_i = 200mA & L_i = 0 \\ P_i = 0.9W & \end{array}$$

1066-AA-FF/FI

Loop Power (Fieldbus, 1066-AA-FF)

TB6, terminals 1 & 2

$$\begin{array}{ll} U_i = 30V & C_i = 0 \\ I_i = 300mA & L_i = 0 \\ P_i = 1.3W & \end{array}$$

Loop Power (FISCO, 1066-AA-FI)

TB6, terminals 1 & 2

$$\begin{array}{ll} U_i = 17.5V & C_i = 0 \\ I_i = 380mA & L_i = 0 \\ P_i = 5.32W & \end{array}$$

Sensor terminals (Fieldbus and FISCO, 1066-AA-FF/FI)

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

$$\begin{array}{ll} U_o = 12.18V & C_i = 0 \\ I_o = 353mA & L_i = 0 \\ P_o = 420mW & \end{array}$$

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μ F	Inductance mH	OR	L/R Ratio μ H/ Ω
IIC	1.32	0.25		88
IIB	8.4	0.75		355
IIA	33	2.10		711

Note: The above load parameters apply where:

2. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than 1 μ F for Group IIB and 600nF for Group IIC.

1066-C/T-HT

Loop Power

TB6, terminals 1 & 2

$$\begin{array}{ll} U_i = 30V & C_i = 0 \\ I_i = 200mA & L_i = 0 \\ P_i = 0.9W & \end{array}$$

Analog Out 2

TB7, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	200mA	L_i	=	0
P_i	=	0.9W			

1066-C/T-FF

Loop Power (Fieldbus)

TB6, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	300mA	L_i	=	0
P_i	=	1.3W			

1066-C/T-FI

Loop Power (FISCO)

TB6, terminals 1 & 2

U_i	=	17.5V	C_i	=	0
I_i	=	380mA	L_i	=	0
P_i	=	5.32W			

The Model 1066T does not have any sensor terminal parameters as the toroids (Model 222, 225, 226 or 228) are directly connected to the PCB. The Model 1066C output parameters are as follows:

1066-C-HT

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	5.88V	C_i	=	3.66nF
I_o	=	71mA	L_i	=	6.11mH
P_o	=	104.4mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	42.9	1.23		340
IIB	1000	22.99		1360
IIA	1000	54.29		2720

Note: The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

1066-C-FF/FI

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

$$\begin{aligned}
 U_o &= 5.88V & C_i &= 3.66nF \\
 I_o &= 65.5mA & L_i &= 6.11mH \\
 P_o &= 96.2mW
 \end{aligned}$$

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu H/\Omega$
IIC	42.9	2.38		250
IIB	1000	27.19		1000
IIA	1000	63.36		1000

Note: The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu F$ for Group IIB and $600nF$ for Group IIC.

16 Report Number

GB/BAS/ExTR15.0367/00

17 Specific Conditions of Use

1. The plastic enclosure, excluding the front panel, may constitute a potential electrostatic ignition risk and must only be cleaned with a damp cloth.

18 Essential Health and Safety Requirements

As follows, in addition to those covered by the standards at item 9.

Clause	Subject	Compliance
1.2.7	LVD type requirements	Manufacturer responsibility
1.2.8	Overloading of equipment (protection relays, etc.)	User/Installer responsibility
1.4.1	External effects	User/Installer responsibility
1.4.2	Aggressive substances, etc.	User/Installer responsibility

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
34384-01	1 of 1	B	01-05-14	PCB, Analyzer, C/T-FF, 1066
34458-01	1 of 1	B	01-05-14	PCB, Analyzer, A/P-FF, 1066
1700705	1 – 4	D	08-26-15	Schematic, PCB, Analyzer, A/P-HT, 1066
1700709	1 & 2	D	09-25-15	Cert Prod, Mod 1066, Xmtr N.I. (ATEX)
1700711	1 – 4	D	08-26-15	PCB, Analyzer, A/P-HT, 1066

Number	Sheet	Issue	Date	Description
1700725	1 – 4	E	08-18-15	Schematic, PCB, Analyzer, A/P-FF/FI, 1066
1700732	1 – 4	E	08-18-15	PCB, Analyzer, A/P-FF, 1066
1700733	1 – 4	D	08-18-15	Schematic, 1066 C/T-FF/FI
1700735	1 – 4	D	08-26-15	Schematic, PCB, C/T-HT, 1066
1700742	1 of 1	D	08-26-15	PCB, C/T-HT, 1066
1700743	1 of 1	D	08-08-15	PCB, C/T-FF, 1066
9080230	1 & 2	C	09-19-13	Isolation Xfmr, 1066

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
34256-00	1 of 1	D	12-08-11	PCB, Analyzer, C/T-HT, 1066
34458-00	1 of 1	A	09-02-09	PCB, Analyzer, A/P-FF, 1066
34479-00	1 of 1	B	02-09-12	PCB, Analyzer, A/P-HT, 1066
1700459	1 of 1	C	11-09-12	Certified Product Dwg, Toroidal Sensor Mod 225/226/228
1700460	1 of 1	C	11-12-12	Certified Product Dwg, Toroidal Sensor Mod 222
9080234	1 of 1	A	05-10-12	Xfmr, Driver, 1066 Conductivity

These drawings are common to, and held with, IECEx BAS 11.0098X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa11ATEX0195X	4 November 2011	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR11.0258/00. Project File No. 10/0729.
Baseefa11ATEX0195X/1	1 June 2012	To permit minor electrical changes that do not affect the original assessment and to permit the introduction of alternative circuit designs and PCBs that introduce the Model 1066C & Model 1066T. Test Report No. GB/BAS/ExTR12.0110/00. Project File No. 11/0983.
Baseefa11ATEX0195X/2	10 December 2012 Re-issued 22 October 2013	To permit minor electrical changes that do not affect the original assessment and to correct the I/O parameters for “Analog Out”. Project File No. 12/1028.
Baseefa11ATEX0195X Issue 3	1 February 2016	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and confirms the current design meets the requirements of EN 60079-0: 2012+A11:2013 and EN 60079-11: 2012. Test Report No. GB/BAS/ExTR15.0367/00. Project File No. 15/0686.

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: Baseefa11ATEX0195X/2

4 Equipment or Protective System: Model 1066

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. Baseefa11ATEX0195X 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. **12/1028**

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R S SINCLAIR PP DBREARLEY
GENERAL MANAGER

On behalf of SGS Baseefa Limited
Re-issued 22 October 2013 to replace original

13

Schedule

14

Certificate Number Baseefa11ATEX0195X/2

15 Description of the variation to the Equipment or Protective System

Variation 2.1

To permit minor electrical changes that do not affect the original assessment.

Variation 2.2

To correct the input/output parameters for "Analog Out". The full input/output parameters are shown below for clarity.

Input/Output Parameters

1066-AA-AN/HT

Loop Power

TB6, terminals 1 - 3

U_i	=	30V	C_i	=	0
I_i	=	200mA	L_i	=	0
P_i	=	0.9W			

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	12.18V	C_i	=	0
I_o	=	353mA	L_i	=	0
P_o	=	420mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	1.32	0.25		88
IIB	8.4	0.75		355
IIA	33	2.10		711

Note: The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

Analog Out 2

TB7, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	200mA	L_i	=	0
P_i	=	0.9W			

1066-AA-FF/FI

Loop Power (Fieldbus, 1066-AA-FF)

TB6, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	300mA	L_i	=	0
P_i	=	1.3W			

Loop Power (FISCO, 1066-AA-FI)

TB6, terminals 1 & 2

U_i	=	17.5V	C_i	=	0
I_i	=	380mA	L_i	=	0
P_i	=	5.32W			

Sensor terminals (Fieldbus and FISCO, 1066-AA-FF/FI)

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	12.18V	C_i	=	0
I_o	=	353mA	L_i	=	0
P_o	=	420mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	1.32	0.25		88
IIB	8.4	0.75		355
IIA	33	2.10		711

Note: The above load parameters apply where:

2. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

1066-C/T-HT

Loop Power

TB6, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	200mA	L_i	=	0
P_i	=	0.9W			

Analog Out 2

TB7, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	200mA	L_i	=	0
P_i	=	0.9W			

1066-C/T-FF

Loop Power (Fieldbus)

TB6, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	300mA	L_i	=	0
P_i	=	1.3W			

1066-C/T-FI

Loop Power (FISCO)

TB6, terminals 1 & 2

U_i	=	17.5V	C_i	=	0
I_i	=	380mA	L_i	=	0
P_i	=	5.32W			

The Model 1066T does not have any sensor terminal parameters as the toroids (Model 222, 225, 226 or 228) are directly connected to the PCB. The Model 1066C output parameters are as follows:

1066-C-HT

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	5.88V	C_i	=	3.66nF
I_o	=	71mA	L_i	=	6.11mH
P_o	=	104.4mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	42.9	1.23		340
IIB	1000	22.99		1360
IIA	1000	54.29		2720

Note: The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

1066-C-FF/FI

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	5.88V	C_i	=	3.66nF
I_o	=	65.5mA	L_i	=	6.11mH
P_o	=	96.2mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	42.9	2.38		250
IIB	1000	27.19		1000
IIA	1000	63.36		1000

Note: The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

16 Report Number

GB/BAS/ExTR12.0110/00

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
34458-00	1 of 1	A	02-09-12	PCB, Analyzer, A/P-FF, 1066
34479-00	1 of 1	B	02-09-12	PCB, Analyzer, A/P-HT, 1066
1700459	1 of 1	C	11-09-12	Certified Product Dwg, Toroidal Sensor Mod 222/226/228
1700460	1 of 1	C	11-12-12	Certified Product Dwg, Toroidal Sensor Mod 222
1700725	1 – 4	D	07-19-12	Schematic, PCB, Analyzer, A/P-FF/FI, 1066
1700732	1 – 4	D	07-20-12	PCB, Analyzer, A/P-FF, 1066
1700733	1 – 4	C	09-13-12	Schematic, 1066 C/T-FF/FI
1700735	1 – 4	C	09-13-12	Schematic, PCB, C/T-HT, 1066
1700742	1 of 1	C	07-20-12	PCB, C/T-HT, 1066
1700743	1 of 1	C	07-20-12	PCB, C/T-FF, 1066

These drawings are common to, and held with, IECEx BAS 11.0098X



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: **Baseefa11ATEX0195X/1**

4 Equipment or Protective System: **Model 1066**

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. Baseefa11ATEX0195X 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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This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **0911**

Project File No. **11/0983**

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A handwritten signature in blue ink, appearing to read "R S Sinclair".
R S SINCLAIR
DIRECTOR
On behalf of
Baseefa



13

Schedule

14

Certificate Number Baseefa11ATEX0195X/1

15 Description of the variation to the Equipment or Protective System

Variation 1.1

To permit minor electrical changes that do not affect the original assessment.

Variation 1.2

To permit the introduction of alternative circuit designs and printed circuit boards forming the Model 1066C and Model 1066T. These new models have the following parameters:

Input/Output Parameters

1066-C/T-HT

Loop Power

TB6, terminals 1 - 3

U_i	=	30V	C_i	=	0
I_i	=	200mA	L_i	=	0
P_i	=	0.9W			

1066-C/T-FF

Loop Power (Fieldbus)

TB6, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	300mA	L_i	=	0
P_i	=	1.3W			

1066-C/T- FI

Loop Power (FISCO)

TB6, terminals 1 & 2

U_i	=	17.5V	C_i	=	0
I_i	=	380mA	L_i	=	0
P_i	=	5.32W			

The Model 1066T does not have any sensor terminal parameters as the toroids are directly connected to the PCB. The Model 1066C output parameters are as follows:

1066-C-HT (HART)

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 - 3; TB3, terminals 1 - 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	5.88V	C_i	=	3.66nF
I_o	=	71mA	L_i	=	6.11mH
P_o	=	104.4mW			



Load Parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	42.9	1.23		340
IIB	1000	22.99		1360
IIA	1000	54.29		2720

Note: The above load parameters apply where:

- 1 The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

1066-C-FF/FI (Fieldbus / FISCO)

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

$$\begin{array}{ll} U_o = 5.88\text{V} & C_i = 3.66\text{nF} \\ I_o = 65.5\text{mA} & L_i = 6.11\text{mH} \\ P_o = 96.2\text{mW} & \end{array}$$

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	42.9	2.38		250
IIB	1000	27.19		1000
IIA	1000	63.36		2000

Note: The above load parameters apply where:

- 1 The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.



1066-C-HT/FF/FI (all variants)

Analog Out

TB7, terminals 1 & 2

U_o	=	5.36V	C_i	=	0
I_o	=	113.15mA	L_i	=	0
P_o	=	151.6mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Block 7, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	65	3.2		234
IIB	1000	12		938
IIA	1000	30		1875

Note: The above load parameters apply where:

- 1 The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

16 Report Number

GB/BAS/ExTR12.0110/00

17 Special Conditions for Safe 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
34256-00	1 of 1	D	12-08-11	PCB, Analyzer, C/T-HT, 1066
34384-00	1 of 1	D	12-08-11	PCB, Analyzer, C/T-FF, 1066
1700705	1 – 4	C	01-16-12	Schematic, PCB, Analyzer, A/P-HT, 1066
1700709	1 & 2	C	08-08-11	Cert Prod, Mod 1066, Xmtr N.I. (ATEX)
1700711	1 – 4	C	10-28-11	PCB, Analyzer, A/P-HT, 1066
1700725	1 – 4	C	11-03-11	Schematic, PCB, Analyzer, A/P-FF/FI, 1066
1700732	1 – 4	C	10-28-11	PCB, Analyzer, A/P-FF, 1066
1700733	1 – 4	B	05-10-12	Schematic, 1066 C/T-FF/FI
1700735	1 – 4	B	05-10-12	Schematic, PCB, C/T-HT, 1066

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Number	Sheet	Issue	Date	Description
1700742	1 of 1	B	05-10-12	PCB, C/T-HT, 1066
1700743	1 of 1	B	05-10-12	PCB, C/T-FF, 1066
9080234	1 of 1	A	05-10-12	Xfmr, Driver, 1066 Conductivity

These drawings are common to, and held with, IECEx BAS 11.0098X



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: **Baseefa11ATEX0195X**

4 Equipment or Protective System: **Model 1066**

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/ExTR11.0258/00

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

IEC 60079-0:2011 IEC 60079-11:2011

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 ≤ Ta ≤ +65°C)

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

Baseefa Customer Reference No. **0911**

Project File No. **10/0729**

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.

Baseefa

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Baseefa is a trading name of Baseefa Ltd

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

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

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa



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Schedule

14

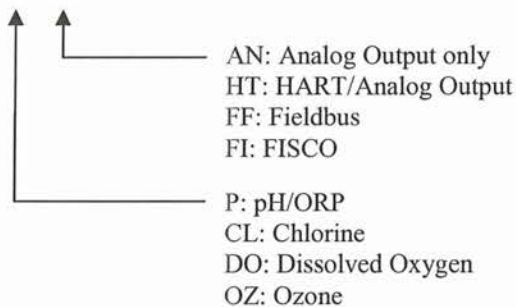
Certificate Number Baseefa11ATEX0195X

15 Description of Equipment or Protective System

The Model 1066 is designed to convert an electrical signal from a remote sensor into a 4-20mA, HART or Fieldbus compatible signal. The apparatus consists of a printed circuit board, terminal facilities and a liquid crystal display and keypad, all housed in a plastic enclosure.

The apparatus may be designated as follows:

1066-AA-BB-73



i.e. 1066-P-FF-73 is a Model 1066 intended for measuring pH/ORP with a Fieldbus output.

Input/output parameters

1066-AA-AN/HT

Loop Power

TB6, terminals 1 - 3

$$\begin{array}{lcl} U_i & = & 30V \\ I_i & = & 200mA \\ P_i & = & 0.9W \end{array} \quad \begin{array}{lcl} C_i & = & 0 \\ L_i & = & 0 \end{array}$$

Sensor terminals

TB1, terminals 1 & 2; TB2, terminals 1 - 3; TB3, terminals 1 - 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

$$\begin{array}{lcl} U_o & = & 12.18V \\ I_o & = & 353mA \\ P_o & = & 420mW \end{array} \quad \begin{array}{lcl} C_i & = & 0 \\ L_i & = & 0 \end{array}$$

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu H/\Omega$
IIC	1.32	0.25		88
IIB	8.4	0.75		355
IIA	33	2.10		711



Note: The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

Analog Out

TB7, terminals 1 & 2

U_o	=	5.36V	C_i	=	0
I_o	=	113.15mA	L_i	=	0
P_o	=	151.6mW			

Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Block 7, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	65	3.2		234
IIB	1000	12		938
IIA	1000	30		1875

Note: The above load parameters apply where:

2. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

1066-AA-FF/FI

Loop Power (Fieldbus, 1066-AA-FF)

TB6, terminals 1 & 2

U_i	=	30V	C_i	=	0
I_i	=	300mA	L_i	=	0
P_i	=	1.3W			

Loop Power (FISCO, 1066-AA-FI)

TB6, terminals 1 & 2

U_i	=	17.5V	C_i	=	0
I_i	=	380mA	L_i	=	0
P_i	=	5.32W			

Sensor terminals (Fieldbus and FISCO, 1066-AA-FF/FI)

TB1, terminals 1 & 2; TB2, terminals 1 – 3; TB3, terminals 1 – 3; TB4, terminals 1 & 2; TB5, terminals 1 & 2

U_o	=	12.18V	C_i	=	0
I_o	=	353mA	L_i	=	0
P_o	=	420mW			



Load parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to Terminal Blocks 1, 2, 3, 4 & 5, must not exceed the following:

Group	Capacitance μF	Inductance mH	OR	L/R Ratio $\mu\text{H}/\Omega$
IIC	1.32	0.25		88
IIB	8.4	0.75		355
IIA	33	2.10		711

Note: The above load parameters apply where:

3. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.
- or 2. The inductance and capacitance are distributed as in a cable.
- or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the L and C values is allowed. But the maximum capacitance allowed must not be more than $1\mu\text{F}$ for Group IIB and 600nF for Group IIC.

16 Report Number

GB/BAS/ExTR11.0258/00

17 Specific Conditions of Use

The plastic enclosure, excluding the front panel, may constitute a potential electrostatic ignition risk and must only be cleaned with a damp cloth.

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
1700705	1	B	JUL 13 2011	Certified Product Schematic, PCB, 1066 pH-HT
1700705	2 - 4	B	07-11-11	Certified Product Schematic, PCB, 1066 pH-HT
1700709	1 & 2	B	AUG 08 2011	Cert Prod, Mod 1066 Xmtr N.I (ATEX)
1700711	1 of 4	B	JUL 13 2011	Certified Product Assy, PCB, Analyzer, 1066pH
1700725	1 - 4	B	7-11-11	Certified Product Schematic, PCB, Analyzer, A/P-FF/FI, 1066
1700732	1 of 4	B	10-28-11	Certified Product Assy, PCB, Analyzer, pH/AMP-FF/FI, 1066
34258-00	1 of 1	B	JUN 16 2011	PCB, Analyzer, A/P-FF, 1066
34379-00	1 of 1	E	8-8-11	PCB, Analyzer, pH, 1066
9080230	1 & 2	B	08-08-11	Isolation Xfmr, 1066

These drawings are common to, and held with, IECEx BAS 11.0098X.