



## EC-TYPE EXAMINATION CERTIFICATE

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

EC-Type Examination Certificate Number : **BAS02ATEX1284**

Equipment or Protective System: **MODEL 5081-A AMPEROMETRIC TRANSMITTER**

Manufacturer: **ROSEMOUNT ANALYTICAL INC**

Address: **2400 Barranca Parkway, Irvine, CA 92714-5018, 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°

**01(C)0316 dated 17 September 2002**

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50014: 1997 + Amds 1 & 2**                      **EN 50020: 1994**                      **EN 50284: 1999**  
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:-

**⊕ Ex** II 1 G                      **EEx ia IIC T4** (-20°C ≤ T<sub>amb</sub> ≤ 65°C)

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

File No: EECS 0911/02/019

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.



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**I M CLEARE**  
DIRECTOR  
27 September 2002



13

**Schedule**

14

**EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX1284**

15

**Description of Equipment or Protective System**

The Model 5081-A Amperometric Transmitter is designed to convert a 4-20mA measurement signal to a HART compatible signal.

The apparatus consists of printed circuit boards, a feed through filter, terminal facilities, and an optional liquid crystal display (LCD), all housed in an epoxy coated aluminium or stainless steel enclosure.

The apparatus may be designated the Model 5081-P which varies only in software from the model 5081-A.

To indicate HART compatibility, the model designation has the suffix -HT.

**Input/Output Parameters**

Models 5081-A and 5081-P

Terminal Block 1, pins 15 and 16:

$U_i = 30V$                        $C_i = 0$   
 $I_i = 0.2A$                      $L_i = 0$   
 $P_i = 0.9W$

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

Terminal Block 1, pins 1 to 14:

$U_o = 13.1V$                      $C_i = 0.01\mu F$   
 $I_o = 173mA$                    $L_i = 0$   
 $P_o = 231mW$

**Load Parameters**

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to terminal Block 1, pins 1 to 14 must not exceed the following values:

Models 5081-A and 5081-P

GROUP	CAPACITANCE in $\mu F$	INDUCTANCE in mH	OR	L/R RATIO in $\mu H/\Omega$
IIC	0.96	1.2		9
IIB	5.9	3.5		38
IIA	21.6	9.5		77



13

**Schedule**

14

**EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX1284**

16

**Report No.**

01(C)0316 dated 17 September 2002

17

**Special Conditions For Safe Use**

None.

18

**Essential Health and Safety Requirements**

<b>ESSENTIAL HEALTH &amp; SAFETY REQUIREMENTS not covered by Standards listed at (9)</b>		
<b>Clause</b>	<b>Subject</b>	<b>Compliance</b>
1.1.3	Changes in characteristics of materials and combinations thereof	Report No 01(C)0316 Clause 5.1.1.3
1.2.2	Components for incorporation or replacement	Report No 01(C)0316 Clause 5.1.2.2
1.2.5	Additional means of protection	Report No 01(C)0316 Clause 5.1.2.5
1.2.7	Protection against other hazards	Report No 01(C)0316 Clause 5.1.2.7
1.4.2	Withstanding attack by aggressive substances	Report No 01(C)0316 Clause 5.1.4.2

19

**DRAWINGS**

<b>Number</b>	<b>Sheets</b>	<b>Issue</b>	<b>Date</b>	<b>Description</b>
1700382		E	10.29.01	5081-A-HT Approval
1700413		D	08.09.02	5081-P-HT Approval
1700427		A	04..23.02	CCA, Analog Board
1700428	1 to 3	B	04..23.02	Schematic, Analog Board
33718-00		E	05.03.02	PWB, Analog Board
33718-00		E	04.24.02	Top Silk, Analog Board
33718-00		E	04.24.02	Top Layer, Analog Board
33718-00		E	04.24.02	Ground Plane, Analog Board
33718-00		E	04.24.02	+5V Plane, Analog Board
33718-00		E	04.24.02	Bottom Layer, Analog Board
33718-00		E	04.24.02	Bottom Silk, Analog Board
1700425	1 to 3	D	09.12.02	Schematic, CPU Board
1700426		A	04.03.02	PWB, CPU Board
33773-00		B	05.03.02	Top Silk, CPU Board
33773-00		B	05.03.02	Top Layer, CPU Board
33773-00		B	05.03.02	Ground Plane, CPU Board
33773-00		B	05.03.02	+5V Plane, CPU Board



13

Schedule

14

EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX1284

Number	Sheets	Issue	Date	Description
33773-00		B	05.03.02	Bottom Layer, CPU Board
33773-00		B	05.03.02	Bottom Silk, CPU Board
2400293		AD	3.16.97	Schematic, Display Board
23638-01		C	08.25.97	CCA, Display Board
33423-00		F	08.25.97	PWB, Display Board
33423-00		F	08.25.97	Top Silk, Display Board
33423-00		F	08.25.97	Top Layer, Display Board
33423-00		F	08.25.97	Inner Layer 1, Display Board
33423-00		F	08.25.97	Inner Layer 2, Display Board
33423-00		F	08.25.97	Ground Plane, Display Board
33423-00		F	08.25.97	Bottom Layer, Display Board
33423-00		F	08.25.97	Bottom Silk, Display Board
9080161	1 & 2	B	11.29.01	Transformer Details
5081AP01		A	09.18.02	Terminal Block Details

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BASEEFA List Keywords  
2TRANSMI