

(1) EC-TYPE EXAMINATION CERTIFICATE**(2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 06ATEX0105**

(4) Equipment: **Industrial Insertion Mass Flow Meters Model 640 and In-Line Industrial Mass Flow Meters Model 780**

(5) Manufacturer: **Sierra Instruments Inc.**

(6) Address: **5 Harris Court, Monterey, CA 93940, USA**

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

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 test report no. 2093026.

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

EN 60079-0 : 2004

EN 60079-1 : 2004

EN 50281-1-1 : 1998 + A1

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

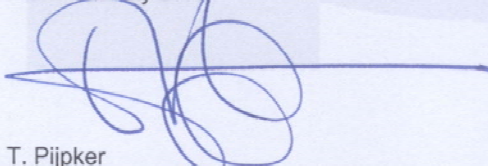
(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:



**II 2 GD Ex d IIC T6 ... T2
IP 66 T70 °C ... T280 °C**

Arnhem, 8 June 2006
KEMA Quality B.V.



T. Pijker
Certification Manager



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 06ATEX0105**

(15) **Description**

The Industrial Insertion Mass Flow Meters Model 640 and the In-Line Industrial Mass Flow Meters Model 780 are used to monitor the mass flow rate of gases. The mass flow meter consists of a certified flameproof electronics housing with probe assembly. The maximum probe length mounted directly to the electronics housing is 13 inches (33 cm). If the probe length exceeds 13 inches to a maximum length of 36" (91 cm), the remote version must be used.

The relation between the temperature class, the maximum process temperature and the maximum surface temperature is stated as below:

Temperature class	Maximum process temperature	Maximum surface temperature T
T6	40 °C	70 °C
T5	50 °C	80 °C
T4	85 °C	115 °C
T3	150 °C	180 °C
T2	250 °C	280 °C

The maximum surface temperature T ... °C is based on a maximum ambient temperature of +50 °C.

Ambient temperature range -20 °C ... +50 °C.

Electrical data

Power Supply: 18 - 30 Vdc, 625 mA max. or
100 - 240 Vac, 50/60 Hz, 15 W max.

Signal output: 0 - 5 Vdc or
1 - 5 Vdc
0 - 10 Vdc
4 - 20 mA
0 - 20 mA
RS232 or RS485 (serial multi-drop communication)

Installation instructions

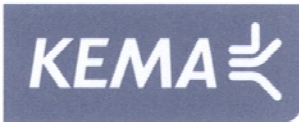
The cable entries of the electronics housing shall be of a certified flameproof type, suitable for the conditions of use.

Routine tests

The probe assembly must be submitted to the routine tests according to Clause 16.1.1 of EN 60079-1 based on a reference pressure of 15.4 bar.

(16) **Test Report**

KEMA No. 2093026.



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 06ATEX0105**

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Assured by compliance with the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 2093026.



SCHEDULE

to Production Quality Assurance Notification KEMA 02ATEXQ3001
Issue 2

Manufacturer : Sierra Instruments, Inc., 5 Harris Court, Building L,
Monterey, CA 93940, U.S.A.

Production site : As manufacturer

Equipment / Components Group	Types of Protection	EC-Type Examination Certificates
Flow Meters	Flameproof enclosure "d"	KEMA 06ATEX0105

Arnhem, 6 June 2006
KEMA Quality B.V.

C.G. van Es
Certification Manager

[2093026]