

# CERTIFICATE

## (1) EC-Type Examination

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

(3) EC-Type Examination Certificate Number: **KEMA 06ATEX0105** Issue Number: **2**

(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) DEKRA Certification 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 number 209302600.

(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.

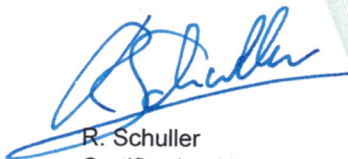
(12) The marking of the equipment shall include the following:



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

This certificate is issued on 12 February 2013 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.

  
R. Schuller  
Certification Manager

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(13) **SCHEDULE**

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

Issue No. 2

(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 to +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  
Modbus (serial multi-drop communication) only in combination with 18-30 Vdc version.

**Installation instructions**

The instructions provided with the equipment shall be followed in detail to assure safe operation.

(16) **Test Report**

No. 209302600.

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

None.

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

Covered by the standards listed at (9).

(13) **SCHEDULE**

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

Issue No. 2

(19) **Test documentation**

As listed in Test Report No. 209302600.