



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX CES 15.0013X** issue No.: **0** Certificate history:

Status: **Current**

Date of Issue: **2015-06-30** Page 1 of 4

Applicant: **GAMA S.r.l.**
via Milano, 76
I - 23899 Robbiate (LC)
Italy

Electrical Apparatus: **Associated apparatus type SCH-TRA, SCH-232-I and SCH-ZEN, for viscometer system.**
Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: **[Ex ia Ga] IIB**

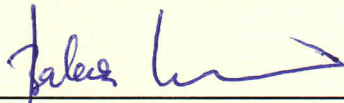
Approved for issue on behalf of the IECEx
Certification Body:

Mirko Balaz

Position:

Head of IECEx CB

Signature:
(for printed version)


30-6-2015

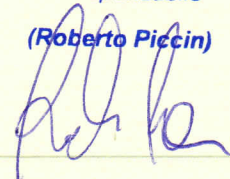
Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
Via Rubattino 54
20134 Milano
Italy

CESI
CESI S.p.A.
Testing & Certification Division
Business Area Certification
II Responsabile
(Roberto Piccin)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The "Power supply board, type SCH-TRA", "Optical transfer data board, type SCH-232-I" and "Interface board, type SCH-ZEN" are [Ex ia] IIB associated apparatus. They are electronic cards intended to be included in a containing assembly acting as a mechanical support and protection (minimum IP20). Together with other interconnected electronic cards and external apparatus they constitute a whole viscometer system. A viscometer system can use one or more "Power supply board, type SCH-TRA", "Optical transfer data board, type SCH-232-I" and "Interface board, type SCH-ZEN".

The "Power supply board, type SCH-TRA" realize the galvanically insulated supply. The "Interface board, type SCH-ZEN" realize the limitation of output parameters for intrinsically safe circuits. The "Optical transfer data board, type SCH-232-I" realize data transfer by optical communication.

The "Power supply board, type SCH-TRA" supplied SCH-ZEN and SCH-232-I cards and all the electronic cards and apparatus connected also; none other electrical supply is admitted for electronic circuits that constitute the whole viscometer system except the external connection for optical data transfer. oard, type SCH-232-I" and "Interface board, type SCH-ZEN".

Each "Interface board, type SCH-ZEN" have a maximum of 11 Ex-ia output channel (4 type A, 3 type B, 4 type C or D). The "Interface board, type SCH-ZEN" has also four non_Ex-i outputs to connect passive apparatus (electro valve) non_Ex-i isolated from other electrical devices; these connections shall be realized with shielded cables with shield connected to earth.

CONDITIONS OF CERTIFICATION: YES as shown below:

- The supply of all the electronic cards and external apparatus of viscometer system shall be made only by "Power supply board, type SCH-TRA". No other electrical supplies is allowed between viscometer system (including external equipment) and external electrical world, with the exception of the non_Ex-i connection for optical data transfer.
- The non_Ex-i electro valves powered by viscometer system shall be separated or segregated from any other electrical equipment and their connecting cables shall be shielded with the shield earthed.
- The connecting cables between non_Ex-i part of SCH-232-I board with external electrical world shall be shielded, with the shield earthed, or separated or segregated from any other electrical equipment of the viscometer system.



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Manufacturer: **GAMA S.r.l.**
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I - 23899 Robbiate (LC)
Italy

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 6.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
IT/CES/ExTR11.0017/00

Quality Assessment Report:
IT/CES/QAR09.0004/05



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EQUIPMENT(continued):

Electrical characteristics

Power supply board type SCH-TRA:

- Um: 250 Vac
- Supply rated voltage Un: 230 Vac $\pm 10\%$; 50-60 Hz
- Rated output voltage: ± 24 Vdc

Optical transfer data board SCH-232-I :

- Supply rated voltage Un: 24 Vdc (from Power supply board type SCH-TRA)
- Um: 250 Vac (from external circuits)

Interface board type SCH-ZEN:

- Supply rated voltage Un: 24 Vdc (from Power supply board type SCH-TRA)
- Intrinsically safe circuits output:

Output channel	Uo (V)	Io (mA)	Po (mW)	Co (μ F)	Lo (mH)
A	8.61	9.1	20	2	3
B	12.6	13.3	42	2	3
C	25.2	88.4	557	0.5	3
D	25.2	98.3	619	0.5	3

All channels have positives towards common 0V and linear output characteristic.