



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 CSA 14.0062X Issue No: 1 Certificate history:
Issue No. 1 (2016-02-08)
Status: **Current** Page 1 of 5 Issue No. 0 (2014-11-17)
Date of Issue: **2016-02-08**
Applicant: **American Sensor Technologies, Inc.**
450 Clark Dr., Mount Olive
New Jersey 07828, USA
United States of America
Electrical Apparatus: **AST4600, AST46HA, AST46PT and 46SW Series Pressure Transducers**
Optional accessory:
Type of Protection: **Ex d and Ex tb**
Marking:
Ex d IIC T5 Gb , Ex tb IIIC T100°C Db
Tamb = -40°C to +85°C
Tproc= -40°C to +125°C

*Approved for issue on behalf of the IECEx
Certification Body:*

Dorin Stochitoiu

Position:

Technical Advisor

*Signature:
(for printed version)*

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](http://www.iecex.com).

Certificate issued by:



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CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada
and
1707 - 94th Street
Edmonton, AB T6N 1E6
and
8503 East Pleasant Valley Road,
Independence, Ohio, USA
44131-5516
Canada





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Manufacturer: **American Sensor Technologies, Inc.**
450 Clark Dr., Mount Olive
New Jersey 07828, USA
United States of America

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 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

IEC 60079-31 : 2008 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:1

*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:

[CA/CSA/ExTR14.0065/00](#) [CA/CSA/ExTR14.0065/01](#)

Quality Assessment Report:

[CA/CSA/QAR14.0002/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The AST46XX Series' Pressure Transducers utilize a mechanical diaphragm to convert a mechanical pressure measurement into an electrical signal for use in the measurement of gases and liquids compatible with stainless steel. The transducers are manufactured as stainless steel sealed assemblies containing up to 2 PCBs.

The transducers consist of 3 parts:

- i. the sensing element;
- ii. the housing tube and;

i ii. a conduit entry connection(adapter) ½" MNPT made from stainless steel. A green ground (earth) conductor in both construction types (3, 4 or 5 lead wires sensors) is connected to the metallic housing.

The transmitters range in Maximum Working Pressure (MWP) rating up to 20000 psi. The physical construction of the Sensing Element varies in accordance with the pressure range.

CONDITIONS OF CERTIFICATION: YES as shown below:

- i. The product label indicates that the process temperature range is -40°C to +125°C, taking this into account, the user/installer shall take precautions that ensure that the operating service temperature of the overall pressure transducer assembly is between -40°C to 92°C.
- ii. Under certain extreme circumstances, exposed plastic and unearthed metal parts of the enclosure may store an ignition-capable level of electrostatic charge. Therefore, the user/installer shall implement precautions to prevent the build up of electrostatic charge, e.g. locate the equipment where a charge-generating mechanism (such as wind-blown dust) is unlikely to be present and clean with a damp cloth.
- iii. The integral conductors shall be suitably mechanically protected and terminated in a suitable terminal or junction facility.
- iv. It is the user's responsibility to ensure that the earth continuity of the equipment is maintained via the mounting arrangement.
- v. The enclosure is manufactured from light metal. In rare cases, ignition sources due to impact and friction sparks could occur and that shall be considered during installation.
- vi. External pressure on potted flying leads shall not exceed 30 bar maximum.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1: Correction to item "vi" of the Conditions of Certification regarding external pressure on flying leads. The maximum external pressure value was lowered from 207 bar to 30 bar.