



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 15ATEX1073X** Issue: **0**

4 Equipment: **Model AST46DS Series Pressure Transducers**

5 Applicant: **American Sensor Technology**

6 Address: **450 Clark Drive
Mount Olive
New Jersey
USA, 07828**

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of 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 intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/A11:2013 EN 60079-1:2007

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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 and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2G
Ex d IIC T5 Gb
Ta = -40°C to +85°C

Project Number 70007814

C Ellaby
Deputy Certification Manager

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The Model AST46DS Series Pressure Transducers utilize a cylindrical enclosure and a Pressure Transducer (sensor) with a mechanical diaphragm to convert a mechanical pressure measurement into an electric signal. The subject pressure transducer assembly consists of 3 main parts:

- i. A cylindrical main enclosure (flame-proof) with a threaded window and threaded blind cover, it has up to three entries;
- ii. The pressure transducer threaded into main enclosure;
- iii. An amplifier assembly (internal to the main enclosure).

The breakdown of the Model AST46DSabcdefghij code is as follows:

Where: a (fitting information) = A, B, C, D, E, F, G, H, I, J, K, L, M, N, P, R, S, T, U, V, W, Z
b (pressure reference) = 0, 1, 2, A, C, G, V
c (pressure) = 0000 to 9999
d (pressure unit) = B, H, K, M, P
e (electrical outputs) = 3, 4
f (electrical connection) = 2
g (header material) = 0, 1, 2, 3, 4, 6
h, i, j (special calibration) = eg: tolerances

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	26 March 2015	R70007814A	The release of the prime certificate.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

- 15.1. 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.
- 15.2. The enclosure and Pressure Transducer sensor are manufactured from light metal. In rare cases, ignition sources due to impact and friction sparks could occur and that shall be considered during installation.
- 15.3. Maximum working pressure of the sensor is 20,000 psi (1379 bar).

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.



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17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 The weld quality of each Pressure Transducer sensor is tested using helium mass spectrometry method to assure that leaks through the welded joints do not exceed the rate of 5×10^{-8} cm³/sec.

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Certificate Annexe

Certificate Number: Sira 15ATEX1073X
Equipment: Model AST46DS Series Pressure Transducers
Applicant: American Sensor Technology



Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
A14032	1 of 1	B	12 Mar 15	Layout, Label, CSA, Explosion Proof, Display
A14181	1 to 1	D	12 Mar 15	Layout, Label, CSA, Explosion Proof, Display
A14499	1 of 1	D	12 Mar 15	Layout, Label, CSA, Explosion Proof, Display, Vented
A14542	1 of 1	D	12 Mar 15	Final Assembly, 4-20 mA, Display, Explosion-Proof
A13818	1 of 1	C	12 Mar 15	Sub-assembly, Housing, Display, Explosion-Proof
A03737	1 of 1	B	12 Mar 15	Epoxy, Potting, Submersible
A13814	1 of 1	D	12 Mar 15	Housing, Display, Explosion-Proof
A13888	1 of 1	F	12 Mar 15	Sub-Assembly, ¾ MNPT, PGA309, Explosion-proof Display
A13877	1 of 1	A	12 Mar 15	Adaptor, ¾ MNPT, Conduit for Display w/sintered plug
A13376	1 of 1	A	12 Mar 15	Adaptor, Sensor to Explosion Proof Housing
S13441	1 to 2	C	12 Mar 15	Display Board Revised w14 pin
A13441	1 of 1	G	12 Mar 15	Sub-assembly, PCB, Voltage, Display Product, Explosion-Proof
S11467	1 of 1	G	12 Mar 15	PGA309 Main Board Dual Trim 8 fuse
A13608	1 of 1	F	12 Mar 15	Sub-assembly, PCB, 4-20 mA, Display Product, Explosion-Proof
A13890	1 of 1	H	12 Mar 15	Final Assembly, Voltage, Display, Explosion-Proof
A16665	1 of 1	A	12 Mar 15	Sub-Assembly, Detail, AST-46DS, Sensor
A12666	1 of 1	C	12 Mar 15	Sub-Assembly, ½ MNPT, 316L, PGA309
A10818	1 of 1	E	12 Mar 15	Subassembly, Detail, AST-46xx, Conduit End
1-Z-L2464	1 of 1	B	12 Mar 15	Instrument housing XD-ID80win

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