



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEx CSA 14.0037X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 5	Issue 4 (2022-12-22)
Date of Issue:	2023-05-10		Issue 3 (2021-03-03)
Applicant:	<b>TE Sensores S de RL de CV</b> A TE Connectivity Company Av. Obrero Mundial#9 Parque Industrial Dynatech Hermosillo Sonora 83174 Sonora <b>Mexico</b>		Issue 2 (2021-01-29)
Equipment:	<b>Pressure Transducer series AST 44xx and AST45xx</b>		Issue 1 (2018-10-18)
Optional accessory:			Issue 0 (2014-07-31)
Type of Protection:	<b>Intrinsically Safe</b>		
Marking:	<u>AST 4401</u> Ex ia IIC T4 Ga, Tamb:-40°C to +80°C; Process Temp: -40°C to +125°C		
	<u>AST 4400, AST 44LP, AST4500, AST4510, AST4520</u> Ex ia IIB T4 Ga, Tamb:-40°C to +80°C; Process Temp: -40°C to +125°C		
	<u>AST4530</u> Ex ia IIB T4 Ga, Tamb:-0°C to +60°C; Process Temp: 0°C to +60°C		

Approved for issue on behalf of the IECEx  
Certification Body:

**Dave Magee**

Position:

**Senior Director of Operations, Toronto**

Signature:  
(for printed version)

Date:  
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

**CSA Group**  
178 Rexdale Boulevard  
Toronto, Ontario M9W 1R3  
Canada





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Date of issue: 2023-05-10

Issue No: 5

Manufacturer: **TE Sensores S de RL de CV**  
A TE Connectivity Company  
Av. Obrero Mundial#9  
Parque Industrial Dynatech  
Hermosillo  
Sonora 83174  
Sonora  
**Mexico**

Manufacturing locations: **TE Sensores S de RL de CV**  
A TE Connectivity Company  
Av. Obrero Mundial#9  
Parque Industrial Dynatech  
Hermosillo  
Sonora 83174  
Sonora  
**Mexico**

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

This Certificate **does not** indicate compliance with 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 Reports:

[CA/CSA/ExTR14.0035/00](#)  
[CA/CSA/ExTR14.0035/04](#)

[CA/CSA/ExTR14.0035/02](#)  
[CA/CSA/ExTR14.0035/05](#)

[CA/CSA/ExTR14.0035/03](#)

Quality Assessment Report:

[CA/CSA/QAR23.0002/00](#)



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Date of issue: 2023-05-10

Issue No: 5

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

Model AST44xx and AST45xx Series Pressure Transducers utilize a mechanical diaphragm to convert a mechanical pressure measurement into an electric signal. The transducers are manufactured as 1-piece stainless steel, sealed assemblies, containing a maximum of 3 PCBs. Depending on the order codes as shown in the Annex attached to this certificate, the user connections can be made using several different types of connectors and can supply 4-20mA current or a range of voltage outputs. The various outputs (current or voltage) are shown in installation Drawing A08949. Output connections are with cables of lengths up to 1000 ft. (for outputs of 4-20mA) or 150ft (for all other electrical outputs).

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. Since models AST4401, AST4400, AST44LP, AST4500, AST4510, AST4520 and AST4530 Pressure Transducers are not earthed and a charge-generating mechanism may be present when in contact with non-metallic charge generating materials, the device shall be grounded before use.
2. 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.
3. The enclosure is manufactured from light metal. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation, particularly if the equipment is installed in a zone 0 location.



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Date of issue: 2023-05-10

Issue No: 5

## **DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

**This issue, Issue 5, recognises the following change; refer to the certificate annex to view a comprehensive history:**

1. To recognise the change of Company Name and Address:

From: - Measurement Specialties Inc., A TE Connectivity Company, 6801 Kaiser Dr., Fremont, California 94555, United States of America

To: - TE Sensores S de RL de CV, A TE Connectivity Company, Av. Obrero Mundial #9, Parque Industrial Dynatech, Hermosillo Sonora 83174, Mexico

## **Annex:**

[IECEX CSA 14.0037X Annexe Issue 5.pdf](#)

Annexe to: IECEx CSA 14.0037X Issue 5

Applicant: TE Sensores S de RL de CV



Apparatus: Pressure Transducer series AST 44xx and AST45xx

The various outputs (current or voltage) are shown in installation Drawing A08949. Output connections are with cables of lengths up to 1000 ft. (for outputs of 4-20mA) or 150ft (for all other electrical outputs).

Models for Ex ia IIC and Ex ia IIB	Entity parameter	Entity parameters values per group of gas					
		Ex ia IIC			Ex ia IIB		
		No cable	Up to 1000 ft cable	Up to 150 ft cable	No cable	Up to 1000 ft cable	Up to 150 ft cable
AST4401*****4*****_** (4-20 mA)	Ui Ii Pi Ci Li	14.5 V 93 mA 625 mW 0.391 µF 0	14.5 V 93 mA 625 mW 0.434 µF 155 µH	- - - - -	- - - - -	- - - - -	- - - - -
ASTXXX*****4*****_** Where XXXX = 4400, 44LP, 4500, 4510, 4520, 4530 (4-20 mA)	Ui Ii Pi Ci Li	- - - - -	- - - - -	- - - - -	28 V 93 mA 625 mW 0.391 µF 0	28 V 93 mA 625 mW 0.434 µF 155 µH	- - - - -
AST4401*****1/M*****_** (output rated 0.5-4.5V and 0.25- 4.75V)	Ui Ii Pi Ci Li	14.5 V 93 mA 625 mW 0.643 µF 0	- - - - -	14.5 V 93 mA 625 mW 0.649 µF 23.3 µH	- - - - -	- - - - -	- - - - -
ASTXXX*****1/M*****_** Where XXXX = 4400, 44LP, 4500, 4510, 4520, 4530 (output rated 0.5-4.5 V and 0.25- 4.75 V)	Ui Ii Pi Ci Li	- - - - -	- - - - -	- - - - -	28 V 93 mA 625 mW 0.643 µF 0	- - - - -	28 V 93 mA 625 mW 0.649 µF 23.3 µH
AST4401*****A/B/F*****_** (output rated 5, 10 and 20 mV/V)	Ui Ii Pi Ci Li	14.5 V 93 mA 625 mW 0.643 µF 0	- - - - -	14.5 V 93 mA 625 mW 0.649 µF 23.3 µH	- - - - -	- - - - -	- - - - -
ASTXXX*****A/B/F*****_** Where XXXX = 4400, 44LP, 4500, 4510, 4520, 4530 (output rated 5, 10 and 20 mV/V)	Ui Ii Pi Ci Li	- - - - -	- - - - -	- - - - -	28 V 93 mA 625 mW 0.643 µF 0	- - - - -	28 V 93 mA 625 mW 0.649 µF 23.3 µH
AST4401*****3/6/8/9/G/J/P* *****_** (output rated 1-5 V, 1-6 V, 0.5- 5.5 V, 0.25-5 V, 1-10 V, 0.1-5.1 V, 0.5-4.5 V)	Ui Ii Pi Ci Li	14.5 V 93 mA 625 mW 0.643 µF 0	- - - - -	14.5 V 93 mA 625 mW 0.649 µF 23.3 µH	- - - - -	- - - - -	- - - - -
ASTXXX*****3/6/8/9/G/J/P* *****_** Where XXXX = 4400, 44LP, 4500, 4510, 4520, 4530 (output rated 1-5V, 1-6V, 0.5- 5.5V, 0.25-5V, 1-10V, 0.1-5.1V, 0.5-4.5V)	Ui Ii Pi Ci Li	- - - - -	- - - - -	- - - - -	28 V 93 mA 625 mW 0.643 µF 0	- - - - -	28 V 93 mA 625 mW 0.649 µF 23.3 µH

Date: 10 May 2023

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Annexe to: IECEx CSA 14.0037X Issue 5

Applicant: TE Sensores S de RL de CV

Apparatus: Pressure Transducer series AST 44xx and AST45xx



## Full certificate change history

Issue 1: – this Issue introduced the following changes:

1. Update from IEC 60079-0:2011 Ed 6 to IEC 60079-0:2017.
2. Drawing updates
3. The applicants name, address, and trademark were changed from American Sensor Technologies, Inc., 450 Clark Dr., Mount Olive, New Jersey 07828 to Measurement Specialties Inc. 6801 Kaiser Dr. Fremont, California 94555

Issue 2: – this Issue introduced the following change:

1. Addition of optional integral connector for the AST4510, designated by the suffix "6", which allows provision for M12 connection.

Issue 3: – this Issue introduced the following change:

1. Correction of the certificate to include Annex which was not shown in the previous issue. There are no changes to the product or other changes to the certificate. There was no revision of the ExTR.

Issue 4: – this Issue introduced the following changes:

1. Minor drawing amendments which do not impact the construction of the product.
2. Update to include process temperature in markings.

Issue 5: – this Issue introduced the following change:

1. To recognise the change of Company Name and Address:

From	To
Measurement Specialties Inc. A TE Connectivity Company 6801 Kaiser Dr. Fremont California 94555 United States of America	TE Sensores S de RL de CV A TE Connectivity Company Av. Obrero Mundial #9 Parque Industrial Dynatech Hermosillo Sonora 83174 Mexico