



1 **TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 16ATEX4351X** Issue: **3**

4 Equipment: **A Range of Amplified and Passive Pressure Sensors (Type I, II, III, IV and V)**

5 Applicant: **Kulite Semiconductor Products, Inc.**

6 Address: **One Willow Tree Road
Leonia
New Jersey 07605
USA**

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

8 CSA Group Netherlands B.V., certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 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 IEC 60079-0:2018 EN 60079-7:2015+A1:2018

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This Type Examination Certificate relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured. 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 3 G

Ex ec IIC T4 Gc (Ta = -60 °C to +80 °C)

Ex ec IIC T3 Gc (Ta = -60 °C to +125 °C)

Ex ec IIC T2 Gc (Ta = -60 °C to +230 °C)

Signed: J A May

Title: Director of Operations



Project Number 80112472

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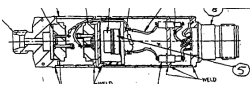
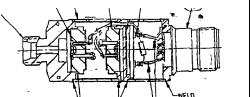
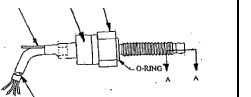
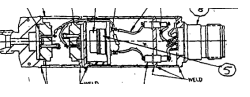
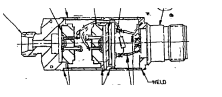
SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The Kulite range of amplified and passive pressure sensors are essentially modular in construction. The sensing element is a silicon diaphragm that is housed within an oiled filled capsule. The amplified transducers contain a hybrid circuit and may also contain a capacitor array and filters for E.M.C protection. The passive transducers contain just the sensing element and compensation resistors. All sensors can be configured to read either absolute, gauge or differential pressure. The pressure port type and electrical connection to the transducer can be specified by the user.

Type I Transducers	Type II Transducers	Type III Transducers	Type IV Transducers	Type V Transducers
			 (Same as type I with platinum RTD for temp measurement)	 (Same as type II with platinum RTD for temp measurement)
Description: Silicon Diaphragm Oil-Filled Design, Amplified, EMC Filters and Capacitor Array	Description: Silicon Diaphragm Oil-Filled Design, Unamplified	Description: Silicon Diaphragm & Metal Diaphragm Designs, Unamplified	Description: Silicon Diaphragm Oil-Filled or Leadless Design, Amplified (internal or in-line) fitted with a platinum RTD (Resistance Temperature Detector)	Description: Silicon Diaphragm Oil-Filled Design, Leadless & Metal Diaphragm Designs Unamplified fitted with a platinum RTD (Resistance Temperature Detector)
Mode: Absolute, Gauge and Differential	Mode: Absolute, Gauge and Differential	Mode: Absolute, Gauge and Differential	Mode: Absolute, Gauge and Differential	Mode: Absolute, Gauge and Differential
Supply: 33 Vdc	Supply: 55 Vdc	Supply: 55 Vdc	Supply: 33 Vdc	Supply: 55 Vdc



SCHEDULE

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Type I Transducers	Type II Transducers	Type III Transducers	Type IV Transducers	Type V Transducers
<p>Example model numbers: APTE-XXX-1000 Series IPTE-1100 Series IBME-1100 Series BMDE-1100 Series ISTE-1000 Series KF-1040 Series KF-1041 Series EPS-XXX-1000 Series TC-1500 Series APTE-DC-XXX Series ETM-XXX-375 & 500 Series PT213A Series EFT-1000 Series NE-XXX-375 Series KE-XXX-375 Series ETQ-XXX Series PT2000A Series ETL-XXX-190 & 312 & 375 Series ETLR Series Other Kulite Models complying with Type I design specification may be included. Type II or Type III Kulite Pressure Transducer with KA-XXX Series (in-line amplifier)</p>	<p>Example model numbers: APT-XXX-1000 Series IPT-1100 Series IPT-750 Series BM-1100 Series BM-750 Series BMD-1100 Series IST-1000 Series PT213A Series (unamplified) ETLR Series HKM-375 Series HEM-375 Series HKM-3X Series HKM-XXX-375 Series HEM-XXX-375 Series IPT-4-750 Series PT2000A Series (unamplified) Other Kulite Models complying with Type II design specification may be included.</p>	<p>Example model numbers: XTM-190 Series XTL-190 Series XTHL-XXX Series XCHL-XXX Series ECS-13L Series Other Kulite Models complying with Type III design specification may be included</p>	<p>Example model numbers: EPTS-312 Series ETL/T-312 Series ETL/T-375 Series ETLR/T-635 Series Other Kulite Models complying with the Type IV design specification may be included Type V Kulite Pressure Transducer with KA-XXX Series (in line amplifier)</p>	<p>Example model numbers: HKL/T-1-235 Series HKL/T-312 Series HKL-T-375 Series Other Kulite Models complying with the Type V design specification may be included</p>

Variation 1 - This variation introduced the following changes:

- i. To permit reduced marking information for small transducers where it is physically not possible to accommodate the marking details. The pressure transducer calibration documentation contains the full marking details.

Variation 2 - This variation introduced the following changes:

- i. Following appropriate assessment to the latest technical knowledge, EN 60079-0:2012/A11:2013, EN 60079-15:2010 were replaced by EN IEC 60079-0:2018 and EN 60079-7:2015+A1:2018.
- ii. Minor update to the product description.
- iii. The Applicant's name was updated from Kulite Semiconductor Products to Kulite Semiconductor Products, Inc.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

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14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	02 February 2017	R70099399A	The release of the prime certificate.
1	20 November 2017	R70160206A	The introduction of Variation 1.
2	15 October 2019	0685	Transfer of certificate Sira 16ATEX4351X from Sira Certification Service to CSA Group Netherlands B.V..
3	01 June 2022	R80112471A	The introduction of Variation 2.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

- 15.1 Provision shall be made, either in the equipment or external to the equipment, to provide for the transient protection device to be set at a level not exceeding 119V at the power supply terminals of the equipment. The transient protection shall limit transients up to a maximum input voltage of the equipment in normal operation.
- 15.2 The connector used to make an electrical connection to the transducer shall have a minimum rating of IP54 (when used indoors) or IP66 rating (when used outdoors) and shall be manufactured from stainless steel and the pins insulated from the shell by glass to metal seals.
- 15.3 The connectors shall not be connected or disconnected whilst the equipment is energised. Before connection, they shall be inspected to be free from contaminants (e.g. moisture and dust) that might impair the segregation between the pins.
- 15.4 The equipment shall be adequately earthed.

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.

17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.
- 17.2 Holders of Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 At the conclusion of manufacture and before shipment, the equipment shall withstand for one minute, without breakdown, the application of the 500 Vac potential between the circuit and the enclosure. The maximum current flowing shall not exceed 5 mA.

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Certificate Annexe



Certificate Number: Sira 16ATEX4351X

Equipment: A Range of Amplified and Passive Pressure Sensors (Type I, II, III, IV and V)

Applicant: Kulite Semiconductor Products, Inc.

Issue 0

Drawing no.	Sheets	Rev	Date (Sira Stamp)	Description
140-A-87800	1 of 1	-	20 Jan 17	Marking, Ex nA
220-B-45529	1 of 1	C	21 Nov 16	Type I pressure transducer, assembly
220-B-45531	1 of 1	-	21 Nov 16	Sensor capsule sub-assembly
220-B-45537	1 of 1	B	21 Nov 16	Type I pressure transducer, assembly
220-B-45541	1 of 1	-	21 Nov 16	Type III pressure transducer, assembly
220-B-45545	1 of 1	-	21 Nov 16	Type III pressure transducer assembly – leadless construction
230-A-45528	1 of 1	J	20 Jan 17	Type I pressure transducer, description
230-A-45530	1 of 1	C	21 Nov 16	Type I pressure transducer, parts list
230-A-45536	1 of 1	F	20 Jan 17	Type II pressure transducer, description
230-A-45538	1 of 1	B	21 Nov 16	Type II pressure transducer, parts list
230-A-45540	1 of 1	C	20 Jan 17	Type III pressure transducer, description
230-A-45542	1 of 1	-	21 Nov 16	Type III pressure transducer, parts list
230-A-82231	1 of 1	A	20 Jan 17	Type IV combined pressure & temperature transducer, description
230-A-82233	1 of 1	A	20 Jan 17	Type V combined pressure & temperature transducer, description
230-A-87690	1 of 1	-	10 Jan 17	Criteria for Ex nA certification
820-B-45534	1 of 1	B	21 Nov 16	Type I, typical compensation board assembly & wiring diagram
820-B-45539	1 of 1	B	21 Nov 16	Type II, typical compensation board assembly & wiring diagram
820-B-45543	1 of 1	-	21 Nov 16	Type III, typical compensation board assembly & wiring diagram

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
140-A-87800	1 of 1	A	08 Nov 17	ATEX Label Ex nA Certified Transducers

Issue 2 – No new drawings were introduced.

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
230-A-87690	1 of 1	A	22 Mar 22	Criteria for Ex ec certification
140-A-87800	1 of 1	B	22 Mar 22	ATEX Label Ex ec Certified Transducers
230-A-45530	1 of 1	D	22 Mar 22	Parts List Kulite Pressure Transducer Type I
230-A-45538	1 of 1	C	22 Mar 22	Parts List Kulite Pressure Transducer Type II
230-A-45542	1 of 1	A	22 Mar 22	Kulite Pressure Transducer Type III

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