Certificate of Compliance

Certificate: 70099401 **Master Contract:** 216092

Project: 70161769 **Date Issued:** November 20, 2017

Issued to: **Kulite Semiconductor Products**
One Willow Tree Road
Leonia, New Jersey, 07605
USA

Attention: **John Chivers**

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only

Issued by: B J Allen

PRODUCTS

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

Ex nA IIC T4 Gc (Ta = -60°C to +80°C)
Ex nA IIC T3 Gc (Ta = -60°C to +125°C)
Ex nA IIC T2 Gc (Ta = -60°C to +230°C)

CLASS 2258 83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - Certified to US Standards

Class I, Zone 2, AEx nA IIC T4 Gc (Ta = -60°C to +80°C)
Class I, Zone 2, AEx nA IIC T3 Gc (Ta = -60°C to +125°C)
Class I, Zone 2, AEx nA IIC T2 Gc (Ta = -60°C to +230°C)

Pressure Transducers Type I, Model numbers listed below; Vmax = 33 V; connected per installation drawing 230-A-45532; Temperature Code T4 (Tamb = -60°C to + 80°C), Temperature Code T3 (Tamb = -60°C to + 125°C), Temperature Code T2 (Tamb = -60°C to + 230°C).

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Pressure Transducers Type II, Model numbers listed below; Vmax = 55 V; Temperature Code T4 (Tamb = -60°C to + 80°C), Temperature Code T3 (Tamb = -60°C to + 125°C), Temperature Code T2 (Tamb = -60°C to + 230°C).

Pressure Transducers Type III, Model numbers listed below; Vmax = 55 V; Temperature Code T4 (Tamb = -60°C to + 80°C), Temperature Code T3 (Tamb = -60°C to + 125°C), Temperature Code T2 (Tamb = -60°C to + 230°C).

Pressure Transducers Type IV, Model numbers listed below; Vmax = 33 V; Temperature Code T4 (Tamb = -60°C to + 80°C), Temperature Code T3 (Tamb = -60°C to + 125°C), Temperature Code T2 (Tamb = -60°C to + 230°C).

Pressure Transducers Type V, Model numbers listed below; Vmax = 55 V; Temperature Code T4 (Tamb = -60°C to +80°C), Temperature Code T3 (Tamb = -60°C to + 125°C), Temperature Code T2 (Tamb = -60°C to + 230°C).

Type I Transducers	Type II Transducers	Type III Transducers	Type IV Transducers	Type V Transducers
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)	**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.	**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	**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)	**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

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Conditions of Acceptability

i. Provision shall be made, either in the equipment or external to the equipment, to provide the transient protection device to be set at a level not exceeding 119V at power supply terminals of the equipment. The transient protection shall limit transients up to maximum input voltage of the equipment in normal operation.

ii. 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 shell by glass to metal seals.

iii. 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.

iv. The equipment shall be adequately earthed in accordance with ANSI/NFPA 70, National Electrical code, when used in the US, or CAN/CSA-C22.2 NO. 0-10 (R2015) - General requirements - Canadian electrical code, part II when used in Canada.

APPLICABLE REQUIREMENTS

C22.2 No. 142-M1987	Process Control Equipment
CAN/CSA-C22.2 No. 60079-0:15	Explosive Atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-15:15	Electrical apparatus for explosive gas atmospheres - Part 15: Construction, test and marking of type of protection "n" electrical apparatus
ANSI/UL 60079-0:2013	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-15:2013	Electrical apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection "n"
UL 916 (4th Ed)	Energy Management Equipment

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MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Electro-Etched/Laser markings are done directly on the body of the transducer or on a metallic attached tag when, due to the size of the product, full marking is not practical to be done on enclosure. The following details appear:

- CSA Monogram with C-US
- Company name
- Model number
- Serial number and/or Date Code
- Electrical Input Rating
- Ex nA symbol
- Class I, Division 2, Groups A, B, C, D

Due to the size of the very small pressure transducers the marking is reduced to a minimum that can be marked on them, and is as follows:-

KPN: KULITE PART NUMBER
SER:
KULITE 34345

Class I Div 2, GROUPS A to D, T4 to T2

C US

CSA Group

Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70161769	2017-11-20	Reduced marking permitted on very small pressure transducers
70099401	2017-02-22	Original Certification.