



Certificate of Compliance

Certificate: 70006610

Master Contract: 246454

Project: 70203784

Date Issued: February 25, 2019

Issued to: KEM Kueppers Elektromechanik GmbH
5 Liebigstrasse
Karlsfeld 85757
Bayern
GERMANY

Attention: David Sperber

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:

P Johnson

PRODUCTS

CLASS 2258-04 - PROCESS CONTROL EQUIPMENT – Intrinsically Safe and Non-Incendive Systems – For Hazardous Locations

**Class I, Division 1, Groups A, B, C, and D; T4
Ex ia IIC T4 Ga**

Pulse Amplifier model VTD03-aa-b-c-Ex. Input rated 12-24 Vdc, 25 mA max. Intrinsically safe with power supply (pin 1 with respect to pin 3(GND)) entity parameters: $U_i = 30$ Vdc, $I_i = 120$ mA, $P_i = 850$ mW, $C_i = 8$ nF and $L_i = 10\mu$ H and signal output on each channel (pin 2 and pin 4 with respect to pin 3(GND)): $U_i = 30$ Vdc, $I_i = 24.6$ mA, $P_i = 185$ mW, $C_i = 8$ nF and $L_i = 10\mu$ H. Ambient temperature range $-40^\circ\text{C} \leq T_a \leq 50^\circ\text{C}$. Install per control drawing VTD03_CONT. IP65.

Where:

aa = Corresponding meter type (= form and position of pickup tip) = 01 ... 99

b = connector type, pinning and output mode = A ... Z, except "N" or "M"

c = options = A... Z



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Pulse Amplifier model A13256-a2. Input rated 12-24 Vdc, 25 mA max. Intrinsically safe with power supply (pin 5 with respect to pin 1(GND)) entity parameters: $U_i = 30$ Vdc, $I_i = 120$ mA, $P_i = 850$ mW, $C_i = 8$ nF and $L_i = 10\mu$ H and signal output on each channel (pin 2 and pin 4 with respect to pin 1(GND)): $U_i = 30$ Vdc, $I_i = 24.6$ mA, $P_i = 185$ mW, $C_i = 8$ nF and $L_i = 10\mu$ H. Ambient temperature range $-40^\circ\text{C} \leq T_a \leq 50^\circ\text{C}$. Install per control drawing A13256-02_CONT. IP65.

Where:

a = form and position of pickup tip = 0 ... 9

CONDITIONS OF ACCEPTABILITY

- (1) Equipment has only been tested for electrical safety. No evaluation of functional safety and performance characteristics has been conducted
- (2) The materials used in the construction of this equipment contain levels of Al, Mg, Ti, Zr that are greater than that allowed for EPL Ga by clause 8.3 of CAN/CSA-C22.2 No. 60079-0, therefore in rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered when this equipment is being used/installed in a hazardous area.
- (3) The equipment shall be supplied with Limited Energy Circuit (LEC) as defined in CSA C22.2 No. 61010-1

Notes:

1. The above model is permanently connected, Equipment Class I, Pollution Degree 3, Measurement Category I.
2. Mode of operation: Continuous
3. Environmental Conditions: Normal: -40°C to 50°C (humidity condition is not considered as the Input is 12 -24Vdc, no hazardous voltages exist in the Models).

CLASS 2258-84 PROCESS CONTROL EQUIPMENT – Intrinsically Safe and Non-Incendive Systems – For Hazardous Locations – Certified to U.S. Standards

Class I, Division 1, Groups A, B, C, and D; T4

Class I, Zone 0 AEx ia IIC T4 Ga

Pulse Amplifier model VTD03-aa-b-c-Ex. Input rated 12-24 Vdc, 25 mA max. Intrinsically safe with power supply (pin 1 with respect to pin 3(GND)) entity parameters: $U_i = 30$ Vdc, $I_i = 120$ mA, $P_i = 850$ mW, $C_i = 8$ nF and $L_i = 10\mu$ H and signal output on each channel (pin 2 and pin 4 with respect to pin 3(GND)): $U_i = 30$ Vdc, $I_i = 24.6$ mA, $P_i = 185$ mW, $C_i = 8$ nF and $L_i = 10\mu$ H. Ambient temperature range $-40^\circ\text{C} \leq T_a \leq 50^\circ\text{C}$. Install per control drawing VTD03_CONT. IP65.

Where:

aa = Corresponding meter type (= form and position of pickup tip) = 01 ... 99

b = connector type, pinning and output mode = A ... Z, except "N" or "M"

c = options = A... Z

Pulse Amplifier model A13256-a2. Input rated 12-24 Vdc, 25 mA max. Intrinsically safe with power supply (pin 5 with respect to pin 1(GND)) entity parameters: $U_i = 30$ Vdc, $I_i = 120$ mA, $P_i = 850$ mW, $C_i = 8$ nF and $L_i = 10\mu$ H and signal output on each channel (pin 2 and pin 4 with respect to pin 1(GND)): $U_i = 30$ Vdc, $I_i = 24.6$ mA,



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Pi = 185 mW, Ci = 8 nF and Li = 10 μ H. Ambient temperature range $-40^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$. Install per control drawing A13256-02_CONT. IP65.

Where:

a = form and position of pickup tip = 0 ... 9

CONDITIONS OF ACCEPTABILITY

- (1) Equipment has only been tested for electrical safety. No evaluation of functional safety and performance characteristics has been conducted.
- (2) The materials used in the construction of this equipment contain levels of Al, Mg, Ti, Zr that are greater than that allowed for EPL Ga by clause 8.3 of CAN/CSA-C22.2 No. 60079-0, therefore in rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered when this equipment is being used/installed in a hazardous area.
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Notes:

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APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-10 (R2015)	General requirements — Canadian Electrical Code, Part II
CAN/CSA-C22.2 No. 60079-0:18	Explosive atmospheres — Part 0: Equipment — General requirements
CAN/CSA-C22.2 No. 60079-11:14 Ed2 (IEC Ed 5)	Explosive atmospheres — Part 11: Equipment protection by intrinsic safety "i"
ANSI/UL 60079-0:2013 Edition 6, R2017 (IEC Ed 6)	Explosive atmospheres – Part 0: Equipment – General requirements
ANSI/UL 60079-11:2012	Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety "i"
CAN/CSA C22.2 No. 61010-1-04	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
UL No. 61010-1 (2 nd Edition)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
CAN/CSA C22.2 No. 157-92 (R2016)	Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations.
ANSI/UL 913 Edition 8	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations



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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.

The following markings are laser engraved onto the housing (enclosure) or laser engraved onto a metal plate riveted to the housing (enclosure).

- Manufacturer's name "KEM Kueppers Elektromechanik GmbH", "KEM" or CSA Master Contract Number "246454", adjacent to the CSA Mark in lieu of Manufacturer's name.
- Model number: as specified in the PRODUCTS section, above.
- Electrical ratings/ Entity Parameters: As specified in the PRODUCTS section, above.
- Ambient temperature rating: as specified in the PRODUCTS section, above.
- Manufacturing date in MMY format, or serial number, traceable to month of manufacture.
- Enclosure ratings: As specified in the PRODUCTS section, above.
- The CSA Mark (with or without C and/or US indicators), as shown on the Certificate of Conformity.
- "CSA13CA70006610" (Certificate number) adjacent to the CSA Monogram
- Hazardous Location designation: As specified in the PRODUCTS section, above (may be abbreviated).
- Temperature Code: as specified in the PRODUCTS section, above.
- The following words:
 - "Exia" (shall appear on the product)
 - "INTRINSICALLY SAFE" and "SÉCURITÉ INTRINSÉQUE" (may appear on the control drawing)
 - "WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY" and "AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÉQUE"; (may appear on the control drawing)
 - "WARNING: To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing" (may appear on the control drawing)
 - "Install per drawing VTD03_CONT" or "Install per drawing A13256-02_CONT" (shall appear on the product)