



Certificate of Compliance

Certificate: 1098814

Master Contract: 161241

Project: 80177371

Date Issued: 2023-08-15

Issued To: nVent Thermal LLC
899 Broadway Street
Redwood City, California, 94063
United States

Attention: James Lim

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Thong Tong*
Thong Tong



PRODUCTS

CLASS - C287801 - HEATERS Cable and Cable Sets - For Hazardous Locations

CLASS - C287881 - HEATERS-Cable and Cable Sets For Hazardous Locations-Certified to U.S. Standards

Class I, Division 1 Groups A, B, C and D; Class II, Division 1 Groups E, F, and G; Class III

Electrical Heat Tracing Systems for Hazardous Locations:

Type VPL-CT high temperature power limiting heating cable sets, PFA fluoropolymer insulating and outer jacket material, rated maximum 260°C, 120V- 480V (20VPL2-CT rated max 240V); min. installation temperature - 60°C; T-Code Rating T6 to T2; Usage Marking: -WS; Cat. Nos. 5, 10 15 & 20VPL1, 2, 4-CT heating cables with the following connection kits:

Class I Division 2 Group A, B, C, D; Class II / III Division 2 Group E, F, G



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Integral components: E-40 (heat shrink end seal kits), S-40 (shrink splice kits)

- Min. installation temperature for E-40 and S-40 is -60°C
- Max. temperature for E-40 and S-40 is 260°C
- Ambient temperature for E-40 and S-40 is -60°C to +56°C

Class I, Division 1 Groups A, B, C and D; Class II, Division 1 Groups E, F, and G

Division 1 Kit: HAK-C-100 Connection Kit

Class I, Division 2 Groups A, B, C and D; Class II, Division 2 Groups E, F, and G; Class III

Division 2 Kits: JBS-100-A, JBS-100-A6, JBS-100-STB, and JBM-100-A, JBM-100-A6, JBM-100-STB Power Connections, JBS-100-L-A and JBM-100-L-A Power Connections with Light Module, T-100 Splice/Tee Connection, JS-100-A Power Connection Transition Kit, E-100-A End Seal, E-100-L/-LR Lighted End Seals, C75-100-A Gland Kit and CS-100 Core Sealer, JBU-100-A, JBU-100-A6 and JBU-100-L-A off pipe power connection kit.

Notes

1. Installation in accordance with the CEC Part I or with the National Electrical Code, ANSI/NFPA 70, Article 426.
2. Installation instruction sheet provided with each cable set assembly.
3. The overall hazardous locations designation is determined by the hazardous locations' designation of the accessory with the lowest ratings. (e.g., box and/or sealing fitting).

APPLICABLE REQUIREMENTS

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| CSA C22.2 No. 60079-30-1:17 | - Explosive atmospheres- Part 30-1: Electrical resistance trace heating- General and Testing Requirements |
| CSA C22.2 No. 30-M1986 | - Explosion- Proof Enclosures for Use in Class I Hazardous Locations |
| CSA C22.2 No. 25- 17 | - Enclosure for use in Class II, Groups E, F and G Hazardous Locations |
| CSA C22.2 No. 213-17 | - Nonincendive Electrical Equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations |
| ANSI/UL 60079-30-1 Ed. 1 | - Explosive Atmospheres – Part 30-1: Electrical Resistance Trace Heating – General and Testing Requirements |
| UL 1203:2013 Ed5 | - Standard for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations |
| UL 121201 Ed. 9 | - Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations |

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.



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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.

I. Marking on Heating Cable (Field-Assembled)

The following marking shall be clearly and permanently surface marked on the heating cable with the following information:

- a) the manufacturer's name or trademark or Master Contract No. "161241" or CSA Legacy File No. "LR 33381";
- b) the catalogue number, reference number, or model;
- c) the month and year of manufacture, date code, applicable serial number, or equivalent;
- d) the rated voltage;
- e) the rated output in watts per unit length and the specified temperature for that output;
- f) the maximum permissible steady-state current;
- g) the usage marking as shown in Table 1 (of CSA Std. 130-16);
- h) the word "parallel";
- i) the Class(es) and, where appropriate, Division(s) and Group(s) of hazardous locations rating (e.g., Class I, Division 2, Groups A, B, C, and D);
- j) the temperature code (e.g., T3A, T4, etc.) or the maximum sheath temperature of the heating device except where engineered systems contain this information on drawings or other documentation; and
- k) the $cCSA_{US}$ Mark.

II. Marking on Packages

The original carton, container, spool, or reel in or on which the heating device or heating device set leaves the factory shall be clearly marked with the following information:

- a) The manufacturer's name or trademark or Master Contract No. "161241" or CSA Legacy File "LR 33381";
- b) the catalogue number, reference number, or model;
- c) the month and year of manufacture, date code, applicable serial number, or equivalent;
- d) the words "Refer to installation instructions", or equivalent wording, and any applicable notices, warnings, and directions to the installer;
- e) the warning "CAUTION: a ground fault protection device must be used with this heating device" and "ATTENTION : ce produit doit être utilisé avec une protection de mise à la terre";
- f) the maximum voltage for which the heating device or heating device set is intended;
- g) the maximum rated current;
- h) the rated output of the device expressed in watts per unit area at a reference temperature;
- i) the words "heating cable" or "heating cable set", and usage marking and usage as shown in Table 1 (of CSA Std. 130-16);
- j) the manufacturer's declared minimum installation temperature (-60°C);



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- k) the Class(es) and, where appropriate, Division(s) and Group(s) of hazardous locations rating (e.g., Class I, Division 2, Groups A, B, C, and D);
- l) the temperature code (e.g., T3A, T4, etc.) or the maximum sheath temperature of the heating device except where engineered systems contain this information on drawings or other documentation ; and
- m) the cCSA_{US} Mark.

III. Connections and Termination Components/Kits

The cartons or containers and the instructions of all connection and termination kits shall be clearly marked with the following information:

- a) The manufacturer's name or trademark or Master Contract No. "161241" or CSA Legacy File "LR 21133";
- b) the catalogue number, reference number, or model;
- c) Intended use (ie. For use with Raychem Models BTV-CT, QTVR-CT, KTV-CT, VPL-CT, HTV-CT * or XTV (R) -CT heating cables only);
- d) the words "SEE INSTALLATION INSTRUCTIONS" and any applicable notices, warnings, or directions to the user;
- e) the maximum permissible steady-state current;
- f) the rated voltage;
- g) maximum temperature continuous exposure;
- h) when required by Clause 4.6.1 (of CSA Std. 130-16), the words "Temperature at the point of connection to branch circuit conductors may exceed 60 °C"; and
- i) the cCSA_{AUS} Mark.

Note: *HTV-CT is certified under report #1333271. Class/Div rating is not applicable for the connections/termination kits when it's installed with HTV-CT.

IV. Installation Instructions

The manufacturer shall provide complete instructions for the installation and maintenance of the heating device and a statement that the heating device set must be installed in accordance with applicable codes. Instructions shall also include caution or warning notices that are specific to the heating device and its intended use.

Instructions shall include the following:

- a) applicable ground fault protection requirements, when a ground fault protection device is not provided with the heating device;
- b) any restrictions that the heating portion of the heating device set shall not touch, cross over, or overlap itself;
- c) restrictions relating to the minimum spacing between adjacent heating devices, e.g., spiral turns around the pipe;
- d) the recommended location of any temperature control sensor(s);
- e) restrictions regarding clearances from combustible surfaces;
- f) the minimum bending radius of each flexible heating device;
- g) recommended attachment methods;
- h) an explanation of the attribute and application markings for the heating device or heating device set;
- i) recommended inspection and test procedures;
- j) the minimum installation temperature for the heating device or heating device set;
- k) restrictions, if any, on permissible thickness and material (or insulation factor) of thermal insulation;



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- l) explanation of specific applications;
 - m) any restrictions regarding alteration of sets;
 - n) a list of components and field assembly procedures;
 - o) the recommended size of the over-current protective device;
 - p) the order, preparation, and method of assembling all components;
 - q) explanation of specific applications
 - r) the statement “De-energise all power circuits before installation or servicing.”;
 - s) the statement “Keep ends of heating devices and kit components dry before and during installation.”; and
 - t) for pipe or vessel applications, the statement “The presence of the heating devices shall be made evident by the posting of caution signs or markings at appropriate locations and/or at frequent intervals along the circuit.”.

Notes:

Products certified under Class C287801 have been certified under CSA’s ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca

