

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM18US0314X
3. **Equipment:** BTV
(Type Reference and Name) Self-Regulating Electrical Heat Trace Cable Systems

4. **Name of Listing Company:** nVent Thermal LLC

5. **Address of Listing Company:** 899 Broadway St.
Redwood City, CA 94063
USA

6. The examination and test results are recorded in confidential report number:

PR451067 dated 8th March 2019

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3611:2004, FM Class 3810:2018, ANSI/ISA-S12.0.01:1998, ISA-S12.22.01:1998, IEEE 515:2011

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

Suitable for Class I, Zone 1, Group IIC; Suitable for Class I, Division 2, Groups A, B, C, D; Suitable for Class II, Division 2, Groups F, G; Suitable for Class III, Division 1; hazardous (classified) locations with a maximum sheath temperature (operating temperature code) rating of T6 (85°C). The maximum maintain temperature is 150°F (65°C) and the maximum intermittent exposure temperature (power on or off) is 185°F (85°C). The minimum installation temperature is -40°F (-40°C).

Certificate issued by:

J. E. Marquedant
VP, Manager - Electrical Systems

27 March 2019

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE



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11. The marking of the equipment shall include:

Class I, Zone 1, Group IIC;

Class I, Division 2, Groups A, B, C, D;

Class II, Division 2, Groups F, G;

Class III, Division 1;

T6

12. **Description of Equipment:**

General – The BTV family of self-regulating heating cables provides for a solution to freeze-protection and process-temperature maintenance applications. BTV heating cables maintain process temperatures up to 150°F (65°C) and can withstand intermittent exposure to temperatures up to 185°F (85°C). The heating cables are configured for use in non-hazardous and hazardous locations, including areas where corrosives may be present.

Construction – The BTV heat trace cables are constructed with a modified polyolefin inner jacket and fluoropolymer outer jacket, tinned-copper braid, conductive core and nickel-plated 16 AWG copper bus wires.

Ratings – The BTV Self-Regulating Electrical Trace Cable Systems supply voltage is 120 Vac (100-130 Vac) or 240 Vac (200-277 Vac). The maximum maintain or continuous exposure temperature (power on) is 150°F (65°C). The maximum intermittent exposure temperature, 1000 hours (power on or off), is 185°F (85°C). The minimum installation temperature is -40°F (-40°C).

aBTVb-c-Cd. Self-Regulating Electrical Heat Trace Cable Systems.

a = Output, W/ft @ 50°F (W/m @ 10°C): 3 (10), 5 (16), 8 (26) or 10 (33).

b = Voltage: 1 (120Vac) or 2 (240Vac).

c = Monitor wire option: M or blank.

d = Outerjacket material option: R, T* or blank (only BTV cable with T outerjacket option may include Class I, Zone 1, Group IIC T6 rating).

13. **Specific Conditions of Use:**

1. The maximum maintain temperature rating is 65°C (150°F), and the maximum intermittent exposure temperature (Power On or Off) rating is 85°C (185°F).

2. The BTV electrical heat trace cable systems are designed for use with the manufacturer's suitably rated FM Approved AutoMatrix, PolyMatrix, JBM-100-L-A, JBS-100-L-A, JBS-100-A, JBM-100-A, E-100-A, E-100-L, S-150, E-150, JBS-100-A6 and T-100 connection kits. The Type or IP rating for the BTV electrical heat trace cable systems is depended on the rating of the FM Approved connection kits.

3. Ambient temperature range for the JBM-100-A, JBS-100-A, JBS-100-A6, and E-100-A is -75°F (-60°C) to 132°F (56°C).

4. Ambient temperature range for the E-100-L-A, JBM-100-L-A, JBS-100-L-A is -40°F (-40°C) to 104°F (40°C).

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

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15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
8 th March 2019	Original Issue.
27 th March 2019	<u>Supplement 1:</u> Report Reference: RR218086 dated 27 th March 2019 Description of the Change: Editorial changes to the description.

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