

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM18US0146X
3. **Equipment:** *aQTVRb-CT Self-Regulating Electrical Heat Trace Cable Systems*
(Type Reference and Name)
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:

3014493 dated 14th May 2002
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, ANSI/IEEE 515:2004,
ANSI/ISA-S12.00.01: 2002, ANSI/ISA-S12.16.01:2002, ANSI/NEMA 250:1991
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:**

Increased safety for Class I, Zone 1, AEx e II 120°C (T4); suitable for Class I, Division 2, Groups A, B, C and D, suitable for Class II, Division 2, Groups E, F and G, and suitable for Class III, Division 1, hazardous (classified) locations, indoors and outdoors (Type 4X), with a maximum sheath temperature (operating temperature code) rating of T4A (120°C).
11. The marking of the equipment shall include:

Certificate issued by:



J.E. Marquedant
VP, Manager, Electrical Systems

20 May 2018

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
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



US Certificate Of Conformity No: FM18US0146X

Class I, Zone 1, AEx e II 120°C (T4)
Class I, Division 2, Groups A, B, C and D T4A
Class II, Division 2, Groups E, F and G T4A
Class III, Division 1
Type 4X

12. Description of Equipment:

General - The QTVR family of self-regulating heating cables is designed for pipe heat tracing in industrial applications. QTVR heating cables can provide process-temperature maintenance up to 225°F (110°C) and can also be used for freeze protection in systems having high heat loss. The heating cables are configured for use in non-hazardous, Zone 1, Division 2 hazardous locations, including areas where corrosives may be present.

Ratings - (*) refer to specific conditions of use.

aQTVRb-CT Self-Regulating Electrical Heat Trace Cable Systems.

a = Output (W/ft@50°F): 10, 15 or 20.

b = Voltage: 1 (100-130Vac) or 2 (200-277Vac).

13. Specific Conditions of Use:

1. The maximum sheath temperature (operating temperature code) rating of 120°C is based on maximum maintain temperature rating of 90°C.
2. The QTVR heating cables are designed for use with FM Approved E-100-A, E-100-L, E-100-LR, E-150, JBM-100-A, JBM-100-L-A, JBS-100-A, JBS-100-L-A, S-150, and T-100 Connection Kits, and AutoMatrix and Polymatrix 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.

15. Schedule Drawings

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

16. Certificate History

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Details of the supplements to this certificate are described below:

Date	Description
14 th May 2002	Original Issue.
20 th May 2018	<u>Supplement 3:</u> Report Reference: RR213993 dated 20 th May 2018 Description of the Change: 1) Name change to nVent Thermal LLC. 2) Updated the year on the FM Class 3600 standard to 2018 due to nontechnical changes in its latest edition.

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