IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx CSA 20.0006**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2020-06-12)
Date of Issue:	2021-04-17		
Applicant:	**Thermon Inc** 100 Thermon Dr San Marcos, TX 78667 **United States of America**		
Equipment:	**K-Profile Trace Heating Cable**		
Optional accessory:	Integral components: ET-8C, TBX-4LC, SK-SX		
Type of Protection:	**Ex 60079-30-1**		
Marking:	Ex 60079-30-1 IIC T* Gb Ex 60079-30-1 IIIC T* Db *T3 for EPL Gb; T200°C for EPL Db for USX 3-1, 3-2, 6-1, 6-2, 9-1, 9-2, 12-1, 12-2, 15-2 *215°C (T2) for EPL Gb; T215°C for EPL Db; for USX 15-1, 20-1 *230°C (T2) for EPL Gb; T230°C for EPL Db; for USX 20-2 *T3 for EPL Gb; T200°C for EPL Db for HTSX 3-1, 3-2, 6-1, 6-2, 9-1, 9-2, 10-4,12-1, 12-2, 15-2, 15-4 *215°C (T2) for EPL Gb; T215°C for EPL Db; for HTSX 15-1, 20-1 *230°C (T2) for EPL Gb; T230°C for EPL Db; for HTSX 20-2, 20-4 *T6 to T3 for EPL Gb; T85°C to T200°C for EPL Db for KSX		

Approved for issue on behalf of the IECEx Certification Body:	**Dorin Stochitoiu**
Position:	**Technical Advisor**
Signature: (for printed version)	
Date: (for printed version)	

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Certificate issued by:

CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W IR3
Canada

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Manufacturer: **Thermon Inc**
100 Thermon Drive
San Marcos, Texas 78666
United States of America

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC/IEEE 60079-30-1:2015 Edition:1.0	Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

CA/CSA/ExTR20.0014/00 CA/CSA/ExTR20.0014/01

Quality Assessment Report:

GB/FME/QAR20.0002/00

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Electric parallel self-regulating heating cable, catalogue designation "USX", “HTSX” and “KSX”, for tracing of metal or non-metallic pipes or vessels, with fluoropolymer (PFA) core, a nickel-plated copper braid, and a fluoropolymer (PFA) overjacket and can be optionally supplied with a tinned copper braid and a fluoropolymer overjacket (FEP). The products are twin-lead parallel circuit self-regulating heating cables that produce heat inversely proportional to pipe temperature. The cables are rated at 3 to 20 Watts per foot (10 to 66 Watts per meter) and has the following temperature ratings:

HTSX:

Ambient Temperature Range: -60ºC to +55ºC

Maximum Maintain Temperature: 150ºC*

Maximum Exposure Temperature: 204ºC (Intermittent Power-off)

Maximum Withstand Temperature: 250ºC**

* Maximum Maintain Temperature for voltages 380-480Vac is limited to 121℃

** Maximum Withstand Temperature for voltages 380-480Vac is limited to 204℃

USX:

Ambient Temperature Range: -60ºC to +55ºC

Maximum Maintain Temperature: 240ºC

Maximum Exposure Temperature: 250ºC (Intermittent Power-off)

Maximum Withstand Temperature: 250ºC

KSX:

Ambient Temperature Range: -60ºC to +55ºC

Maximum Maintain Temperature: 121ºC

Maximum Exposure Temperature: 121ºC (Intermittent Power-off)

Maximum Withstand Temperature: 121ºC

The maximum rated voltage is 480Vac. Temperature class for K-profile trace heating cable is as followed:

USX:

- T3 for EPL Gb; T200℃ for EPL Db for USX 3-1, 3-2, 6-1, 6-2, 9-1, 9-2, 12-1, 12-2, 15-2
- 215℃ (T2) for EPL Gb; T215℃ for EPL Db; for USX 15-1, 20-1
- 230℃ (T2) for EPL Gb; T230℃ for EPL Db; for USX 20-2

HTSX:

- T3 for EPL Gb; T200℃ for EPL Db for HTSX 3-1, 3-2, 6-1, 6-2, 9-1, 9-2, 10-4,12-1, 12-2, 15-2, 15-4
- 215℃ (T2) for EPL Gb; T215℃ for EPL Db; for HTSX 15-1, 20-1
- 230℃ (T2) for EPL Gb; T230℃ for EPL Db; for HTSX 20-2, 20-4

KSX:

- T6 to T3 for EPL Gb*;
- T85℃ to T200℃ for EPL Db*;

*Stabilized Design

See the table in the annex for the rated voltage and nominal power of the model numbers.

SPECIFIC CONDITIONS OF USE: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1:

Variation to include the HTSX and KSX self-regulating cable models and increase the rated voltage of the HTSX self-regulating cable model to 480Vac, from 277 Vac.

Annex:

Annex to IECEx CSA 20.0006 Issue 1.pdf

Table below shows the rated voltage and nominal power for the model numbers in this certificate:

Model No.	Rated Voltage Vac	Nominal Power W/m (W/ft) at 10°C
USX 3-1	110-120	10 (3)
USX 6-1	110-120	20 (6)
USX 9-1	110-120	30 (9)
USX 12-1	110-120	39 (12)
USX 15-1	110-120	49 (15)
USX 20-1	110-120	66 (20)
USX 3-2	208-277	10 (3)
USX 6-2	208-277	20 (6)
USX 9-2	208-277	30 (9)
USX 12-2	208-277	39 (12)
USX 15-2	208-277	49 (15)
USX 20-2	208-277	66 (20)
HTSX 3-1	110-120	10 (3)
HTSX 6-1	110-120	20 (6)
HTSX 9-1	110-120	30 (9)
HTSX 12-1	110-120	39 (12)
HTSX 15-1	110-120	49 (15)
HTSX 20-1	110-120	66 (20)
HTSX 3-2	208-277	10 (3)
HTSX 6-2	208-277	20 (6)
HTSX 9-2	208-277	30 (9)
HTSX 12-2	208-277	39 (12)
HTSX 15-2	208-277	49 (15)
HTSX 20-2	208-277	66 (20)
HTSX 10-4	380-480	33 (10)
HTSX 15-4	380-480	49 (15)

HTSX 20-4	380-480	66 (20)
KSX 5-1	110-120	17 (5)
KSX 10-1	110-120	33 (10)
KSX 15-1	110-120	49 (15)
KSX 20-1	110-120	66 (20)
KSX 5-2	208-277	17 (5)
KSX 10-2	208-277	33 (10)
KSX 15-2	208-277	49 (15)
KSX 20-2	208-277	66 (20)

K-Profile Self-Regulating cable uses the following integral components to create a trace heating system:

Integral Component	Description	Min. Installation Temp.	Max. Exposure Temp. (power off)*
ET-8C	Certified End Termination (Certificate: IECEx CSA 20.0005U)	-60°C	230°C
TBX-4LC	Certified Power Connection Termination (Certificate: IECEx CSA 20.0005U)	-60°C	230°C
SK-SX	Splice Connection Kit which includes Metallic Covers, GR-SX-M Grommets (material: silicone rubber) , wire crimps and RTV	-60°C	250°C

*Maximum exposure temperature of the K-Profile trace heating system is 230°C when used with ET-8C, TBX-4LC integral components and 240°C when used with SK-SX connection kit.