



EU Type Examination Certificate CML 19ATEX3387 Issue 1

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Powerheat AHT Heating Cables**
- 3 Manufacturer **Heat Trace Limited**
- 4 Address **Mere's Edge,
Chester Road, Helsby, Frodsham,
Cheshire,
WA6 0DJ,
United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018

EN 60079-30-1:2017

- 10 The equipment shall be marked with the following:



II 2 GD

Ex 60079-30-1 IIC T6...T1 Gb

Ex 60079-30-1 IIIC T85°C...T450°C Db

IP67

Withstand temp range: -40°C to +500°C



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11 Description

The Powerheat AHT Heating Cables are constant power trace heating cables that are used to protect against freezing or maintain temperatures. The cables are rated at up to 200 W/m on a supply voltage up to 277 V. They comprise two insulated parallel bus wires, around which is wrapped a layer of mica and the glass insulation tape. A resistance wire is spiralled over the core, which is notched at intervals so that the resistance wire connects to the bus wire underneath. A further layer of mica and glass tape insulation is extruded over the top of the resistance wire. The insulation is covered with an aluminium outer jacket, and can have a further, optional, chemical resistant outer jacket.

The heating cables are cut to length to form a unit that is terminated at each end with a seal kit. The equipment is designed to be connected to a supply by means of suitable certified cable entries and junction boxes in accordance with the manufacturer's installation instructions. Additional earthing of the outer jacket may also be achieved by the use of a P clip arrangement. The minimum installation temperature of the heating cables is -40°C. The maximum surface temperature is dependent on the maximum permissible workpiece temperature as shown in the following tables.

Table A (*)		Maximum permissible workpiece temperature					
Maximum surface temperature:		T6	T5	T4	T3	T2	T1
Product type	Nominal output (W/m)	85°C	100°C	135°C	200°C	300°C	450°C
AHT	10	34	50	100	188	290	340
	15	-	36	71	160	289	350
	30	-	11	28	100	246	323
	50	-	-	-	39	178	276
	100	-	-	-	-	48	140
	150	-	-	-	-	-	36
	200	-	-	-	-	-	7

Table B (#)		Maximum Permissible Workpiece Temperature					
Maximum surface temperature:		T6	T5	T4	T3	T2	T1
Product type	Nominal output (W/m)	85°C	100°C	135°C	200°C	300°C	450°C
AHT	10	40	60	110	190	290	340
	50	-	-	-	-	206	295
	100	-	-	-	-	82	176
	150	-	-	-	-	-	38

Table A: Stabilised design system or Protective System

Table B: Protective system with Heat Trace 'Powermatch' power controller (where a temperature controller is used to limit the maximum surface temperature, it shall comply with EN / IEC/IEEE 60079-30-1:2015 Ed.1.0, clause 4.5.3).

The heating cable meet the requirements for degree of protection IP67.



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Variation 1

This variation introduces the following modifications:

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the document previously listed, EN 60079-30-1:2007, is replaced by EN 60079-30-1:2017; as a result, the markings of the equipment were updated.
- ii. To assess and permit a change to upper limit of the maximum Withstand Temperature.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	09 Dec 2019	R12696A/00	Issue of Prime Certificate
1	19 Aug 2021	R13396A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. An electric strength test of $2 U + 1000 \text{ V rms}$ shall be applied between the conductors and the outer, metallic braid/jacket as appropriate for 60 seconds as required by clause 5.1.2 of EN 60079-30-1.
- ii. An electric strength test of the polymeric sheath (over jacket) used for corrosion resistance shall be carried out in accordance with the requirements of EN 60079-30-1 clause 5.2.1.
- iii. The manufacturer shall verify the output rating for each cable manufactured in accordance with EN 60079-30-1 clause 5.2.2.

14 Specific Conditions of Use (Special Conditions)

None.

Certificate Annex

Certificate Number CML 19ATEX3387
Equipment Powerheat AHT Heating Cables
Manufacturer Heat Trace Limited



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
HC2901/C	1 of 1	6	09 Dec 2019	Certification drawing for Power Heat AHT
AHT Markings	1 of 1	1	09 Dec 2019	AHT Heating Cable - ATEX and IECEx Markings
AHT Drum Label	1 of 1	0	09 Dec 2019	Cable Drum Label – For Cable Type AHT
HTML-23/C	1 of 1	0	09 Dec 2019	Certification Drawing for AHT Marking Label
HTML-24/C	1 of 1	0	09 Dec 2019	AHT ATEX & IECEx Label
HTML-29/C	1 of 1	6	09 Dec 2019	T Class termination label – AHT for Hazardous area application

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Drawing No	Sheets	Rev	Approved date	Title
HTML-23/C	1 of 1	1	19 Aug 2021	Certification Drawing for AHT Marking Label
HTML-24/C	1 of 1	1	19 Aug 2021	AHT ATEX & IECEx Label
AHT Markings	1 of 1	2	19 Aug 2021	PHT Heating Cable – ATEX & IECEx Markings