

Translation, original language: German

(1) EC-TYPE EXAMINATION CERTIFICATE

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 10ATEX0035 U** Issue Number: 1

(4) Component: **Series Resistance Heating Cables and Cold Leads Type EKL Medium and EKL Premium**

(5) Manufacturer: **BARTEC GmbH**

(6) Address: **Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany**

(7) This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential report no. 213248400.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006
EN 61241-0 : 2006

EN 60079-30-1 : 2007
EN 61241-1 : 2004

EN 62086-1 : 2005

(10) The sign "U" placed after the certificate number indicates that this certificate describes components and must not be mistaken for a certificate intended for an equipment or protective system. This EC-Type Examination Certificate may be used as a basis for certification of an equipment or protective system.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified component according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

(12) The marking of the component shall include the following:



II 2 G Ex e II
II 2 D Ex tD A21

This certificate is issued on May 7, 2010 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.


T. Pijpker
Certification Manager

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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 10ATEX0035 U** Issue No. 1

(15) **Description**

The series resistance Heating Cables and Cold Leads Type EKL Medium und EKL Premium form electrical resistance trace heating which is used to raise or maintain the temperature of a work piece where it is externally applied to.

Operating temperature: see table below
 Minimum bending radius 1,08 Ω/km to 1,71 Ω/km: 25 mm
 Minimum bending radius 2,9 Ω/km to 8000 Ω/km: 15 mm

Electrical data

27 - 582 * - 7 5 6 * - *****
 I II III IV V VI VII

Designation	Explanation	Value	Explanation
I	General	27-582	Single conductor polymeric insulated Heating Cables
II	Heater material	1 2 4 6	Material code heating conductor
III	Rated voltage	7	750 V
IV	General	5	General coding
V	Operating temperature	6	-60 °C to +260 °C
VI	Type, mechanical strength, heater construction	F G H J K L	Medium, 4 Joule, reduced Medium, 4 Joule, standard Medium, 4 Joule, enhanced Premium, 7 Joule, reduced Premium, 7 Joule, standard Premium, 7 Joule, enhanced
VII	Electrical resistance at 10 °C	1R08 ... 04R4 07R2 ... 8000	1,08 Ω/km ... 4,4 Ω/km, 7 Joule only 7,2 Ω/km ... 8000 Ω/km, 4 and 7 Joule

(13) **SCHEDULE**

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Installation instructions

The maximum sheath temperatures of the series resistance Heating Cables and Cold Leads Type EKL Medium und EKL Premium have not been verified. For application in ATEX Categories 2G and 2D the maximum sheath temperatures have to be verified by a Notified Body. Two methods are available:

1. By controlled design according to EN 60079-30-1 clause 4.4.3 a)
2. By systems approach, design verification method according to EN 60079-30-1 clause 5.1.13.2

Connections and terminations for installation with the heating and cold connection cables, type EKL Medium und EKL Premium, shall be certified according to the requirements of the applicable standards for their types of protection for potential flammable gas or combustible dust atmosphere, as well as according to the requirements of EN 60079-30-1 as integral parts of this trace heating system.

When used in TT and TN systems a residual current device according to EN 60079-30-1, clause 4.3 point d) shall be installed. When used in IT systems an insulation monitoring device according to EN 60079-30-1, clause 4.3 point e) shall be used.

(16) **Report**

KEMA No. 213248400

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 213248400.