



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: **IECEX KEM 10.0011U** issue No.:0 Certificate history:

Status: **Current**

Date of Issue: **2010-05-07** Page 1 of 3

Applicant: **BARTEC GmbH**
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

Electrical Apparatus: **Series Resistance Heating Cables and Cold Leads Type EKL Medium and EKL Premium**
Optional accessory:

Type of Protection: **Ex e, Ex tD**

Marking: **Ex e II**
Ex tD A21

Approved for issue on behalf of the IECEx
Certification Body:

T. Pijpker

Position:

Certification Manager

Signature:
(for printed version)



Date:

2010-05-07

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

KEMA Quality B.V.
Utrechtseweg 310
6812 AR Arnhem
The Netherlands

KEMA Quality
— a DEKRA company



IECEx Certificate of Conformity

Certificate No.: IECEx KEM 10.0011U

Date of Issue: 2010-05-07

Issue No.: 0

Page 2 of 3

Manufacturer: **BARTEC GmbH**
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

Manufacturing location(s):
BARTEC GmbH
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

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 electrical apparatus 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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-30-1 : 2007-01 Edition: 1	Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

This Certificate does not indicate compliance with electrical 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 Report:

NL/KEM/ExTR10.0019/00

Quality Assessment Report:

DE/TUN/QAR06.0017/02



IECEx Certificate of Conformity

Certificate No.: IECEx KEM 10.0011U

Date of Issue: 2010-05-07

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The series resistance Heating Cables and Cold Leads Type EKL Medium and 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.

For further details refer to attachment/annex of this certificate.

CONDITIONS OF CERTIFICATION: NO

Annex to: IECEx KEM 10.0011U, issue No.:0
 Applicant: BARTEC GmbH
 Electrical Apparatus: Series Resistance Heating Cables and Cold Leads Type EKL Medium and EKL Premium

Description (continued)

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

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 Zone 1 and Zone 21 the maximum sheath temperatures have to be verified by a Certification Body. Two methods are available:

1. By controlled design according to IEC 60079-30-1 clause 4.4.3 a)
2. By systems approach, design verification method according to IEC 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 IEC 60079-30-1 as integral parts of this trace heating system.

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