



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: 2 Certificate history:
Status: **Current** Issue No. 2 (2017-09-26)
Date of Issue: **2017-09-26** Page 1 of 5 Issue No. 1 (2015-08-12)
Applicant: **BARTEC GmbH** Issue No. 0 (2010-05-07)
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany
Equipment: **Series Resistance Heating Cables and Cold Leads Type EKL Medium and EKL Premium
Type 27-582*-756*/******
Optional accessory:
Type of Protection: **Ex 60079-30-1**
Marking: Ex 60079-30-1 IIC Gb
Ex 60079-30-1 IIIC Db

Approved for issue on behalf of the IECEx
Certification Body:

R.H.D. Pommé

Position:

Certification Manager

Signature:
(for printed version)

Date:

2017-09-26

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](http://www.iecex.com).

Certificate issued by:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
The Netherlands





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

Additional Manufacturing location(s):

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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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

*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/ExTR10.0019/02](#)

Quality Assessment Report:

[DE/TUN/QAR06.0017/09](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

SPECIFIC CONDITIONS OF USE: NO



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

1. Certification according to IEC/IEEE 60079-30-1:2015 which replaced IEC 60079-30-1:2007 as well as IEC 60079-31:2008;
2. Addition of 8 new resistances to the Heating Cables and Cold Leads EKL Medium und EKL Premium.



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Additional information:

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Schedule of Limitations

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The maximum sheath temperatures of the Heating Cables and Cold Leads Type 27-582*-756*/**** have not been verified. For EPL Gb and Db the maximum sheath temperatures have to be verified by an IECEx Certification Body. Two methods are available:

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1. By controlled design according to IEC/IEEE 60079-30-1 clause 4.5.3, verification of calculations

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in accordance with IEC/IEEE 60079-30-1 clause 5.1.13.3;

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2. By stabilized design according to IEC/IEEE 60079-30-1 clause 4.5.2, verification of calculations

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in accordance with IEC/IEEE 60079-30-1 clauses 5.1.13.3.

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Connections and terminations for installation with the heating and cold connection cables, EKL Medium and EKL Premium Type 27-582*-756*/**** have, shall be certified according to the requirements of the applicable standards for their types of protection for potential flammable gas or combustible dust atmosphere, or according to the requirements of IEC/IEEE 60079-30-1 as integral parts of this trace heating system.

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When used in TT and TN systems a residual current device according to IEC/IEEE 60079-30-1, clause 4.4 point c) 1) shall be installed. When used in IT systems an insulation monitoring device according to

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IEC/IEEE 60079-30-1, clause 4.4 point c) 2) shall be used.

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</body>
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</html>
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Annex:

[221595200-Annex1.pdf](#)

Annex 1 to Test Report IECEx NL/KEM/ExTR10.0019/02
Annex 1 to Certificate of Conformity IECEx KEM 10.0010U, issue no. 2
Annex 1 to EU-Type Examination KEMA 10ATEX0035 U, issue no. 3
Anhang 1 zu EU-Baumunsterprüfbescheinigung KEMA 10ATEX0035 U, Ausgabe Nr. 3

Description

The series resistance Heating Cables and Cold Leads EKL Medium und EKL Premium Type 27-582*-756*/**** 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: -60 °C to +260 °C
 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

Rated voltage: 750 V

Nomenclature

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

Annex 1 to Test Report IECEx NL/KEM/ExTR10.0019/02
Annex 1 to Certificate of Conformity IECEx KEM 10.0010U, issue no. 2
Annex 1 to EU-Type Examination KEMA 10ATEX0035 U, issue no. 3
Anhang 1 zu EU-Baumusterprüfbescheinigung KEMA 10ATEX0035 U, Ausgabe Nr. 3

Beschreibung

Die serielle Heiz- und Kaltleitungen, EKL Medium und EKL Premium Typ 27-582*-756*/**** bilden eine elektrische Widerstands-Begleitheizung die zur Temperaturerhöhung oder Temperaturerhaltung von einem Werkstück, wo sie von außen aufgebracht ist, verwendet wird.

Einsatztemperatur: -60 °C bis +260 °C
 Minimaler Biegeradius 1,08 Ω/km bis 1,71 Ω/km: 25 mm
 Minimaler Biegeradius 2,9 Ω/km bis 8000 Ω/km: 15 mm

Elektrische Daten

Nennspannung: 750 V

Nomenklatur

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

Platzhalter	Erklärung	Wert	Bedeutung
I	Allgemein	27-582	Einadrige kunststoffisolierte Heizleitung
II	Heizleitermaterial	1 2 4 6	Kennziffer Heizleitermaterial
III	Nennspannung	7	750 V
IV	Allgemein	5	Kennziffer
V	Einsatztemperatur	6	-60 °C bis +260 °C
VI	Typ, mechanische Stärke, Litzenaufbau	F G H J K L	Medium, 4 Joule, reduziert Medium, 4 Joule, standard Medium, 4 Joule, verstärkt Premium, 7 Joule, reduziert Premium, 7 Joule, standard Premium, 7 Joule, verstärkt
VII	Widerstandswert bei 10 °C	1R08 ... 04R4 07R2 ... 8000	1,08 Ω/km ... 4,4 Ω/km, nur 7 Joule 7,2 Ω/km ... 8000 Ω/km, 4 und 7 Joule