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 BVS 14.0040X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2014-05-09)
Date of Issue:	2017-09-04		
Applicant:	**BARTEC BENKE GmbH** Schulstraße 30 94239 Gotteszell **Germany**		
Equipment:	**Peltier cooler type 5985-103**		
Optional accessory:			
Type of Protection:	**Equipment protection by encapsulation “m”**		
Marking:	Ex mb IIC T3 Gb or Ex mb IIC T3		

Approved for issue on behalf of the IECEx Certification Body: **Jörg Koch**

Position: **Head of Certification Body**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Certificate No.: **IECEx BVS 14.0040X**

Date of issue: 2017-09-04

Issue No: 1

Manufacturer: **BARTEC BENKE GmbH**
Schulstraße 30
94239 Gotteszell
Germany

Additional manufacturing locations: **BARTEC BENKE GmbH**
Borsigstraße 10
21455 Reinbek
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 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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-18:2014 Explosive atmospheres – Part 18: Equipment protection by encapsulation “m”
Edition:4.0

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 Report:

DE/BVS/ExTR14.0042/01

Quality Assessment Reports:

DE/TUN/QAR12.0008/05 DE/TUN/QAR12.0009/05

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

Description

The peltier cooler type 5985-103 is suitable for use in areas endangered by gas atmospheres. It is designed in type of protection Encapsulation 'm' for an EPL Gb.
The peltier cooler consists of a peltier element, permanently connected to a cable. This peltier element is placed between a massive finned aluminium heat sink linked to the hot side and a metal rod linked to the cold side.
For thermal monitoring a Pt100 sensor is fixed in a hole in the metal rod. For thermal protection in case of reverse operation a thermal fuse is also placed inside the metal rod.

SPECIFIC CONDITIONS OF USE: YES as shown below:
For safe use of the peltier cooler type 5985-103 the external power supply must be surely limited to a maximum current of 6.8 A. In case the external power supply is not limited a fuse with a rated current of 4 A and a capability to surely interrupt the maximum current of the power supply must be used in the supply line.
The connection cable must be fixed installed.
If the peltier cooler is mounted to an enclosure it must be linked to the equipotential bonding of the enclosure and the potting material must be protected against mechanical forces and soiling.
The peltier cooler must be mounted in vertical orientated heat sink position.

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Equipment (continued):

Parameters

Electrical parameters

Rated voltage	15.5	VDC
Rated current	3.9	A
Limiting values (power supply)		
Maximum current of the power supply	6.8	A
or alternatively		
Rated current of an external fuse	4.0	A
Electrical parameters (temperature sensor)		
Rated voltage	30.0	VDC

Thermal parameters

Ambient temperature range	$-20\ °C \leq T_{amb} \leq 60$	°C

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Reasons for this issue are:
1. Update of the used standard
IEC 60079-18:2009 → IEC 60079-18:2014
2. Optionally use of a silicone sealed peltier cooler element