



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

Certificate No.: IECEx PTB 13.0016X issue No.:0 Certificate history:

Status: **Current**

Date of Issue: **2013-06-17** Page 1 of 4

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

Electrical Apparatus: **Explosion protected isolating relay-card-module type 17-9955-0\*\*\*\*/\*\*\*\***  
Optional accessory:

Type of Protection: **General Requirements, Intrinsic Safety**

Marking: **[Ex ia Ga] IIC**  
**[Ex ia Da] IIIC**

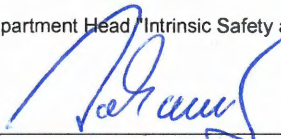
Approved for issue on behalf of the IECEx  
Certification Body:

Dr.-Ing. Ulrich Johannsmeyer

Position:

Department Head "Intrinsic Safety and Safety of Systems"

Signature:  
(for printed version)

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Date:

2013-07-15

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:

**Physikalisch-Technische Bundesanstalt (PTB)**  
Bundesallee 100  
38116 Braunschweig  
Germany





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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 60079-11 : 2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition: 6.0

*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:  
[DE/PTB/ExTR13.0021/00](#)

Quality Assessment Report:  
[DE/TUN/QAR06.0017/04](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The explosion protected isolating relay-card-module type 17-9955-0\*\*\*\*/\*\*\*\* is used for the electrical isolation of intrinsically safe circuits from non-intrinsically safe circuits.  
For further information see annex.

### CONDITIONS OF CERTIFICATION: YES as shown below:

For special conditions for safe use see annex.



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**Additional information:**

For electrical specifications reference is made to the annex.



**Applicant:** BARTEC GmbH  
Max-Eyth-Str. 16, 97980 Bad Mergentheim  
Germany

**Test item:** Explosion protected isolating relay-card-module  
**Type:** 17-9955-0\*\*\*/\*\*

Description of equipment

The explosion protected isolating relay-card-module is used for the electrical isolation of intrinsically safe circuits leading into potentially explosive dust or gas atmospheres from non-intrinsically safe circuits.

The isolating relay-card-module is installed outside of the hazardous area.  
The ambient temperature range is -20 °C ... 70 °C.

Electrical data:

Certified circuits of type of protection Intrinsic Safety Ex ia IIC or Ex ia IIIC may be connected alternatively to the terminals of the coil circuit or the contact circuit respectively.  
The effective internal inductances and capacitances are negligibly low.

**Coil circuit:**

Intrinsically safe application: for connection to an intrinsically safe circuit

Maximum values:  
 $U_i = 30 \text{ V}$   
 $I_i = 120 \text{ mA}$   
 $P_i = 1 \text{ W}$

Non-intrinsically safe application: Excitation voltage 6 ... 48 V DC (depending on coil)  
Maximum excitation power 1 W

**Contact circuit(s):**

| type of current: |       | alternating current |       |
|------------------|-------|---------------------|-------|
| voltage          | max.: | 250 V               | 250 V |
| current          | max.: | 5 A                 | 3 A   |
| power            | max.: | 100 VA              | -     |
| cos φ            |       |                     | ≥ 0.7 |

| type of current: |       | direct current |       |       |         |         |         |
|------------------|-------|----------------|-------|-------|---------|---------|---------|
| voltage:         |       | 24 V           | 110 V | 220 V | 24 V    | 110 V   | 220 V   |
| current          | max.: | 6 A            | 0.5 A | 0.3 A | 1.5 A   | 0.22 A  | 0.14 A  |
| power            | max.: | 144 W          | 55 W  | 66 W  | 20 W    | 20 W    | 20 W    |
| L/R              |       |                |       |       | ≤ 40 ms | ≤ 40 ms | ≤ 40 ms |

The coil circuit and the contact circuit(s) are safely electrically isolated from each other up to a peak value of the nominal voltage of 375 V.





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Special conditions for safe use

1. The isolating relay-card-module shall be mounted into an enclosure which meets the degree of protection IP 20 according to IEC 60529 as a minimum.
2. For „Electrical data“ reference is made to the operating instructions.
3. Certified circuits of type of protection Intrinsic Safety Ex ia IIC or Ex ia IIIC may be connected alternatively to the coil circuit or the contact circuits respectively. The effective internal inductances and capacitances shall be neglected. Several intrinsically safe circuits may be connected to the contact circuits only if Intrinsic Safety is maintained with the connection of these circuits considering the rules for the interconnection of intrinsically safe circuits.
4. The total sum of the peak values of the nominal voltages of coil circuit and contact circuit(s) shall not exceed 375 V.