

# TÜV Cert

## (1) **EC Design Test Certificate**

(2) **Machines and protection systems for proper use  
in explosion-hazard zones - Directive 94/9/EC**

(3) **EC Design Test Certificate Number:**

**TÜV 07 ATEX 1211 X**

(4) **Machine:** Isolating Switch Amplifier, Type 17-5521-4.../...

(5) **Manufacturer:** BARTEC  
Componenten und Systeme GmbH

(6) **Address:** Max-Eyth-Strasse 16  
D-97980 Bad Mergentheim  
Germany

(7) The design of this machine and the different permitted models are defined in the annex to this Design Test Certificate.

(8) The Certification Agency of TÜV Hannover/Sachsen-Anhalt e.V. has been appointed as agency no. 0032. In this capacity the Agency hereby certifies in accordance with Article 9 of the Directive of the Council of the European Community of March 23, 1994 (94/9/EC) that the machine fulfils the basic safety and health requirements for the design and construction of machines and protective systems for proper use in explosion-hazard zones, as specified in Annex II of the Directive.

The results of the test are specified in the confidential test report no. 044/97/7002.

(9) The basic safety and health requirements are met in conformity with

**DIN EN 50 014 3.94      DIN EN 50 020 4.96      Draft DIN EN 50 014/PR/A1 4.96**

(10) If the certificate number has an "X" after it, then this indicates the presence of special conditions for the safe application of the machine, specified in the annex to this Certificate.

(11) This EC Design Test Certificate only refers to the design and construction of the defined machine as specified in Directive 94/9/EC. Further requirements of this Directive are applicable to the manufacturing and distribution of this machine.

(12) The machine must be marked with the following details:

**Ex II (1) G [EEx Ia] IIC**

TÜV Hannover/Sachsen-Anhalt e.V.  
TÜV CERT Zertifizierungsstelle  
Am TÜV 1  
D-30519 Hannover  
Germany

[Logo of TÜV  
Hannover/  
Sachsen-Anhalt  
e.V.]

Hannover, 1997-08-28

[signature]  
The Manager

This EC Design Test Certificate may only be distributed without modifications.  
Extracts and changes require permission from TÜV Hannover/Sachsen-Anhalt e.V.

# TÜV Hannover/Sachsen-Anhalt e.V.

- (13) **ANNEX**
- (14) **EC Design Test Certificate No. TÜV 97 ATEX 1211 X**
- (15) **Machine specifications:**

The Isolating Switch Amplifier, Type 17-5521-4 .../... is for the electronically safe isolation of the intrinsically safe signal circuits from the intrinsically unsafe supply circuit and the intrinsically unsafe output circuit.

The permitted ambient temperature is  $-25^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ .

Electrical details

Supply circuit  
(connection Z1 and Z2/Z3)  $U \leq 30 \text{ V DC}$ ; approx. 2.5 W  
 $U_m = 253 \text{ V}$

Signal circuits  
(connection Z5, Z7, Z9, Z11  
and Z4, Z6, Z10): System of protection: intrinsic safety EEx ia IIC  
with the following maximum values (per circuit):  
 $U_o = 11.55 \text{ V}$   
 $I_o = 30 \text{ mA}$   
 $P_o = 86.4 \text{ mW}$   
Characteristic curve: linear

The maximum values for external capacity / inductivity can be found in the following table:

EEx ia	IIC	IIB
$C_o$	1.59 $\mu\text{F}$	10.8 $\mu\text{F}$
$L_o$	34 mH	130 mH

Output circuits:  $U \leq 29 \text{ V DC}$ ;  $I \leq 100 \text{ mA}$   
(connection Z12, Z13, Z14,  
Z15, Z16 and Z3)

The intrinsically safe signal circuits are electrically isolated from all other circuits up to a maximum value of 375 V.

- (16) The test documents, consisting of 11 pages and 8 drawings (including itemised lists), are listed in the Test Report.
- (17) **Special condition:**  
The Isolating Switch Amplifier, Type 17-5521-4 .../... must be set up in such a way that it meets at least protective system IP 20 (as specified in EN 60529).
- (18) **Basic safety and health requirements:**  
No additional requirements.

Translation

**1. SUPPLEMENT**

**to Certificate No.** TÜV 97 ATEX 1211 X

**Equipment:** Isolating Switch Amplifier type 17-5521-4\*\*\*/\*\*

**Manufacturer:** BARTEC GmbH

**Address:** Max-Eyth-Str. 16  
97980 Bad Mergentheim  
Germany

**Order number:** 8000556262

**Date of issue:** 2011-10-19

Amendments:

In the future the devices may also be manufactured and operated according to the test documents listed in the test report. The changes concern components and the standards used for assessment.

The electrical data and all other data apply unchanged for this supplement.


The equipment incl. of this supplement meets the requirements of these standards:

**EN 60079-0:2009**

**EN 60079-11:2007**

**EN 61241-11:2006**

In the future the marking must include the following:

 **II (1) G [Ex ia Ga] IIC**    **resp.**    **II (1) G [Ex ia Ga] IIB**    **and**  
**II (1) D [Ex ia Da] IIIC**    **resp.**    **II (1) D [Ex ia Da] IIIB**

(16) The test documents are listed in the test report No. 11 203 556262.

(17) Special conditions for safe use

No additional ones

1. Supplement to Certificate No. TÜV 97 ATEX 1211 X

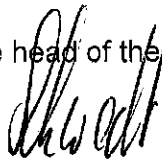
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(18) Essential Health and Safety Requirements

No additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

A handwritten signature in black ink, appearing to read "Schwedt".

Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

Translation

**2. SUPPLEMENT**

to Certificate No.

**TÜV 97 ATEX 1211 X**

Equipment:

Isolating Switch Amplifier type 17-5521-4<sup>\*\*\*</sup>/<sup>\*\*\*\*</sup>

Manufacturer:

BARTEC GmbH

Address:

Max-Eyth-Str. 16  
97980 Bad Mergentheim  
Germany

Order number:

8000455112

Date of issue:

2016-01-15

Amendments:

Object of this supplement is the proof of conformity of the isolating Switch Amplifier type 17-5521-4<sup>\*\*\*</sup>/<sup>\*\*\*\*</sup> to the current versions of the standards EN 60079-0:2012 +A11:2013 and EN 60079-11:2012.

The changes to the previous version have been described in the submitted documents.

The electrical data apply unchanged and the lower limit of the ambient temperature has been extended to -40°C for this supplement.

The equipment incl. of this supplement meets the requirements of these standards:

**EN 60079-0:2012 + A11:2013**

**EN 60079-11:2012**

(16) The test documents are listed in the test report No. 15 203 172558.

(17) Special conditions for safe use  
No additional ones

(18) Essential Health and Safety Requirements  
No additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body



Meyer

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