TÜV
CERT

(1) **EC prototype test certificate**

(2) Devices and protective systems for the prescribed use in explosion-hazard areas – **Directive 94/9/EEC**

(3) EC prototype test certificate number
TÜV 98 ATEX 1355 X

(4) Device: Profibus Interface 16 NAMUR type 17-8583-33../....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

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

(7) The type of this device as well as the different admissible versions are stipulated in the appendix to this prototype test certificate.

(8) As appointed office no. 0032 in accordance with Article 9 of the Directive of the Council of the European Communities dated 23 March 1994 (94/9/EEC), the TÜV Hannover/Sachsen-Anhalt e.V., TÜV CERT-Zertifizierungsstelle, hereby certifies the satisfaction of the basic safety and health requirements for the design and construction of devices and protective systems for the prescribed use in explosion-hazard areas in accordance with Appendix II of the Directive.

The results of the test are laid down in the confidential test report number 98/PX22080.

(9) The basic safety and health requirements are satisfied by compliance with

EN 50 014:1997 **EN 50 020:1994**

(10) If an "X" is at the end of the certificate number, reference is made to special conditions for the safe use of the device in the appendix to this certificate.

(11) This EC prototype test certificate refers only to the design and the construction of the stipulated device in accordance with Directive 94/9/EEC. Additional requirements of this Directive apply to the manufacture and circulation of this device.

(12) The marking of the device must contain the following information:

Ex II (1) G [EEx ia] IIC

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

Hanover, 25.09.1998

The Director

(13) **APPENDIX**

(14) **EC prototype test certificate no. TÜV 98 ATEX 1355 X**

(15) Description of the device

The Profibus Interface 16 NAMUR type 17-6583-33../.... serves to safely electrically isolate the intrinsically safe signal circuit from the non-intrinsically safe supply circuit, the non-intrinsically safe interface circuits as well as the non-intrinsically-safe output circuit.

The admissible ambient temperature range is –25°C to +75°C.

Electrical data

Supply circuit (Connection X4.23, X4.24 and X4.22 (PE))	U = 24 V DC (max. 30 V DC), approx. 5.1 W U_m = 253 V		
Signal circuits (Connection X1.1 to X1.8 and X1.17 to X1.24 as well as X1.9 to X1.16)	with type of protection : Intrinsic safety EEx ia IIC/IIB or EEx ib IIC/IIB maximum values per circuit: U_o = 12.3 V I_o = 31.8 mA P = 97.8 mW characteristic curve: linear The effective inner inductances and capacitances are negligibly small.		
	EEx ia or EEx ib	IIC	IIB
	Maximum outer inductance	31 mH	115 mH
	Maximum outer capacitance	1.28 µF	8.1 µF
Interface circuit (Connection X4.1, X4.5 and X4.2, X4.6, X4.7 and X4.9 as well as X4.8 and X4.9 as well as X4.3, X4.4 and X4.16, X4.17)	U<= 5 V DC U_m = 253 V		
Output circuit (Connection X4.19 and X4.18, X4.20)	U = 230 V AC, I = 3 A, S = 100 VA		

The intrinsically safe signal circuits are all safely electrically isolated from all other circuits up to a peak value of rated voltage of 375 V.

(16) Test documents are listed in test report no. 98/PX22080.

(17) Special conditions

The Profibus Interface 16 NAMUR type 17-6583-33../.... is to be set up in such a way that at least protective class IP 20 is satisfied in accordance with EN 60529.

(18) Basic safety and health requirements

no additional requirements.

First Supplement
to the
EC-Type Examination Certificate No. TÜV 98 ATEX 1355 X

of the company: BARTEC Componenten und Systeme GmbH
D-97980 Bad Mergentheim

The Profibus Interface 16 NAMUR type 17-6583-33../.... is being extended by the Bus-Interface 4do 8di type 17-6583-.50./.... and type 17-6583-.51./....and is allowed to be manufactured according to test documents listed below. The modifications relate to the "Electrical Data" as well as to the permissible ambient temperature range.
The admissible ambient temperature range of the Bus Interface 4do 8di Type 17-6583-.50./.... and type 17-6583-.51./.... is – 25 °C to + 85 °C.

Electrical Data

Bus-Interface 4do 8di type 17-6583-.50./....

Supply circuit 1 .....U = 24 V DC (max. 30 V DC), approx. 2,1 W
(Connection X4.23, X4.24 U_m = 253 V
and X4.22 (PA))

Supply circuit 2 .....U = 24 V DC (max. 30 V DC), approx. 60 W
(Connection X4.19 and U_m = 253 V
X4.20)

Signal circuit 1 .....in type of protection „Intrinsic Safety" EEx ia IIC/IIB
(Connection X1.1 to X1.9 resp. EEx ib IIC/IIB
and 8 * connection
"external")

Max. values per circuit:

U_o = 11,8 V
I_o = 31 mA
P = 90 mW

Characteristic line: linear

The effective internal inducivities and capacitances are negligibly small.

EEx ia resp. EEx ib	IIC	IIB
Max. permissible outer inductivity	34 mH	130 mH
Max. permissible outer capacitance	1,5 µF	9,9 µF

Signal circuit 2 .....U = 24 V DC, I = 500 mA (per channel)
(Output) U_m = 253 V
(Connection X1.17 to X1.24)

Interface circuit .....U ≤ 30 V DC
(Connection X 4.1 to U_m = 253 V
X 4.14, X4.16, X4.17)

Indication circuit ..... $U \leq 5$ V DC
(Connection X4.16 and X4.17)

Bus-Interface 4do 8di type 17-6583-.51./....

Supply circuit 1 .....U = 24 V DC (max. 30 V DC), approx. 2,1 W
(Connection X4.23, X4.24 U_m = 253 V
and X4.22 (PA))

Supply voltage 2 .....U = 24 V DC (max. 30 V DC), approx. 6,5 W
(Connection X4.19 U_m = 253 V
and X4.20)

Signal circuit 1 .....in type of protection „Intrinsic Safety" EEx ia IIC/IIB
(Connection X1.1 to X1.16) resp. EEx ib IIC/IIB

Max. values per circuit:

U_o = 11,8 V
I_o = 31 mA
P = 90 mW

Characteristic line: linear

The effective internal inductivities and capacitances are negligibly small.

EEx ia resp. EEx ib	IIC	IIB
Max. permissible outer inductivty	34 mH	130 mH
Max. permissible outer capacitance	1,5 µF	9,9 µF

Signal circuit 2 .....in type of protection „Intrinsic Safety" EEx ia IIC/IIB
(Connection X1.17 to X1.24) resp. EEx ib IIC/IIB

Max. values per circuit:

U_o = 26,8 V
I_o = 97 mA
P = 650 mW

Characteristic line: linear

The effective internal inductivities and capacitances are negligibly small.

EEx ia resp. EEx ib	IIC	IIB
Max. permissible outer inductivity	3,9 mH	15 mH
Max. permissible outer capacitance	92 nF	720 nF

resp. Max. values per circuit:

U_o = 7,9 V
I_o = 145 mA
P = 287 mW

Characteristic line: linear

The effective internal inductivities and capacitances are negligibly small.

EEx ia resp. EEx ib	IIC	IIB
Max. permissible outer inductivity	1,9 mH	8 mH
Max. permissible outer capacitance	8,8 µF	115 µF

Interface circuit .....U ≤ 30 V DC
(Connection X4.1 to X4.14, X4.16, X4.17) U_m = 253 V

Indication circuit .....U ≤ 5 V DC
(Connection X2.1 to X2.16)

All other details as well as the "Special Terms and Conditions" remain untouched.

Test documents: all signed on 20.08.1999

1. Description (23 sheets)

2. Drawing No. 11-6583-6565 (6 sheets)
11-6583-6565 St (8 sheets)
11-6583-6566 (6 sheets)
11-6583-6567 (2 sheets)
11-6583-6568 (2 sheets)
11-6583-6569 (2 sheets)
11-6583-6570 (2 sheets)
11-6583-6571 (2 sheets)
11-6583-6572 (2 sheets)
11-6583-6573
11-6583-6574
11-6583-6575

3. Operating Instructions dated 26.07.1999

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

Hannover, 01.11.1999

Head of the
Certification Body

Translation

2. SUPPLEMENT
to
EC-Type-Examination Certificate No. TÜV 98 ATEX 1355 X

Testobject:	**Profibus Interface 16 NAMUR type 17-6583-33../.... resp.**
	Bus-Interface 4do 8di type 17-6583-.50./.... and type 17-6583-.51./....
Customer:	**BARTEC GmbH**
	formerly
	BARTEC Componenten und Systeme GmbH
Adress:	**Max-Eyth-Straße 16**
	D-97980 Bad Mergentheim

Changes

The Profibus Interface 16 NAMUR type 17-6583-33../.... resp. Bus-Interface 4do 8di type 17-6583-.50./.... and type 17-6583-.51./.... can also be manufactured according to the test documents listed in the test report. The amendments concern the internal design of the device.

In the future the marking of the above mentioned devices is:
II (1) G D [EEx ia] IIC bzw. II (1) G D [EEx ia] IIB

The electrical and other data apply unchanged for this Supplement.

The testobject inclusive this Supplement is in accordance with the following standards:

EN 50 014:1997+A1+A2 **EN 50 020:2002**

(16) All documents are listed in the test report No. 05 YEX 551987-3

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH & Co. KG
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hannover, 2005-04-19

Head of the
Certification body

Translation

3. S U P P L E M E N T

to Certificate No.	**TÜV 98 ATEX 1355 X**
Equipment:	Profibus Interface 16 NAMUR, type 17-6583-33**/**** and Bus-Interface 4do 8di type 17-6583-*5**/****
Manufacturer:	BARTEC GmbH
Address:	Max-Eyth-Str. 16 97980 Bad Mergentheim Germany
Order number:	8000556263
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, names of contacts and the standards used for assessment.

The electrical data and all other data apply unchanged for this supplement except of the following names of contacts for the -Interface 4do 8di Typ 17-6583-.50./....

Indication circuit ..... $U \leq 5$ V DC
(Connections X2.1 to X2.16)

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:

⟨Ex⟩ **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 556263.

(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, 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

Schwedt

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