Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 05 ATEX 1001

(4) Equipment: Terminal box, type .. Box ...

(5) Manufacturer: Schischek GmbH

(6) Address: Mühlsteig 45, 90579 Langenzenn, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 05-15003.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1997 + A1 + A2	**EN 50018:2000**	**EN 50019:2000**
EN 50020:2002	**EN 50028:1987**	**EN 50281-1-1:1998**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2 G/D EEx edm ia [ia] IIC T6, T5, T4 IP 66 T 85 °C, T 100 °C , T 135 °C

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, February 8, 2005

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 30

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 1001

(15) Description of equipment

The terminal box, type.. Box ... , consists of – separately certified – empty enclosures of Increased Safety "e" type of protection, which are made from aluminium and are designed as stationary units.

The terminal boxes may optionally be used for circuits of Increased Safety "e" or Intrinsic Safety "ia" type of protection, or a combination of intrinsically safe and non-intrinsically safe circuits of Increased Safety "e" and Intrinsic Safety "ia" type of protection.

All terminal housings may also be fitted with – separately certified – control and signalling units and fusible links of Flameproof Enclosure "d" or Encapsulation "m" type of protection.

Connection is from outside by means of separately certified cable entries. The box section for intrinsically safe circuits will be identified, e.g. by a light-blue colour. The maximum permissible ambient temperatures of the terminal box may be limited by the maximum permissible ambient temperatures of the separately certified equipment.

Technical data

Rated voltage:*	up to	690 V
Rated current:*	max.	500 A
Conductor size:*	max.	240 mm^2
Protective conductor cross section:*	max.	120 mm^2

*) depending on type of terminal and Ex-type components used

Protection against contact, foreign bodies and water:	min. IP66 in compliance with EN 60529
Ambient temperature range:	-20 °C to +55 °C with CR, NBR and PU-Fermapor seal -55 °C to +55 °C with Silicone and HF seal -55 °C to +90 °C with silicone foam seal (supplier: Sico) -55 °C to +100 °C with sponge rubber seal EPDM 4246 -20 °C to +55 °C with glass or plastic pane

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values dependent on power supply specifications, operating mode, utilization category, etc. It will be the manufacturer's responsibility to specify the characteristic values of the intrinsically safe circuits.

Any additional technical features are specified in the test documents.

The composition of the protection symbol is based on the types of protection of the components actually used.

(16) Test report PTB Ex 05-15003

(17) Special conditions for safe use

None

Notes for manufacturing and operation

Equipment designed to Intrinsic Safety "i" type of protection shall be installed in such a way that the clearance and creepage distances specified in EN 50020 between intrinsically safe and non-intrinsically safe circuits are complied with.

If the clearance requirements specified in EN 50020, section 6.3, are not complied with, terminals and wiring of Increased Safety "e" standard shall also be used for the intrinsically safe circuits.

When connecting more than one intrinsically safe circuit, the rules and regulations for interconnection shall be duly observed.

(18) Essential health and safety requirements

Met by compliance with the aforementioned Standards.

Zertifizierungsstelle Explosionsschutz
By order

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, February 8, 2005

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1st S U P P L E M E N T

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 1001

(Translation)

Equipment: Terminal box, type ** Box ***

Marking: **II 2 G EEx edm ia [ia] IIC T6, T5, T4**

II 2 D IP66 T 85 °C, T 100 °C, T135 °C

Manufacturer: Schischek GmbH

Address: Mühlsteig 45, 90579 Langenzenn, Germany

Description of supplements and modifications

The terminal box, type ** Box ***, has been modified in the following respects:

1) It has been re-examined on the basis of standards EN 60079-0:2012, EN 60079-1:2007, EN 600797:2007, EN 60079-11:2012, EN 60079-18:2009 and EN 60079-31:2009.

The marking therefore changes to:

II 2 G Ex d e ia [ia] mb IIC T6, T5 or T4 Gb

II 2 D Ex tb IIIC T85 °C, T100 °C or T135 °C Db IP66

2) The technical data have been changed.

Technical data

Rated voltage:*	up to	275 V
Rated current:*	max.	10 A
Conductor size:*	max.	4 mm^2
Protective-conductor size:*	max.	10 mm^2

*) subject to the type of terminal and 'Ex' components actually used

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1st SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 1001

Ambient temperatures:

-55 °C to +135 °C with silicone gasket (Sico, Silex)
-40 °C to +100 °C with HF gasket (Neuhaus Elektronik, Laird)
-40 °C to +100 °C with PU foam (Sonderhoff)
-20 °C to +85 °C with CR gasket (Leeser)
-20 °C to +100 °C with glass pane
-50 °C to +100 °C with mono duro clear 8099 PC pane, conductive

Protection against solid foreign objects,
water and contact ..... IP66 in accordance with EN 60529

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values dependent on power supply specifications, operating mode, utilisation category, etc. It is the manufacturer's responsibility to specify the characteristic values of the intrinsically safe circuits.

The composition of the protection symbol depends on the types of protection of the components actually used.

The maximum permissible ambient temperatures can be restricted by the maximum permissible ambient temperatures of the separately certified components.

Notes for manufacturing and operation

Equipment of Intrinsic Safety "i" type of protection shall be installed so that the clearances and creepage distances between intrinsically safe and non-intrinsically safe circuits, which are specified in EN 60079-11 are complied with.

If the clearance requirements specified in EN 60079-11 are not complied with, terminals and wiring of Increased Safety "e" quality standard must also be used for intrinsically safe circuits.

When connecting more than one intrinsically safe circuit, the rules and regulations for interconnection must be observed.

Applied standards

EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007, EN 60079-11:2012,
EN 60079-18:2009, EN 60079-31:2009

Test report: PTB Ex 14-14023

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Dr.-Ing. U. Klausmeyer
Direktor und Professor

Braunschweig, March 7, 2014