

IBExU Institut für Sicherheitstechnik GmbH

An-Institut der TU Bergakademie Freiberg

[1] EC-TYPE EXAMINATION CERTIFICATE

according to Directive 94/9/EC, Annex III

(Translation)



[2] Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres, **Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **IBExU12ATEX1099**

[4] Equipment: Measuring, Control and Switchgear combination
Typ 07-3***_****/****

[5] Manufacturer: Bartec GmbH

[6] Address: Max-Eyth-Str. 16
97980 Bad Mergentheim
Germany

[7] The design of the equipment mentioned in [4] and any acceptable variations thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that the equipment mentioned in [4] has been found to comply with the essential health and safety requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The test results are recorded in the test report IB-12-3-133 of 12 November 2012.

[9] Compliance with the essential health and safety requirements has been assured by compliance with EN 60079-0:2012, EN 60079-1:2007, EN 60079-5:2007, EN 60079-7:2007, EN 60079-11:2012, EN 60079-18:2009, EN 60079-28:2007 and EN 60079-31:2009.

[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 [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this directive apply to the manufacture and supply of this equipment.

[12] The marking of the equipment mentioned in [4] shall include the following:

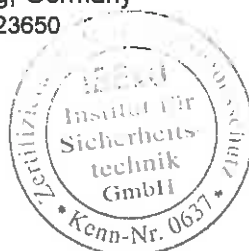
- ⊕ II 2G Ex d e ma/mb op is q ia/ib [ib] IIA, IIB, IIC T6, T5, T4, T3 Gb
- ⊕ II 2(1)G Ex d e ma/mb op is q ia/ib [ia Ga] IIA, IIB, IIC T6, T5, T4, T3 Gb
- ⊕ II 2D Ex tb [ib] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db
- ⊕ II 2(1)D Ex tb [ia Da] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db
-55 °C ≤ T_A ≤ +75/80 °C

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Authorised for certifications
- Explosion protection -

By order

(Dr. Wagner)



- Seal -
(ID no. 0637)

Freiberg, 16 November 2012

Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Schedule

[13]

Schedule

[14]

to the EC-Type Examination Certificate IBExU12ATEX1099

[15]

Description of the equipment

The explosion-proof switchgear combination is used for the control of electrical apparatus and/or for the power distribution. The stationary switchgear combination can be used in areas in which equipment of category 2G or 2D is required.

The enclosures are produced from polyester resin, stainless steel or aluminium. They are separately certified in type of protection "Ex e" or "Ex t". They contain measuring-, controlling- and switching devices and can be equipped with actuating elements, indication lights and inspection glasses, if required. All built-in and attached components are separately tested according to the Ex standards. The built-in components for dustproof control units can be designed in accordance with the industrial standards. The electrical connections are carried out via Ex cable entries on terminals. Connecting parts for intrinsically safe circuits are separately marked.

For the final assembly of the differently sized enclosures the permissible dissipation power is determined to consider the operating conditions of the individual apparatus/components which are intended to fit in/install on the enclosures. In addition, the temperature class to be marked and the maximum surface temperature must be determined. The respective types of protection are marked following the specifications of the certificates.

Technical data

Ambient temperature range:	-55 °C to +80 °C		
	-55 °C to +75 °C with enclosure insert		
Degree of protection:	≥ IP54 accord. to EN 60529 for explosive gas atmospheres		
	≥ IP6X accord. to EN 60529 for explosive dust atmospheres		
Dimensions (H x L x W) (mm)			
Single enclosure (aluminium):	75 x 80 x 57	to	600 x 310 x 180
Single enclosure (stainless steel):	80 x 75 x 57	to	1200 x 1000 x 400
Single enclosure (polyester):	75 x 80 x 55	to	1000 x 800 x 300
Rated insulation voltage	max. 1000 V		
Rated current	max. 160 A		
Auxiliary circuit/control circuit	16 A		
Rated frequency	50/60 Hz		
Rated terminal cross section	max. 120 mm ²		

The rated values are maximum values. The respective built-in components cause the actual electrical values. The manufacturer specifies the final rated values, within the limits of the maximum values, in compliance with the respective standards and depending on the supply conditions, mode of operation, equipment category and so on. The intrinsically safe circuits must be interconnected in accordance with the requirements of the EN 60079-14:2007 or EN 60079-25:2012.

[16]

Test report

The proof of the explosion protection is explained in detail in the test report IB-12-3-133. The test documents are part of the test report and are listed there.

Summary of the test results:

The Measuring, Control and Switchgear combination type 07-3***-****/**** fulfils the requirements of the explosion protection on electrical apparatus of equipment group II, category 2G or 2D.

[17]

Special conditions for safe use

none

[18]

Essential Health and Safety Requirements

Confirmed by compliance with standards (see [9]).

By order



(Dr. Wagner)

Freiberg, 16 November 2011

- [1] **1st Addition to**
EC-TYPE EXAMINATION CERTIFICATE IBExU12ATEX1099 X
according to Directive 94/9/EC, Annex III
(Translation)



- [2] Equipment: **Measuring, Control and Switchgear combination**
Type 07-3***-****/****
- [3] Manufacturer: Bartec GmbH
- [4] Address: Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

[5] **Additions/Modifications**

- New types of enclosure are added.
- Separately certified pneumatic valves in combination with bulkhead connector and polyamide tubes, manufactured by Riegler & Co. KG may be used.

[6] **Test report**

The proof of the explosion protection of the equipment mentioned under [2] is documented in the Test Report IB-15-3-088 of 29 January 2016. The test documents are part of the Test Report.

[7] **Test result**

IBExU certifies, that the equipment mentioned under [2] fulfils the Essential Health and Safety Requirements given in Annex II to the Directive 94/9/EC by compliance with EN 60079-0:2012, EN 60079-1:2007, EN 60079-5:2007, EN 60079-7:2007, EN 60079-11:2012, EN 60079-18:2009, EN 60079-28:2007 and EN 60079-31:2009.

The equipment mentioned under [2] still fulfils the requirements of explosion protection o for Equipment Group II and Category 2(1)G or 2(1)D depending on the used components.

The Ex marking of the equipment mentioned under [2] remains unchanged:

⊕ II 2G	Ex d e ma/mb op is q ia/ib [ib] IIA, IIB, IIC T6, T5, T4, T3 Gb
⊕ II 2(1)G	Ex d e ma/mb op is q ia/ib [ia Ga] IIA, IIB, IIC T6, T5, T4, T3 Gb
⊕ II 2D	Ex tb [ib] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db
⊕ II 2(1)D	Ex tb [ia Da] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db

-55 °C ≤ T_A ≤ +75/80 °C

Safety Instructions:

- The special conditions for the safe use mentioned in the EC-Type examination certificates of the used equipment has to be observed.
- The values mentioned in the certificate are maximum values. The rated values depend on the used components.
- The ambient temperature range, the maximum surface temperature as well the temperature class have to be determined by the manufacturer depending on used components.
- The equipment has to be marked with "X".

[8] **Special conditions for safe use** (requires "X"- marking)

- The polyamide hose maybe used in a temperature range of -20 °C up to +60 °C.
- It may be a potential risk of electrostatic discharge from plastic window in the enclosures, refer to the instructions.

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This Addition is only valid in combination with the EC-Type Examination Certificate IBExU12ATEX1099 of 16 November 2012.

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Authorised for certifications
-Explosion protection-

By order



(Dipl.-Ing. [FH] Henker)



- Seal -
(ID no. 0637)

Freiberg, 29 January 2016

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IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg



[1] **EU-TYPE EXAMINATION CERTIFICATE - Translation**

[2] Equipment or protective systems intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU12ATEX1099 X** | Issue 1

[4] Product: **Measuring, Control and Switchgear combination**
Type: 07-3***-****/****

[5] Manufacturer: Bartec GmbH

[6] Address: Max-Eyth-Straße 16
97980 Bad Mergentheim
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-16-3-173.

[9] Compliance with the essential health and safety requirements has been assured by compliance with: EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-5:2015, EN 60079-7:2015, EN 60079-11:2012, EN 60079-18:2015, EN 60079-28:2015 and EN 60079-31:2013 except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product mentioned under [4] is variable and depends on the used components:

- ⊕ II 2G Ex db eb ma/mb op is q ia/ib [ib] IIA, IIB, IIC T6, T5, T4, T3 Gb
- ⊕ II 2(1)G Ex db eb ma/mb op is q ia/ib [ia Ga] IIA, IIB, IIC T6, T5, T4, T3 Gb
- ⊕ II 2D Ex tb op is [ib] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db
- ⊕ II 2(1)D Ex tb op is [ia Da] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db
-55 °C ≤ T_A ≤ +75/80 °C

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Freiberg, 2016-10-04

[13] **Schedule**

[14] **Certificate number IBExU12ATEX1099 X | Issue 1**

[15] **Description of product**

The explosion-proof Measuring, Control and Switchgear combination is used for the control of electrical apparatus and/or for the power distribution. The stationary switchgear combination can be used in areas in which equipment of category 2G or 2D is required.

The enclosures are produced from polyester resin, stainless steel or aluminium. They are separately certified in type of protection "Ex e" or "Ex t". They contain measuring-, controlling- and switching devices and can be equipped with actuating elements, indication lights and inspection glasses, if required. All built-in and attached components are separately tested according to the Ex standards. The built-in components for dustproof control units can be designed in accordance with the industrial standards. The electrical connections are carried out via Ex cable entries on terminals. Connecting parts for intrinsically safe circuits are separately marked. Separately certified pneumatic valves in combination with bulkhead connector and poly-amide tubes, manufactured by Riegler & Co. KG may also be used.

For the final assembly of the differently sized enclosures the permissible dissipation power is determined to consider the operating conditions of the individual apparatus/components which are intended to fit in/install on the enclosures. In addition, the temperature class to be marked and the maximum surface temperature must be determined. The respective types of protection are marked following the specifications of the certificates.

Technical data

Ambient temperature range:	-55 °C to +80 °C -55 °C to +75 °C with enclosure insert
Degree of protection:	≥ IP54 acc. to EN 60529 for explosive gas atmospheres ≥ IP6X acc. to EN 60529 for explosive dust atmospheres
Rated insulation voltage	max. 1000 V
Rated current	max. 160 A
Auxiliary circuit/control circuit	16 A
Rated frequency	50/60 Hz
Rated terminal cross section	max. 120 mm ²

The rated values are maximum values. The respective built-in components cause the actual electrical values. The manufacturer specifies the final rated values, within the limits of the maximum values, in compliance with the respective standards and depending on the supply conditions, mode of operation, equipment category and so on. The intrinsically safe circuits must be interconnected in accordance with the requirements of the current standard EN 60079-14 or EN 60079-25.

Variations compared to EC-Type Examination Certificate and its first addition

Variation 1

The Measuring, Control and Switchgear combination complies with the requirements of the current standards.

[16] **Test report**

The test results are recorded in the confidential test report IB-16-3-173 of 2016-10-04. The test documents are part of the test report and they are listed there.

Summary of the test results

The equipment mentioned under [24] still fulfils the requirements of explosion protection o for Equipment Group II and Category 2(1)G or 2(1)D depending on the used components.

Safety Instructions:

- The special conditions for the safe use mentioned in the EU-Type examination certificates of the used equipment have to be observed.
- The values mentioned in the EU-Type examination are maximum values. The rated values depend on the used components.

- The ambient temperature range, the maximum surface temperature as well the temperature class have to be determined by the manufacturer depending on used components.

[17] Specific conditions of use

- The polyamide hose maybe used in a temperature range of -20 °C up to +60 °C.
- It may be a potential risk of electrostatic discharge from plastic window in the enclosures, refer to the instructions.

[18] Essential health and safety requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

None

[19] Drawings and Documents

The documents are listed in the test report.

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09599 Freiberg, GERMANY

By order



Dipl.-Ing. (FH) Henker

Freiberg, 2016-10-04