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/EEC

(3) EC-Type-Examination Certificate Number:

PTB 97 ATEX 1068 U

(4) Equipment: Control component type 07-7311-..../....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

(6) Address: D-97980 Bad Mergentheim

(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/EEC 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 97-17080

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

EN 50014: 1997 **EN 50018: 1994** **EN 50019: 1994**

(10) If the sign "U" is placed after the certificate number it indicates that this certificate must not be confused with a certificate designated for a device or protective system. This partial certificate may only be used as the basis for certification of a device or protective system.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EEC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

Ex **II 2 G EEx de IIC** **I M2 EEx de I**

Zertifizierungsstelle Explosionsschutz
By order
Dr.-Ing. U. Klausmeyer
Oberregierungsrat

Braunschweig, 23 March 1998

(13) ## Schedule

(14) **EC-Type-Examination Certificate No. PTB 97 ATEX 1068 U**

(15) Description of equipment

The control component type 07-7311-..../.... in a flameproof enclosure is used to control, switch and indicate electrical circuits. It is permissible to install control elements such as plungers and axles and light elements for signal and indicator displays. Connection is established on the integrated terminals. The control component is snapped on to rails and several may be mounted in a row.

Technical data

Rated voltage max. 550 V

Power loss for T6 at T_a 40°C and T4 at 65°C

	Clearance	**16 mm**	**8 mm**	**Several in a row**
Type 07.7311-63	max.	1.9 W	1.7 W	1.2 W
Type 07.7311-93 (depth 91 mm)	max.	3.0 W	2.5 W	1.8 W
Type 07.7311-97	max.	4.3 W	4.3 W	3.0 W
Type 07.7311-93 (depth 78 mm)	max.	2.2 W	1.8 W	1.8 W

Power loss for T6 at T_a 60°C and T4 at 80°C

	Clearance	**16 mm**	**8 mm**	**Several in a row**
Type 07.7311-63	max.	0.9 W	0.7 W	0.5 W
Type 07.7311-93 (depth 91 mm)	max.	1.4 W	1.1 W	0.8 W
Type 07.7311-97	max.	2.1 W	1.9 W	1.6 W
Type 07.7311-93 (depth 78 mm)	max.	1.1 W	0.9 W	0.9 W

Rated conductor cross section: max. 2.5 mm^2

Number of terminals: 2 ...20

This control component is suitable for use in areas of temperature class T6 to T4. The flameproof enclosure of the component is rated as resistant to temperatures of -25°C to 105°C.

Rated operating voltage and current and, in the case of switchgear, utilization category are in accordance with the components fitted and should be taken from the information supplied by the manufacturer.

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

Schedule to EC-Type-Examination Certificate No. PTB 97 ATEX 1068 U

(16) Report PTB Ex 97-17080 consisting of 3 pages and Description (11 pages)
Drawing (1 page)
Parts list (2 pages)
Table (4 pages)
Test report (97 pages)

(17) Special conditions for safe use

The control component is to be fitted in an enclosure complying with an approved explosion protection type in accordance with EN 50 014 section 1.2.

When fitted in an enclosure of explosion protection type "e" increased safety in accordance with EN 50 019, the clearance and creepage distances in accordance with section 4.3, section 4.4 and Table 1 must be met.

The component is suitable for use in both Group I and Group II, as the requirements of the standards are identical in this case.

The EC-type-examination certificate and any future supplements thereto shall also count as supplements to partial conformity certificate PTB No. Ex-89.C.1063 U.

Routine testing

Routine testing in accordance with EN 50 018 section 16.1.1 is waived owing to the component having passed the type test in accordance with section 16.2 at four times reference pressure

Routine tests in accordance with EN 50 014 section 23.4.7.1 and the test documentation are to ensure that the maximum permissible temperature for the relevant temperature class is adhered to, taking account of the maximum permissible ambient temperature

(18) Essential Health and Safety Requirements

Not applicable.

Zertifizierungsstelle Explosionsschutz
By order
Dr.-Ing. U. Klausmeyer
Oberregierungsrat

Braunschweig, 23 March 1998

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1rst 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 97 ATEX 1068 U

(Translation)

Equipment: control module, type 07-7311-..../....

Marking:  **II 2 G EEx de IIC I M 2 EEx de I**

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16,
97980 Bad Mergentheim, Germany

The essential health and safety requirements are met by compliance with:

EN 50014:1997 EN 50018:1994 EN 50019:1994 EN 50020:2002

Description of supplements and modifications

The control module, type 07-7311-..../.... may also be equipped with certified associated and/or instrinsically safe apparatus and/or simple apparatus according to the specifications listed in the description under point 3a of the test report.

The „Electrical data" are specified in the respective EC-type-examination certificates.

The marking changes as follows and has to be adapted to the respective equipment installed:

 **II 2 (1) G EEx d e [ia] IIC resp. IIB**

 **II 2 G EEx d e [ib] IIC resp. IIB**

 **I M 2 EEx d e [ia resp. ib] I**

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1rst SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 97 ATEX 1068 U

All other data remain unchanged.

Test report: PTB Ex 04-21194

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeier
Regierungsdirektor

Braunschweig, January 26, 2004

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 97 ATEX 1068 U

(Translation)

Equipment: Control Module Type 07-7311-..../....

Marking:

Ex II 2 (1) G	EEx d e [ia] IIC resp. IIB
Ex II 2 G	EEx d e [ib] IIC resp. IIB
Ex I M 2	EEx d e [ia resp. ib] I

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16
97980 Bad Mergentheim, Germany

Description of supplements and modifications

1. According to the technical documentation, the use of alternative plastics materials is possible. A change of the type designation of the enclosure material Ultramid KR4455 in Ultramid B3UGM2010 resp. Badamid LB70GF/M60 FR HF is effected.

2. The installation of a lithium cell type CR 2032, 3V, 190 mAh is possible. A charging of the cell during use is not permitted.

3. The enclosure is completely filled with glass beads ø 0.75 mm or an analogical filling material. The remaining free volume consists only of the own volumes of the parts on the circuit boards and is less than 10 cm^3.

All other data remain unchanged.

Applied standards

EN 60079-0:2009 **EN 60079-1:2007** **EN 60079-7:2007** **EN 60079-11:2007**

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 97 ATEX 1068 U

Due to the use of the above-mentioned standards, the marking changes as follows:

Ex II 2 (1) G	**Ex d e [ia Ga] IIC Gb resp. IIB Gb**
Ex II 2 G	**Ex d e [ib] IIC Gb resp. IIB Gb**
Ex I M2	**Ex d e [ia Ma resp. ib] I Mb**

Assessment and test report: PTB Ex 11-11272

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, October 21, 2011

Dr.-Ing. U. Klausmeyer
Direktor und Professor

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

3 SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 97 ATEX 1068 U

(Translation)

Equipment: Contol Module type 07-7311-****/****

Marking:
II 2 (1) G Ex db e [ia Ga] IIC resp. IIB Gb
II 2 G Ex db e [ib] IIC resp. IIB Gb
I M 2 Ex db e [ia Ma resp. ib] I Mb

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

The Control Module type 07-7311-****/**** was verified with respect to the state of the art of the standards.

The withstand temperature is limited to 100 °C.

The enclosure is only completely filled with glass beads ø 0.75 mm.

All other data remain unchanged.

Applied standards

EN 60079-0:2012, EN 60079-1:2014, EN 60079-7:2007, EN 60079-11:2012

Test report: PTB Ex 14-34290

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, February 6, 2015

Dr.-Ing. M. Thedens
Oberregierungsrat

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

3 SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 97 ATEX 1068 U

(Translation)

Equipment: Contol Module type 07-7311-****/****

Marking:
II 2 (1) G Ex db e [ia Ga] IIC resp. IIB Gb
II 2 G Ex db e [ib] IIC resp. IIB Gb
I M 2 Ex db e [ia Ma resp. ib] I Mb

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

The Control Module type 07-7311-****/**** was verified with respect to the state of the art of the standards.

The withstand temperature is limited to 100 °C.

The enclosure is only completely filled with glass beads ø 0.75 mm.

All other data remain unchanged.

Applied standards

EN 60079-0:2012, EN 60079-1:2014, EN 60079-7:2007, EN 60079-11:2012

Test report: PTB Ex 14-34290

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, February 6, 2015

Dr.-Ing. M. Thedens
Oberregierungsrat

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT