



(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 02 ATEX 1061 U**

(4) Component: Electrode bushing, type Ex + M Typ 37-94...-.../....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

(6) Address: 97980 Bad Mergentheim, Germany

(7) This component 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 component 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 02-12185.

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

**EN 50014: 1997 + A1 + A2      EN 50018: 2000**

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This Component Certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

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

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

**II 2 G EEx d II IM 2 EEx d I**

Zertifizierungsstelle Explosionsschutz

Braunschweig, July 30, 2002

By order:

Dr.-Ing. U. Klausmeyer  
Regierungsdirektor



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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

SCHEDULE

(13)

(14) EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1061 U

(15) Description of component

The electrode bushing, type Ex+M type 37-94..-....., is used for detection, for instance, of water seeping into the oil well of a submersible pump.

Only certified intrinsically safe circuits may be connected to the electrode bushing.

The electrode bushing is operationally grounded. Operating conditions other than those specified in this examination certificate need to be specifically stated in the EC type-examination certificate for the electrical apparatus in question.

Technical data

Rated voltage .....	30 V
Type and size of thread .....	M 10x1 to M 24x1.5 other thread types and sizes as marked
Max. temperature at the location of the electrode bushing for rated operation of the electrical equipment *)	70 °C or 110 °C
*) depending on the non-sheathed cable used	

(16) Test report PTB Ex 02-12185

(17) Special conditions for safe use

None

Additional notes for installation and operation

Threaded holes into which the Ex+M electrode bushing will be screwed with its internal thread shall as a minimum comply with the requirements of EN 50018, section 5.3 (table 3).

If the reference pressure exceeds 20 bar, the Ex+M electrode bushing shall be included in the type test according to EN 50018, section 15.1.3 (overpressure test) as required for group I, IIA, IIB or IIC classification of the equipment in question.

## SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1061 U

Assignment of the thermal class to the temperature resistance of the Ex+M electrode bushing shall be determined when type testing the electrical equipment in question.

The non-sheathed cable of the Ex+M electrode bushing shall be connected in enclosures that comply with a standard type of protection as specified in EN 50014, section 1.2.

The Ex+M electrode bushing shall be fixed in the electrical equipment in such a way that rotation and accidental loosening will be prevented.

The non-sheathed cable shall be of a quality that satisfies the local thermal requirements.

Since in this case the requirements of the standard are identical, the Ex+M electrode bushing can be used in groups I and II.

This EC type-examination certificate as well as any future supplements thereto shall at the same time be regarded as supplements for Component Certificate PTB No. Ex-95.D.1067 U.

(18) Essential health and safety requirements

The tests and the favourable results these have produced reveal that the Ex+M electrode bushing meets the requirements of directive 94/9/EC as well as those of the standards quoted on the cover sheet.

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