



- [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: **IBExU03ATEX1160 X**
- [4] Equipment: TA-FM System  
Type FM1 and FM2
- [5] Manufacturer: TA ROLOFF  
Technischer Apparatebau GmbH
- [6] Address: Adlerhorst 5  
D-22459 Hamburg
- [7] This equipment and any acceptable variation 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 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 intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
The examination and test results are recorded in the test report IB-03-3-334 of 15 October 2003.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 50014:1997 + A1 + A2 and EN 50028:1987.
- [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 under [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 called under [4] shall include the following:

II 2G EEx m II T3

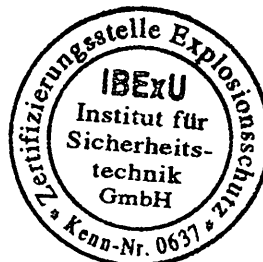
**IBExU Institut für Sicherheitstechnik GmbH**  
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Phone: 00493731 3805-0 - Fax: 00493731 23650

Authorised for certifications  
-Explosion protection-

By order

(Dr. Lösch)

**Schedule**



- Seal-  
(ID no. 0637)

Freiberg, 15 October 2003

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.

[13] **Schedule**

[14] **to the EC-TYPE EXAMINATION CERTIFICATE IBExU03ATEX1160 X**

[15] **Description of equipment**

The TA-FM System is an electromagnetic failsafe device and accessories to TA rotary drives. It serves for automatically moving the valve into the required safety position "open" or "shut" in case of a failure of the electrical supply voltage. At power failure, valve and rotary drive are decoupled and the valve is operated by the pressure spring. The TA-FM System consists of an encapsulated magnet coil, which is adapted to fit in an aluminium enclosure.

- Electrical data:

	FM1	FM2
Rated voltage:	24 V DC	24 V DC
Nominal current:	0.29 A	0.76 A
Fuse:	0.3 A	0.8 A
Nominal power:	6.96 W	18.24 W
Operating time:	100 % ED	100 % ED

- Ambient temperature range: -20 °C up to +40 °C

[16] **Test report**

The examination and test results are recorded in the test report IB-03-3-334 of 15 October 2003. The test documents are component of the test report and listed in the annex to the test report.

**Summary:**

The TA-FM System type FM1 and FM2 fulfils the requirements of explosion protection for equipment group II and equipment category 2G, type of protection Encapsulation for explosive atmospheres with gases and vapours of explosion group II and temperature class T3.

[17] **Special conditions for safe use**

The connection of the free cable end must be carried out in an equipment approved according to EN 50014, section 1.2.

The TA-FM System may be operated only in an additional enclosure, which fulfils the requirements of the shock test according to EN 50014, section 23.4.3.1. The surface of the compound may not be exposed to the surroundings freely.

[18] **Essential Health and Safety Requirements**

Met by compliance of standards (see [9]).

By order



(Dr. Lösch)

Freiberg, 15 October 2003

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



- [1] **1<sup>st</sup> Addition to**  
**EC-TYPE EXAMINATION CERTIFICATE IBExU03ATEX1160 X**  
according to Directive 94/9/EC, Annex III  
**- Translation -**

- [2] Equipment: **TA-FM System**  
Type FM1 and FM2
- [3] Manufacturer: **TA ROLOFF**  
Technischer Apparatebau GmbH
- [4] Address: **Adlerhorst 5**  
**22459 Hamburg**  
Germany

[5] **Addition / Alteration**

The additions / alterations of the equipment mentioned in [2] compared with the equipment already certified concern in detail:

- a) It be used a different potting compound.
- b) The equipment fulfils also the requirements of the current standard series EN 60079-0:2009.

[6] **Test Report**

The proof of the explosion protection of the equipment mentioned in [2] is documented in the Test Report IB-9-3-069 of 12 July 2011. The test documents are part of the Test Report.

[7] **Test result**

IBExU certifies that the equipment mentioned in [2] fulfils the Essential Health and Safety Requirements fixed in Annex II of the Directive 94/9/EC by compliance with EN 60079-0:2009 and EN 60079-18:2010.

The TA-FM Systems type FM1 and FM2 stated under [2] fulfill the requirements of explosion protection for equipment group II and equipment category 2G, type of protection Encapsulation "mb" for explosion group IIC and temperature class T3.

The marking of the equipment stated under [2] have to include one of the following:

II 2G Ex mb IIC T3

**This addition is only valid in combination with the EC-Type Examination Certificate IBExU03ATEX1160 X of 15 October 2003.**

**The safety instructions are unchanged and have to be taken into account furthermore.**

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Authorized for certifications  
- Explosion protection -

By order

(Dr. Wagner)



- Seal -

(Identification No. 0637)

Freiberg, 12 July 2011

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