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 10 ATEX 1054 X

(4) Equipment: Three-phase motor with integrated frequency converter, type FBM 4000 Ex

(5) Manufacturer: FLUX-GERÄTE GmbH

(6) Address: Talweg 12 , D-75433 Maulbronn

(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 assessment and test report PTB Ex 10-10281.

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

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

(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 Ex d e IIC T6 and T5 Gb

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, November 30, 2010

Dr.-Ing. U. Klausmeyer
Direktor und Professor

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(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 10 ATEX 1054 X

(15) Description of equipment

Three-phase motor with integrated frequency converter, type FBM 4000 Ex. The enclosure (motor compartment) is made from aluminium and is designed to Flameproof Enclosure "d" type of protection; the terminal is made from plastics and is designed to Increased Safety "e" type of protection. The motors are used for driving barrel pumps that are operated as category-1 pumps and are separately tested and certified.

Technical data

Rated output:	600	W
Voltage:	220 - 240	V AC
Current:	4.2	A
Frequency:	50 - 60	Hz
Speed:	5000 - 12000	rpm
Duty type:		S1
Temperature classes	T6 resp. T5	

The motors may be operated on electric low-voltage power systems with nominal voltages (rated voltage = nominal voltage) and voltage tolerances that comply with IEC 60038 specifications, or other power or supply systems with nominal voltage tolerances of max. ±10 %.

Compliance with the maximum permissible temperatures specified in EN 60079-0, section 26.5.1.3, will be ensured by the manufacturer who also defines the temperature class under his own responsibility.

(16) Assessment and Test Report PTB Ex 10-10281

(17) Special conditions for safe use

Repairs on flameproof joints may only be performed in accordance with the manufacturer's design specifications. Repair on the basis of the values in tables 1 and 2 of EN 60079-1 is not permitted.

Additional notes for safe operation:

Components attached or installed (terminal compartments, bushings, Ex-type cable glands, connectors) must be of a technical standard that complies as a minimum with the specifications on the cover sheet, and they must have a separate examination certificate. The operating conditions specified in the component certificates must be complied with.

If the motors are operated together with the barrel pump, comprehensive and clear equipotential bonding must be provided in the form of an electrically conductive connection between the pump and the motor that complies with the specifications in EN 60079-0, section 15.

If, for practical reasons (e.g. remote control system), a no-volt release cannot be provided, the barrel pump unit has to be arranged so that no frictional or impact sparks can occur and that the operating conditions ensure safe operation.

(18) Essential health and safety requirements

Met by compliance with the afore-mentioned Standards.

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, November 30, 2010

Dr.-Ing. U. Klausmeyer
Direktor und Professor