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 02 ATEX 1139

(4) Equipment: EExII loudspeaker, type LT2001Ex

(5) Manufacturer: FHF Funke+Huster Fernsig GmbH

(6) Address: Eintrachtstraße 95, D-42551 Velbert, Germany

(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 report PTB Ex 02-10246.

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

EN 50014:1997 + A1 + A2 **EN 50018:2000** **EN 50019:2000**
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 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 EEx dem IIC T5

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, December 13, 2002

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1139

(15) Description of equipment

The EexII loudspeaker, type LT2001Ex, is used as a stationary unit in areas that may be exposed to a potentially explosive gas/air atmosphere. It is designed for apparatus group II and category 2, and may be used within zones 1 and 2.

The enclosure consists of an inside and outside housing, which form separate units and are essentially cylindrical. When placed into one another, they form the complete loudspeaker. The outside housing is made from plastics and carries the steel mounting bracket for wall mounting. The inside housing is made from aluminium with a magensium and titanium percentage less than 6%. The explosion protection of the LT2001Ex is only safeguarded by the desing of the inside housing. The aluminium inside housing may be one complete piece or it may consist of several pieces welded together, in which case the weld seam will not be located in the area of the "d" wall. The inside housing accommodates a terminal compartment of Increased Safety "e" at the top, an Encapsulation "m" section, as well as the bottom end Flameproof Enclosure "d".

Admissible ambient temperature range: -20 °C to +60 °C

(16) Test report PTB Ex 02-10246

(17) Special conditions for safe use

None

Notes for installation and use

The pressure test which EN 50018:2000, section 16.1.1, requires to be performed for type testing can be dispensed with, because a type test with four times the reference pressure was passed in accordance with section 16.2.

The electrical connections may be provided in the form of – separately certified – cable entries as well as sealing plugs, which comply with the standards shown on the cover sheet. Any Special Conditions of the cable entries (e.g. inadequate resistance to tensile stress) shall be duly considered, and the user shall be informed in an appropriate manner by providing the required details in the operating instructions (e.g. connecting cable to be permanently wired).

Suitable and regular incoming-goods inspection is to safeguard that the sintered metals used do not exceed a maximum pore size of 305 µm.

Any components attached or installed shall be of a technical standard that complies with the specifications on the cover sheet as a minimum.

The unit is classified as a safety class II device.

(18) Essential health and safety requirements

Complied with by compliance with the above Standards.

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, December 13, 2002

Dr.-Ing. U. Klausmeyer
Regierungsdirektor