



(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 07 ATEX 2039 X

(4) Equipment: Ex II signal-horn, type mHP 11, mHP12, mHG11

(5) Manufacturer: FHF Funke + Huster Fernsig GmbH

(6) Address: Gewerbeallee 15-19, 45478 Mülheim a.d. Ruhr, 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 07-27174.

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

EN 60079-0:2006

EN 60079-7:2003

EN 60079-18:2004

EN 61241-0:2006

EN 61241-1:2004

(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:

see page No. 2

Zertifizierungsstelle Explosionschutz
By order:

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Braunschweig, November 15, 2007

(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 07 ATEX 2039 X

(15) Description of equipment

The signal-horn mHx1x is applied as a stationary device in hazardous areas due to an explosive gas or dust atmosphere.

The signal-horn is an electromechanical structure. It consists of a driving coil with an iron core having no limb on the bottom side. A current flow through the coil generates a magnetic field which activates a movable armature arranged on the bottom side against the force of a helical spring. When the magnetic field is switched off, the spring moves back the armature which thereby dashes against a pin installed on the diaphragm. This produces the sound of the signal-horn during operation.

The armature of the a.c.-variant oscillates in time with twice the mains frequency.

The d.c.-variant uses a chopping circuitry by which the direct voltage is switched on and off.

The marking mHx1x distinguishes the following types of housings:

mHP11	Plastic housing with horn
mHP12	Plastic housing with sound grill, without horn
mHG11	Metal housing with horn

Depending on the ambient temperature range, the type of the housing and the type of supply (AC/DC), the marking shall be applied as follows:

Type	Supply	Ambient temperature	Marking
mHG11	AC or DC	$-55\text{ °C} \leq T_a \leq +70\text{ °C}$	II 2 G Ex e mb II T4 II 2 D Ex tD A21 IP66 T90 °C
	AC	$-55\text{ °C} \leq T_a \leq +50\text{ °C}$	II 2 G Ex e mb II T5
	DC	$-55\text{ °C} \leq T_a \leq +60\text{ °C}$	II 2 D Ex tD A21 IP66 T90 °C
mHP11 mHP12	AC or DC	$-20\text{ °C} \leq T_a \leq +70\text{ °C}$	II 2 G Ex e mb II T4
	AC	$-20\text{ °C} \leq T_a \leq +50\text{ °C}$	II 2 G Ex e mb II T5
	DC	$-20\text{ °C} \leq T_a \leq +60\text{ °C}$	

Electrical data

The signal-horn mHx1x is manufactured for the following nominal voltages:

AC 50 Hz	AC 60 Hz	DC
230 V		230 V
	240 V 120 V	
115 V		115 V
60 V		60 V
		48 V
42 V		
24 V		24 V
12 V		12 V
6 V		6 V

(16) Test report PTB Ex 07-27174

(17) Special conditions for safe use

The signal-horns mHP11 and mHP12 shall be installed as such that they are protected against mechanical damage caused by impact, shock or falling objects.

For the prevention of electrostatic charge the signal-horns mHP11 and mHP12 shall be provided with a warning label showing the inscription "clean with a moist cloth only".

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionschutz
By order:

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Braunschweig, November 15, 2007

1. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 07 ATEX 2039 X

(Translation)

Equipment: Ex II signal-horn, type mHP 11, mHP12, mHG11

Marking:  II 2 G Ex e mb II T4, T5, T6 and II 2 D Ex tD A21 IP65 T100 °C

Manufacturer: FHF Funke + Huster Fernsig GmbH

Address: Gewerbeallee 15-19
45478 Mülheim a.d. Ruhr, Germany

Description of supplements and modifications

The Ex II signal-horn, type mHP 11 may also be produced with the dimensions L x W x H = 150 mm x 140 mm x 342 mm or H = 149 mm (mHP12).

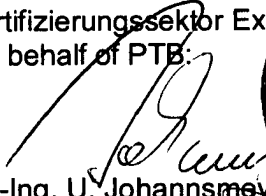
The designation of the applied hardening agent was changed.

Applied standards

EN 60079-0:2006, EN 60079-7:2007, EN 60079-18:2004, EN 61241-0:2006, EN 61241-1:2004

Test report: PTB Ex 11-21166

Zertifizierungssektor Explosionschutz
On behalf of PTB:


Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Braunschweig, August 3, 2011

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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.