



## (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 08 ATEX 2018 X**

- (4) Equipment: Clamp-on Ultrasonic Flowsensor,  
type series VersaFlow Sonic 1000
- (5) Manufacturer: Honeywell Int. HFS
- (6) Address: 512 Virginia Drive, Fort Washington,  
PA 19034, U.S.A.
- (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 08-28018 .
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0:2006** **EN 60079-11:2007**
- (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 ia IIC T6...T4**

Zertifizierungsstelle Explosionschutz  
By order:

Dr.-Ing. U. Johannsmeyer  
Direktor und Professor



Braunschweig, July 1, 2008

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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.

(13)

## SCHEDULE

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 2018 X

(15) Description of equipment

The clamp-on ultrasonic flowsensors of type series VersaFlow Sonic 1000 are used to detect the flow rate of flammable and non-flammable gases and liquids in pipings. They form part of a measuring system which is composed of measuring sensor, distribution box (splitter box) and separately certified measuring transducer in remote design. The electronic assembly of the associated measuring transducer is separately certified as well. The measuring sensors consist of the actual ultrasonic sensors which are mounted into a specifically designed carrier housing and fixed from the outside onto the piping by means of pipe clamps. The connections to the measuring transducer are carried out by cables. The splitter box is used for large diameters of the pipings or for the connection of several sensor units.

The permissible range of the ambient temperature is – 40 °C bis +70 °C.

For relationship between medium temperature and temperature class, reference is made to the following table:

Temperature class	Max. permissible medium temperature at $T_a = 70\text{ °C}$
T6	80 °C
T5	95 °C
T4	120 °C

#### Electrical data

##### **Clamp-on ultrasonic flowsensor**

Sensor circuits  
(cable, non-detachably mounted to  
internal SMB-connectors)

type of protection Intrinsic Safety Ex ia IIC

only for connection to the measuring transducer,  
type VersaFlow TWS 9000 F(/i) (PTB 08 ATEX  
2019 X)

Maximum values per circuit:

$U_i = 8.5\text{ V}$   
 $I_i = 250\text{ mA}$   
 $P_i = 625\text{ mW}$   
 $C_i = 4.5\text{ nF}$   
 $L_i = 400\text{ }\mu\text{H}$

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**Splitter-Box**

Sensor circuits

(cable, non-detachably mounted to  
internal SMB-connectors 1U, 1D, 2U, 2D)

type of protection Intrinsic Safety Ex ia IIC

only for connection to the measuring transducer,  
type VersaFlow TWS 9000 F(/i) (PTB 08 ATEX  
2019 X)

Maximum values per circuit:

$U_i = 8.5 \text{ V}$   
 $I_i = 250 \text{ mA}$   
 $P_i = 625 \text{ mW}$   
 $C_i = 4.5 \text{ nF}$   
 $L_i = 400 \text{ }\mu\text{H}$

16) Test report PTB Ex 08-28018

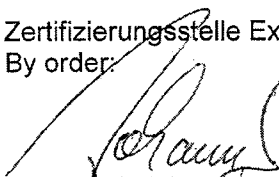
(17) Special conditions for safe use

1. The clamp-on ultrasonic flowsensors of type series VersaFlow Sonic 1000 shall only be operated with the system-specific measuring transducer of type VersaFlow TWS 9000 F(/i) (PTB 08 ATEX 2019 X).
2. The connecting cables shall be laid as permanent installation and as such, that they are sufficiently protected against possible damage.

(18) Essential health and safety requirements

met by compliance with the standards stated above

Zertifizierungsstelle Explosions-  
By order:

  
Dr.-Ing. U. Johannsmeyer  
Direktor und Professor



Braunschweig, July 1, 2008