(1) # EC-TYPE EXAMINATION CERTIFICATE

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 09ATEX0047 X** Issue Number: **1**

(4) Equipment: **Electro Magnetic Flowmeter Primary Head Series VersaFlow Mag 3000 F**

(5) Manufacturer: **Honeywell International, HFS**

(6) Address: **512 Virginia Drive, Fort Washington, PA 19034, USA**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 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 confidential test report number 212419200/4.

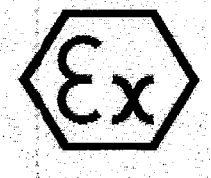
(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006 **EN 60079-7 : 2007** **EN 60079-18 : 2004**
EN 50020 : 2002 **EN 50281-1-1 : 1998 + A1**

(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 according 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 GD Ex e ia mb IIC T6...T3 T 180 °C

This certificate is issued on June 23, 2009 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.

H.J.G. de Wild
Certification Manager

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KEMA Quality B.V. Utrechtseweg 310, 6812 AR Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 26 3 56 20 00 F +31 26 3 52 58 00 customer@kema.com www.kema.com Registered Arnhem 09085396

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 09ATEX0047 X** Issue No. 1

(15) **Description**

The Electro Magnetic Flowmeter Primary Head Series VersaFlow Mag 3000 F, sizes DN25 to DN80, is used to convert the flow of a conducting fluid into an electrical signal. An associated flow transmitter is used to supply the field coils of the primary head and to convert the measured electrode signal into an output signal.

The flowmeter consists of a terminal compartment in type of protection increased safety "e", field coils in type of protection "mb" and electrodes in type of protection intrinsic safety "i".

Ambient temperature range: -40 °C to +60 °C.
Minimum process temperature: -40 °C.

The relation between temperature class, maximum process temperature and ambient temperature is shown in the following table:

Temperature class	Max. process temperature		
	$T_a \leq 40$ °C	40 °C < $T_a \leq 50$ °C	50 °C < $T_a \leq 60$ °C
T6	75 °C	70 °C	65 °C
T5	95 °C	90 °C	85 °C
T4	130 °C	130 °C	130 °C
T3	180 °C	180 °C	170 °C

The maximum surface temperature "T 180 °C" is based on a maximum ambient temperature of 60 °C.

The enclosure provides a degree of protection of at least IP64 in accordance with EN 60529.

Electrical data

Field coil circuit ..... $U \leq 50$ V (pulsed)
(terminals 7, 8 and 9) $I \leq 125$ mA (fuse protected)

Electrodes circuit (terminals 1, 2, 3 and 4):
in type of protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
$U_i = 20$ V; $I_i = 175$ mA; $C_i = 0$ nF; $L_i = 0$ mH

The aforementioned intrinsically safe circuits shall, from the safety point of view, be considered to be connected to ground.

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 09ATEX0047 X** Issue No. **1**

Installation instructions

The cable glands and blanking elements shall be in type of protection increased safety "e", suitable for the conditions of use and correctly installed. The devices shall provide a degree of protection of at least IP64 according to EN 60529.

A cable, cable gland and blanking element with a continuous operating temperature of at least 85 °C shall be used for 40 °C < Ta ≤ 50 °C and a process temperature ≥ 150 °C and for Ta > 50 °C and a process temperature ≥ 110 °C.

Routine tests

Each flowmeter shall be subjected to the following routine tests:
- EN 60079-18, clause 9.1:
Visual check of the encapsulated parts. No visible damage of the compound shall be evident.
- EN 60079-7, clause 7.1 / EN 60079-18 clause 9.2:
A dielectric strength test shall be carried out between the field coil circuit and the enclosure and between the field coil circuit and the intrinsically safe sensor circuit with a voltage of 500 V, during 1 minute without breakdown.

(16) **Test Report**

KEMA No. 212419200/4.

(17) **Special conditions for safe use**

The relation between temperature class, maximum surface temperature, maximum process temperature and ambient temperature is as shown above in description (15).

The field coils must be protected by a 160 mA fuse. The breaking capacity of the fuse must be in accordance with the prospective short circuit current of the supply.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 212419200/4.