CERTIFICATE

(1) EC-Type Examination

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

(3) EC-Type Examination Certificate Number: **KEMA 99ATEX5014 X** Issue Number: **4**

(4) Equipment: **Guided Wave Radar Level Transmitter Eclipse Model 705-5...-... and Probe Eclipse Model 7..-...-...**

(5) Manufacturer: **Magnetrol International N.V.**

(6) Address: **Heikensstraat 6, 9240 Zele, Belgium**

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

(8) DEKRA Certification 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 NL/KEM/ExTR06.0017/05.

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

EN 60079-0 : 2009 **EN 60079-11 : 2007** **EN 60079-15 : 2010**
EN 60079-26 : 2007 **EN 60079-27 : 2008**

(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 3(1) G	**Ex nA [ia Ga] IIC T4 … T6 Gc** or	(Transmitter)
II 1 G	**Ex ia IIC T4 … T6 Ga** or	
II 3(1) G	**Ex ic [ia Ga] IIC T4 … T6 Gc**	
II 1 G	**Ex ia IIC T4 … T6 Ga**	(Probe)

This certificate is issued on 28 April 2015 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.

DEKRA Certification B.V.

R. Schuller
Certification Manager

PRODUCTS RvA C 001

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(13) # SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 99ATEX5014 X** Issue No. **4**

(15) **Description**

Guided Wave Radar Level Transmitter Eclipse Model 70.-5...-... only for connection to Probe Eclipse Model 7..-.…-... is used for level detection.
Using the Time Domain Reflectrometry and Micro Power Impulse Radar Technology, a fluid level is converted into a 4 - 20 mA current with Hart signal or a digital fieldbus signal, where Model 705-51..-E.. is integral connected with probe and Model 705-51..-F.. is remotely connected to a probe with a maximum probe length of 36 m.

The transmitter enclosure provides a degree of protection IP 66 as per EN 60529.

Ambient temperature range: -40 °C to +60 °C for temperature class T6,
-40 °C to +70 °C for temperature class T4 with Ex nA.
-40 °C to +80 °C for temperature class T4 with Ex ic.

Process temperature range: -196 °C to +450 °C, depending on the Probe Model.

Electrical data

<u>For Eclipse Level Transmitter Model 705-50..-... and Model 705-51..-...:</u>
Output/supply circuit (terminals + and -):
in type of protection intrinsic safety Ex ia IIC or Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 28,4 V; I_i = 124 mA; P_i = 0,84 W; C_i = 2,2 nF; L_i = 3 µH.

<u>For Eclipse Level Transmitter Model 705-51..-E.. (integral) and Model 705-51..-F.. (remote)::</u>
Output/supply circuit (terminals + and -):
in type of protection non sparking Ex nA, in accordance with EN 60079-15, with the following nominal value:
U_N = 24 V

<u>For Eclipse Level Transmitter Models 705-52..-.., and 705-53..-...:</u>
Output/supply circuit (terminals + and -):
in type of protection intrinsic safety Ex ia IIC or Ex ic IIC suitable for connection to a FISCO fieldbus system in accordance with EN 60079-27, with the following maximum values:
U_i = 17,5 V; I_i = 380 mA; P_i = 5,32 W; C_i = 3 nF; L_i = 3 µH.
or
in type of protection intrinsic safety Ex ia IIC or Ex ic IIC only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 28,4 V; I_i = 124 mA; P_i = 0,84 W; C_i = 3 nF; L_i = 3 µH.

(13) # SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 99ATEX5014 X** Issue No. **4**

For Eclipse Level Transmitter Models Model 705-52..-E.. (integral) and Model 705-52-F.. (remote):
in type of protection non sparking Ex nA, in accordance with EN 60079-15, with the following nominal value:
U_N = 24 V

The sensor circuit in type of protection intrinsic safety Ex ia IIC is an internal circuit.

Installation instructions

The instructions provided with the equipment shall be followed in detail to assure safe operation.

(16) **Test Report**

No. NL/KEM/ExTR06.0017/05.

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

Because the enclosure of the Guided Wave Radar Level Transmitter Eclipse Model 705-5...-.1. and/or Probe Eclipse Model 7..-….-... is made of aluminium, if it is mounted in an area where the use of category 1 G apparatus is required, it must be installed such, that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.

For applications in explosive atmospheres caused by gases or mists and where category 1 G apparatus is required, electrostatic charges on the non-metallic parts of the Probe Eclipse Model 7M5-….-..., Model 7M7-….-… and Model 7.F-….-… shall be avoided.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. NL/KEM/ExTR06.0017/05.