



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx KEM 06.0019X Issue No: 5 Certificate history:
Status: Current Page 1 of 5 Issue No. 5 (2015-04-29)
Date of Issue: 2015-04-29 Issue No. 4 (2014-06-05)
Applicant: Magnetrol International N.V. Issue No. 3 (2012-03-14)
Heikensstraat 6 Issue No. 2 (2011-08-05)
9240 Zele Issue No. 1 (2011-03-04)
Belgium Issue No. 0 (2006-07-25)

Electrical Apparatus: Guided Wave Radar Level Transmitter Eclipse Model 705-5...-A.. and
Model 705-5...-B.., Model 705-5...-E.. and Model 705-5...-F.. and Probe
Eclipse Model 7E-.....-... and Model 7M-.....-...

Optional accessory:

Type of Protection: Ex ia; Ex ic [ia]; Ex nA [ia]

Marking: Ex ia IIC T4 Ga or (transmitter)
Ex ic [ia Ga] IIC T4 Gc or
Ex nA [ia Ga] IIC T4 Gc
Ex ia IIC T4 ... T6 Ga (probe)

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

2015-04-29

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
The Netherlands





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Manufacturer: **Magnetrol International Inc.**
5300 Belmont Rd
Downers Grove, IL 60515-4499
United States of America

Additional Manufacturing
location(s):
Magnetrol International NV
Heikensstraat 6
9240 Zele
Belgium

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition:5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2008 Edition:5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-26 : 2008 Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 60079-27 : 2008 Edition:2.0	Explosive atmospheres - Part 27: Fieldbus intrinsically safe concept (FISCO)

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NL/KEM/ExTR06.0017/01	NL/KEM/ExTR06.0017/02	NL/KEM/ExTR06.0017/03
NL/KEM/ExTR06.0017/04	NL/KEM/ExTR06.0017/05	

Quality Assessment Report:

NL/DEK/QAR11.0031/02	CA/CSA/QAR06.0004/08
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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Guided Wave Radar Level Transmitter Eclipse Model 705-5...-A., Model 705-5...-E.. and Model 705-5...-F.. and Probe Eclipse Model 7..-B...-... are used for level detection. Probe Eclipse Model 7E...-...-... and Model 7M...-...-... are used for level detection. Using the Time Domain Reflectometry 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 IP66 as per IEC 60529.

Ambient temperature range -40 °C to +70 °C

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

CONDITIONS OF CERTIFICATION: YES as shown below:

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 requiring equipment of EPL Ga, 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 gas atmospheres requiring equipment of EPL Ga, electrostatic charges on the non-metallic parts of the Probe Eclipse Model 7M5...-...-..., Model 7M7...-...-... and Model 7.F...-...-... shall be avoided.



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EQUIPMENT (continued):

Electrical data

For Eclipse Level Transmitter Model 705-50... and Model 705-51...:

Output/supply circuit (terminals + and -):

in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 28.4 \text{ V}$; $I_i = 124 \text{ mA}$; $P_i = 0.84 \text{ W}$; $C_i = 2.2 \text{ nF}$; $L_i = 3 \text{ }\mu\text{H}$.

For Eclipse Level Transmitter Model 705-51...-E.. (integral) and Model 705-51...-F.. (remote):

Output/supply circuit (terminals + and -):

in type of protection non sparking Ex nA, in accordance with IEC 60079-15, with the following nominal value:

$U_N = 24 \text{ V}$

For Eclipse Level Transmitter Models 705-52... and 705-53...:

Output/supply circuit (terminals + and -):

in type of protection intrinsic safety Ex ia IIC, Ex ic IIC, suitable for connection to a FISCO fieldbus system in accordance with IEC 60079-27, with the following maximum values:

$U_i = 17.5 \text{ V}$; $I_i = 380 \text{ mA}$; $P_i = 5.32 \text{ W}$; $C_i = 3 \text{ nF}$; $L_i = 3 \text{ }\mu\text{H}$.

or

in type of protection intrinsic safety Ex ia IIC, Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 28.4 \text{ V}$; $I_i = 124 \text{ mA}$; $P_i = 0.84 \text{ W}$; $C_i = 3 \text{ nF}$; $L_i = 3 \text{ }\mu\text{H}$.

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 IEC 60079-15, with the following nominal value:

$U_N = 24 \text{ V}$

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



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DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above):

Addition of Model 705-5...-E.. (integral) and Model 705-5...-F.. (remote):
for additional type of protection Ex nA.

Added thermal data for above mentioned type of protection Ex nA.

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