



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 BKI 09.0001	issue No.:1	Certificate history: Issue No. 1 (2011-9-21) Issue No. 0 (2009-3-26)
Status:	Current		
Date of Issue:	2011-09-21	Page 1 of 4	
Applicant:	NIVELCO Ipari Elektronika Zrt. Dugonics u. 11. 1043 Budapest, Hungary Hungary		
Electrical Apparatus:	Two-wire guided wave radar level transmitter		
Optional accessory:	Type MicroTREK H __ - 4 __ -6 and MicroTREK H __ - 4 __ -8 series		
Type of Protection:	General requirements, Flameproof enclosures, Intrinsic safety, Protection by enclosures „tD”,		
Marking:	Ex ia IIC T6...T3 Ga Ex ia IIB T6...T3 Ga Ex ia IIIC T100 °C Da -30 °C ≤ Tamb ≤ +60 °C		
Approved for issue on behalf of the IECEX Certification Body:	Janos FEJES		
Position:	managing director		
Signature: (for printed version)			
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:

Testing Station for Explosion Proof Equipment
H 1037 BUDAPEST
MIKOVINY S.u. 2-4
Hungary





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Manufacturer: **NIVELCO Ipari Elektronika Zrt**
Dugonics u. 11.
1043 Budapest, Hungary
Hungary

Manufacturing location(s):

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 identification documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements

*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:

[HU/BKI/ExTR09.0003/00](#)

Quality Assessment Report:

[HU/BKI/QAR09.0001/00](#)



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Certificate No.: IECEx BKI 09.0001

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Issue No.: 1

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The MicroTREK H two-wire guided wave radar level measurement equipment consist the potted power supply, signal converter electronics are in non-metallic housing and display unit, the pressure tight measurement pulse feedthrough with the process connection of the instrument. Measuring probe connected in aluminium enclosure. The process connection material are stainless steel, the electronic housing is aluminium with label and with cable entries The output signal is analogue 4...20 mA and/or digital HART.

Used standards:

IEC 60079-0:2007

Edition: 4.0

IEC 60079-11:2006

Edition: 5.0

IEC 61241-0:2004

Edition: 1.0

IEC 61241-11:2004

Edition: 1.0

See details in Addendum to IECEx BKI 09.0001

CONDITIONS OF CERTIFICATION: NO



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

Changing of the mistake IEC 60079-0:2007 Edition: 4.0 to IEC 60079-0:2004 Edition: 4.0


Annexe: [Addendum to IECEX BKI 09.0001.pdf](#)



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Status:	Current		
Date of Issue:	2009-03-26	Page 1 of 3	
Applicant:	NIVELCO Ipari Elektronika Zrt. Dugonics u. 11. 1043 Budapest, Hungary Hungary		
Electrical Apparatus: Optional accessory:	Two-wire guided wave radar level transmitter Type MicroTREK H __ - 4 __ -6 and MicroTREK H __ - 4 __ -8 series		
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Position:	managing director		
Signature: (for printed version)			
Date:	<u>2009. 03. 26.</u>		

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Edition: 1.0

See details in Addendum to IECEx BKI 09.0001

CONDITIONS OF CERTIFICATION: NO

Annexe: [Addendum to IECEx BKI 09.0001.pdf](#)

1. Description

The MicroTREK H two-wire guided wave radar level measurement equipment consist the potted power supply, signal converter electronics are in non-metallic housing and display unit, the pressure tight measurement pulse feedthrough with the process connection of the instrument. Measuring probe connected in aluminium enclosure. The process connection material are stainless steel, the electronic housing is aluminium with label and with cable entries The output signal is analogue 4...20 mA and/or digital HART.

2. Type assortment

MicroTREK H __ - 4 __ - __

Legend of the signs from left to right

- 1., 2., 3., 4., 5., 6., 7., 8., 9., 10.: Code for manufacturer
- 11. Code of type
 - T = Transmitter
 - H = High Temperature Transmitter
 - B = Transmitter + display
 - P = High Temperature Transmitter + display
- 12. Probe/Process connection with coaxial, rod, cable (A...W)
- 13. 4 = fix number
- 14., 15. Insertion length (00...6,9 m and 00...29 m)
- 16. Output / Approval
 - 6 = 4 – 20 mA + HART / Ex ia IIIC T100 °C Da
 - 8 = 4 – 20 mA + HART / Ex ia IIB or IIC T6 ... T3 Ga

3. General parameters

Electrical data:

Intrinsically safe type:
(+ and – terminals)

Only for connection to a certified intrinsically safe circuit
Ex ia IIC or Ex ia IIB with following maximum values:

- $U_i = 30 \text{ V}$
- $I_i = 150 \text{ mA}$
- $P_i = 1 \text{ W}$
- $C_i = 10 \text{ nF}$
- $L_i = 10 \text{ }\mu\text{H}$

4. Ambient and medium temperature

Temperature class	Medium temperature	Ambient temperature
T6	≤ 85 °C	≤ 60 °C
T5	≤ 100 °C	≤ 60 °C
T4	≤ 135 °C	≤ 60 °C
T3	≤ 200 °C	≤ 60 °C

Minimal ambient temperature: -30 °C
Minimal medium temperature: -50 °C

5. Ingress protection:

IP65 according to IEC 60529

6. Drawings

Title	Drawing N ^o	Rev.	Issue Date
Technical description (11 pages)	--	1	2008. 12. 05.
User' Manual	htk4014a0600p01	0	2009. 02. 18.
Routine test	--		2008. 12. 02.
MicroTREK assembly	HTK-402-8I-000-0X (3 pages)	0	2009. 02. 18.
Measuring PCB (M)	HTK-402-4M-220-02	0	2008. 12. 08.
Measuring (M) PCB circuit diagram	HTK-401-4M-220-02	0	2008. 12. 05.
Measuring PCB (M) foil	HTK-402-4M-090-02 (4 pages)	0	2008. 12. 08.
Power supply (T) circuit diagram	HTK-402-4M-220-01	4	2008. 12. 15.
Power supply PCB (T)	HTK-402-4M-220-01	0	2008. 12. 15.
Power supply PCB (T) foil	HTK-402-4M-090-01 (4 pages)	0	2008. 12. 08.
Display unit	SAP-300-0M-000-0X	0	2008. 12. 08.
SAP-300 Display unit circuit diagram	SAP30A02	0	2008. 12. 15.



SAP-300 Display unit	SAP-300-0M-100-00	0	2008. 12. 08.
Label	HTK-402-8I-050-0L	0	2009. 02. 16.
A-PCB foil	SAP-300-0M-090-01(2 pages)	0	2009. 01. 07.
Part lists:			
Measuring (M)	HTK-402-4M-220-02	0	2009. 02. 18.
Power supply (T)	HTK-402-4M-220-01	0	2009. 02. 18.
SAP-300 Display unit	SAP30A02	0	2009. 02. 86.

Special conditions for safe use

- The radar transmitters - protection mode Ex ia IIC, Ex ia IIB - must be operated only according the technical data in intrinsically safe circuit.
- The parameters of the sealing ring in respect of chemical and flameproofness shall be observed as specified in the instruction manual.
- The radar transmitters with coated sensor must be operated protection mode only in Ex ia IIB intrinsically safe circuit.
- The metal enclosure of the equipment must be connected to EP circuit.