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 13.0001X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2013-01-03** Page 1 of 3	
Applicant:	**NIVELCO Process Control Co.** H-1043 Budapest, Dugonics utca 11. **Hungary**	
Electrical Apparatus: *Optional accessory:*	**Vibrating rod level switch family** NIVOCONT R**-5**-* Ex	
Type of Protection:	**General requirements; Dust ignition protection by enclosure 't'**	
Marking:	Ex t IIIC T* Da/Db IP67 *see clause 4 of Addendum to IECEx BKI 13.0001 X -30°C ≤ T_{amb} ≤ see clause 4 of Addendum to IECEx BKI 13.0001 X	

Approved for issue on behalf of the IECEx Certification Body: János Fejes

Position: managing director

Signature:
(for printed version)

Date: 2013-01-03

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.

Certificate issued by:

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

Robbanásbiztos Berendezések ® BKI • Vizsgáló Állomása • Ex

IECEx Certificate of Conformity

Certificate No.: IECEx BKI 13.0001X

Date of Issue: **2013-01-03** Issue No.: **0**

Manufacturer: **NIVELCO Process Control Co.**
H-1043 Budapest, Dugonics utca 11.
Hungary

Additional 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 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 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*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/ExTR13.0001/00

Quality Assessment Report:

HU/BKI/QAR09.0001/03

IECEx Certificate

of Conformity

Certificate No.: IECEx BKI 13.0001X

Date of Issue: **2013-01-03** Issue No.: **0**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The sensor of the device transfers electrical signal into mechanical vibration, using a piezo-electric transfer unit. When the level of the medium is lifting up to the vibrating rod, the vibrating rod will be damped by the medium and the vibration is interrupted if the level becomes higher than the critical switching point. At lower level the rod is vibrating again because of the missing damping. The output switch will be activated by the electronics driven by the signal of the piezoelectric unit. See details in Addendum to IECEx BKI 13.0001 X

CONDITIONS OF CERTIFICATION: YES as shown below:

- The enclosure must not open while it is energized!

- The apparatus may be used only in explosive dust atmospheres where the temperature class of the selected type of the apparatus does not exceed two-third parts of the minimum ignition temperature of the dust/air mixture.

- The equipment must be assembled with cable glands certified according to protection Ex t IIIC IP67, size M20x1,5

Annexe: Addendum to IECEx BKI 13.0001 X..pdf

1. Description

The sensor of the device transfers electrical signal into mechanical vibration, using a piezo-electric transfer unit. When the level of the medium is lifting up to the vibrating rod, the vibrating rod will be damped by the medium and the vibration is interrupted if the level becomes higher than the critical switching point. At lower level the rod is vibrating again because of the missing damping. The output switch will be activated by the electronics driven by the signal of the piezoelectric unit.

2. Type assortment

NIVOCONT R □□ - 5 □□ - □Ex

Tempera-ture / finish	CODE
Normal	K
High temperat.	H
Normal polished	S
High temperat. polished	T

PROCESS CONNECTION	EXTENSION	CODE
Specified by customer		A
		B
1 ½ " NPT	Cable	C
Specified by customer		D....G
1 ½ " BSP	Standard	H
Specified by customer		I ; J
1 ½ " BSP	Cable	K
1 ½ " NPT	Rod	L
Specified by customer		M
1 ½ " NPT	Standard	N
Specified by customer		O....Q
1 ½ " BSP	Rod	R
Specified by customer		S....Z

INSERTION LENGTH	CODE
Depending on the extension	00
	....
	99

POWER SUPPLY	OUTPUT	CODE
20-250 V AC / 20-50 V DC	relay	5

3 Electrical data

Supply voltage (universal):	20...250 V AC (50/60Hz) or 20-50 V DC
Power consumption:	≤ 2,5 VA / 2 W
Output	one SPDT RELAY
Output rating	250 V AC, 8A, AC 1

4 Temperature range

TEMPERATURE DATA	Cable extended			Standard and Pipe extended				
								HIGH TEMPERATURE
	R_K-5_ _-5Ex R_C-5_ _-5Ex			RK_-5_ _-5Ex, RS_-5_ _-5Ex Except cable extended				RH_-5_ _-5Ex, RT_-5_ _-5Ex
Medium temperature range min -30°C ....max	+60°C	+70°C	+80°C(1)	+60°C	+70°C	+95°C	+110°C	+160°C
Ambient temperature range min -30°C ....max	+60°C	+50°C	+60°C	+60°C	+50°C	+60°C	+50°C	+35°C
Max. surface temperature of process connection	+85°C	+85°C	+95°C	+85°C	+85°C	+95°C	+95°C	+135°C
Max. surface temperature	+85°C	+85°C	+95°C	+85°C	+85°C	+95°C	+110°C	+160°C
Temperature class	T90°C		T100°C	T90°C		T100°C	T115°C	T170°C

(1) Medium temperature for max.1hour: +95°C

5 Ingress protection

The enclosure provides a degree of protection IP67.

6 Special conditions for safe use

The enclosure must not open while it is energized!

The apparatus may be used only in explosive dust atmospheres where the temperature class of the selected type of the apparatus does not exceed two-third parts of the minimum ignition temperature of the dust/air mixture.

The equipment must be assembled with cable glands certified according to protection Ex t IIIC IP67, size M20x1,5

Manufacturer's Documents

Title:	Drawing No.:	Rev.:	Date:
ÉMI-TÜV SÜD Test Report	R-354748		31.10.2012
Technical drawings			
Ex vibration rod standard version	RKH-502-5I-000-00	0	15.10.2012
Ex vibration rod tube extended	RKR-505-5I-000-00	0	15.10.2012
Ex vibration rod cable extended	RKK-501-5I-000-00	0	15.10.2012
Ex data plate	RKH-502-5I-050-0L	0	15.10.2012
Ex data label	RKH-502-5I-050-02	0	15.10.2012
Ex cover	RKH-502-5M-400-0L	0	15.10.2012
Ex converter transf. NTPE16140	RKH-502-1M-212-0X	0	15.10.2012
Parts list			
Ex RK_-500 A card list of electrical components	RKH-502-5M-211-0V	---	15.10.2012
Ex RK_-500 E card list of electrical components	RKH-502-1M-214-0V	---	15.10.2012
Circuit Diagrams			
Ex RK_-500 A card RK500A01.SCH Circuit diagram	RKH-502-5M-211-0V	1	15.10.2012
Ex RK_-500 E card RK500E02.SCH Circuit diagram	RKH-502-1M-214-0V	0	15.10.2012
Ex RK500 PCB-A part side	RKH-502-5M-211-0X	1	15.10.2012
Ex RK500 PCB-A Foil side	RKH-502-1M-090-01	0	15.10.2012
Ex RK500E PCB-E part side	RKH-502-1M-214-0X	0	15.10.2012
Ex RK500 PCB-E foil side	RKH-502-1M-090-02	0	15.10.2012
Routine test procedures			
Routine Test for NIVOCONT R_ _-5_ _-_ Ex family	RKH-502-5M-060-0U	0	15.10.2012
Operating instructions			
Technical description	RKH-502-5I-060-0M	0	15.10.2012
User's Manual	rkh5021m0600h_04	----	15.10.2012
Manufacturer's declarations			
Declaration of conformity	nivcei0rk500e_01	----	15.10.2012