



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 14.0001** issue No.: 0 Certificate his

Status: **Current**

Date of Issue: **2014-02-27** Page 1 of 3

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

Electrical Apparatus: **Capacitance level switch family**
Optional accessory: **NIVOCAP C**-1**-*Ex**

Type of Protection: **General requirements, Equipment dust ignition protection by enclosure "t"**

Marking: **Ex ta IIIC T85°C...T220°C Da/Db * see clause 4 of Addendum**
-30 °C ≤ Tamb ≤ +65 °C

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

Position: **managing director**

Signature: *(for printed version)* 

Date: 2014-02-27

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 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 product 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 identifying documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0

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

*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/ExTR14.0001/00](#)

Quality Assessment Report:
[HU/BKI/QAR09.0001/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The capacitance level switch family NIVOCAP suitable for detecting level of powders and solid materials with relative dielectric constant greater than 1.5 and liquids.
See details in Addendum to IECEx BKI 14.0001.

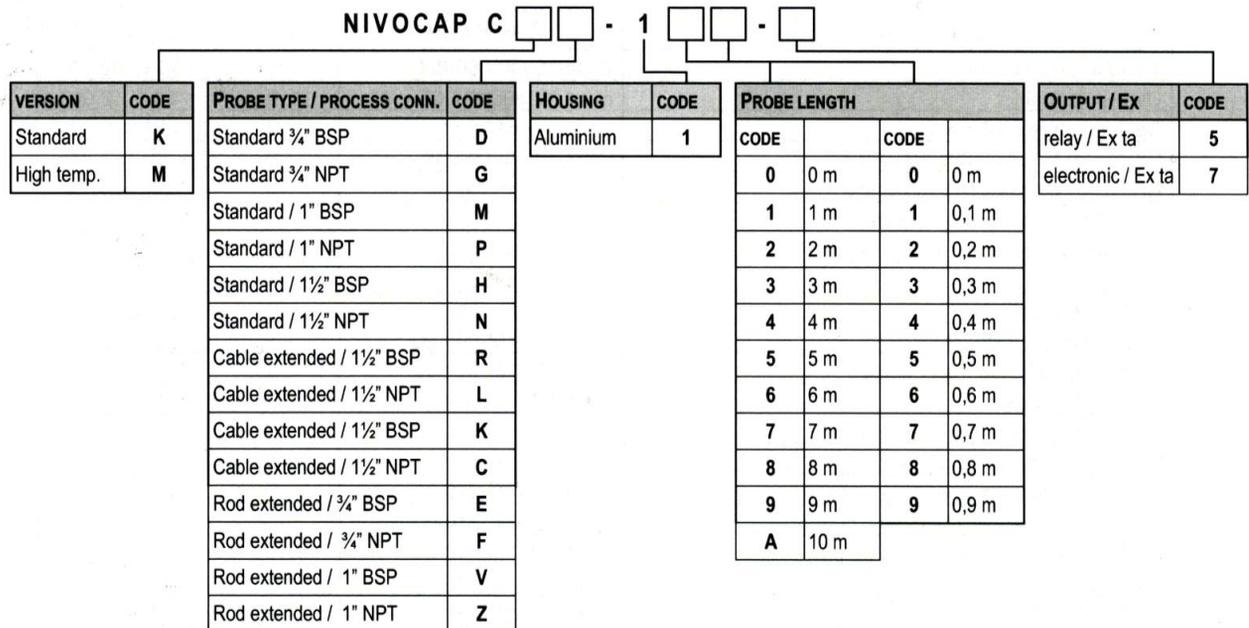
CONDITIONS OF CERTIFICATION: NO

Annex: Addendum to IECEx BKI 14.0001.pdf

1. Description

The capacitance level switch family NIVOCAP suitable for detecting level of powders and solid materials with relative dielectric constant greater than 1.5 and liquids. The type of explosion protection of the device has been designed according to the standard IEC 60079-31:2008 Equipment dust ignition protection by enclosure "t". The degree of ingress protection of the enclosure is IP67 according to IEC 529:1989. The sealing is provided by O rings between the housing and the cover, between the housing and the probe, and between the housing and the gland. The device has been equipped with 2 pcs thermal cut-offs and 1 pc melting fuse to prevent overheating. The thickness of paint coating of the enclosure is less than 0,2 mm to avoid static charging.

2. Type assortment



3. Electrical data

Supply voltage: 20...250 V AC (50/60 Hz) or 20...50 V DC

Power consumption: ≤ 2,5 VA / 2 W

OUTPUT DATA	RELAY	SOLID STATE SWITCH
	C**-1**-5	C**-1**-7
Output type	SPDT (potential free)	SPST (electronic)
Output rating	250 V AC (50/60 Hz); 8 A; AC 1	250 V AC; 50 V DC; 1,35 A

4. Temperature range

TEMPERATURE DATA	CABLE EXTENDED			STANDARD AND ROD EXTENDED				
	CKK-1**-*			CK(D,G,M,P,H,N)-1**-*				HIGH TEMPERATURE VERSION
	CKC-1**-*			CK(R,L,E,F,V,Z)-1**-*				
Maximum medium temperature at the sensor	+60°C	+70°C	+80°C	+60°C	+70°C	+95°C	+110°C	+220°C
Maximum ambient temperature	+65°C	+60°C	+60°C	+65°C	+60°C	+60°C	+50°C	+35°C
Maximum surface temperature of process connection	+80°C	+80°C	+90°C	+80°C	+80°C	+90°C	+95°C	+195°C
Temperature class	T85°C	T85°C	T95°C	T85°C	T85°C	T95°C	T110°C	T220°C

5. Ingress protection

The enclosure provides a degree of protection IP67.

6. Special conditions for safe use

None

7. Manufacturer's Documents

Title:	Drawing No.:	Rev.:	Date:
Technical description	CKM-100-8I-060-0M	0	2013.09.19.
User's manual	ckm1051a0600h 02	0	2013.12.01.
Declaration of conformity	nivcei0ckm10e 01	0	2013.10.10.
NIVOCAP Ex assembly drawing 1.	CKM-105-5I-000-0X	0	2013.01.15
NIVOCAP Ex assembly drawing 2.	CKR-107-5I-000-0X	0	2013.01.15
NIVOCAP Ex assembly drawing 3.	CKK-110-5I-000-0X	0	2013.01.15
Ex connector auxiliary wiring diagram	CKM-105-1M-070-01	0	2013.01.14
Ex Data plate	CKM-105-5I-050-0L	0	2013.06.14.
Ex Data plate label	CKM-105-5I-050-02	0	2013.09.31
Ex routine test instruction	CKM-105-1M-060-0U	1	2013.02.06
Ex A-PCB part side (relay output)	CKM-105-1M-210-00	0	2013.01.21
Ex A-PCB layers	CKM-105-1M-090-01	0	2013.01.21
Ex A-card schematic (relay output)	CKM-105-1M-210-00	1.2	2013.10.08
Ex A-card parts list (relay output)	CKM-105-1M-210-00	1.2	2013.10.08
Ex A-PCB part side (electronic output)	CKM-105-3M-210-00	0	2013.01.21
Ex A-card schematic (electronic output)	CKM-105-3M-210-00	1.2	2013.10.08
Ex A-card parts list (electronic output)	CKM-105-3M-210-00	1.2	2013.10.08
Ex J-PCB part side	CKM-105-1M-220-00	0	2013.01.21
Ex J-PCB layers	CKM-105-1M-090-02	0	2013.01.21
Ex J-card schematic	CKM-105-1M-220-00	1	2013.02.01
Ex J-card parts list	CKM-105-1M-220-00	1	2013.02.01
P-PCB part side	CKM-105-1M-230-00	0	2013.01.22
P-PCB layer	CKM-105-1M-090-03	0	2013.01.21
P-card schematic	CKM-105-1M-230-00	1.0	2013.02.01
P-card parts list	CKM-105-1M-230-00	1.0	2013.02.01