

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM16US0224X
3. **Equipment:** NIVOSWITCH Vibrating Fork Sensor
(Type Reference and Name)
4. **Name of Listing Company:** NIVELCO Process Control Co.
5. **Address of Listing Company:** Dugonics u 11
Budapest, 1043
Hungary
6. The examination and test results are recorded in confidential report number:

3057897 dated 17th October 2016
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2011, FM Class 3615:2006, FM Class 3810:2005,
ANSI/ISA 61010-1:2012, ANSI/IEC 60529:2004
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. **Equipment Ratings:**

Explosionproof for Class I, Division 1, Groups C and D; hazardous (classified) locations, indoors and outdoors (IP67) with an ambient temperature rating of $-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$.

Certificate issued by:

J. E. Marquedant
Manager, Electrical Systems

9 December 2016

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE



US Certificate Of Conformity No: FM16US0224X

11. The marking of the equipment shall include:

Class I, Division 1, Groups C, D; T6...T4, $-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$; IP67

12. **Description of Equipment:**

Construction:

The NIVOSWITCH Vibrating Fork Model Rxx-4xx-x is a two compartment instrument. One compartment, constructed of aluminium alloy, consists of the electronics and wiring terminal. The second compartment is the probe assembly and is constructed of 316Ti. The two compartments are separated with an FM Approved line bushing installed with an M12 x 1.5 thread making two explosionproof compartments. The sensor body (probe) assembly comes in various sizes from 69mm (Short), 125mm (Standard) and 0.2m to 3m. The probe assembly is rated for a process pressure of 40 bar.

Operation Temperature Ranges:

The ambient operating temperature range is -40°C to 70°C . Process temperature range is -40°C to 130°C .

Electrical data:

Rated for a 20 to 250 Vac 17VA max and 20 to 36 Vdc, maximum 3 Watt power supply.

NIVOSWITCH Rab-4cd-e. Vibrating Fork Sensor

a = Fork: N or M

b = Connections: M, P, G, B, K, H, N, L or C.

cd = Length: 00, 01 or any two numbers ranging from 02 to 30 (0.2m to 3m).

e = Output: N or P

13. **Specific Conditions of Use:**

1. For Field connections, use cable rated 20°C greater than Maximum Ambient Temperature.
2. For installation, seal all threaded entries at enclosure with suitably rated sealing components.
3. Temperature codes for the rating of XP/II/1/CD is defined by the following table:

PROCESS TEMPERATURE (PT)	MAXIMUM AMBIENT TEMPERATURE	TEMPERATURE CODE (TC)
From -40°C to $+70^{\circ}\text{C}$	$+65^{\circ}\text{C}$	T6
From $+70^{\circ}\text{C}$ to $+80^{\circ}\text{C}$	$+50^{\circ}\text{C}$	T6
From $+80^{\circ}\text{C}$ to $+95^{\circ}\text{C}$	$+65^{\circ}\text{C}$	T5
From $+95^{\circ}\text{C}$ to $+130^{\circ}\text{C}$	$+70^{\circ}\text{C}$	T4

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

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15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
17 th October 2016	Original Issue.
9 th December 2016	<u>Supplement 1:</u> Report Reference: – Revision Request RR207646 dated 9 th December 2016. Description of the Change: Addition 2" NPT (L) and 2" BSP (C) exterior process thread connection options to the model code.

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