



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: Sira 05ATEX5070X

4 Equipment: NivuGuard Ultrasonic Flow Switch

5 Applicant: NIVUS GmbH

6 Address: Im Tale 2
D-75031
Eppingen
Germany

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number R51V13335A.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 50014:1997 plus Amendments 1 and 2
EN 50 028:1987

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

 II 2 G
EEx m II T4 (Tamb = -20°C to +75°C)

Project Number 51V13335
Date 16 June 2005
C. Index 13

C Ellaby
Certification Officer 

This certificate and its schedules may only be reproduced in its entirety and without change

Sira Certification Service

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 05ATEX5070X

13 DESCRIPTION OF EQUIPMENT

The NivuGuard Ultrasonic Flow Switch that is designed to give a voltage output dependent on the flow in a pipe. It comprises a printed circuit board (PCB) and two piezo electric crystal transducers, all housed inside a metal enclosure and then totally encapsulated. An integral cable provides the connection facilities to external circuits. The electrical circuits are afforded an adequate degree of ingress protection by the enclosure and encapsulation.

The electrical parameters for the equipment are as follows:

Rated input voltage = 30 V
Rated input current = 120 mA

14 DESCRIPTIVE DOCUMENTS

14.1	Drawing No.	Sheet	Rev.	Date	Description
	D-804-0639-A	1 of 1	-	31 Mar 05	NivuGuard Ultrasonic Flow Switch

14.2 Report number R51V13335A

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 The NivuGuard Ultrasonic Flow Switch shall be supplied from equipment that provides protection against prospective short circuit currents of up to 4000 A.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in report number R51V13335A.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The equipment shall be subjected to a visual inspection in accordance with EN 50 028:1987, clause 7.1, no visible damage to the encapsulating compound shall be evident.

17.4 The equipment shall be subjected to a routine test voltage of 1500 V rms for 1 minute applied between circuit and frame, in accordance with EN 50 028:1987, clause 7.2.

Date 16 June 2005

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