




DET NORSKE VERITAS

EC-TYPE EXAMINATION CERTIFICATE

- [2] EQUIPMENT OR PROTECTED SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC
- [3] EC-Type Examination Certificate Number: **DNV-2005-OSL-ATEX- 0327X**
- [4] Equipment or Protective System: **PAC 1278 2-wire IS-ASL subsystem**
- [5] Applicant – Manufacturer or Authorized representative: **Physical Acoustics Corp.**
- [6] Address: **195 Clarksville rd. Princeton Jct. NJ, 08550-5303 New Jersey, USA**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential report no. : **2005-3340**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 + A1: 1999 + A2: 1999, EN 50020: 2002, EN50284: 1999 and EN50281-1-1: 1998 + A1: 2002
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system 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 or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following :

 **II 1 GD EEx ia IIC I4 Ta=-40°C to 70°C**

Høvik, 2005-11-22
for Det Norske Veritas Certification AS


Line Gangeskar
Head of Section




Bjørn Spongsveen
Senior Engineer

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



[13]

Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV-2005-OSL-A IEX-0327X

[15] **Description of Equipment or Protective System**

The ASL Subsystem comprises an electronic circuit housed in an aluminium enclosure. The circuit is partially encapsulated in an epoxy resin. The input of the ASL Subsystem must be connected to a power supply via an EC Type Examination Certified zener barrier with or without galvanic separation

EC Type Examination Certified sensors that can be connected to the ASL subsystem output: ISR 45, ISR1.5, ISR3, ISR6, ISR15, ISR30, ISR50, ISWD, ISD9203B

Type Identification :

Model 1278

GDU 1278

The ASL Subsystem GDU 1278 has the following alternative Authorized Representative:

Groveley Detection Limited

Anchor Works, Groveley Road, Christchurch, Dorset, BH23 3HB UK

Electrical Data:

$U_1 = 30V$, $I_1 = 100mA$, $P_1 = 0,9W$, $L_1 = 100\mu H$, $C_1 = 0,05\mu F$

Degrees of protection (IP Code)

IP66

[16] **Report No.:** 2005-3340

Project No.: 42210285

Descriptive Documents

Number	Title	Rev.	Date
1277-2011	Drill/fabrication drawing, 2-wire IS-ASL subsystem, 2 sheets	0	2005-01-22
1278-2011	Drill/fabrication drawing, 2-wire IS-ASL subsystem, 2 sheets	1	2005-01-22
1278-2014	Assembly drawing, 2-wire IS-ASL subsystem	0	2005-01-22
1278-2014	Assembly drawing, 2-wire IS-ASL subsystem	1	2005-01-22
1278-5015	Assembly drawing, 1278 2-wire IS-ASL subsystem	1	2005-10-26
1278-6000	1278 System Connections	0	2005-02-02
1278-3010	Schematic, 2-wire IS-ASL subsystem, 3 sheets	0	2005-01-22
1278-3010	Schematic, 2-wire IS-ASL subsystem, 3 sheets	1	2005-01-22
1278-5011	Silkscreen drawing, 2-wire IS-ASL subsystem	1	2005-11-18
1278-5020	Detail drawing IS preamplifier case, modified (GDU)	1	2002-02-28
1278-5012	Silkscreen drawing 2-wire IS-ASL subsystem (GDU)	1	2005-11-18
1278-5010	Detail drawing IS preamplifier case, modified	1	2002-02-28
1277-2010	PCB layout, 9 sheets	0	2005-01-26
1278-2010	PCB layout, 8 sheets	1	2005-10-25



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[17] Special Conditions for Safe Use

The enclosure is made of aluminium, and care must be taken due to the potential risk of sparks on impact with iron/steel objects.

[18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE



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