1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 10ATEX2179X** Issue: **2**

4 Equipment: **ASC Compression Load Cell Transducers**

5 Applicant: **VPG Transducers**

6 Address: 5 Hanapach Street
Carmiel
20100 Israel

(These products may be manufactured at any VPG Transducers Facility listed on Quality Assurance Notification SIRA 04 ATEX M297 that has been audited for the manufacture of the type of protection listed)

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 the confidential reports listed in Section 14.2.

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 60079-0:2006 EN 60079-11:2007 EN 60079-26:2007
EN 61241-0:2006 EN 61241-11:2006

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 1 GD
Ex ia IIC T6 Ga (Ta = -40°C to +40°C)
Ex ia IIC T5 Ga (Ta = -40°C to +60°C)
Ex ia IIC T4 Ga (Ta = -40°C to +80°C)
Ex iaD 20 T85°C Da (Ta = -40°C to +40°C)
Ex iaD 20 T100°C Da (Ta = -40°C to +60°C)
Ex iaD 20 T135°C Da (Ta = -40°C to +80°C)

Project Number 26861

A C Smith
Certification Manager

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

13 DESCRIPTION OF EQUIPMENT

The ASC compression load cell housing is constructed from a single column of stainless steel that is fully encapsulated to give an IP66 or IP68 level of protection. The product is a strain gauge based-transducer which produces an electrical signal proportional to the applied weight load or force. The circuit is based on a Wheatstone bridge concept. The applied mechanical load is converted to an electrical signal via the encapsulated strain gauge sensors. The electrical circuit is connected via a four-wire integral cable that has a maximum length of 20m. The sensor is intended for connection to an associated intrinsically safe apparatus located in non-hazardous area.

Electrical Input (entity) Parameters

Ui	Ii	Pi	Ci	Li
30 V	250 mA	3 W	7 nF	20 µH

Note: Entity parameters Ci and Li are derived from the integral cable at a maximum length of 20 meters.

Variation 1 - This variation introduced the following changes:

i. The change of applicant's name from Vishay Transducers Israel. to VPG Transducers was recognised, incorporating the new company logo on associated drawings.
ii. The addition of alternative manufacturing sites was recognised.

Variation 2 - This variation introduced the following changes:

i. The introduction of two new types of potting compound, Sylgard 527 and TSE 3062.
ii. The recognition of minor drawing modifications; "Constantan Foil Polyamide Backed Strain Gauge- 350 To 1000 Ohms" change to "Strain Gauge- 350 To 1000 Ohms" and "Bondable Temperature Sensitive Polyamide Backed Resistor- 19.5 To 100 Ohms (Tr1, Tr2)"- "Nickel Resistor - 19.5 To 100 Ohms (Tr1, Tr2)"; these amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	02 September 2010	R21015A	The release of prime certificate.
1	21 July 2011	R23506A/00	The introduction of Variation 1.
2	16 January 2013	R26861A/00	The introduction of Variation 2.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 10ATEX2179X**
Issue 2

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

15.1 The apparatus has multi- temperature classification and surface temperature for dust, as detailed in the table below

Temperature class	Surface Temperature for Dust	Ambient Temperature, Ta
T6	T85°C	-40°C to +40°C
T5	T100°C	-40°C to +60°C
T4	T135°C	-40°C to +80°C

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 the reports listed in Section 14.2.

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 product shall withstand 500 V r.m.s for one minute between the excitation and output polarities circuits connected altogether and the metal housing, in accordance with EN 60079-11:2007, clause 10.3. The current flowing during the test shall not exceed 5 mA r.m.s or dc at any time.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

Certificate Annexe

Certificate Number: **Sira 10ATEX2179X**

Equipment: **ASC Compression Load Cell Transducers**

Applicant: **VPG Transducers**

Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
392.000.00-3	1 to 2	3	31 Aug 10	ASC ATEX Load cell assembly
392.210.00-3	1 of 1	1	31 Aug 10	PC Board
392.250.00-3	1 of 1	0	31 Aug 10	Wired Element
392.024.00-4	1 of 1	1	07 Sep 10	Certification Label

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
392.000.00-3	1 to 2	4	21 Jul 07	ASC ATEX Load cell assembly
392.210.00-3	1 of 1	2	21 Jul 07	PC Board
392.250.00-3	1 of 1	1	21 Jul 07	Wired Element
392.024.00-4	1 of 1	3	21 Jul 07	Certification Label

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
392.250.00-3	1 of 1	2	21 Aug 2012	Wired Element

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com