



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate No: **Sira 04ATEX2108X** Issue: **4**

4 Equipment: **Model 3510 Series Load Cells**

5 Applicant: **VPG Transducers**

6 Address: **5 Hanapach St,  
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 61241-0:2006  
EN 60079-0:2009 (used for guidance in respect of marking) EN 60079-26:2007 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 T85°C  
Ex ia IIC T6 Ga (Tamb -20°C to +40°C)  
Ex ia IIIC T85°C Da

or



II 1 GD T115°C  
Ex ia IIC T4 Ga (Tamb -20°C to +70°C)  
Ex ia IIIC T115°C Da

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D R Stubbings BA MIET  
Certification Manager

**Sira Certification Service**

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The Type 3510 Series Load Cells are designed to produce an electrical signal proportional to mechanical load. The load cells consist of strain gauge elements, compensating resistors, associated terminal printed circuit boards and an encapsulated printed circuit board all housed within a metal enclosure fitted with an integral cable for external connection. The models vary by the shape of the enclosure, the bridge circuit and the type of integral cable fitted. The Type 3510 consists of the following models:

3410, 3411. 3510, 3520, 3530, 3540, 4158, HSB, 1510, 1550, 220, 223, 343, 355, 620

Input Parameters

Ui (V)	Ii (A)	Pi (W) Gas	Tamb (°C)
22	0.320	1.25	40
22	0.469	1.25	70
18	0.160	1.50	70
17	0.110	1.80	70
13	0.483	2.00	40
24	1.000	2.00	70
24	1.000	2.00	40

Pi (W) Dust	Maximum surface temp. in dust (°C)	T Class
0.75	85	T6
0.65	115	T4
0.65	115	T4
0.65	115	T4
0.75	85	T6
0.65	115	T4
0.75	85	T6

Ci = 23.7 nF                      Li = 36 µH

Variation 1 - This variation introduced the following change:

- i. The introduction of the following, alternative manufacturing site:  
Vishay Tedea-Huntleigh (Beijing) Electronics Co. Ltd  
No.16 Hongda North Road  
Beijing Economic & Technological Development Zone  
Beijing City 100176  
PRC

Variation 2 - This variation introduced the following change:

- i. To authorise the cable parameters to be changed:  
From:                      To:  
Ci = 19.5 nF              Ci = 23.7 nF  
Li = 18 µH                Li = 36 µH

Variation 3 - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents originally listed in section 9, EN 50014:1997 (amendments 1 and 2), EN 50020:1994, EN 50284:1999 and EN 50281-1-1:1998, were replaced by those currently listed, the markings in section 12 were updated accordingly and the conditions were modified to recognise the requirements of the latest standards.
- ii. The applicants address was changed from Hazoran Street PO Box 8381, New Industrial Zone Netania 42506 Israel to that currently shown.

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## SCHEDULE

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**Variation 4** - This variation introduced the following changes:

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

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	18 March 2004 26 April 2004	R52V11646A	The release of the prime certificate. Re-issued to replace original certificate that was lost in transit
1	15 November 2007	R52A17257A	The introduction of Variation 1.
2	7 December 2009	R20369F	The introduction of Variation 2.
3	07 June 2010	R20369B/00	This Issue covers the following changes: <ul style="list-style-type: none"><li>• All previously issued certification was rationalised into a single certificate, Issue X, Issues 0 to X-1 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.</li><li>• The introduction of Variation 3.</li></ul>
4	11 July 2011	R23506A/00	The introduction of Variation 4.

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

15.1 When the screen of the integral cable is connected to the apparatus enclosure, the apparatus enclosure will not withstand the 500 V rms specified in the standards, this must be taken into account during installation.

15.2 The apparatus may have exposed light metal parts, which may constitute a risk of ignition due to impact or friction. This must be taken into account during installation.

#### 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 Each completed sample of the 3510 Series Load Cells shall be subjected to and pass an insulation test of 500 V rms. Any inputs shall be connected together and a test voltage shall be applied between them and the enclosure or frame. The test procedure shall be in accordance with clause 10.6 of EN 50020:1994

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### Sira Certification Service

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# Certificate Annexe

Certificate Number: Sira 04ATEX2108X  
Equipment: Model 3510 Series Load Cells  
Applicant: VPG Transducers



## Issue 0

Drawing No.	Sheet	Rev.	Date	Description
2AM039	1 of 1	5	Mar 04	Label
2AM040	1 of 1	4	Jan 03	Component Details and Wiring Schematic
2AM041	1 of 1	3	Aug 02	Outline Dimensions

## Issue 1

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
3011.200.54-3	1 & 2	2	15 Nov 07	Models: 220, 223, 355, 343, 620, 1510, 1550, 3410/3411, 3510, 3520, 3540, 4158, HSB

## Issue 2

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
2AM040	1 of 1	5	27 Nov 09	Component Details and Wiring Schematic
3011.200.54-3	1 to 2	A	07 Dec 09	Label Drawing

## Issue 3

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
2AM041	1 to 2	6	27 May 10	Outline Dimensions
2AM040	1 of 1	6	27 May 10	Component Details and Wiring Schematic
3011.200.54-3	1 to 2	B	27 May 10	Label Drawing

## Issue 4

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
3011.200.54-3	1 of 1	D	11 Jul 11	Certification Details
2AM041	1 of 1	7	11 Jul 11	ATEX Schedule Drawing
2AM040	1 of 1	7	11 Jul 11	Component Details and Wiring Schematic

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