

CERTIFICATE

(1) Type Examination

(2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC

(3) Type Examination Certificate Number: **KEMA 05ATEX1001 X** Issue Number: **4**

(4) Equipment: **Load Cell Model SHBxR, BSP, CSP-M, CP-M, HPS, SSB, HCB, 9102, RLC, 5103 and 9103**

(5) Manufacturer: **VPG Transducers**

(6) Address: **5 Hanapah Sreet, Carmiel 21653, Israel**

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

(8) DEKRA Certification B.V., certifies that this equipment 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 test report no. 212779500/2.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006
EN 60079-15 : 2005

EN 61241-0 : 2006
EN 61241-1 : 2004

(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 Type Examination Certificate relates only to the design, examination and tests of the specified equipment and not to the manufacturing process and supply of this equipment.

(12) The marking of the equipment shall include the following:



II 3 G Ex nA II T6 ... T4 or
II 3 G Ex nL IIC T6 ... T4
II 3 D Ex tD A22 IP 6X T70 °C

This certificate is issued on 14 June 2011 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.


C.G. van Es
Certification Manager

Page 1/3

© Integral publication of this certificate and adjoining reports is allowed. This Certificate may only be reproduced in its entirety and without any change.

All testing, inspection, auditing and certification activities of the former KEMA Quality are an integral part of the DEKRA Certification Group

DEKRA Certification B.V. Utrechtseweg 310, 6812 AR Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 26 3 56 20 00 F +31 26 3 52 58 00 www.dekra-certification.com Registered Arnhem 09085396

(13) **SCHEDULE**

(14) **to Type Examination Certificate KEMA 05ATEX1001 X**

Issue No. 4

(15) **Description**

The Load Cells Model SHBxR-..., Model BSP-..., Model CSP-M-..., Model CP-M-..., Model HPS-..., Model, SSB-..., Model HCB-..., Model 9102-..., Model RLC-..., Model 5103-... and Model 9103-... are used to convert a mechanical force or load into an electrical signal. The Load Cells are of a hermetically sealed or sealed construction and are provided with a permanently connected cable with a maximum length of 25 m.

The enclosure of the Load Cell provides, depending on the Model, a degree of protection of IP66, IP67 or IP68 in accordance with EN 60529.

Ambient temperature range -20 °C to +40 °C.

The maximum surface temperature of the enclosure T70 °C is referred to a maximum ambient temperature of 40 °C.

Electrical data

Model HCB, Model 9102, Model SHBxR, Model BSP, Model CSP-M, Model CP-M, Model HPS, Model SSB, Model RLC, Model 5103 and Model 9103

Excitation circuit (green and black wires) in type of protection energy limitation Ex nL IIC.

Signal output circuit (white and red wires) in type of protection energy limitation Ex nL IIC.

Sense output circuit (optional) (yellow and blue wires) in type of protection energy limitation Ex nL IIC.

The excitation circuit, the signal output circuit and the optional sense output circuit are galvanically connected and may only be connected to circuits in type of protection energy limitation Ex nL IIC. Voltage, current and power addition of the circuits must be taken into account.

The circuits of Model CSP-M and Model CP-M shall be considered to be connected to earth.

The total maximum values for the above mentioned circuits, with exception of the circuits of Model RLC, for loads of 60 kg, 130 kg, 28 t and 60 t, are:

$U_i = 25 \text{ V}$; $I_i = 1 \text{ A}$; $P_i = 1,3 \text{ W}$ for temperature class T6; $P_i = 2,75 \text{ W}$ for temperature class T4
 $C_i = 0,4 \text{ nF}$; $L_i = 0 \text{ }\mu\text{H}$.

For Model RLC, for loads of 60 kg, 130 kg, 28 t and 60 t, the maximum values for the above mentioned circuits are:

$U_i = 30 \text{ V}$; $I_i = 1 \text{ A}$; $P_i = 1,3 \text{ W}$ for temperature class T6; $P_i = 2,75 \text{ W}$ for temperature class T4
 $C_i = 2,5 \text{ nF}$; $L_i = 0 \text{ }\mu\text{H}$.

(13) **SCHEDULE**

(14) **to Type Examination Certificate KEMA 05ATEX1001 X**

Issue No. 4

For longer cables than specified in the description, the capacitance and inductance of the additional cable must be taken into account.

For use in type of protection non-sparking Ex nA II or if intended to be used in a potentially explosive atmosphere caused by combustible dust, the Load Cell may be used without connection to energy limited circuits.

The electrical data are:

Maximum excitation voltage: 15 ... 30 Vdc (depending on model)
Bridge impedance: 350 ... 1450 Ω (depending on model)

(16) **Test Report**

No. 212779500/2.

(17) **Special conditions for safe use**

For electrical data for connection to energy-limited circuits see (15).

For use in type of protection non-sparking Ex nA II provision must be made externally to prevent the rated voltages being exceeded by transient disturbances of more than 40 %.

For use in type of protection non-sparking Ex nA II or if intended to be used in a potentially explosive atmosphere caused by combustible dust, the integral cable shall be terminated either in a safe area or in a suitable enclosure, which provides protection suitable for the area of installation.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).



(19) **Test documentation**

As listed in Test Report No. 212779500/2.

EU Declaration of Conformity

VPG Transducers

VPG Transducers declares under our sole responsibility that the load cells listed below conform with the relevant Union harmonisation legislation: Directive 2014/34/EU - Equipment and protective systems intended for use in potentially explosive atmospheres.

Load Cell Type	EC-Type Examination Certificate	Application Code
HCB, 9102:	KEMA 00ATEX1132X Iss 4	 II1G Ex ia IIC T4/T6, II1D Ex tD A20 IP68 T70°C.  II3G Ex nL IIC T4/T6 or II3D Ex tD A22 IP68 T70°C.
	KEMA 05ATEX1001X Iss 4	

Notified Body: Sira Certification Service (0518)
Unit 6 Hawarden Industrial Park
Hawarden, Deeside CH5 3US, United Kingdom.

Conformity has been demonstrated with reference to the following documentation:

EC type- examination certificates: KEMA 00ATEX1132X (14/06/2011), KEMA 05ATEX1001X (14/06/2011)
Quality Assurance Notification: Sira 04 ATEX M297 (21/03/2016)

Compliance with the Essential Health & Safety Requirements has been assessed by reference to the following standards:

EN 60079-0 :2006 Part 0: General requirements.
EN 60079-11 :2007 Part 11: Equipment protection by intrinsic safety " i ".
EN 60079-15 :2005 Part 15: Construction, test and marking of type of protection "n" electrical apparatus.
EN 60079-26 :2007 Part 26: Equipment with equipment protection level (EPL) Ga.
EN 61241-0 :2006 Part 0: General requirements.
EN 61241-1 :2004 Part 1: Protection by enclosures " tD ".

Date: 12 Sep 2017

Signature



Name: R. Srinivasan

Position: Section Manager-QA

VPG Transducers

Hanapah St.5



P.O. Box 6424, Carmiel 42506, Israel

Form #17-02-04-025-R

EU Declaration of Conformity

VPG Transducers

VPG Transducers declares under our sole responsibility that the load cell listed below conforms with the relevant Union harmonisation legislation: Directive 2014/34/EU - Equipment and protective systems intended for use in potentially explosive atmospheres.

Load Cell Type	EC-Type Examination Certificate	Application Code
SHBxR, BSP, CSP-M, CP-M, HPS, SSB.	KEMA 00ATEX1132X Iss 4 KEMA 05ATEX1001X Iss 4	 II2G Ex ib IIC T4/T6, II2D Ex tD A21 IP68 T70°C.  II3G Ex nA II T4/T6 or II3D Ex tD A22 IP68 T70°C.

Notified Body: Sira Certification Service (0518)
Unit 6 Hawarden Industrial Park
Hawarden, Deeside CH5 3US, United Kingdom.

Conformity has been demonstrated with reference to the following documentation:

EC type- examination certificates: KEMA 00ATEX1132X (14/06/2011), KEMA 05ATEX1001X (14/06/2011)
Quality Assurance Notification: Sira 04 ATEX M297 (21/03/2016)

Compliance with the Essential Health & Safety Requirements has been assessed by reference to the following standards:

EN 60079-0:2012 / A11:2013¹ EN 60079-11:2012² EN 60079-15:2010³ EN 60079-31:2014⁴

¹ EN 60079-0:2012 / A11:2013 was compared with EN 60079-0:2006 and EN 61241-0:2006 that were used for the original certification and no changes in the "state of art" apply to this equipment.

² EN 60079-11:2012 was compared with EN 60079-11:2007 that was used for the original certification and no changes in the "state of art" apply to this equipment.

³ EN 60079-15:2010 was compared with EN 60079-15:2005 that was used for the original certification and no changes in the "state of art" apply to this equipment.

⁴ EN 60079-31:2014 was compared with EN 61241-1:2004 that was used for the original certification and no changes in the "state of art" apply to this equipment.

Note: EN 60079-26:2015 is no longer required for Ex ia, Ga (zone 0) as all requirements are in EN 60079-0:2012.

Date: 11 September 2017

VPG Transducers
5, Hanapah Street,
Carmiel 21653, Israel.

Signature



Name: R. Srinivasan



Position: Section Manager-QA

Form #17-02-04-025-R

EU Declaration of Conformity

VPG Transducers

VPG Transducers declares under our sole responsibility that the load cell listed below conforms with the relevant Union harmonisation legislation: Directive 2014/34/EU - Equipment and protective systems intended for use in potentially explosive atmospheres.

Load Cell Type	EC-Type Examination Certificate	Application Code
RLC	KEMA 00ATEX1132X Iss 4	 II2G Ex ib IIC T4/T6, II2D Ex tD A21 IP68 T70°C.
	KEMA 05ATEX1001X Iss 4	 II3G Ex nA II T4/T6 or II3D Ex tD A22 IP68 T70°C.

Notified Body: Sira Certification Service (0518)
Unit 6 Hawarden Industrial Park
Hawarden, Deeside CH5 3US, United Kingdom.

Conformity has been demonstrated with reference to the following documentation:

EC type- examination certificates: KEMA 00ATEX1132X (14/06/2011), KEMA 05ATEX1001X (14/06/2011)
Quality Assurance Notification: Sira 04 ATEX M297 (21/03/2016)

Compliance with the Essential Health & Safety Requirements has been assessed by reference to the following standards:

EN 60079-0:2012 / A11:2013¹ EN 60079-11:2012² EN 60079-15:2010³ EN 60079-31:2014⁴

¹ EN 60079-0:2012 / A11:2013 was compared with EN 60079-0:2006 and EN 61241-0:2006 that were used for the original certification and no changes in the "state of art" apply to this equipment.

² EN 60079-11:2012 was compared with EN 60079-11:2007 that was used for the original certification and no changes in the "state of art" apply to this equipment.

³ EN 60079-15:2010 was compared with EN 60079-15:2005 that was used for the original certification and no changes in the "state of art" apply to this equipment.

⁴ EN 60079-31:2014 was compared with EN 61241-1:2004 that was used for the original certification and no changes in the "state of art" apply to this equipment.

Note: EN 60079-26:2015 is no longer required for Ex ia, Ga (zone 0) as all requirements are in EN 60079-0:2012.

Date: 27 August 2017

VPG Transducers
5, Hanapah Street,
Carmiel 21653, Israel.

Signature



Name: R. Srinivasan

Position: Section Manager-QA

Form #17-02-04-025-R

EU Declaration of Conformity

VPG Transducers declares under our sole responsibility that the load cells listed below conforms with the relevant Union harmonisation legislation: Directive 2014/34/EU - Equipment and protective systems intended for use in potentially explosive atmospheres.

Load Cell Type	EU-Type Examination Certificate	Application Code
HCB, 9102	KEMA 00ATEX1132X Iss 6	ⒺⅠ1G Ex ia IIC T6/T4 Ga, ⒺⅠ1D Ex ia IIIC T70°C Da, ⒺⅠ2D Ex tb IIIC T70°C Db.
	KEMA 05ATEX1001X Iss 6	ⒺⅠ3G Ex ic IIC T6/T4 Gc, or ⒺⅠ3G Ex nA IIC T6/T4 Gc, ⒺⅠ3D Ex ic IIIC T70°C Dc, ⒺⅠ3D Ex tc IIIC T70°C Dc.
SHBxR, BSP, CSP-M, CP-M, HPS, SSB, RLC, 5103 and 9103.	KEMA 00ATEX1132X Iss 6	ⒺⅠ2G Ex ib IIC T6/T4 Gb, ⒺⅠ2D Ex ib IIIC T70°C Db, ⒺⅠ2D Ex tb IIIC T70°C Db.
	KEMA 05ATEX1001X Iss 6	ⒺⅠ3G Ex ic IIC T6/T4 Gc, or ⒺⅠ3G Ex nA IIC T6/T4 Gc, ⒺⅠ3D Ex ic IIIC T70°C Dc, ⒺⅠ3D Ex tc IIIC T70°C Dc.

Notified Body: Sira Certification Service (0518)
Unit 6 Hawarden Industrial Park
Hawarden, Deeside CH5 3US, United Kingdom.

Conformity has been demonstrated with reference to the following documentation:

EU type- examination certificates: KEMA 00ATEX1132X (14/06/2018), KEMA 05ATEX1001X (14/06/2018)

Quality Assurance Notification: SIRA 04 ATEX M297 (07/11/2017)

Compliance with the Essential Health & Safety Requirements has been assessed by reference to the following standards:

EN 60079-0:2012 + A11:2013

EN 60079-11:2012

EN 60079-15:2010

EN 60079-31:2014

Date: 25 June 2018

VPG Transducers
5, Hanapah Street,
Carmiel 2165311, Israel.

Signature



Name: R. Srinivasan

Position: Section Manager-QA

Form #17-02-04-051-R