

TEST CERTIFICATE

Fifth addition to number E-02.02.C02

LOAD CELL TYPE SP-D

Issued by: LGAI TECHNOLOGICAL CENTER S.A.
Campus de la U.A.B. Ronda de la Font del Carme, s/n.
E-08193 BELLATERRA SPAIN
Notified Body Number 0370.

In accordance with Paragraph 3.10 of the European Standard "Metrological aspects of non-automatic weighing instruments" EN 45501:2015. The applied error fraction p_{LC} with reference to paragraph 3.10.2.1 of this standard is 0,7. Following paragraph F.2 of annex F of this standard, the tests have been performed according to the OIML International Recommendation, OIML R 60 (2000).

Issued to: SENSOCAR S.A.
Carrer Geminis, número 77. P.I. Can Parellada
E-08228 TERRASSA ESPAÑA.

In respect of: The model of a load cell, with strain gauges, equipped with electronics, composed by modules 2 and 3 in Figure 1 of the UNE-EN 45501 (april 2016), tested as part of a non-automatic weighing instrument.
Manufacturer: SENSOCAR S.A.
Type: SP-D.
This fifth addition complements the test certificate number E-02.02.C02, with changes relating a new external geometry, EMC tests for the adaptation to the new standard and software tests.

Characteristics:

Classification	---	C3 $\updownarrow$	C4 $\updownarrow$	---
Maximum number of LC verification intervals	n_{LC}	4000		---
Maximum capacity	E_{max}	10 t up to and including 50 t		t
Ratio minimum LC verification interval	$Y = E_{max}/V_{min}$	15000		---
additional marking	temperature limits	rated output	Impedance input	minimum dead load
--	-10°C/+40°C	$C = 2^4$	$R_{LC} = 570 \Omega$	$E_{min} = 0 \text{ kg}$
				safe overload
				$E_{fm}/E_{max} = 150\%$

The main characteristics are shown in the descriptive annex, which is an integral part of the test certificate and consists of 7 pages.

The type is described in the submitted technical documentation, identified with number 07/02. The documents of first, second, third and fourth Additions to Test Certificate are described in the submitted technical documentations, identified respectively with numbers 18/02, 13/06, 13/09 y 18/09. The changes covered by this addition are described in the submitted additional technical documentation, identified with number 02/18 (18/34510848/D).

Managing Director
Product Conformity B.U.

Xavier Ruiz Peña
Bellaterra, 08 march 2018.

This document shall not be reproduced except in full, with the annex.
This test certificate refers only to metrological requirements.
This test certificate cannot be used without applicant's authorization.

CERTIFICADO DE ENSAYO

Adicional quinta al número E-02.02.C02

CÉLULA DE CARGA MODELO SP-D

Emitido por: LGAI TECHNOLOGICAL CENTER S.A.
Campus de la U.A.B. Ronda de la Font del Carme, s/n.
E-08193 BELLATERRA ESPAÑA
O.N.0370.

En aplicación de: Parágrafo 3.10 de la norma europea "Aspectos metrológicos de los instrumentos de pesaje de funcionamiento no automático" EN 45501:2015. La fracción de error aplicada p_{LC} en referencia al parágrafo 3.10.2.1 de esta norma es 0,7. De acuerdo con el parágrafo F.2 del Anexo F de esta norma, los ensayos han sido realizados según la Recomendación Internacional de la OIML, OIML R 60 (2000).

Emitido para: SENSOCAR S.A.
Carrer Geminis, número 77. P.I. Can Parellada
E-08228 TERRASSA ESPAÑA.

Referente a: El modelo de una célula de carga, con bandas extensométricas, equipada con electrónica, compuesta por los módulos 2 y 3 de la Figura 1 de UNE-EN 45501 (abril 2016), ensayada como parte de un instrumento de pesaje de funcionamiento no automático.
Fabricante: SENSOCAR S.A.
Modelo: SP-D.
El Certificado de Ensayo número E-02.02.C02 se complementa mediante esta adicional quinta, que viene afectada por la adición de nuevas geometrías externas, ensayos de EMC para la adaptación a la nueva norma y ensayos de software.

Características:

Símbolo de clasificación	C3 ↓		C4 ↓	---
Número máximo de escalones de verificación	n_{LC}	4000		---
Alcance máximo	E_{max}	De 10 t hasta e incluyendo 50 t		t
Escalón de verificación mínimo	$Y = E_{max} / v_{min}$	15000		---
marcado adicional ---	límite temperatura -10°C/+40°C	sensibilidad nominal $C = 2^{24}$	impedancia de entrada $R_{LC} = 570 \Omega$	mínima carga muerta $E_{min} = 0 \text{ kg}$
				carga límite seguridad $E_{lm}/E_{max} = 150\%$

Las características principales figuran en el anexo descriptivo adjunto, que forma parte integrante del certificado de ensayo y consta de 7 páginas.

El modelo está descrito en la documentación técnica presentada, identificada con el número 07/02. Los documentos de la adicional primera, segunda, tercera y cuarta están descritas en las documentaciones técnicas presentadas, identificadas respectivamente con los números 18/02, 13/06, 13/09 y 18/09. La modificación objeto de esta adicional está descrita en la documentación técnica adicional presentada, identificada con el número 02/18 (18/34510848/D).

Managing Director
Product Conformity B.U.

Xavier Ruiz Peña
Bellaterra, 08 de marzo de 2018.

La reproducción del presente documento sólo está autorizada si se realiza en su totalidad, con el anexo incluido.
El presente certificado de ensayo se refiere sólo a los requisitos metrológicos.
No se puede hacer uso de este certificado de ensayo sin la autorización escrita del peticionario



OIML CERTIFICATE OF CONFORMITY

Issuing Authority

Name: Centro Español de Metrología
Address: C/ del Alfar, 2 - 28760 Tres Cantos - Madrid (Spain)
Person responsible: Agustín Falcón. Head of weighing division

Applicant

Name: SENSOCAR S.A.
Address: Carrer Géminis, 77 - Terrasa - Spain
Manufacturer of the certified type is the applicant

Identification of the certified type

Strain gauge compression load cell

Identification of the certified pattern: Compression load cell

Model designation	SP-D
Maximum capacity ($E_{\max}$)	10, 13, 15, 20, 25, 30, 35, 40, 45 and 50 t
Accuracy class	C4
Maximum number of load cell verification intervals, n_{LC}	4000
Minimum verification interval ($V_{\min}$)	$E_{\max} / 15000$
Apportionment factor (P_{LC})	0,7

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report (s) with the requirements of the following Recommendation of the International Organization of Legal Metrology-OIML):

R 60 *Metrological regulation of load cells* Edition 2000 (E) for accuracy class C

This certificate relates only to the metrological and technical characteristics of the type of instrument covered by the relevant OIML Recommendation identified above.

This certificate does not bestow any formal of legal international approval.



The conformity was established by the results of test and examinations provided in the associated Test Report:

No.- IT-100289001 that includes 4 pages.

The Issuing authority



Dr. Fernando Ferrer Margalef
Director of CEM

Tres Cantos, 10 March 2010



The OIML Member



Dr. Fernando Ferrer Margalef

Additional characteristics

<i>Model designation</i>	SP-D
Temperature limits	-10 °C / +40 °C
Rated output	2 ²⁴
Impedance input (R _{LC})	570 Ω
Minimum dead load (E _{min})	0 kg

Important note: Apart from the mention of the certificate's reference number and the name of the OIML Member State in which the certificate is issued, partial quotation of the certificate and of the associated test report is not permitted, although either may be reproduced in full.