EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(1)

(2) Equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC

(3) Supplement nr. **3** to EC-Type Examination Certificate **LOM 03ATEX2029 X**

(4) Equipment or Protection System — Load cell
Mark UTILCELL, types 450 and 460

(5) Manufacturer — Técnicas de Electrónica y Automatismos, S.A.

(6) Address — Espronceda, 176-180
08018-BARCELONA
SPAIN

(7) Test report nr.: **LOM 10.254 KP**

(8) Variations included in this certificate

- To include an application as category 1D using the type of protection by enclosures and the assessment update based on standards EN 60079-0:2009 and EN 60079-31:2009. Load cells can be used alternatively either in intrinsically safe circuits or as equipment protected by enclosure type of protection, the last when used in flammable dusts environment.
- To increase the range of the model 460 that include the capacities of 5, 10, 20, 30, 50, 75 y 100 t.

Specific parameters with "Ex ta" type of protection: Maximum voltage supply: 25 V

The specific parameters as intrinsically safe equipment remain unchanged.

(9) Changes in marking

II 1 G	Ex ia IIC T4..T6 Ga
II 1 D	Ex ia IIIC T135 °C..T85 °C Da
II 1 D	Ex ta IIIC T85 °C Da

(10) Changes in special conditions for safe use

When load cells are used with a mode of protection by enclosure "Ex ta" the cable and the same cells must be mechanically protected. The power supply of the load cells must be fitted with a fuse of up to 1 A according to IEC 60127 with a breaking capacity not less than 10 kA.

(11) Descriptive documents

		Rev.	Date
- Drawings nr.:	HM-0352	0	2010-12-21
	HM-0353	0	2010-12-21

Madrid, 2010-12-22

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

This supplement must be an inseparable part together with the base certificate **LOM 03ATEX2029 X**

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text

RCPCER 07.4/2 Rev. 0

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ENSAYOS E INVESTIGACIONES DE MATERIALES Y EQUIPOS PARA ATMÓSFERAS EXPLOSIVAS Y MINERÍA
(Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29)

Alenza, 1 - 28003 MADRID • ☎ (34) 91 4421366 / 91 3367009 • (34) 91 4419933 • lom@lom.upm.es

LABORATORIO OFICIAL J. M. MADARIAGA

EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(1)

(2) Equipment or protective system intended for use in potentially explosive atmospheres
Directive 94/9/EC

(3) Supplement nr. **2** to EC-Type Examination Certificate number **LOM 03ATEX2029**

(4) Equipment or Protection System — Load cells
Mark UTILCELL, types 450 and 460

(5) Applicant — Técnicas de Electrónica y Automatismos, S.A.

(6) Address — Espronceda, 176-180
08018-BARCELONA
SPAIN

(7) Test report nr.: **LOM 09.534 SP**

(8) Variations included in this certificate

Assessment update according the standards EN 60079-0:2006, EN 60079-11:2007 and EN 61241-11:2006

Specific parameters of the type of protection remain unchanged.

(9) Changes in marking

II 1GD Ex ia IIC T4..T6

(10) Descriptive documents

		Rev.	Date
- Description:		-	2009-10-28
- Drawings nr:	HM-0021	a	2009-10-27
	HM-0176	a	2009-10-27

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Madrid, 2009-12-14

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX

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RCPCER 07.4/2
Rev. 0

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LABORATORIO OFICIAL J. M. MADARIAGA

(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres
Directive 94/9/EC

(3) Supplement nr. **1** to EC-Type Examination Certificate number: **LOM 03ATEX2029**

(4) Equipment or Protection System — Load cells
Mark UTILCELL, type 460

(5) Applicant — Técnicas de Electrónica y Automatismos, S.A.

(6) Address — Espronceda, 176-180
08018-BARCELONA
SPAIN

(7) Test Report nr. **LOM 05.356 AP**

(8) Variations included in this supplement

To include a variant name 460 having the same electrical and metrological characteristics that type 450.

(9) Variations in marking

Those that affect the type codification

(10) Descriptive documents

		Rev.	Date
- Description		-	2005-05-21
- Drawings nr.	HM-0174	-	2005-01-03
	HM-0175	-	2005-01-03
	HM-0176	-	2005-01-03
	HM-0177	-	2005-01-03
	HM-0178	-	2005-01-03

Madrid, 21st July 2005

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

This supplement must be an inseparable part together with the base certificate **LOM 03ATEX2029**

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ENAC INSPECCIÓN Nº 23/E1037

UNIVERSIDAD POLITÉCNICA DE MADRID
ENSAYOS E INVESTIGACIONES DE MATERIALES Y EQUIPOS PARA ATMÓSFERAS EXPLOSIVAS Y MINERÍA
(Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29 -)

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LABORATORIO OFICIAL J. M. MADARIAGA

(1) EC-TYPE EXAMINATION CERTIFICATE

(2) Equipment or protective system intended for use in potentially explosive atmospheres
Directive 94/9/EC

(3) EC-Type Examination Certificate number: **LOM 03ATEX2029**

(4) Equipment or Protection System — Load cells
Mark UTILCELL, type 450

(5) Applicant: — Técnicas de Electrónica y Automatismos, S.A.

(6) Address — Espronceda, 176-180
08018-BARCELONA
SPAIN

(7) Laboratorio Oficial J.M. Madariaga (LOM), notified body number 0163 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament 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 nr. **LOM 03.073 FP**

(8) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- Standards **EN 50014:1997 + A1:1999 + A2:1999**
EN 50020:2002
EN 50281-1-1:1998 + A1:2002

(9) 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.

(10) This EC-Type Examination Certificate relates only to the design and construction of this specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of the Directive applies to the manufacture and supply of this equipment or protective system.

(11) The marking of the equipment or protective system shall include the following:

Ex II 1 GD EEx ia IIC T4..T6 IP65 Ta: 85°C

OFICIAL LABORATORIO J.M. MADARIAGA

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Madrid, 18 Mars 2003

Angel Vega Remesal
Head of ATEX area

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ENAC INSPECCIÓN Nº 23/EI037

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Alenza, 2 - 28003-MADRID • ☎ (34) 91 4421366/ 91 3367009 • Fax.(34) 91 4419933 • ✉ lom@lom.upm.es

(A1) **SCHEDULE**

(A2) EC-Type Examination Certificate: : **LOM 03ATEX2029**

(A3) Description of equipment or protective system

Strain gauge load cells that include a permanent cable mounted by the manufacturer with a maximum length of 20 m.

Rated characteristics

Nominal voltage supply:	10 Vdc
Maximum voltage supply:	22 V (ac o dc)
Input resistance:	800±100 Ω
Output resistance:	700±10 Ω
Rated load :	2, 5, 7, 10, 15 and 20 t

Temperature class	Specific parameters
T4	Pi: 1,3 W
T5	Pi: 0,6 W
T6	Pi: 0,4 W

(A4) Test report nr: **LOM 03.073 FP**

(A5) Special conditions for safe use

None

(A6) Individual tests

None

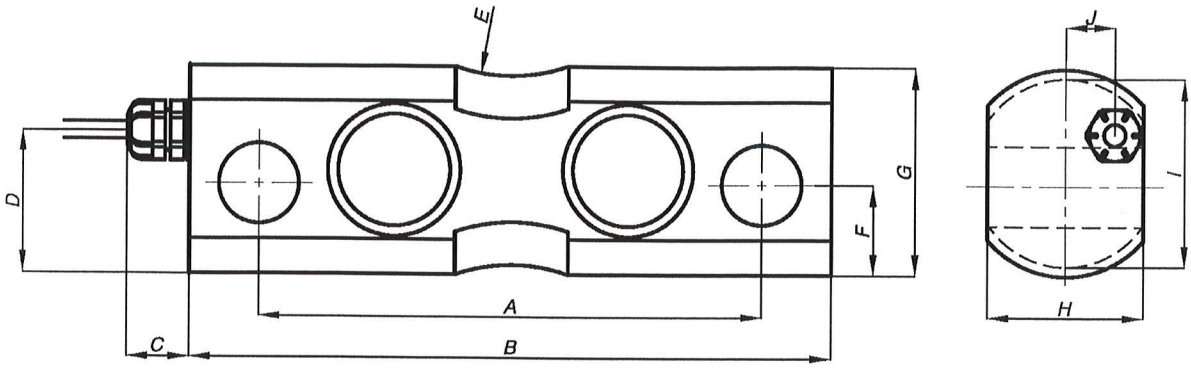
(A7) Essential Health and Safety Requirements

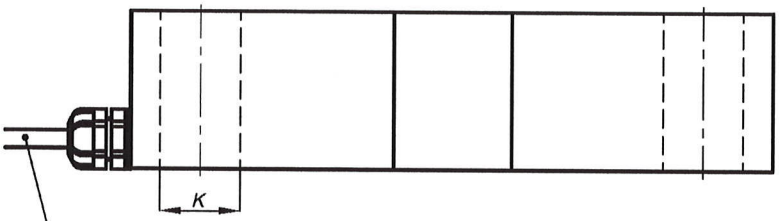
Explosion safe requirements are covered by application of the standards indicated in page 1/2 of this certificate.

(A8) Descriptive documents:

		Rev.	Date
- Description (2 pp.)		-	2001-09-06
- Drawings nr.:	HM-0019	-	2003-02-21
	HM-0020	-	2003-02-21
	HM-0021	-	2003-02-21
	HM-0022	-	2003-02-21
	HM-0023	-	2003-02-21

OFICIAL LABORATORIO J.M. MADARIAGA LOM





PVC cable 6ø 12m. long.

Células de carga Load cells	A	B	C	D	E	F	Gø	H	Iø	J	Kø	Transport Weight kg
460 5...20 t	145	185	16	41	r.50	25.7	59.5	45	54	14	23	2.7
460 30...50 t	220	285	16	48	r.50	29.7	74.5	60	65	22	30	7.2
460 75...100 t	260	340	16	66	r.50	37.2	99.5	80	90	32	50	14.3

Dimensiones en mm. *Dimensions in mm.*

	FECHA	FIRMA	CODIGO
PROYECTADO	03-01-05	OLLER	-
DIBUJADO	-	-	MODELO 460
VERIFICADO			

UTILCELL ® CELULAS DE CARGA - *LOAD CELLS*

MATERIAL	-	Nº HM-0174	DIN
TRATAMIENTO	-		
ACABADO	-	SUST.POR	SUST.A -
ESCALA	DENOMINACION	PLANO MEDIDAS mod 460	