

TECNICAS DE ELECTRONICA Y AUTOMATISMOS, S.A.

UTILCELL Célula de carga / Load Cell / Wägezelle / Capteur

Modelo / Model / Modell / Modèle: **PINH / PINZ**

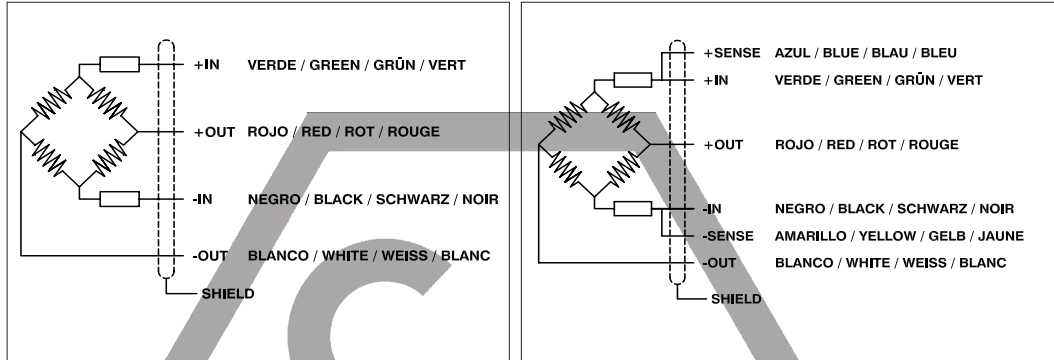
Características / Characteristics / Technische Daten / Caractéristiques

Tensión de alimentación nominal / Nominal input voltage / Nom. Speisespannung /

Tension d'alimentation nominale: 10V (Max. 15V)

Resistencia de entrada / Input impedance / Eingangswiderstand / Impédance d'entrée: 400±20...1150±60 Ω

Resistencia de salida / Output impedance / Ausgangswiderstand / Impédance de sortie: 350±3...1000±10 Ω



Nota: Código de colores indicado a título de ejemplo. Cada caso tendrá indicado el código de colores que le corresponda. / Note: Color coding showed as an example. Each case shall have its corresponding coding. / Hinweis: Die Farbcodierung ist nur beispielhaft angegeben und hängt von der individuellen Ausführung ab. / Note: le code de couleur est indiqué à titre d'exemple. Dans chaque cas sera mentionné le code de couleur qui correspond

INSTRUCCIONES DE SEGURIDAD / SAFETY INSTRUCTIONS / SICHERHEITSANWEISUNGEN / INSTRUCTIONS DE SÛRETÉ

Este equipo puede ser utilizado con tres modos de protección distintos: / This equipment may be used with three different safety modes: / Dieses Gerät kann mit drei verschiedenen Zündschutzarten verwendet werden / Cet équipe peut être utilisée en trois modes différents de protection

#1 & #2: Como equipo del Grupo II Categoría 1 / As equipment of Group II Category 1 / Als Gerät der Gruppe II Kategorie 1 / Comme équipe du Groupe II Catégorie 1

#1- Para las Zonas: **0,1,2,20,21,22** / For Zones: **0,1,2,20,21,22** / Für Zonen: **0,1,2,20,21,22** / Pour les Zones: **0,1,2,20,21,22**

Este equipo puede usarse con el Modo de protección “**Seguridad intrínseca (ia)**” / This equipment may be used with a Safety mode “**Intrinsically safety (ia)**” / Dieses Gerät kann mit einer Zündschutzart “**Eigensicherheit (ia)**” eingesetzt werden / Cet équipe peut s'employer avec le Mode de protection “**Sécurité intrinsèque (ia)**”

En un circuito con los siguientes Parámetros específicos del modo de protección / In a circuit with the following Type of protection specific parameters / In einen Stromkreis mit den spezifischen Kenngrößen der Zündschutzart / Dans un circuit avec les suivants Paramètres spécifiques de la mode de protection

Pi=1.5 W Ci=125 pF/m_{cable} (*) Li=0.8 µH/m_{cable} (*)

Y con el Marcado de protección **Ex⁽¹⁾** / And with the Protective mark **Ex⁽¹⁾** / Und mit Kennzeichnung der Eigensicherheit **Ex⁽¹⁾** / Et avec le Marcação de protection **Ex⁽¹⁾**

Ex II 1 G Ex ia IIC T6 Ga **CE**
II 1 D Ex ia IIIC T85 °C Da 0163

Amparado por el certificado de ensayos LOM 15ATEX2132 X emitido por el organismo notificado 0163 - Laboratorio Oficial J.M. Madariaga / Protected by the test certificate LOM 15ATEX2132 X emmited by the notified body 0163 - Laboratorio Oficial J.M. Madariaga / Geschützt durch die Testbescheinigung LOM 15ATEX2132 X ausgestellt durch die Benannte Stelle 0163 - Laboratorio Oficial J.M. Madariaga / Protégé par le certificat d'essais LOM 15ATEX2132 X émis par l'organisme notifié 0163 - Laboratorio Oficial J.M. Madariaga

NOTA: La capacitancia y la inductancia del cable debe de ser considerada con los siguientes valores: Ci = 125 pF/m y Li = 0.8 µH/m / NOTE: Cable capacitance and inductance has to be considered with the following values: Ci = 125 pF/m and Li = 0.8 µH/m / HINWEIS: Die Kapazität und Induktivität des Kabels muss mit den folgenden Werten berücksichtigt werden: Ci = 125 pF/m und Li = 0.8 µH/m / REMARQUE: la capacité du câble et de l'inductance doit être considérée avec les valeurs suivantes: Ci = 125 pF/m et Li = 0.8 µH/m

#2 Para las Zonas: **20,21,22** / For Zones: **20,21,22** / Für Zonen: **20,21,22** / Pour les Zones: **20,21,22**

Este equipo puede usarse con el Modo de protección “**Protección contra la ignición de polvo por envolvente (t)**” / This equipment may be used with a Safety mode “**Dust ignition protection by enclosure (t)**” / Dieses Gerät kann mit einer Zündschutzart “**Geräte-Staubexplosionsschutz durch Gehäuse (t)**” eingesetzt werden / Cet équipe peut s'employer avec le Mode de protection “**Protection contre l'inflammation des poussières par enveloppe (t)**”

En un circuito que cumpla con los siguientes requisitos / In a circuit that fulfills the following requirements / In einem Stromkreis mit den folgenden Voraussetzungen / Dans un circuit avec les conditions requises suivantes

El cableado debe cumplir las normativas legales y exigencias reglamentarias de la instalación. Tensión máx. de alimentación: 28 V. Las células de carga y cables deben de protegerse mecánicamente. La alimentación de las células de carga deberá ir provista un dispositivo de protección y limitación de corriente de hasta 1 A con un poder de corte no inferior a 10 kA. / Wiring has to accomplish with legal regulations and requirements of the installation. Maximum input supply: 28 V. Load cells and cables must be mechanically protected. The power supply to the load cells must be fitted with a protective device with a maximum current of 1 A and a breaking capacity of 10 kA. / Die Verdrahtung hat die gesetzlichen Bestimmungen und Anforderungen der Installation zu erfüllen. Max. Speisespannung: 28 V. Die Wägezellen und Kabel müssen mechanisch geschützt werden. Die Wägezellenstromversorgung muss mit einer Sicherung von maximal 1 A geschützt werden und darf einen Kurzschlussstrom von maximal 10 kA aufweisen. / Le câblage doit être conforme à tous les normes légales et réglementations de l'installation. Tension d'alimentation max.: 28 V. Les capteurs et câbles doivent être protégés mécaniquement. L'alimentation des capteurs doit être fournie avec un dispositif de sécurité et limiteur de courant de jusqu'à 1 A et une capacité de coupure qui ne peut être inférieure à 10 kA.

Y con el Marcado de protección **Ex⁽¹⁾** / And with the Protective mark **Ex⁽¹⁾** / Und mit Kennzeichnung der Eigensicherheit **Ex⁽¹⁾** / Et avec le Marcação de protection **Ex⁽¹⁾**

Ex II 1 D Ex ta IIIC T85 °C Da **CE**
0163 (PINH sólo/only/nur/seulement)

Amparado por el certificado de ensayos LOM 15ATEX2132 X emitido por el organismo notificado 0163 - Laboratorio Oficial J.M. Madariaga / Protected by the test certificate LOM 15ATEX2132 X emmited by the notified body 0163 - Laboratorio Oficial J.M. Madariaga / Geschützt durch die Testbescheinigung LOM 15ATEX2132 X ausgestellt durch die Benannte Stelle 0163 - Laboratorio Oficial J.M. Madariaga / Protégé par le certificat d'essais LOM 15ATEX2132 X émis par l'organisme notifié 0163 - Laboratorio Oficial J.M. Madariaga

#3- Como equipo del Grupo II Categoría 3 para las Zonas **2,22** / As equipment of Group II Category 3 for Zones **2,22** / Als Gerät der Gruppe II Kategorie 3 für Zonen **2,22** / Comme équipe du Groupe II Catégorie 3 pour les Zones **2,22**

Este equipo puede usarse con el Modo de protección “**No incendiaria-No productor de chispas (nA) / Protección contra la ignición de polvo por envolvente (t)**” / This equipment may be used with a Safety mode “**Non incendiary-Non-sparking (nA) / Dust ignition protection by enclosure (t)**” / Dieses Gerät kann mit einer Zündschutzart “**nicht funkende (nA) / Geräte-Staubexplosionsschutz durch Gehäuse (t)**” / Cet équipe peut s'employer avec le Mode de protection “**Non inflammable (nA) / Protection contre l'inflammation des poussières par enveloppe (t)**”

En un circuito que cumpla con los siguientes requisitos / In a circuit that fulfills the following requirements / In einem Stromkreis mit den folgenden Voraussetzungen / Dans un circuit avec les conditions requises suivantes

Tensión máx. de alimentación / Max. input supply / Max. Speisespannung / Tension d'alimentation max.: 15 V

Y con el Marcado de protección **Ex⁽¹⁾⁽²⁾** / And with the Protective mark **Ex⁽¹⁾⁽²⁾** / Und mit Kennzeichnung der Eigensicherheit **Ex⁽¹⁾⁽²⁾** / Et avec le Marcação de protection **Ex⁽¹⁾⁽²⁾**

Ex II 3 G Ex nA IIC T6 Gc
II 3 D Ex tc IIIC T85 °C Dc

CE

(1) Los modos de protección #1 y #2 son susceptibles de llevar su marcado de protección en la misma etiqueta; el modo de protección #3 no lo es y su marcado se encuentra en otra etiqueta. Este equipo incluye ambas etiquetas y, en función de la instalación, la etiqueta del marcado del modo de protección que no se corresponda deberá ser retirada. / Safety modes #1 and #2 are susceptible of having its protective marking in the same label; safety mode #3 is not and its marking is in another label. This equipment includes both labe s, so, according to the installation, the protective marking label which does not correspond have to be removed. / Für die Zündschutzarten #1 und #2 ist es zulässig die Kennzeichnung der Eigensicherheit auf demselben Etikett anzubringen; für die Zündschutzart #3 ist ein anderes Etikett notwendig. Diese Gerät ist mit beiden Etiketten gekennzeichnet, daher muss das Etikett, das nicht zutrifft, entfernt werden. / Les modes de protection #1 et #2 sont susceptibles de porter son marquage de protection dans la même étiquette; le mode de protection #3 ne l'est pas et son marquage se trouve dans une autre étiquette. Cette équipe inclut les deux étiquettes et, en fonction de l'installation, l'étiquette du marquage de le mode de protection qui n'entretient pas une correspondance devra être retirée.

(2) El modo de protección #3 tiene el certificado de ensayos LOM 15ATEX4133 / Safety mode #3 has the test certificate LOM 15ATEX4133 / Sicherheitsweis #3 hat die Testbescheinigung LOM 15ATEX4133 / Le mode de protection #3 correspond au le certificat d'essais LOM 15ATEX4133

Declaración UE de Conformidad / EU Declaration of Conformity
EU-Konformitätserklärung / Déclaration UE de Conformité

Técnicas de Electrónica y Automatismos, S.A.
Espronceda, 176-180 / 08018 BARCELONA (SPAIN)
TEL: (+34) 93 498 44 65 / FAX: (+34) 93 308 69 93

Con notificación de garantía de la calidad de la producción LOM 03 ATEX 9025 emitida por LOM nº0163,
que nos autoriza a colocar sobre el producto el marcado legal
With production quality assurance notification LOM 03 ATEX 9025 emitted by LOM nº0163, which authorizes
us to place on the product the legal marking
Durch die Mitteilung über die Qualitätssicherung LOM 03 ATEX 9025, ausgestellt von LOM nº0163, die uns
ermächtigt auf den Produkt das Kennzeichen anzubringen
Avec certificat de conformité du système de contrôle de la production LOM 03 ATEX 9025 émis pour le LOM
nº0163, qui nous autorise le marquage légal

CE mark and technical specifications: II 1 G Ex ia IIC T6 Ga, II 1 D Ex ia IIIC T85 °C Da, II 1 D Ex ta IIIC T85 °C Da (*), II 3 G Ex nA IIC T6 Gc, II 3 D Ex tc IIIC T85 °C Dc, (*) Ex ta PINH sólo/only/nur/seulement

declara bajo nuestra única responsabilidad que el producto fabricado en nuestras instalaciones
declare under our sole responsibility that the product manufactured at our facilities
erklärt unter unseren alleinigen Verantwortung, dass das in unseren Produktionsstätten produzierte Produkt
déclare sous notre responsabilité exclusive que le produit fabriqué a nos installations

load cell model PINH / PINZ

es conforme a los requisitos esenciales de seguridad establecidos en el anexo II de la Directiva 2014/34/UE.
is in conformity with the essential safety requirements established in appendix II of Directive 2014/34/EU.
die im Anhang II der Richtlinie 2014/34/EU festgelegten grundlegenden Sicherheitsanforderungen erfüllt.
est conforme aux conditions essentielles de sûreté requises par l'annexe II de la Directive 2014/34/UE.

Para el cumplimiento de estos requisitos el producto es conforme con las normas
To accomplish with these requirements this product conforms with the standards
Zur Erfüllung dieser Anforderungen werden folgende Normen eingehalten
Pour l'accomplissement de ces conditions, le produit est conforme aux normes

EN 60079-0:2012 EN 60079-31:2009 EN 60079-26:2007
EN 60079-11:2012 EN 60079-15:2010

El modelo dispone de los certificados CE de tipo
The model has the EC type examination certificates
Das Modell verfügt über die EG-Konformitätsbescheinigungen
Le model dispose des certifications CE de type

LOM 15ATEX2132 X LOM 15ATEX4133

Signature and date: Barcelona, April 20, 2016, J. Oller, Technical Director



LABORATORIO OFICIAL J. M. MADARIAGA



Table with 2 columns: Item number and Description. Contains technical details and certification information.



LABORATORIO OFICIAL J. M. MADARIAGA



Table with 2 columns: Item number and Description. Contains technical details and certification information.



(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 nr.: LOM 15ATEX2132 X
(4)	Equipment or protection system Load cells Mark UTILCELL, types PIN**
(5)	Manufacturer Técnicas de Electrónica y Automatización, S.A.
(6)	Address Espronceda, 176-180 08018 BARCELONA SPAIN
(7)	This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
(8)	Laboratorio Oficial (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. LOM15425 HP
(9)	Compliance with the Essential Health and Safety Requirements has been assured by compliance with: Standards: EN 60079-0-2012 EN 60079-11:2012 EN 60079-26:2007 EN 60079-31:2009
(10)	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.
(11)	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 apply to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.
(12)	The marking of the equipment or protective system shall include the following: Ex II 1G Ex Ia IIC T6 Ga II 1D Ex Ia IIC T85 °C Da II 1D Ex Ia IIC T85 °C Da CE-Ex Carles Fernández Ramón Head of Certification Committee

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

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(1)	TYPE EXAMINATION CERTIFICATE
(2)	Equipment of category 3 intended for use in potentially explosive atmospheres Directive 94/9/EC
(3)	Type Examination Certificate nr.: LOM 15ATEX4133
(4)	Equipment or protection system Load cells Mark UTILCELL, types PIN**
(5)	Manufacturer Técnicas de Electrónica y Automatización, S.A.
(6)	Address Espronceda, 176-180 08018 BARCELONA SPAIN
(7)	This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
(8)	Laboratorio Oficial (LOM) certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment of category 3 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. LOM15425 HP
(9)	Compliance with the Essential Health and Safety Requirements has been assured by compliance with: Standards: EN 60079-0-2012 EN 60079-15:2010 EN 60079-31:2009
(10)	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.
(11)	This 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 apply to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.
(12)	The marking of the equipment or protective system shall include the following: Ex II 3 G Ex Ia IIC T6 Gx II 3 D Ex Ia IIC T85 °C Dx CE-Ex Carles Fernández Ramón Head of Certification Committee

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

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(A1)	SCHEDULE
(A2)	EC-Type Examination Certificate nr.: LOM 15ATEX2132 X
(A3)	Description of equipment or protective system Series of shear strain gauges load cells having a permanent factory fitted cable with 4 or 6 wires and a maximum length of 20 m. The enclosure is made of stainless steel and the internal circuits are encapsulated. It offers a degree of protection IP65. These cells are made in two constructive variants PINH and PINZ, and amplified variants PINHA and PINZA that include a signal conditioner with 4-20 mA output. Strain gauges are mounted internally in variants PINH, and externally in variants PINZ. These cells can be used with a type of protection of intrinsic safety in gas and flammable dust environments. The PINH variants also with protection by enclosure in flammable dust environments.
(A4)	Characteristics PINH, PINZ Rated supply voltage: 10 Vdc Maximum supply voltage: 15 Vdc Input resistance: 400±20 Ω, 11 50±60 Ω Output resistance: 590±3 Ω, 1000±10 Ω
	Specific parameters according type of protection "Ex" in PINH, PINZ UL 28 V PI: 0.7 W II: 100 mA CI: 50 nF Umax: 28 V
	Test temperature: LOM 15425 HP
(A5)	Special conditions for a safe use When the load cells are used with a type of protection "Ex" in "n" cable and the cells themselves must be protected mechanically. Also the supply to the load cells must be fitted with a protective device with a maximum current of 1 A and a breaking capacity of 10 kA.
(A6)	Individual tests None
(A7)	Essential Health and Safety Requirements Explosion safe requirements are covered by application of the standards indicated in the first page of this certificate.
(A8)	Descriptive documents - Technical description nr.: MH-PIN Rec.: 2015-10-23 Date: 2015-10-23

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(A1)	SCHEDULE
(A2)	Type Examination Certificate nr.: LOM 15ATEX4133
(A3)	Description of equipment or protection system Series of shear strain gauges load cells having a permanent factory fitted cable with 4 or 6 wires and a maximum length of 20 m. The enclosure is made of stainless steel and the internal circuits are encapsulated. It offers a degree of protection IP65. These cells are made in two constructive variants PINH and PINZ, and amplified variants PINHA and PINZA that include a signal conditioner with 4-20 mA output. Strain gauges are mounted internally in variants PINH, and externally in variants PINZ.
(A4)	Characteristics PINH, PINZ Rated supply voltage: 10 Vdc Maximum supply voltage: 15 Vdc Input resistance: 400±20 Ω, 11 50±60 Ω Output resistance: 590±3 Ω, 1000±10 Ω
	Specific parameters according type of protection "Ex" in PINH, PINZ UL 28 V PI: 0.7 W II: 100 mA CI: 50 nF Umax: 28 V
	Test report nr.: LOM 15425 HP
(A5)	Special conditions for safe use When the load cells are used with a type of protection "Ex" in "n" cable and the cells themselves must be protected mechanically. Also the supply to the load cells must be fitted with a protective device with a maximum current of 1 A and a breaking capacity of 10 kA.
(A6)	Individual tests None
(A7)	Essential Health and Safety Requirements Explosion safe requirements are covered by application of the standards indicated in the first page of this certificate.
(A8)	Descriptive documents - Technical dossier nr.: MH-PIN Rec.: 2015-10-23 Date: 2015-10-23

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