ADVANCED FORCE MEASUREMENT

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INSTALLATION MANUAL

Model 1923
Load Cells

Certified for Explosion Safety nA Non-Sparking

REVISION REQUIRES NOTIFICATION CERTIFICATION BODY

Change Record:

DATE	*Revision*	*Page*	*Description*	Released By
2/25/13	D	All	Initial AEx nA IIC T4 release	KV
3/22/16	E	All	Updates for IECEx II 2 G Ex ia IIC T4.	KV
5/26/16	F	All	Add revision record, new label, update wiring diagram.	KV
6/10/16	G	All	Add CSA standards, French translation	KV
11/7/16	H	All	Revert to rev D zone 2 configuration	JB
11/15/16	I	All	Update document number to 15-165EX, add new certification and installation information. Add installation position warning for sunlight	

PRODUCT OVERVIEW

NOTE: All information in this document pertains to the Interface 1923 series load cell. If the product ordered has any special requirements or modifications, refer to the markings on the product label and the purchase order for differences in configuration. Failure to verify product configuration prior to installation may cause permanent damage to the product and void the product warranty. For any questions concerning the configuration of the product, please contact an Interface application engineer for assistance.

Retain all instruction manuals, drawings, and performance certificates that are included with the product. These documents provide important information on the product operation, calibration, installation and safety precautions as well as repair and re-calibration information. These documents may be updated as changes are made to the product, and should be carefully read when the product is received.

DESCRIPTION

The Interface 1923 series load cells are 2mV/V output force transducers. The model is passive, consisting of a strain gage bridge circuit producing a ratiometric output stated in units of mV/V. The calibration and application of the 1923 is in compression only. The bridge resistance is 700Ω.
The 1923 load cell is sealed and is produced specifically for non-sparking applications in Zone 2 hazardous gas environments. Interface Model 1923 series load cells are certified for IECEx, ATEX, and North American (USA and Canada) in accordance with the following standards:

EN 60079-0:2012 + A11:2013
EN 60079-15:2010
IEC 60079-0
IEC 60079-15
ANSI/UL STD 60079-0
ANSI/UL STD 60079-15
ANSI/UL STD 61010-1
CAN/CSA STD C22.2 NO. 60079-0
CAN/CSA STD C22.2 NO. 60079-15
CAN/CSA STD C22.2 NO. 61010-1

IECEx certificate number: IECEx ETL 16.0050X
ATEX certificate number: ITS16ATEX401487X

MARKING

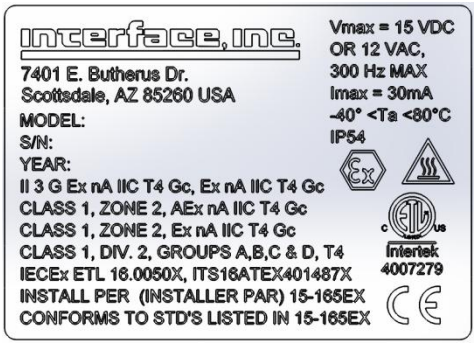
The units shall be marked with the following safety designations:

II 3 G Ex nA IIC T4 Gc, Ex nA IIC T4 Gc
US: Class I, Zone 2, AEx nA IIC T4 Gc
CAN: Class I, Zone 2, Ex nA IIC T4 Gc
Class 1, Division 2, Groups A, B, C and D, T4

Intertek
4007279

Additional marking:

Model, Serial Number, Interface, Scottsdale, Arizona 85260
Excitation 15 VDC or 12 VAC Max, 300 Hz Max, Imax = 30 mA
IP54, -40°C < Ta < 80°C
Reference to this 15-165EX manual for installation



WARNING: Explosion hazard. Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

AVERTISSEMENT: Risque d'explosion. Ne débranchez pas l'équipement à moins que l'alimentation soit coupée ou que la zone soit connue comme non dangereuse.

Important Installation Instruction:

The model 1923 is installed on a metal rod through the center hole and makes metal to metal contact. The metal rod is connected to the frame of the apparatus. To comply with CE requirements for electromagnetic compatibility, the load cell case must be electrically connected to earth ground either directly or by load string contact.
Unless it is known that the 1923 model being installed includes the optional MOV protection shown in the schematic above, external transient limiting means are to be provided for non-sparking low power apparatus, limiting excitation voltage to a maximum of 140% of maximum rated excitation.
Only to be connected to an isolated SELV power source.
Cable glands used with the equipment must be ATEX/IECEx certified as Ex e or Ex nA. For the US the certification would be AEx e or AEx nA, for Canada: Ex e or Ex nA.
When the temperature under rated conditions exceeds 70°C at the cable or conduit entry point, and 80°C at the branching point of the conductors, or for North America (both US and Canada), 60°C at both the entry point and branching point, the temperature specification of the selected cable and cable gland shall be in compliance with the actual measured temperature.
Equipment shall be installed with proper orientation to prevent direct sunlight exposure to the lower white seal.

Instructions d'installation importantes:

Le modèle 1923 est installé sur une tige métallique par le trou central et fait le contact métal à métal. La tige métallique est reliée au cadre de l'appareil. Pour se conformer aux exigences de la CE en matière de compatibilité électromagnétique, le boîtier de la cellule de pesage doit être connecté électriquement à la masse soit directement, soit par contact de chaîne de charge.
À moins que l'on sache que le modèle 1923 en cours d'installation comprend la protection MOV optionnelle illustrée dans le schéma ci-dessus, des moyens externes de limitation des transitoires doivent être prévus
Non étincelle, limitant la tension d'excitation à un maximum de 140% de l'excitation nominale maximale.
Uniquement pour être connecté à une source d'alimentation SELV isolée.
Les presse - étoupes utilisés avec l'équipement doivent être certifiés ATEX/IECEx, Ex e ou Ex nA. Pour les États-Unis, la certification serait AEx e ou AEx nA, pour le Canada: Ex e ou Ex nA.
Lorsque la température dans les conditions nominales dépasse 70 ° C au point d'entrée du câble ou du conduit, et 80 ° C au point de branchement des conducteurs, ou pour l'Amérique du Nord (US et Canada), 60 ° C au point d'entrée et Point de dérivation, la spécification de température du câble et du presse-étoupe sélectionnés doit être conforme à la température réelle

mesurée.L'équipement doit être installé avec l'orientation appropriée pour empêcher l'exposition directe au soleil au joint blanc inférieur.

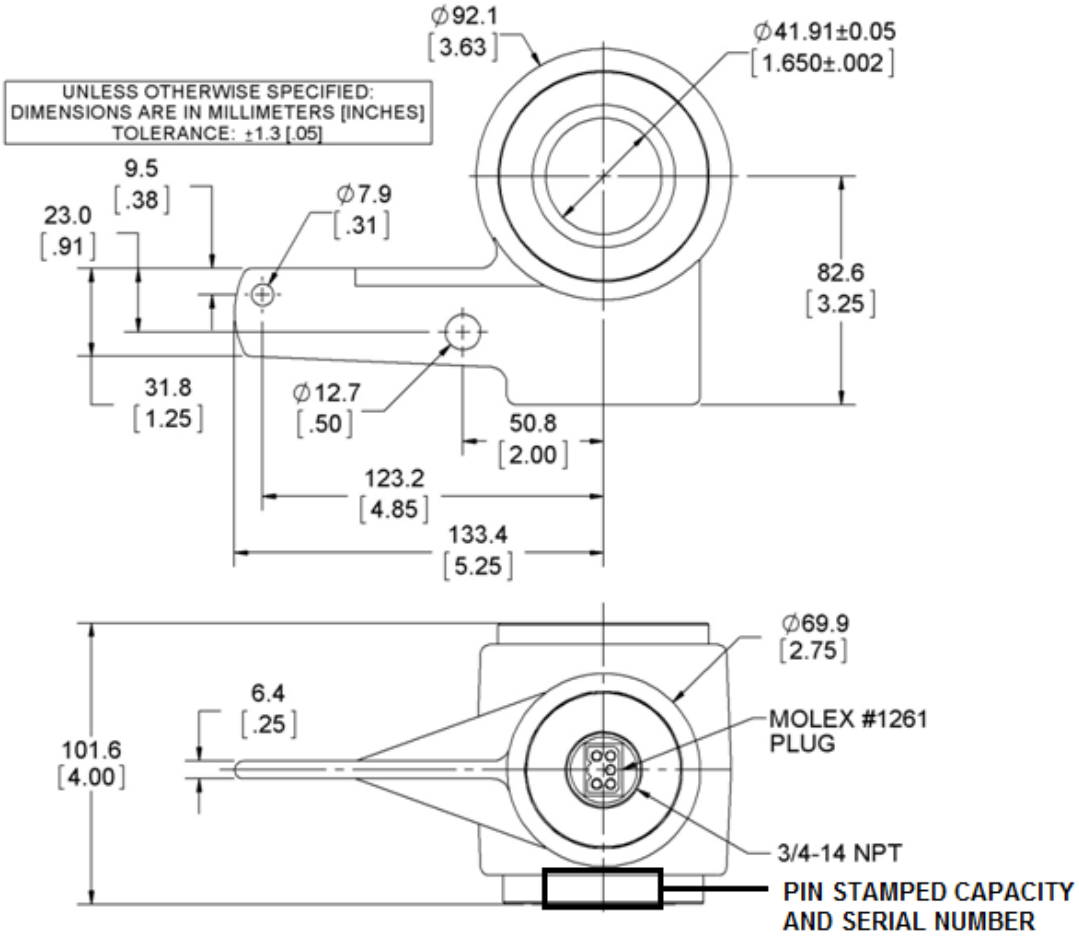
GENERAL GUIDELINES

1. All electrical and mechanical connections should be compatible with the model specifications.
2. Installation should only be performed when the electrical supply power is off and when there is no mechanical force applied.
3. It is not recommended that the excitation or output leads be connected to the case. The cable shield should be connected to instrument ground to reduce noise. The shield at the load cell end of the cable is floating.

HANDLING

Protect the load cell from mechanical overload that could be caused by dropping or any type of abuse.

INSTALLATION DIMENSIONS

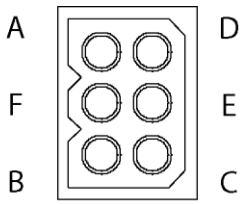


ELECTRICAL INFORMATION

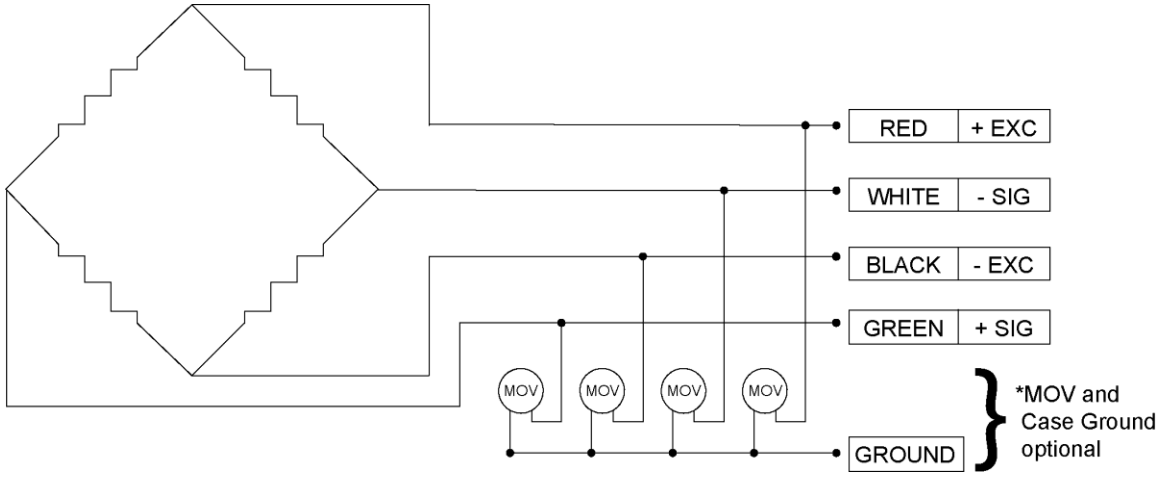
The 1923 series load cells are supplied with a Molex connector Model 1261. Transient voltage protection is provided by optional metal oxide varistors (MOV) between each connector pin and the load cell case.
Recommended Excitation Voltage: 10VDC (MAX 15VDC)

CONNECTOR		CABLE	
PIN	FUNCTION	COLOR	FUNCTION
A	+ EXCITATION	RED	+ EXCITATION
B	+ SIGNAL	GREEN	+ SIGNAL
C	- SIGNAL	WHITE	- SIGNAL
D	- EXCITATION	BLACK	- EXCITATION
E	CASE GROUND*		SHIELD
F	NO CONNECTION		

* MOV and Case Ground for lightning protection optional



LOAD CELL CONNECTOR



MAINTENANCE AND REPAIR

It is recommended that the calibration be verified periodically according to a routine maintenance schedule. If the unit has been subjected to rough usage or shows external damage, immediate calibration verification is recommended.

If failure occurs the unit should be returned to the factory for diagnosis and repair.

For repair or calibration, send load cell to:

Repair Department
Interface, Inc.
7401 E. Butherus Drive
Scottsdale, AZ 85260
USA