

デジタルロードセル DIGITAL LOAD CELL

型式 LB-XD-EXM シリーズ
MODEL LB-XD-EXM Series

取扱説明書
INSTRUCTION MANUAL

株式会社**クボタ**
電装機器事業部

Electronic Equipped Machinery Division
KUBOTA Corporation

目次 Contents

はじめに Introduction	.....	2
安全について Safety Precautions	3
製品の適用 Application of Product	5
製品の説明 Description of Product	6
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1. 仕様 Specifications	7
1-1 主仕様 Main Specifications	7
1-2 ケーブル仕様 Cable Specifications	8
1-3 外観図 Dimensions	.....	9
1-4 マーキング Marking	.....	10
2. 設置 Installation	.....	11
3. 防爆合格証 (ATEX,IECEX) Certification	.....	13

はじめに Introduction

このたびは、クボタ製品をお買い上げいただき、ありがとうございます。

Thank you very much for purchasing the KUBOTA product.

- この取扱説明書は、クボタデジタルロードセル LB-XD-EXM シリーズを正しく取り扱っていただくための基本的な知識について記載したものです。本製品を設置する前に熟読され、よくご理解のうえ「正しい設置・正しい管理」をお願いいたします。

This Instruction manual provides information for installation and maintenance of the KUBOTA Digital Load Cell Type LB-XD-EXM Series.

Read the manual carefully and fully understand the operation of this product for “**Proper Installation and Maintenance**” before installation.

- 取扱説明書はいつでも参考にできるよう、必ず本製品の近くでわかりやすい場所に備えておいてください。

Be sure to keep the manual at an easily accessible place near this product so as to refer to the manual at any time.

- 本書の著作権は、株式会社クボタに所属します。本書の一部または全部について弊社に許諾を得ずに、いかなる方法においても無断で転載・複写・複製することを禁止します。

The copyright of this manual belongs to KUBOTA Corporation. It may not be reprinted, copied or reproduced in whole or in part without the express written permission of KUBOTA Corporation.

- 本製品は日本国内でご使用いただけるよう製作しています。本製品を輸出または国外に持ち出される際は、必ず弊社までご相談ください。

This product is for domestic purpose only. Contact to our Sales Department, if it is exported or is taken out of Japan.

- いかなる場合であっても、弊社は本製品を使用した結果生じる損失、逸失利益など、いかなる損害について、一切の責任を負わないものとします。

In any case, KUBOTA does not assume the responsibility at all for any damage such as the losses and passive damages caused as a result of using this product.

- 本製品を廃却するときは、産業廃棄物として扱い、法令で定められた方法で廃棄してください。

Treat as industrial waste when you abandon this product. And abandon it by the method of providing by Act of Parliament.

安全について Safety Precautions

安全注意シンボル Safety alert symbol

このシンボルは「安全注意」を示します。本機の注意銘板あるいは、本書で、このシンボルを見た場合は安全に注意してください。記載内容に沿って、予防措置を講じ、「正しい操作・正しい管理」を行ってください。

This symbol alerts you to safety precautions. In the event you observe the symbol affixed to this equipment or in this manual, pay utmost care for safety. In accordance with the instructions given, take preventive measures, thus conducting “Proper Operations and Maintenance”.




シグナルワード Signal words


シグナルワードは、人の安全確保や製品の取扱い上、知っておくべき項目を示す見出しです。


The signal words are direction words, which indicate items that you should recognize to ensure safety for human body and handle the equipment.


安全上のシグナルワードは、人や設備に及ぼす危険や損傷の度合いにより、3つの区分があります。安全注意シンボルとも用い、それぞれ次のような意味をもっています。


The signal words for safety are classified into three stages in accordance with the potential danger of injury or damage that operator or equipment suffers. Thus, the signal words are used with the safety alert symbol to indicate the following situations, respectively.

 「危険」 : 注意事項を守らないと、死亡または重傷を負うことになるもの。
“Danger” indicates that when mishandled, there is an imminently hazardous situation which will result in death or serious injury.

 「警告」 : 注意事項を守らないと、死亡または重傷を負う危険性があるもの。
“Warning” indicates that when mishandled, there is a potentially hazardous situation which will result in death or serious injury.

 「注意」 : 注意事項を守らないと、けがを負うまたは機械の損傷や故障のおそれがあるもの
“Caution” indicates that when mishandled, dangerous situation may happen and operator error could result in injury or equipment damage.

本製品の注意銘板や本書では、これらを使い分けています。注意銘板をよく確認してください。本書では、安全上のシグナルワードは全て「」で記しております。

On this equipment or in this manual, these caution labels are properly used. Check for the caution labels with care. On this document, the signal words for safety are all indicated with “”.

本製品の取扱上のシグナルワードは、本製品の寿命を延ばすための留意点や、お使いいただく上で有用な情報について示します。

The signal words for handling are used with the note to extend product lifetime, or with the useful information in use.

操作や管理上重要な事柄について「**重要**」の見出しを付けて記しています。

An important matter for operation or management is indicated with “Important!”

その他の有用な情報については、「**補足**」の見出しを付けて記しています。

Other useful information is indicated with “Supplement”

安全指示遵守 Observance of safety instructions

- 本書および注意銘板をよく読み、ご理解ください。
Thoroughly read and fully understand this manual and caution labels affixed to this equipment.
- 注意銘板は、いつもきれいにしておいてください。
Keep the caution labels clean at all times.
- 破損や紛失した場合、ただちに発注の上、再度貼り付けてください。
In the event any caution labels are damaged or lost, immediately place an order for the labels to affix them in place again.
- 本書記載事項以外についても、安全には細心の注意をはらってください。
Pay close attention to any safety items in addition to those described in the manual.



「警告」

“Warning”

弊社サービスマニュアルに基づく技術教育を受けたサービスマン以外は、設置作業をしないでください。

Do not handle or transport this product except the person in charge of technological service, who had received technical training based on our service manual.

- ・製品の性能の低下だけでなく、重大な事故や怪我を引き起こす恐れがあります。

It might be caused not only lower performance of the product but also a serious accident and the injury.

製品の適用 Application of Product

- 本製品は、以下の EX マーキングに適合した防爆電気機器です。

This product is an explosion-proof electrical equipment of the following "EX marking".

[ATEX]

II 2 G Ex mb II B T5 Gb

[IEC Ex]

Ex mb II B T5 Gb

保護のタイプ	Type of protection	: mb
機器グループ	Equipment group	: Group II
カテゴリ	Category	: Zone 1
ガスのグループ	Gas group	: II B
温度クラス	Temperature class	: T5

- ・ガス・蒸気危険場所のうち、Zone 1 および Zone 2 で使用できます。

This product can be used in Zone 1 and Zone 2 of hazardous Gases vapors atmospheres.

- 本ロードセルは、樹脂により防爆構造が維持されています。

As for this load cell, explosion-proof construction is maintained with compound.

- 本製品の適用規格は、以下の通りです。

The applicable standards for this product are as follows.

[ATEX]

EN 60079-0 : 2009	Equipment - General requirements
EN 60079-18 : 2009	Equipment protection by encapsulation "m"

[IEC Ex]

IEC 60079-0 : 2007-10	Equipment - General requirements
IEC 60079-18 : 2009	Equipment protection by encapsulation "m"

- 本製品は、人命にかかわる設備やシステムに適用した設計または製造をしていません。

This product is not designed or manufactured to apply the equipment or systems that involve human life.

- 本製品の不具合が重大な事故や損失を引き起こすと予想される場合は、必ず安全装置を設けてください。

Be sure to provide safety devices in case of applying this product to the facilities where failure of this product is expected to cause serious accident or loss.



「警告」

“Warning”

- ・仕様書に記載の目的にのみ本製品を使用のこと。

Use this equipment with the product specifications only.

- ・仕様書に記載の最大容量、許容過負荷を遵守のこと。

Observe the maximum capacity and safe load limit described in specifications.

製品の説明 Description of Product

- LB-XD-EXM シリーズロードセルは、樹脂防爆型デジタルロードセルです。
The load cells of type LB-XD-EXM are explosion-proof load cells with digital outputs.
- 酸やアルカリなど樹脂の性能を著しく低下させる環境下では使用できません。
樹脂部の欠損、起歪体の腐食が認められた場合、防爆性能が維持できなくなる可能性がありますので、使用を中止し交換してください。
This product cannot be used in the environment , such as acid and alkali, where reduces performance of compound remarkably.
Since it may become impossible to maintain explosion-proof performance when the deficit of a compound part or the corrosion of a load cell body are found, please stop using and exchange it.
※防爆仕様に関しては、 p.5 参照下さい。
Please refer to p.5 for the explosion-proof specification.
- 起歪体の材質はアルミ合金です。起歪体のアルミ合金が腐食するような環境では使用できません。
The load cell body is made of aluminum alloy. It cannot be used in an environment which erodes the aluminum alloy of a load cell body.
- 歪ゲージブリッジ回路のアナログ信号は、D-LC 基板の回路内で増幅、A/D 変換、スケール処理そしてフィルター処理されます。デジタル信号は、RS-485 インターフェースにより出力されます。
The analogue signal of the strain gauge bridge is amplified, A/D converted, scaled and filtered by the D-LC board. The load cell is equipped with an interface RS-485.
- このように信号をデジタル出力することには、次のようなメリットがあります。
This digital output has the advantages as follows.
 - ・電磁波妨害の影響を受けにくい。
It cannot be affected by electromagnetic interference easily.
 - ・RS-485 を用いて長距離の伝送ができる。
It can be transmitted in a long distance by RS-485.
 - ・各々のロードセルが ID をもち、独立して通信できるので、据付調整や異常なロードセルの特定、ロードセルの交換などがアナログロードセルと比べて非常に容易である。
Each load cell has ID number and communicates independently, so it is very easy to set a multiple load cell type scale, to specify abnormal load cell, and to replace it compared with analogue load cell.

補足 Supplement

- ・使用にあたっては、接続する専用指示計（D-LC 対応）が必要です。
It is necessary to prepare the indicator specially made for the D-LC specification.
- ・使用にあたっては、ID 設定やスパン調整など指示計側の設定が必要です。設定方法については、指示計のマニュアルを参照してください。
It is necessary to set the indicator such as ID setting and span adjustment before using. Please refer to the manual of the indicator.

1. 仕様 Specifications

1-1 主仕様 Main Specifications

精度等級 Accuracy class acc. to OIML R60			C6	C5	C4	C3
ロードセル検定目量の最大数 Max. number of load cell verification intervals	n_{max}		6000	5000	4000	3000
型式名 Model name			LB-XD- ()-EXM ↑ 150L/300L/600L/1T/1.5T/2T/2.5T/4T/5T			
最大容量 Maximum capacity	E_{max}	kg	150/300/600/1000/1500/2000/2500/4000/5000			
最小測定量 Minimum capacity	E_{min}	kg	0			
定格出力 Rated output	C_n	counts	600000 ± 300			
最小ロードセル検定目量 Minimum load cell verification interval	V_{min} (E_{max}/Y)	% C_n	$E_{max}/15000$	$E_{max}/12500$	$E_{max}/10000$	$E_{max}/8000$
組合せ誤差 ¹⁾ Combined error		% C_n	±0.010	±0.012	±0.015	0.018
クリープ (30分) Creep error (30 minutes)		% C_n	±0.0123	±0.0147	±0.0184	±0.0245
最小測定量出力戻りDR Minimum dead load output return		% C_n	±0.0083	±0.0100	±0.0125	±0.0167
零バランス Zero balance		% C_n	± 1			
最小測定量出力への温度影響 Temp. effect on min. dead load output	TK_0	ppm $C_n/°C$	± 10	± 12	± 16	± 20
感度への温度影響 ¹⁾ Temp. effect on sensitivity	TK_{Cn}	ppm $C_n/°C$	± 5	± 6	± 7.5	± 10
温度補償範囲 Compensated temperature range		°C	-10~+40			
使用温度範囲 Rated ambient temperature range		°C	-10~+40			
許容過負荷 Safe load limit	E_{lim}	% E_{max}	150			
限界過負荷 Ultimate load		% E_{max}	200			
定格電圧 Rated voltage		V(DC)	8			
出力インターフェース Output interface			RS-485			
起歪体材質 Element material			アルミ合金 Aluminum alloy			

1) 感度への温度影響(TK_{Cn})および組合せ誤差のデータは、標準値です。これらのデータの合計が OIML R60 による誤差配分 $p_{LC} = 0.8$ の要件を満足します。

The data for temperature effect on sensitivity (TK_{Cn}) and combined error are typical values. The sum of these data meets the requirements for $p_{LC} = 0.8$ according to OIML R60.

1-2 ケーブル仕様 Cable Specifications

本ロードセルは、ツイストペアシールドケーブルを使用しています。
This load cell uses the shielded, twisted pair cable.

重要 Important !

和算箱などを用いてケーブルを延長する場合、必ずツイストペアシールドケーブルを使用してください。ツイストペアの組合せは、1.2.1を参照してください。
Use the shielded, twisted pair cable when you extend the cable by using junction box etc. Refer to the following table for the combination of the twisted pairs.

1-2-1 配線色 Cable colors

色 Color	機能 Function	ツイストペア の組合せ Combination of twisted pair
赤 Red	電源 (+V) Power supply "+V"	
緑 Green	信号出力 (+D) Data input/output "+D"	
青 Blue	信号出力 (-D) Data input/output "-D"	
黄 Yellow	グラウンド (SG) Power supply "SG"	
黒 Black	筐体接地 (FG) Frame Ground "FG"	
橙 Orange	シールド (SH) Shield "SH"	

1-2-2 ツイストペアシールドケーブル仕様

Specification of the shielded, twisted pair cable

導体材料 Material of Conductor	スズメッキ軟銅線 Tinned soft copper wire
導体サイズ Size of Conductor	AWG24
ケーブルシース材料 Material of Cable sheath	ポリ塩化ビニル polyvinyl chloride
ケーブルシース外径 Outer diameter of Cable sheath	φ 6.6mm
ケーブルシース色 Color of Cable sheath	黒 Black

1-2-3 圧着端子の仕様

Specification of the terminal

種類 Type of terminal	絶縁被覆付丸型圧着端子 Insulated ring terminal
品番 Part number	TMEV 0.3-4

1-3 外観図 Dimensions

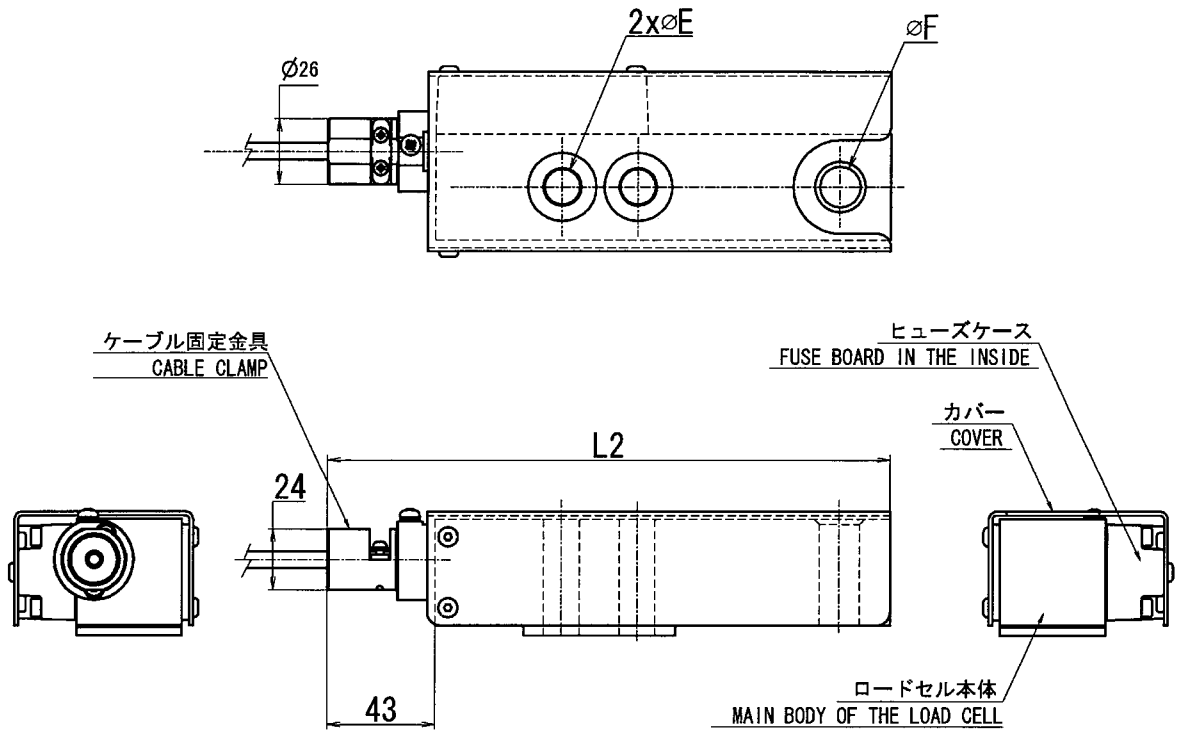


Fig. 1 LB-XD-(600L , 1T , 1.5T , 2T , 2.5T , 4T , 5T)-EXM

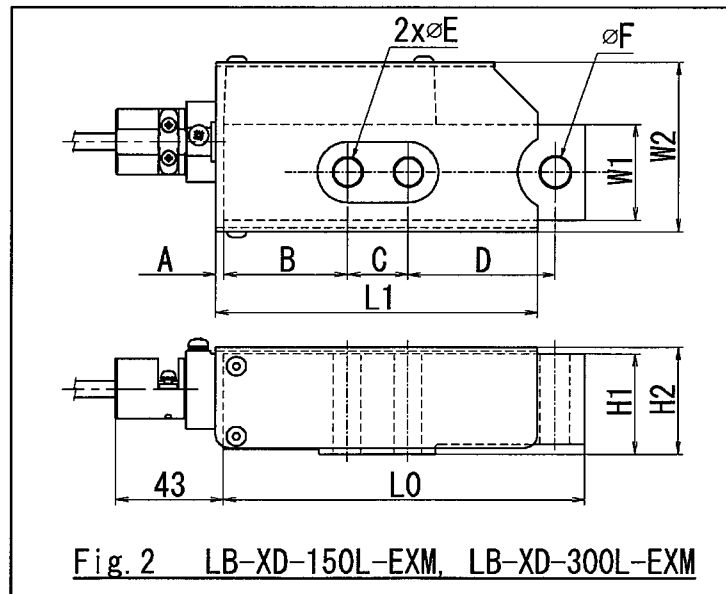


Fig. 2 LB-XD-150L-EXM, LB-XD-300L-EXM

寸法表 Dimension

型式 model	A	B	C	D	φE	φF	L0	H1	W1	L1	L2	H2	W2	weight apprpx.(kg)
LB-XD-150L-EXM	3	49	24	58	φ 11	φ 12	143	40	38	127	(188)	42.5	67	1.2
LB-XD-300L-EXM	3	49	24	58	φ 11	φ 12	143	40	38	127	(188)	42.5	67	1.2
LB-XD-600L-EXM	3	50	30	80	φ 14	φ 16	180	46	42	183	(225)	49	71	1.6
LB-XD-1T-EXM	3	50	30	80	φ 14	φ 16	180	49	42	183	(225)	52	71	1.7
LB-XD-1.5T-EXM	3	15	65	70	φ 14	φ 16	170	56	42	173	(215)	59	71	1.8
LB-XD-2T-EXM	3	15	60	75	φ 18	φ 20	170	56	48	173	(215)	59	77	2.0
LB-XD-2.5T-EXM	3	15	60	75	φ 18	φ 20	170	68	48	173	(215)	71	77	2.5
LB-XD-4T-EXM	5	20	50	115	φ 22	φ 24	205	78	58	210	(250)	81	87	3.0
LB-XD-5T-EXM	5	20	50	115	φ 22	φ 24	205	78	58	210	(250)	81	87	3.5

unit: mm

1-4 マーキング Marking

本製品には、防爆に関する以下のラベルを貼付しています。

This product is marked with the following label concerning about explosion-proof.



TYPE	①	②	③
LB-XD-150L-EXM	150L	Serial number	Year of manufacturing
LB-XD-300L-EXM	300L		
LB-XD-600L-EXM	600L		
LB-XD-1T -EXM	1T		
LB-XD-1.5T-EXM	1.5T		
LB-XD-2T -EXM	2T		
LB-XD-2.5T-EXM	2.5T		
LB-XD-4T -EXM	4T		
LB-XD-5T -EXM	5T		

2. 設置 Installation

- 本製品は、計量器組み用に設計されています。他の用途で、防爆環境での使用はできません。

This product is designed for the meter building in. It is not possible to use it by other usages in the explosion-proof environment.

- 本製品には、ステンレス製のカバーが取り付けられています。防爆構造を維持するために、このカバーは外さないで下さい。

The stainless steel cover is obtained for this product. Please do not remove this cover to maintain the explosion-proof construction.

- ロードセルに一時的にも過負荷が加わらないよう注意して下さい。
Do not overload load cells, not even temporarily.

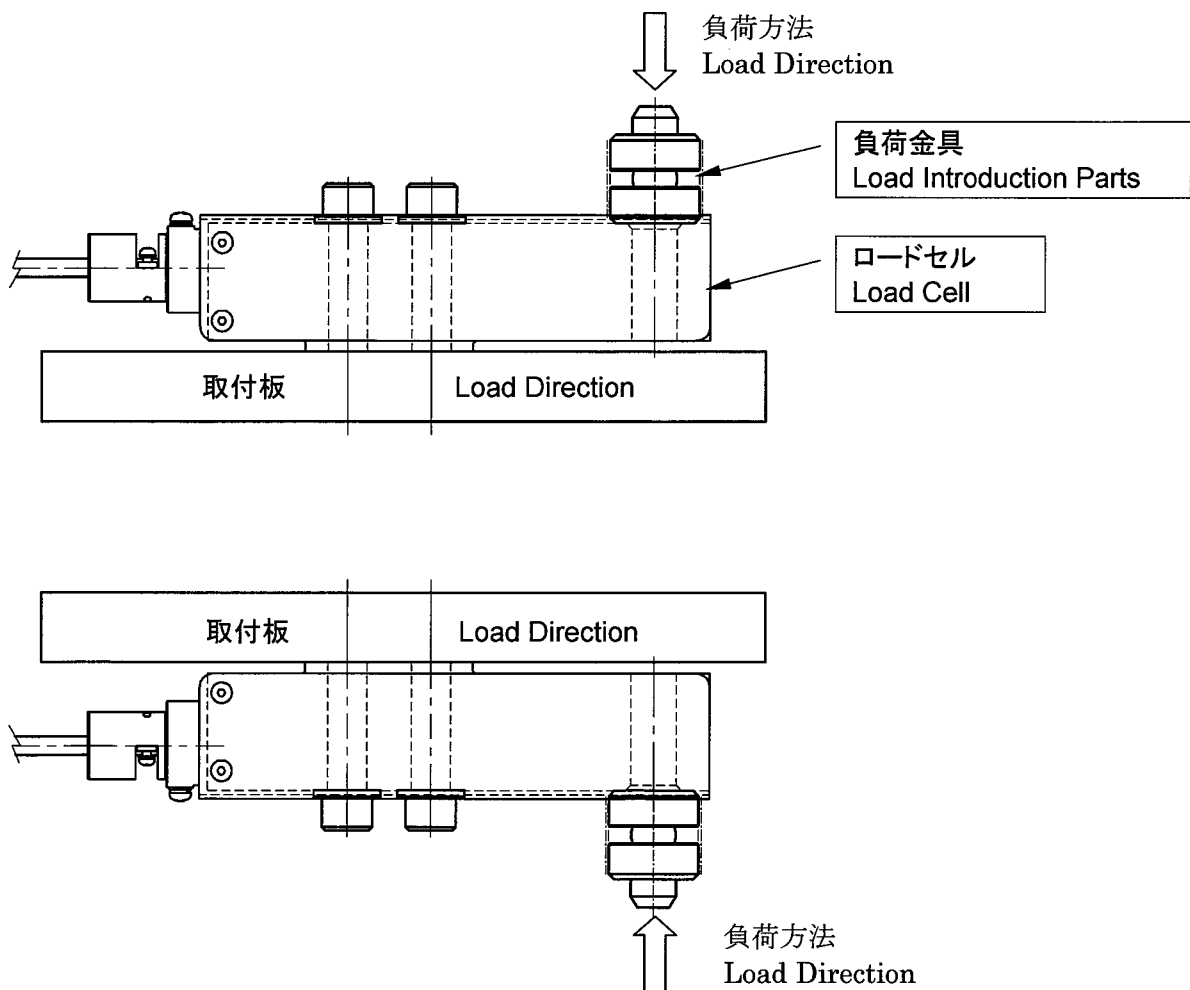
- ロードセル取り付け面は、水平な平坦面として下さい。

The mounting surface must be horizontal, flat surface.

- ロードセルには、下図の方向に力を加えて使用して下さい。逆方向への負荷は避けてください。

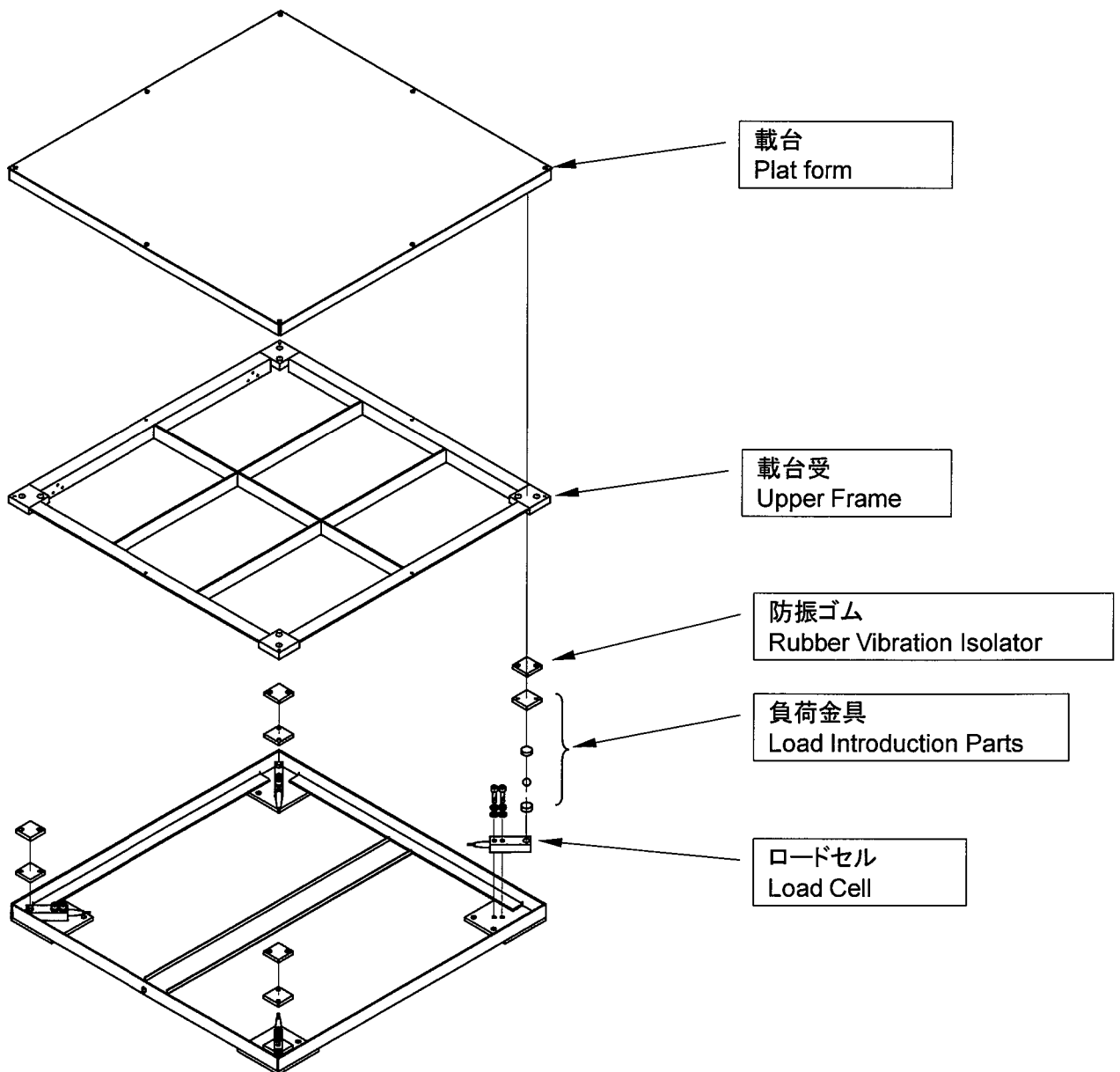
The load direction is shown in the drawing below.

Never load in a direction opposite to the load direction.



<使用例>

Example of use



正しく設置が行なわれていない場合、爆発の危険があります。防爆電気機器およびその設置作業に関する十分な知識を有した作業員以外の設置作業を禁止します。設置作業は、防爆に関連する法令で定められた方法に従って設置してください。

Improper installation of this product will induce an explosion hazard. To avoid that, the equipment must be installed by personnel with adequate knowledge about explosion-proof electrical equipment and its installation work. Install the equipment according to laws and regulations relevant to explosion protection of providing by Act of Parliament.

- ・本製品に関する防爆上の制約を遵守するため、弊社作業員以外が、本製品に追加工することを禁止します。

To observe the restriction on the explosion-proof concerning this product, people except our company personnel are prohibited from processing the addition to this product.

- ・ケーブルと引込器具との間の密封は、弾性体のパッキンの使用により確保しています。引込用部品は、出荷前に組付け調整済です。弊社作業員以外が、分解することを禁止します。

The cable sealing between the cable and the gland body is ensured by using an elastomeric sealing ring. The cable glands parts are assembled, and adjusted before shipping. People except our company personnel are prohibited from disassembling them.

3. 防爆合格証 (ATEX,IECEX) Certification

ATEX 防爆合格証 (認証番号 : DEKRA 12ATEX0026)

(1 / 2 頁)

ATEX Certificate(Cert No. DEKRA 12ATEX0026)

(Page 1 of 2)



CERTIFICATE

(1) EC-Type Examination

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

(3) EC-Type Examination Certificate Number: DEKRA 12ATEX0026 Issue Number: 1

(4) Equipment: Load cell LB-XD-EXM Series

(5) Manufacturer: KUBOTA Corporation

(6) Address: 2-35, Jinmu-cho, Yao-City, Osaka Pref., 581-8686 Japan

(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., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, 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 number NL/DEK/ExTR12.0003/xx.

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

EN 60079-0 : 2009

EN 60079-18 : 2009

(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 EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

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



II 2 G Ex mb IIB T5 Gb

This certificate is issued on 29 February 2012 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 1/2

° 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
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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate DEKRA 12ATEX0026**

Issue No. 1

(15) **Description**

Load cell LB-XD-EXM Series, in type of protection encapsulation "mb", consists of a aluminium alloy enclosure with strain gauges, electronics, a cable gland and a permanently attached cable and converts the analogue signal from the strain gauge into a digital (RS-485) signal.

The load cell LB-XD-EXM Series consist of the following models, depending on the maximum capacity:

LB-XD-150L-EXM, LB-XD-300L-EXM, LB-XD-600L-EXM, LB-XD-1T-EXM, LB-XD-1.5T-EXM, LB-XD-2T-EXM, LB-XD-2.5T-EXM, LB-XD-4T-EXM and LB-XD-5T-EXM

Ambient temperature range -10 °C to +40 °C

Electrical data

Supply, RS-485 data input/output interface: rated voltage 8 Vdc; rated current 30 mA.

Installation instructions

The instructions provided with the equipment shall be followed in detail to assure safe operation.

(16) **Test Report**

No. NL/DEK/ExTR12.0003/xx.

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

None.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. NL/DEK/ExTR12.0003/xx.

	IECEX Certificate of Conformity	
INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres <small>for rules and details of the IECEX Scheme visit www.iecex.com</small>		
Certificate No.:	IECEX DEK 12.0002	issue No.:0
Status:	Current	Certificate history:
Date of Issue:	2012-03-15	Page 1 of 3
Applicant:	KUBOTA Corporation 2-35, Jinmu-cho Yao-City Osaka Pref., 581-8686 Japan	
Electrical Apparatus: Optional accessory:	Load cell LB-XD-EXM Series	
Type of Protection:	Ex mb	
Marking:	Ex mb IIB T5 Gb	
Approved for issue on behalf of the IECEX Certification Body:	C.G. van Es	
Position:	Certification Manager	
Signature: (for printed version)		
Date:	<u>2012-03-15</u>	
<ol style="list-style-type: none">1. This certificate and schedule may only be reproduced in full.2. This certificate is not transferable and remains the property of the issuing body.3. The Status and authenticity of this certificate may be verified by visiting the Official IECEX Website.		
Certificate issued by:	DEKRA Certification B.V. Utrechtseweg 310 6812 AR Arnhem The Netherlands	
All testing, inspection, auditing and certification activities of the former KEMA Quality are an integral part of the DEKRA Certification Group.		

		IECEX Certificate of Conformity	
Certificate No.:	IECEX DEK 12.0002	Issue No.:	0
Date of Issue:	2012-03-15	Page 2 of 3	
Manufacturer:	KUBOTA Corporation 2-35, Jinmu-cho Yao-City Osaka Pref., 581-8686 Japan		
Manufacturing location(s):			
<p>This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended</p>			
STANDARDS: The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:			
IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements		
IEC 60079-18 : 2009 Edition: 3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"		
<p><i>This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.</i></p>			
TEST & ASSESSMENT REPORTS: A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in			
<u>Test Report:</u> NL/DEK/ExTR12.0003/00			
<u>Quality Assessment Report:</u> NL/DEK/QAR11.0015/00			



IECEX Certificate of Conformity

Certificate No.: IECEX DEK 12.0002

Date of Issue: 2012-03-15

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Load cell LB-XD-EXM Series, in type of protection encapsulation "mb", consists of a aluminium alloy enclosure with strain gauges, electronics, a cable gland and a permanently attached cable and converts the analogue signal from the strain gauge into a digital (RS-485) signal.

The load cell LB-XD-EXM Series consist of the following models, depending on the maximum capacity:
LB-XD-150L-EXM, LB-XD-300L-EXM, LB-XD-600L-EXM, LB-XD-1T-EXM, LB-XD-1.5T-EXM, LB-XD-2T-EXM,
LB-XD-2.5T-EXM, LB-XD-4T-EXM and LB-XD-5T-EXM

Ambient temperature range -10 °C to +40 °C

Electrical data

Supply, RS-485 data input/output interface: rated voltage 8 Vdc; rated current 30 mA.

CONDITIONS OF CERTIFICATION: NO

【製品型式】 LB-XD-EXM	【器 番】
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【設置日（お買上げ日）】	年	月	日
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【販売店】 TEL : FAX :

※お買上げ後、すみやかに上記にご記入ください。

株式会社クボタ 電装機器事業部

クボタお客様相談窓口 《コールセンター》

 0120-732-058 (フリーダイヤル)

東 京 本 社 〒103-8310 東京都中央区日本橋室町三丁目1番3号
TEL : 03(3245)3912 FAX : 03(3245)3919

久 宝 寺 事 業 セ ン タ ー 〒581-8686 大阪府八尾市神武町2-35
TEL : 072(993)1932 FAX : 072(993)1929

クボタ計量器ホームページ <http://www.keisoku.kubota.ne.jp/>