

INSTRUCTIONS FOR SAFE OPERATIONS

UT5000
INTRINSICALLY
SAFE ULTRASONIC
THICKNESS GAUGE



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READ THIS FIRST

The CorDEX UT5000 thickness gauge is a gauge for measuring the wall thickness of pipes or tanks.

Read and understand all Warnings and Cautions before using this product.

Safety Information

This instruction manual contains information and warnings that must be observed for safe operation under the conditions described.

Faults and Damage

If there are any grounds for believing the unit is no longer safe to use, it must be taken out of service and measures taken to prevent its further unintentional use. The safety of the unit may be impaired if, for example:

- External damage to the housing is visible
- The unit has not been stored correctly
- The unit has suffered transport damage

Safety Regulations

When using the UT5000, the appropriate regulations must be observed to avoid incorrect operation of the unit.

ATTENTION! Please make sure that the case is securely fastened when using the unit. The unit must not be opened in the hazardous area. Only probes intended for this instrument must be used.

Batteries

If you change the battery, make sure that the replacement is suitable for the purpose.

The use of different batteries is strictly forbidden.

Calibration

Calibration must be carried out by the manufacturer since the protective circuits must be checked after calibration for safety reasons.

EXCHANGING BATTERIES

Batteries are inserted into the compartment in the bottom side of the instrument.

To change the battery:

- Half turn the screws on the compartment cover and then carefully lift the cover.
- Make sure that the rubber sealing of the cover will not be damaged or removed from the guiding notch.
- Insert the new battery.

WARNING! Ensure correct orientation according to the sketch on the battery cover to avoid internal damage to the tester.

When exchanging batteries, the memorized parameter and calibration values are deleted. Therefore you need to execute a new calibration and enter the relevant parameters again after exchange of the batteries.

After battery replacement, switch the instrument on/off twice to reset it to a predefined operating status. All previous settings will be restored to the tester after connecting to the CorDEX CONNECT™ software, or the UT5000 Mini app.

ATTENTION! Only use a 3.6V Lithium Thionyl Chloride Cell. The use of different batteries is strictly forbidden.

OPERATIONAL CAUTIONS

The cautions contained in this section do not relate specifically to safe use in hazardous area applications but should be followed to help prevent damage to the device or personnel.

- Keep out of reach of children
- The UT5000 is a precision instrument. Do not drop it, strike it or use excessive force when handling

Maintenance

For safety critical maintenance, please refer to EN60079:17

CERTIFICATION

Model	UT5000
ATEX Certificate No.	Baseefa 11ATEX0114
IECEx Certificate No.	IECEx BAS 11.0094
Certificate Type	 II 2G Ex ib IIC T4 Gb
USB Terminal parameter	Um253V
Ambient Temperature	Tamb -10 to +50°C
Power Supply	1x CorDEX Instruments Battery Part Number: CDX5000-327

EC DECLARATION OF CONFORMITY

CorDEX

CorDEX Instruments Limited
1 Owens Road
Skippers Lane Industrial
Estate
Middlesbrough
TS6 6HE

Declaration No. SO/8 Rev 2

**EC Declaration of Conformity
in accordance with EEC ATEX Directive 94/9/EC**

We,

CorDEX Instruments Ltd.

Hereby declare that the products described below

Product: Ultrasonic Thickness Gauge
Model: UT5000

are in conformity with the essential health and safety requirements of Council Directive 94/9/EC relating to equipment intended for use in potentially explosive atmospheres (ATEX Directive) Ex II 2GD, Ex ib IIC T4 Gb Ex ibD IIIB T200°C Db Tamb (-10°C to +50°C) equipment, by the application of the following Standards:-

EN 60079-0:2009 Explosive atmospheres - Equipment: General requirements

EN 60079-11:2007 Explosive atmospheres. Equipment protection by intrinsic safety "I"

EN 61241-11:2005 Electrical apparatus for use in the presence of combustible dust. Protection by intrinsic safety "ID"

as certified by Notified Body Number 1180 Baseefa Ltd, UK by EC-Type Examination Certificate: Baseefa11ATEX0114 and are subject to the procedure set out in Annex VII of Directive 94/9/EC and these procedures are in conformity with the requirements of EN 13980:2002 under the supervision of Notified Body Number 0518, SIRA Certification Service Rake Lane, Eccleston, Chester, CH4 9JN.

It is ensured through internal measures that the products conform at all times to the requirements of the current EEC Directives and relevant standards.

Signature:  Authorised Person

Position: Director on behalf of CorDEX Instruments Ltd

Date: 07/10/2014

Product Serial number



ATEX CERTIFICATION

Certificate Number
Baseefa11ATEX0114/1



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1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
Directive 94/9/EC

3 Supplementary EC - Type Examination Certificate Number: **Baseefa11ATEX0114/1**

4 Equipment or Protective System: **Ultrasonic Thickness Gauge**

5 Manufacturer: **CorDEX Instruments Limited**

6 Address: **Middlesbrough, TS6 6HE**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa11ATEX0114 to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 Item 9 of the original Certificate is replaced by "Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2009 EN 60079-11:2007 EN 61241-11:2005

except in respect of those requirements listed at item 18 of the Schedule."

9 The marking of the equipment has changed from the original Certificate and shall include the following:

Ⓓ II 2GD Ex ib IIC T4 Gb Ex ibD IIB T200°C Db T_{amb} (-10°C to +50°C)

This certificate shall be held with the original certificate and may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **6684**

Project File No. **11/0942**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

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Baseefa is a trading name of Baseefa Ltd
Registered in England No. 4305578. Registered address as above.

R. S. SINCLAIR
DIRECTOR
On behalf of
Baseefa

ATEX CERTIFICATION

Certificate Number
Baseefa11ATEX0114/1



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13 **Schedule**

14 **Certificate Number Baseefa11ATEX0114/1**

15 **Description of the variation to the Equipment or Protective System**

Variation I.1

To permit the addition of the dust protection concept "protection by Intrinsic Safety iD".

16 **Report Number**
GB/BAS/EXTR12.0004/00

17 **Specific Conditions of Use**
None

18 **Essential Health and Safety Requirements**
Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 **Drawings and Documents**

Number	Sheet	Issue	Date	Description
CDX-5000-333	1	B	16/01/12	Marking Detail

IECEX CERTIFICATION

IECEX CERTIFICATION

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 BAS 11.0094 Issue No.: 1
Status:	Current Certificate history: Issue No. 1 (2012-2-28) Issue No. 0 (2011-9-21)
Date of Issue:	2012-02-28 Page 1 of 4
Applicant:	CorDEX Instruments Limited 1 Owens Road Skippers Lane Industrial Estate Middlesbrough TS6 6HE United Kingdom
Electrical Apparatus:	UT-5000 Ultrasonic Thickness Gauge
Optional accessory:	
Type of Protection:	Intrinsic Safety
Marking:	Ex ib IIC T4 Gb (Tamb -10°C to +50°C) Ex ibD T200°C Db (Tamb -10°C to +50°C)
Approved for issue on behalf of the IECEX Certification Body:	R S Sinclair General Manager
Position:	 29/2/12
Signature: (for printed version)	
Date:	
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:	Baseefa Rockhead Business Park Staden Lane Buxton Derbyshire SK17 9RZ United Kingdom
	

IECEX Certificate of Conformity	
Certificate No.:	IECEX BAS 11.0094
Date of Issue:	2012-02-28 Issue No.: 1
	Page 2 of 4
Manufacturer:	CorDEX Instruments Limited 1 Owens Road Skippers Lane Industrial Estate Middlesbrough TS6 6HE United Kingdom
Manufacturing location(s):	
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.	
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 : 2004	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
Edition: 4.0	
IEC 60079-0 : 2007-10	Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5	
IEC 60079-11 : 2006	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 5	
IEC 61241-11 : 2005	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety "ID"
Edition: 1	
<i>This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.</i>	
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>	
GB/BAS/ExTR11.0093/00	GB/BAS/ExTR11.0094/00
	GB/BAS/ExTR12.0004/00
<u>Quality Assessment Report:</u> GB/SIR/QAR10.0010/02	

IECEX CERTIFICATION

IEC		IECEX		IECEX Certificate of Conformity	
Certificate No.:	IECEX BAS 11.0094			Issue No.:	1
Date of Issue:	2012-02-28			Page 3 of 4	
Schedule					
EQUIPMENT:					
<i>Equipment and systems covered by this certificate are as follows:</i>					
The UT-5000 is battery powered hand held equipment designed to measure the thickness of materials in hazardous areas using non-destructive techniques. It comprises three printed circuit boards inside a main instrument case housed in a protective rubber over boot, a custom cable, and a dual element ultrasonic transducer.					
The equipment is battery powered by a single primary cell. Only Tadiran SL-2780 Lithium Thionyl Chloride cells may be used. The battery is to be replaced only when in a safe area.					
The USB connector is for use only in safe areas and has the terminal parameter $U_m = 253V$					
CONDITIONS OF CERTIFICATION: NO					

IECEX CERTIFICATION

IEC		IECEX		IECEX Certificate of Conformity	
Certificate No.:	IECEX BAS 11.0094			Issue No.:	1
Date of Issue:	2012-02-28			Page 4 of 4	
DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):					
Variation 1.1					
To permit the addition of the dust protection concept Ex ibD.					
EXTR: GB/BAS/EXTR12.0004/00		File Reference: 11/0942			

