



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx FTZU 10.0018X** issue No.:0 Certificate history:

Status: **Current**

Date of Issue: **2010-09-30** Page 1 of 3

Applicant: **Crystal Engineering Corporation**
708 Fiero Lane
San Luis Obispo
California
United States of America

Electrical Apparatus: **Digital Pressure Calibrator 30 Series, 90 Series**
Optional accessory:

Type of Protection: **Intrinsic safety**

Marking: **Ex ia IIC T4 Gb**

*Approved for issue on behalf of the IECEx
Certification Body:*

Dipl. Ing. Jaroslav Šindler

Position:

Head of the Certification Body

*Signature:
(for printed version)*

Date:

2010-09-30

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:

Fyzikálně technický zkusební ústav
(Physical -Technical Testing Institute)
Pikartská 7
71607 Ostrava - Radvanice
Czech Republic





IECEX Certificate of Conformity

Certificate No.: IECEX FTZU 10.0018X

Date of Issue: 2010-09-30

Issue No.: 0

Page 2 of 3

Manufacturer: **Crystal Engineering Corporation**
708 Fiero Lane
San Luis Obispo
California
United States of America

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 : 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

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

CZ/FTZU/ExTR10.0018/00

Quality Assessment Report:

CA/CSA/QAR07.0004/01



IECEx Certificate of Conformity

Certificate No.: IECEx FTZU 10.0018X

Date of Issue: 2010-09-30

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The 30 Series Digital Pressure Calibrators are portable, battery powered instruments designed to measure pressure in hazardous areas. Further the instruments are able to measure loop current signals by means of two jacks placed on the front panel. The apparatus comprises electronics circuits arranged on two printed circuit boards, an LCD module and one or two pressure sensor assemblies, all housed in an aluminium alloy enclosure. The battery which must be of type listed below is housed in a separate compartment.

Input/output parameters, front jacks:

$U_i = 30 \text{ V}$; $I_i = 100 \text{ mA}$; $P_i = 0.75 \text{ W}$; $C_i = 0$; $L_i = 0$

$U_o = 9.9 \text{ V}$; $I_o = 2.62 \text{ mA}$; $P_o = 6.5 \text{ mW}$; $C_o = 3.2 \mu\text{F}$; $L_o = 100 \mu\text{H}$

Instruction for use - see documents 4435 30 Series and 4466 TRANSCAT Model 92.

CONDITIONS OF CERTIFICATION: YES as shown below:

- Acceptable battery types:
 - Varta High Energy; 9 V; 4922 E Block; 6LR61; 6AM6; MN 1604
 - Duracell Pile Alkaline ; 9 V; MN 1604; 6L, R61
 - Energizer 9 V; Size 522, 6LR31.6AM6
 - Energizer Industrial Lithium 9 V; Format 522FP; 6LR31.6AM6
- The battery must not be replaced in hazardous location.
- RS 232 interface must not be connected to any apparatus when using calibrator in hazardous location.

IECEx Technical Report: CZ/FTZU/ExTR10.0018/00 details

ExTR :	
ExTR Reference Number*: (automatic numbering)	CZ/FTZU/ExTR10.0018/00
Status*:	Issued
ExTR Free Reference Number*:	CZ/FTZU/ExTR10.0012
Date of Issue*: (yyyy-mm-dd)	2010-09-30
List of Standards Covered*:	IEC 60079-0 (Ed.5); IEC 60079-11 (Ed.5)
Issuing ExTL*:	FTZU - Fyzikalne technicky zkusebni ustav
Endorsing ExCB*:	FTZU - Fyzikalne technicky zkusebni ustav
Manufacturer*:	Crystal Engineering Corporation 708 Fiero Lane, San Luis Obispo, California
Country of Manufacture*:	United States of America
Ex Protection*:	Ex ia IIC T4 Gb
Ratings:	Input/output parameters, front jacks: $U_i = 30\text{ V}$; $I_i = 100\text{ mA}$, $P_i = 0.75\text{ W}$; $C_i = 0$; $L_i = 0$ $U_o = 9.9\text{ V}$; $I_o = 2.62\text{ mA}$; $P_o = 6.5\text{ mW}$; $C_o = 3.2\text{ uF}$; $L_o = 100\text{ uH}$
Product*:	Digital Pressure Calibrator
Model Reference*:	30 Series, 90 Series
Related IECEx Certificates:	-
Comment:	The 30 Series Digital Pressure Calibrators are portable, battery powered instruments designed to measure pressure in hazardous areas. Further the instruments are able to measure loop current signals by means of two jacks placed on the front panel. The apparatus comprises electronics circuits arranged on two printed circuit boards, an LCD module and one or two pressure sensor assemblies, all housed in an aluminium alloy enclosure. The battery which must be of type listed below is housed in a separate compartment.
Attachment:	



(1) **Supplement No. 1 to
EC-Type Examination Certificate**

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

(3) EC-Type Examination Certificate Number:

FTZÚ 06 ATEX 0010X

(4) Equipment or protective system: **30 Series Digital Pressure Calibrator**

(5) Manufacturer: **Crystal Engineering Corporation**

(6) Address: **708 Fiero Lane, Suite 9, San Luis Obispo, California, 93401, USA**

(7) This supplement of certificate is valid for:

- modification of certified apparatus
- new model (variant) – **IS 90 Series**
- application of new standards
- prolongation of certificate validity

(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this certificate.

(9) This supplement to type examination certificate is valid only for type examination of design and construction of product sample in accordance with Annex 3 Paragraph 6) of Directive No. 94/9/EC. The Directive contains another requirements, which manufacturer shall fulfil before products are place on market or introduce in service.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:

EN 60079-0 : 2006; EN 60079-11 : 2007

(11) Marking of equipment shall contain symbols:

 **II 2G Ex ia IIC T4**


(12) This type examination certificate is valid till: **13. 09. 2015**

Responsible person:

Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 13.09.2010



Number of pages: 3
Page: 1/3

This supplement to certificate is granted subject to the general conditions of the Physical Technical Testing Institute.
This supplement to certificate may only be reproduced in its entirety and without any change, schedule included.



Physical Technical Testing Institute
Ostrava-Radvanice

(13) **Schedule**

(14) **Supplement No. 1 to
EC-Type Examination Certificate N° FTZÚ 06 ATEX 0010X**

(15) Description of Equipment or Protective System:

Variation one:

1. To permit minor changes to the electronic, construction and label design.
2. To permit an alternative apparatus designation: IS90 Series Digital Pressure Calibrator.
3. The certified apparatus is manufactured according to the verified documentation shown in the basic certificate and in this Supplement and complies with requirements of upgraded standards listed in (10).
4. The validity of the certificate is prolonged till 13.09.2015.

New input/output parameters, front jacks:

$U_i = 30 \text{ V}$; $I_i = 100 \text{ mA}$; $P_i = 0.75 \text{ W}$; $C_i = 0$; $L_i = 0$

$U_o = 9.9 \text{ V}$; $I_o = 2.62 \text{ mA}$; $P_o = 6.5 \text{ mW}$; $C_o = 3.2 \text{ }\mu\text{F}$; $L_o = 100 \text{ }\mu\text{H}$

Ambient temperature: $T_a = 0^\circ\text{C}$ to $+50^\circ\text{C}$

(16) Report No.: 06/0010/1


(17) Special conditions for safe use: see the basic certificate

(18) Essential Health and Safety Requirements:

Covered by standards mentioned in (10).

Responsible person:

Date of issue: 13.09.2010


Dipl. Ing. Sindler Jaroslav
Head of certification body



Page: 2/3

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Physical Technical Testing Institute
Ostrava-Radvanice

(13)

Schedule

(14)

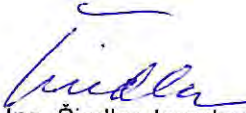
**Supplement No. 1 to
EC-Type Examination Certificate N° FTZÚ 06 ATEX 0010X**

(19)

LIST OF DOCUMENTATION

<i>Documentation:</i>	<i>Date:</i>
• 4435 30 Series Operation Manual, Rev B (11 pages)	22.9.2010
• 4466 TRANSCAT Model 92 Instructions, Rev B (5 pages)	09/2010
• Drawings No.: 4437-ASY, Rev A	7.7.2010
30 SERIES-ASY, Rev A	7.7.2010
1655-ASY, Rev A	7.7.2010
4313-PCA, Rev A	7.7.2010
4313-BOM, Rev A	7.7.2010
4312-SCH, Rev A	7.7.2010
4364-PCA, Rev B	17.9.2010
4364-BOM, Rev B	7.7.2010
4321-SCH, Rev B	7.7.2010
30 SERIES-BOM, Rev A	7.7.2010
4438, Rev C	10.9.2010
4436, Rev B	2.9.2010
4463-ASY, Rev A	7.9.2010
IS90 SERIES-BOM, Rev A	7.9.2010
4462, Rev B	10.9.2010
2643, Rev D	7.9.2010

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 13.09.2010

Page: 3/3

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EC Declaration of Conformity

Issued in accordance with the ATEX Directive 94/9/EC

Manufacturer: Crystal Engineering Corporation
708 Fiero Lane, Suite 9
San Luis Obispo, CA, 93401
USA

Products: 30 Series Digital Pressure Calibrator

*is in conformity with the provisions of the Directive 94/9/EC for use in
potentially explosive atmospheres*

Marking:  II 2G Ex ia IIC T4 Gb

Standards: EN 60079-0:2006
EN 60079-11:2007

EC-Type Examination Certificate: FTZU 06 ATEX 0010X
FTZU, Notified Body 1026
Pikartska 7, 716 07 Ostrava Radvanice
Czech Republic

EC Directives: 94/9/EC ATEX Directive
2004/108/EC EMC Directive
97/23/EC PED Directive

Name: David K. Porter, P.E.
Title: Director of Engineering
Date: 23 Feb 2012

EC Declaration of Conformity



I/We

Crystal Engineering Corporation

of

708 Fiero Lane, Suite 9
San Luis Obispo, CA, 93401
USA

declare that

**Pressure Calibrator
30 Series Digital Pressure Calibrator**

In accordance with the following directives

2004/108/EC

The Electromagnetic Compatibility Directive per:

EN 55011:2007

EN 61326:2006

have been designed and manufactured to the following specifications

EN 55011:2007	Radiated Emissions	Class B	Pass
EN 61000-4-2:2001	Electrostatic Discharge	Criteria A	Pass
EN 61000-4-3:2006	RF Radiated Immunity		Pass

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all essential requirements of the Directives

David K. Porter, P.E.

(NAME OF AUTHORIZED PERSON)

Director of Engineering

(TITLE OF AUTHORIZED PERSON)


(SIGNATURE OF THE AUTHORIZED PERSON)

24 January 2012

(DATE OF ISSUE)