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 SIR 07.0078 issue No.:4

Status: **Current**

Date of Issue: **2014-11-27** Page 1 of 4

Certificate history:
Issue No. 4 (2014-11-27)
Issue No. 3 (2011-9-14)
Issue No. 2 (2010-5-7)
Issue No. 1 (2008-5-1)
Issue No. 0 (2008-1-4)

Applicant: **Elite Transducers Limited**
3 Zephyr House
Calleva Park
Aldermaston
Berkshire RG7 8JN
United Kingdom

Electrical Apparatus: **Range of Load Cells**
Optional accessory:

Type of Protection: **Intrinsically Safe and Dust**

Marking: Ex ia IIC T6
Ex tb IIIC Db T85°C
(-20°C ≤ Ta ≤ +60°C)

Approved for issue on behalf of the IECEx Certification Body: C Ellaby

Position: Deputy Certification Manager

Signature: (for printed version)

Date: 2014-11-27

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:
SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

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Manufacturer: **Elite Transducers Limited**
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Berkshire RG7 8JN
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Additional 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 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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:
GB/SIR/ExTR07.0126/00 GB/SIR/ExTR08.0049/00 GB/SIR/ExTR10.0096/00
GB/SIR/ExTR11.0229/00 GB/SIR/ExTR14.0279/00

Quality Assessment Report:

GB/SIR/QAR08.0001/00

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The SELB, DELB, DELP, CLC, SLL, LPMW, LPCC, SM60 and KFP Load Cells are designed to be fitted into equipment such as weighing machines to measure the load applied to them. The load cells comprise a stainless steel block, fitted within recesses in this block are either one or two strain gauge arrangements, optional nickel resistors, terminal boards and amplifier PCBs. The electrical devices are encapsulated and sealed within the block by a welded stainless steel cover. An integral cable with a maximum length of 30 m permits connection to the load cell. An alternative version permits the amplifier board to be fully encapsulated in a steel enclosure that may be fitted external to the load cell.

CONDITIONS OF CERTIFICATION: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 - this Issue introduced the following changes:	
1	An alternative version of the DELP-IGP-AMP Load Cell was recognised, this device has a plug connector in place of the integral cable and is designated the DELP-IGP-AMP-C Load Cell.
2.	The use of an alternative cable was permitted, this cable may be used with all versions of the Load Cells.
Issue 2 - this Issue introduced the following changes:	
1.	Specification of the maximum input current applicable to all products.
2.	Alternative versions of the load cells (included in description)
Issue 3 – this Issue introduced the following changes:	
1	The introduction of the new versions of the Load Cells; NOTE – a new, definitive list of products was included in the Description of Equipment, this not only includes the original Load Cells described in certificate Issue 0, but also covers versions introduced by subsequent Issues.
2	Certain types of Load Cells (as defined in the list of products shown in the Description of Equipment) were permitted to have a six-core, integral cable where two cores are doubled up; when six core cables are used, the cable length is reduced to a maximum of 15 m.
3.	The integral cable of some types of Load Cells (as defined in the list of products shown in the Description of Equipment) may be replaced by a fixed connector and a mating half complete either with cable or without cable enabling the customer to fit wiring suitable for the system requirements.The defined thickness of the printed circuit board was changed to '0.7 mm minimum' in place of the restrictive statement of '0.7 mm'.
4.	The existing high voltage electric strength test was recognised as a condition of certification and now includes the use of an alternative voltage of 700 Vdc applied for a period of 1 min.
5.	The use of alternatively sized enclosures for use with the 2 Wire Amplifier Box was allowed.
6.	The use of alternative, certification labels was recognised, these are either fitted to the 'SM' and 'KFP' products distributed by Soemer or the products distributed by Pat-Kruger.
7.	The list of certified drawings was rationalised to specify those currently in use.
Issue 4 – this Issue introduced the following changes:	
1.	The use of generically specified RTV Silicone Gel Compounds was recognised.
2.	Following appropriate re-assessment, any previously listed standards, IEC 60079-0: 2004 Ed 4, IEC 60079-11: 2006 Ed 5, IEC 60079-26: 2004 Ed 1, IEC 61241-0: 2004 Ed 1 and IEC 61241-1:2004 Ed 1 were replaced by, IEC 60079-0:2011 Ed 6, IEC 60079-11:2011 Ed 6, IEC 60079-26:2006 Ed 2 and IEC 60079-31:2013 Ed 2, the markings being updated accordingly to recognise the requirements of the latest standards.
3.	The recognition of minor drawing modifications which are mainly administrative but also include the use of alternative distributor certification labels, material and wiring changes.
4.	The load cells detailed in the product description were clarified.

Annex: IECEx SIR 07.0078_Issue4_Annexe.pdf

Annexe to: IECEx SIR 07.0078 Issue 4

Applicant: Elite Transducers Limited

Apparatus: Range of Load Cells

The following versions of the load cell are permitted, each model may vary in size and shape within defined limits to cover a variety load capacities, additional, mechanical attachments may be added to create loading assemblies:

Model (Description)	Type (Description)	Issue	Amplifier	Connector	4/6 wire
SELB (Single Ended Load Beam)	RO (Rationalised Output)	0	No	Yes	4
SELB (Single Ended Load Beam)	RI (Rationalised Input)	0	No	Yes	4
DELB (Double Ended Load Beam)	RO (Rationalised Output)	0	No	Yes	4 & 6
DELB (Double Ended Load Beam)	RI (Rationalised Input)	0	No	Yes	4
DELP (Double Ended Load Pin)	EGW (Externally Gauged, Welded)	0	No	Yes	4
DELP (Double Ended Load Pin)	IGP (Internally Gauged, Potted)	0	No	Yes	4
DELP (Double Ended Load Pin)	IGP (Internally Gauged, Potted)	0	Yes	Yes	4
CLC (Compression Load Cell)	RO (Rationalised Output)	0	No	Yes	4
CLC (Compression Load Cell)	RO (Rationalised Output)	0	Yes	Yes	4
DELP (Double Ended Load Pin)	IGP (Internally Gauged, Potted)	1	Yes	Yes	6
DELP (Double Ended Load Pin)	DS1950-TB (Procon Triple Bridge)	2	No	No	4
DELP (Double Ended Load Pin)	DB (Double Bridge)	2	No	No	4
DELP (Double Ended Load Pin)	DB (Double Bridge)	2	Yes	Yes	4
SLL (Stainless Load Link)	SLL (Tension Link)	2	No	Yes	4 or 6
SLL (Stainless Load Link)	SLL (Tension Link)	2	Yes	Yes	4
LPMW (Low Profile Multi Webb)	SB (Single Bridge)	3	No	Yes	4 or 6
LPMW (Low Profile Multi Webb)	DB (Double Bridge)	3	No	Yes	4 or 6
LPCC (Low Profile Compression Cell)	SB (Single Bridge)	3	No	Yes	4 or 6
SM60 (Silo Mounted)	RO (Rationalised Output)	3	No	Yes	4 & 6
SM66 (Silo Mounted)	SB (Single Bridge)	3	No	Yes	4 or 6
KFP (Low Profile Multi Webb)	SB (Single Bridge)	3	No	Yes	4 or 6
KFP (Low Profile Multi Webb)	DB (Double Bridge)	3	No	Yes	4 or 6

NOTE - this list is definitive and not only includes the original Load Cells described in certificate Issue 0, but also covers versions introduced by subsequent Issues as indicated above.

The following safety description is applicable to all versions the Load Cells:

Ui = 28 V Pi = 1.3 W Ii = 300 mA Ci = 0.04 µF Li = 284 µH

Date: 27 November 2014

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