



INSTRUCTION MANUAL

ATEX IECEx Load Cells & Enclosures

07/24/2014

Introduction:

This manual refers to LCM Systems range of ATEX and IECEx certificated load cells and enclosures. This and any reference documents should be read and understood before installing or operating any LCM systems ATEX, IECEx products. All LCM Systems ATEX, IECEx load cells will be accompanied by a general arrangement drawing or datasheet, calibration certificate, declaration of conformity and a copy of LCM systems ATEX, IECEx certificates as a minimum. All LCM Systems ATEX IECEx enclosures will be accompanied with the same documentation as stated above for load cells minus a calibration certificate.

All LCM Systems ATEX, IECEx products are design and manufactured in accordance with Directive 94/9/EC, IEC 60079-0:2011, IEC 60079-1:2007 and IEC 60079-31:2008 EN 60079-0:2012, EN 60079-1:2007 and EN 60079-31:2009.

Product Description

Item: Load Cell or Enclosure – Group II, Category 2, Zone 1 Environment

Model Numbers: Load Pin – 4255, Link Load Cell – 4256, CPA Load Cell – 4257.
Enclosure – 4290

Supplier: LCM Systems Ltd

Unit 15, Newport Business Park
Barry Way
Newport
Isle of Wight
PO30 5GY
UNITED KINGDOM

Service: (REPAIR, SUPPORT)
LCM Systems Ltd
(Address as above)

Tel: +44(0)1983 249264
Fax: +44(0)1983 249266
E-mail: sales@lcm systems.com

Markings:

The Label will be affixed to the Load cell or enclosure as shown in the general arrangement drawing supplied.

The label will be as to drawing LCM4255/9, information on the label is shown as follows:-

Name and Address of supplier: LCM Systems Ltd
Unit 15 Newport Business Park, Newport, Isle of Wight
PO30 5GY, UK

Description of the product: Load Cell

Serial Number (unique No. to individual item)

Hazardous area Markings

ATEX Marking: -

Explosion classification: -

Operating temperature range



II 2GD

Ex d IIC T6 Gb

Ex tb IIIC T85 Db IPXX

-20°C to +55°C

Unit CE marked CE XXXXX

The Following Certification Numbers cover Models: - Load Pin – 4255, Link Load Cell – 4256, CPA Load Cell – 4257.

TRAC14ATEX0023X and IECEx TRC 14.0011X

The Following Certification Numbers cover Models: - Enclosure – 4290.

TRAC14ATEX0047X and IECEx TRC 14.0018X

Installation: All LCM Systems ATEX, IECEx certificated products should be installed as shown on the supplied general arrangement drawing. Load direction will be marked on each load cell and clearly shown on the drawing. All cable entry/exit points are clearly labelled with the thread type and size on the load cell or enclosure and the drawing. All wiring or connector pin details are shown on the calibration certificate and where applicable on the load cell or enclosure drawing. All earthing points must have a cross sectional area at least equal to the cross sectional area of the phase conductor.

LCM Systems do not supply any detailed installation instructions due to the equipment being designed as to customer details or the equipment is for portable usage.

Manufacture: LCM Systems carries out the design and manufacture of ATEX, IECEx load cells and performs full testing and inspection of each item in accordance with IEC 80079-34 QMS system.

Repairs: Only LCM Systems personnel are authorised to carry out a repair or service to their products. All repairs or services will be carried out in the premises of LCM Systems, the unit is not serviceable out of LCM Systems premises.

Assembling and Dismantling of load cells will be carried out by LCM System Ltd Personnel only; Third party attempts will render the certification for the unit invalid. Enclosures can be assembled and dismantled by third party engineers outside of a hazardous area only. All seals and fixings must be fitted correctly in accordance with the general arrangement drawing.

Emergency repairs will involve returning the unit to LCM Systems Ltd premises for servicing and prompt return to the customer, should the item be deemed suitable for return.

Adjustments for Parameter/Calibration to the Unit: For Calibrating the unit, it is recommended that this is carried out by a member of LCM Systems or a fully competent Instrument Engineer.

No Internal adjustments are required or permitted.

Any other Interference will render the unit invalid as a certified product and require it to be returned to LCM Systems for analysis and/or re-adjustment.

WARNING –The load cell or enclosure should **NEVER** be opened when an explosive atmosphere may be present. Any repairs or adjustments must only ever be carried out in a Non-explosive environment.

The user should determine media effects on the exposed transducer materials. Where a corrosive environment is present transducers can often be manufactured from corrosion resistant materials or alternatively, isolation barriers can be employed between the corrosive environment and the transducer. The Ingress protection rating (IP) should never be exceeded see **table A & B** below for details

ALL details shown on the general arrangement drawing and ATEX, IECEx certificate should never be exceeded for any LCM Systems products.

Table A: - Solid particle protection

Level	Object size Protected against	Effective against
0	-	No Protection
1	>50mm	Large items - No protection from deliberate contact with body part
2	>12.5mm	fingers or other object not greater than 80mm in length and 12mm in diameter
3	2.5mm	entry by tools, wires etc., with a diameter of 2.5 mm or more
4	1mm	Solid bodies larger than 1mm (e.g. fine tools etc.)
5	Dust protected	dust that may harm equipment
6	Dust tight	No ingress of dust

Table B: - Liquid ingress protection

Level	Protect against	Details
0	-	No Protection
1	Dripping water	Water equivalent to 1 mm rainfall per minute
2	Dripping water tilted up to 15°	Water equivalent to 3 mm rainfall per minute
3	Spraying water	Water volume: 0.7 litres per minute
4	Splashing water	Water volume: 10 litres per minute
5	Water jets	Water volume: 12.5 litres per minute
6	Powerful water jets	Water volume: 100 litres per minute
7	Immersion 1Mtr	Fully immersed for 30mins
8	Immersion beyond 1Mtr	Depth required to be specified customer