



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEX CML 19.0169X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-01-17

Applicant: **MK Test Systems Limited**
Unit 14B, ATE House
Westpark 26
Chelston
Wellington
Somerset TA21 9AD
United Kingdom

Equipment: **ExLRT Loop Resistance Tester**

Optional accessory:

Type of Protection: **Intrinsic safety**

Marking: Ex ia IIA T3 Ga
Ta = -20°C to +60°C

Approved for issue on behalf of the IECEx
Certification Body:

H M Amos

Position:

Certification Manager

Signature:
(for printed version)

Date:

January 17, 2020

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 www.iecex.com or use of this QR Code.



Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Date of issue: 2020-01-17

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Manufacturer: **MK Test Systems Limited**
Unit 14B, ATE House
Westpark 26
Chelston
Wellington
Somerset TA21 9AD
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Additional
manufacturing
locations:

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with 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/CML/ExTR19.0193/00](#)

Quality Assessment Report:

[GB/CML/QAR19.0036/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The ExLRT Loop Resistance Tester is portable battery powered equipment which is used for measuring the resistance of the electrical bonding systems within aircraft.

See Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Annex for Specific Conditions of Use

Annex:

[IECEX 19.0169X Annex Issue 0.pdf](#)

Annexe to: IECEx CML 19.0169X Issue 0
Applicant: MK Test Systems Ltd.
Apparatus: ExLRT Loop Resistance Tester



Description

The ExLRT Loop Resistance Tester is portable battery powered equipment which is used for measuring the resistance of the electrical bonding systems within aircraft.

The equipment comprises the main control unit which houses the electronic measurement and control circuits in a non-metallic enclosure, a replaceable battery pack (safe area replacement only), loop coupling clamps, and a pair of joint probes. In use, one of the coupling clamps is driven with an AC voltage to induce current into the loop, whilst the other measures the current in the loop allowing the resistance to be measured. The joint probes allow the impedance across a part of the loop to be measured.

The battery pack is detachable and may be charged in the safe area only, either via a charging socket on the equipment itself, or in a separate charger.

The loop coupling clamps and the joint probes are connected to the main control unit via circular multi-pole plugs and sockets.

The equipment contains an optional Bluetooth wireless interface which may be used whilst in the hazardous area. A USB port is provided for connection to external equipment and this may be used in the safe area only.

Intrinsic safety is achieved by limiting energy storage and discharge within the equipment.

Conditions of Manufacture

The following are conditions of manufacture

- i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. The manufacturer shall ensure that any external source of power provided for use with this equipment has a maximum output voltage of 6.3V and which complies with one of the following:
 - Is a SELV or PELV system
 - A safety isolating transformer complying with the requirements of IEC 61558-2-6 or technically equivalent standard
 - Apparatus complying with the IEC60950 series, IEC61010-1, or a technically equivalent standard
 - Fed directly from cells or batteries

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Specific Conditions of Use

- i. The ExLRT shall only be used with the couplers and probes supplied by MK Test Systems Ltd.
- ii. The USB interface shall not be connected to any external equipment whilst in the hazardous area.
- iii. The equipment shall not be connected to any external source of power whilst in the hazardous area.
- iv. The battery pack shall not be disconnected, replaced, or charged in a hazardous area.
- v. The battery pack shall only be replaced with type XLR-2600 supplied by MK Test Systems Ltd. and marked for use with the ExLRT.
- vi. External power shall only be supplied from a power supply provided by MK Test systems Ltd. and marked for use with the ExLRT equipment.

Components covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEX BAS 10.0098U	IEC60079-0 Ed. 6 IEC60079-11 Ed. 6	Technical differences evaluated and found satisfactory. For detail see ExTR