



EMCEE ELECTRONICS INC.

QUALITY POLICY

It is the policy of Emcee Electronics Inc. to establish and maintain internal processes and controls which allow us to provide the highest quality products and services that meet or exceed all applicable requirements and our customer expectations.

Emcee Electronics Inc understands that ALL employees' participation in this policy is necessary to achieve the stated goals.

This policy will be subjected to continual management review to establish that the documented quality management system is being effectively followed and improved upon.



QUALITY POLICY OF THE QC LABORATORY

The quality policy of the QC laboratory is the basis of our laboratory quality management system. It is based on the satisfaction of our clients, and other business partners, while optimizing the wellbeing of staff and the harmonization of standards and procedures.

The quality policy of the laboratory is aligned around the following guidelines:

- ▶ Strengthen the relationship of trust established with our clients by the use of working methods guaranteeing the reliability of the results.
- ▶ Operate the laboratory with the highest levels of benefits by adapting continuously to technological developments and the needs of our clients.
- ▶ Comply at all times with the regulatory requirements and prescriptive measurements by ensuring a continuous improvement of the Quality Management System in full compliance with the ISO 17025 Standard.
- ▶ Guarantee sufficient personnel resources by a qualitative and quantitative recruitment with a follow-up for the maintenance of their skills.
- ▶ Improve the involvement of all the staff in the laboratory.
- ▶ Ensure the impartiality of the laboratory and respect the confidentiality of the data.

To implement this policy, the laboratory has defined a number of objectives:

- ▶ Acquire all the resources for which the laboratory has a need to carry out its activities in accordance with the regulatory requirements.
- ▶ Continue our efforts in the application and monitoring of good professional practices in order to ensure the quality of the results rendered.
- ▶ Continually improve by conducting training of the staff and by giving awareness to the quality service and competence of the staff.
- ▶ Apply the quality management system to the QC laboratory.
- ▶ Give the best service to our customers and business partners.
- ▶ Continue our policy of accreditation.
- ▶ Comply with all regulatory requirements and the ISO 17025 Standard.

This is to certify that the Quality Management System of:

Emcee Electronics, Inc

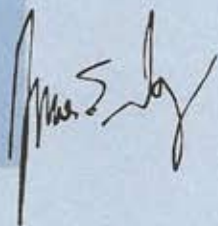
520 Cypress Ave
Venice FL 34285
United States of America

applicable to:

Emcee Electronics designs and manufactures test equipment for fuels, typically diesel and aviation grades.

has been assessed and approved by
National Quality Assurance, U.S.A., against the provisions of:

ISO 9001:2015



For and on behalf of NQA, USA



Certificate Number: 17702
EAC Code: 18
Certified Since: August 29, 2018
Valid Until: August 28, 2024
Reissued: August 29, 2021
Cycle Issued: August 29, 2021



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Emcee Electronics, Inc.
520 Cypress Avenue, Venice, FL 34285

*(Hereinafter called the Organization) and hereby declares that Organization is accredited
in accordance with the recognized International Standard:*

ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the
operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Chemical Testing
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Initial Accreditation Date:

March 20, 2019

Issue Date:

June 27, 2023

Expiration Date:

August 31, 2025

Accreditation No.:

100275

Certificate No.:

L23-502

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

*The validity of this certificate is maintained through ongoing assessments based on a
continuous accreditation cycle. The validity of this certificate should be
confirmed through the PJLA website: www.pjlabs.com*



Certificate of Accreditation: Supplement

Emcee Electronics, Inc.

520 Cypress Avenue, Venice, FL 34285

Contact Name: Allan J. Barberio Phone: 941-485-1515

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Chemical ^F	Conductivity Meters	Conductivity	ASTM D4308 ASTM D2624	0.1 pS/m to 2 000 pS/m
	Microseparometer	Water Separability of Fuel	ASTM D3948 ASTM D7224 ASTM D7261 ASTM D4860 Calibration Boxes and Fixtures in a Fuel Lab	50 MSEP to 100 MSEP

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer ^F would mean that the laboratory performs this testing at its fixed location.



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Emcee Electronics, Inc.
520 Cypress Avenue, Venice, FL 34285

*(Hereinafter called the Organization) and hereby declares that Organization is accredited
in accordance with the recognized International Standard:*

ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the
operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Chemical Calibration
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Initial Accreditation Date:

March 20, 2019

Issue Date:

June 27, 2023

Expiration Date:

August 31, 2025

Accreditation No.:

100275

Certificate No.:

L23-500

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

*The validity of this certificate is maintained through ongoing assessments based on a
continuous accreditation cycle. The validity of this certificate should be
confirmed through the PJLA website: www.pjllabs.com*



Certificate of Accreditation: Supplement

Emcee Electronics, Inc.

520 Cypress Avenue, Venice, FL 34285

Contact Name: Allan J. Barberio Phone: 941-485-1515

Accreditation is granted to the facility to perform the following calibrations:

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Conductivity Tester ^F	0.1 pS/m to 2 000 pS/m	1 % of Reading	ASTM D4308 Emcee 1152 Emcee 1153 Emcee 1154 Conductivity References Fluke 1555 Fluke 51
Separometer (Water Separability of Fuel) ^F	50 MSEP to 100 MSEP	1 % of Reading	ASTM D3948, D7224, D7261, and D4860 Section 7 Appendix X1 Turbidity Box Hand gages

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer ^F would mean that the laboratory performs this calibration at its fixed location.



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 UL 19.0003X

Issue No: 0

Certificate history:

Issue No. 0 (2019-01-30)

Status: Current

Page 1 of 3

Date of Issue: 2019-01-30

Applicant: Emcee Electronics Inc.
520 Cypress Ave.
Venice, FL 34285
United States of America

Equipment: Digital Conductivity Meter, Model 1152, Part Nos. 152-00-0010, 152-00-0011, 152-00-0012, 152-00-0013, 152-00-0014

Optional accessory:

Type of Protection: Intrinsic Safety "ia"

Marking:

Ex ia IIA T4 Ga

-20°C ≤ Ta ≤ +40°C

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:

(for printed version)

Date:

2019-01-30

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:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America





IECEx Certificate of Conformity

Certificate No: IECEx UL 19.0003X

Date of Issue: 2019-01-30

Manufacturer: Emcee Electronics Inc.
520 Cypress Ave.
Venice, FL 34285
United States of America

Issue No: 0

Page 2 of 3

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 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 : 2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"

*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:

US/UL/ExTR19.0004/00

Quality Assessment Report:

US/UL/QAR19.0001/00



IECEx Certificate of Conformity

Certificate No: IECEx UL 19.0003X

Issue No: 0

Date of Issue: 2019-01-30

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Model 1152 series is a portable, battery-operated electronic conductivity meter with a removable probe, Part No. 152-09-0000. It may be provided with an optional 50 ft. extension cable for connection to the probe.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Aluminum Enclosure – Check polyurethane coating every 2 months. Scratched or chipped polyurethane coating may impair suitability for intrinsic safety.

Annex:

Annex to IECEx UL 19.0003X issue 0.pdf



IECEx Certificate of Conformity

Certificate No.: IECEx UL 19.0003X

Issue No.: 0

Page 1 of 1

EQUIPMENT

Model/Part No.	Multiplier	Range
152-00-0010	X 1	0 – 2,000 pS/m
152-00-0011	X 10	0 – 20,000 pS/m
152-00-0012	X 100	0 – 200,000 pS/m
152-00-0013	X 1,000	0 – 2,000,000 pS/m
152-00-0014	X 10,000	0 – 20,000,000 pS/m

PARAMETERS RELATING TO THE SAFETY

Three Energizer No. A544 Alkaline Batteries (6V Each)

MARKING

Marking has to be readable and indelible; it has to include the following indications:



NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



Aug 11, 2017

EMCEE ELECTRONICS INC

520 CYPRESS AVE
VENICE, FL, 34285-4603
US

Our Reference:	File E78352, Vol. 1	Project Number	4787946408
Your Reference:	N/A		
Project Scope:	E78352 (UIOR) - Meter 1152 update to SMT components and combine AD converter board and display board.		

Dear MR. GARY SOBIE:

Congratulations! UL's investigation of your product(s) has been completed under the above Reference Number and the product was determined to comply with the applicable requirements. This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at authorized factories under UL's Follow-Up Service Program. To provide your manufacturer(s) with the intended authorization to use the UL Mark, you must send a copy of this notice to each manufacturing location currently authorized under File E78352, Vol. 1.

Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent in the near future. Until then, this letter authorizes application of the UL Mark for 90 days from the date indicated above.

Additional requirements related to your responsibilities as the Applicant can be found in the document "Applicant responsibilities related to Early Authorizations" that can be found at the following web-site:
<http://www.ul.com/EAResponsibilities>

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

We are excited you are now able to apply the UL Mark to your products and appreciate your business. Feel free to contact me or any of our Customer Service representatives if you have any questions.

Very truly yours,

Vincent Wan
+1 416 288-2504
Project Engineer
Vincent.wan@ul.com

Reviewed by:

Bruce A. Mahrenholz
847-664-3009
CPO Director
Bruce.A.Mahrenholz@ul.com

NBK6F1D-2A6053

[1] **PRODUCTION QUALITY ASSURANCE NOTIFICATION**



[2] **Equipment or Protective Systems or Components intended for use
in Potentially Explosive Atmospheres
Directive 2014/34/EU**

[3] Notification Number: **DEMKO 19 ATEX Q6747 Rev. 1**

[4] Equipment or Protective System or Components as listed: **Design and manufacture of test equipment
for fuels, typically diesel and aviation grades
Intrinsic safety "i"**

[5] Applicant/Manufacturer/Authorized Representative: **Emcee Electronics
520 Cypress Avenue
Venice, FL 34285 USA**

[6] Manufacturing locations: **Same as Applicant**

[7] UL International Demko A/S notified body number 0539 for Annex IV in accordance with Article 21 of the Council Directive 2014/34/EU of 26 February 2014, notifies to the applicant that the manufacturer has a production quality system which complies to Annex IV of the Directive.

[8] This notification is based on audit report No.

4790188053

This notification can be withdrawn if the manufacturer no longer satisfies the requirements of Annex IV. The Manufacturer is obliged to inform UL International Demko A/S of any changes in their ISO 9001 registration or other aspects upon which this notification has been given.

Results of periodic re-assessment of the quality system are a part of this notification.

[9] This notification is valid until:

2025-01-10

and can be withdrawn if the manufacturer does not satisfy the production quality assurance surveillance.

[10] According to Article 16[3] of the Directive 2014/34/EU the CE marking shall be followed by the identification number 0539 identifying the notified body involved in the production control stage.

Certification Manager
Jan-Erik Storgaard

This notification may only be reproduced in its entirety and without any change.

Date of re-issue: 2022-01-05

Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com





[1]

UNITED KINGDOM CONFORMITY ASSESSMENT
UK QUALITY ASSURANCE NOTIFICATION

[2]

**Equipment or Protective Systems or Components Intended for use in
Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Part 2**

[3]

Notification No.: **UL21UKQAN2264 Rev. 0**

[4]

The list of products (Equipment or Protective Systems or Components) covered by this Notification is listed in the schedule to this Notification.

[5]

Applicant: Emcee Electronics, 520 Cypress Avenue, Venice, Florida, 34285, USA

[6]

Manufacturing location: Emcee Electronics, 520 Cypress Avenue, Venice, Florida, 34285, USA

[7]

UL International (UK) Ltd, Approved Body number 0843 in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), notifies to the Applicant that the Manufacturer has a quality system which complies with Part 2 of the Regulations.

[8]

This Notification is based upon confidential audit report no. US/UL/QAR19.0001/02, dated 2022-01-06
This Notification may be withdrawn if the Manufacturer no longer satisfies the requirements of Part 2 of the Regulations.

Results of periodical surveillance or re-assessment of the quality system are a part of this Notification.

The Manufacturer is obliged to notify UL International (UK) Ltd. of any changes to their quality system, ISO 9001 registration (NQA, 17702) or other aspects upon which this Notification is granted.

[9]

This Notification is valid until 2025-01-10 and can be withdrawn if the Manufacturer does not satisfy the periodical quality assurance surveillance assessment or re-assessment..

[10]

According to Regulation 41, the UKCA mark shall be followed by the identification Number 0843 identifying the Approved Body involved in the production control stage.
This Notification may only be reproduced in its entirety and without change.

Certification Manager

David Lloyd

Date of issue: 2022-01-06

Approved Body

UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100



SCHEDULE TO UK QUALITY ASSURANCE NOTIFICATION

NOTIFICATION NUMBER UL21UKQAN2264 Rev. 0

List of Products Covered by this Notification

The production associated with the items listed on this schedule has been assessed by UL International (UK) Ltd and found to be compliant with Part 2 of the Regulations. Only items listed on this schedule are permitted to carry the UL International (UK) Ltd number 0843 adjacent to the manufacturer's UKCA mark.

Description of Ex equipment Ex marking

Digital Conductivity Meter
Ex ia IIA T4 Ga

EU-TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

EU-Type Examination Certificate Number: **UL 21 ATEX 2510X Rev. 0**

Product: **Digital Conductivity Meter, Model 1153A**

Manufacturer: **Emcee Electronics Inc.**

Address: **520 Cypress Ave., Venice, FL 34285 USA**

This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **US/UL/ExTR21.0009/00.**

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-11:2012

If the sign "X" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

The marking of the product shall include the following:

II 1 G Ex ia IIA T4 Ga

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-03-14

Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com



[13]

[14]

Schedule

EU-TYPE EXAMINATION CERTIFICATE No.

UL 21 ATEX 2510X Rev. 0

[15]

Description of Product

The Model 1153A is a portable, battery-operated electronic conductivity meter that measures the conductivity of liquid fuels. The device has varying sensing ranges of conductivity that vary based on the Probe Assembly accessory that is installed. Refer to the table below that outlines the sensing range and the correlating Probe Assembly part no.

Probe Assembly Part No.	Sensing Range
153-13-0000	0 - 2,000 pS/m
153-14-0000	0 - 20,000 pS/m
153-15-0000	0 - 2,000 pS/cm
153-16-0000	0 - 20,000 pS/cm
153-17-0000	0 - 100,000 pS/cm

Temperature range

The ambient temperature range is -25 °C to +40 °C.

Electrical data

Three Panasonic Type CR2016 batteries.

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17]

Specific conditions of use:

The Model 1153A enclosure contains aluminum which is painted. Care must be taken to avoid hazard due to impact or friction. If the paint on the equipment is damaged, then the device shall not be used.

[18]

Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

The trademark shown below will be used as the company identifier on the marking label.



or

EMCEE ELECTRONICS, INC.

or



The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.



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 UL 21.0009X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 1	Issue 0 (2022-03-14)
Date of Issue:	2023-08-28		
Applicant:	Emcee Electronics Inc. 520 Cypress Ave. Venice, FL 34285 United States of America		
Equipment:	Digital Conductivity Meter, Model 1153A.		
Optional accessory:	153-13-0000, 153-14-0000, 153-15-0000, 153-16-0000 and 153-17-0000.		
Type of Protection:	Intrinsic Safety "ia"		
Marking:	Ex ia IIA T4 Ga -25°C to +40°C		

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:
(for printed version)

2023-08-28

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:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096



Solutions



IECEX Certificate of Conformity

Certificate No.: **IECEX UL 21.0009X**

Page 2 of 4

Date of issue: 2023-08-28

Issue No: 1

Manufacturer: **Emcee Electronics Inc.**
520 Cypress Ave.
Venice, FL 34285
United States of America

Manufacturing
locations: **Emcee Electronics Inc.**
520 Cypress Ave.
Venice, FL 34285
United States of America

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 Reports:

US/UL/ExTR21.0009/00

US/UL/ExTR21.0009/01

Quality Assessment Report:

US/UL/QAR19.0001/03



IECEX Certificate of Conformity

Certificate No.: **IECEX UL 21.0009X**

Page 3 of 4

Date of issue: 2023-08-28

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Model 1153A is a portable, battery-operated electronic conductivity meter that measures the conductivity of liquid fuels. The device is to be used with an interchangeable Probe Assembly with different sensing ranges of conductivity.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The Model 1153A enclosure contains aluminum which is painted. Care must be taken to avoid hazard due to impact or friction. If the paint on the equipment is damaged, then the device shall not be used.



IECEX Certificate of Conformity

Annex to Certificate No.:

IECEX UL 21.0009X

Issue No.: 1

Page 1 of 3

TYPE DESIGNATION

Refer to the table below for the probe assembly part numbers and their corresponding sensing ranges for use with the Model 1153A.

Probe Assembly part no.	Sensing Range
153-13-0000	0 – 2,000 pS/m
153-14-0000	0 – 20,000 pS/m
153-15-0000	0 – 2,000 pS/cm
153-16-0000	0 – 20,000 pS/cm
153-17-0000	0 – 100,000 pS/cm

PARAMETERS RELATING TO THE SAFETY

Intrinsically safe when powered by three Panasonic CR2016 battery cells connected in series.

MARKING

Marking has to be readable and indelible; it has to include the following indications:

Digital Conductivity Meter Nameplate:

EMCEE ELECTRONICS, INC.
520 CYPRESS AVE., VENICE, FL 34285
TYPE: 1153A YEAR OF CONSTRUCTION XXXX

CLASSIFIED
UL **US**
89X8

Ex

II 1 G Ex ia IIA T4 Ga
Ex ia IIA T4 Ga
UL 21 ATEX 2510X
IECEX UL 21.0009X
UL21UKEX2274X

UK
CA
0843

CE
0539

INTRINSICALLY SAFE CONDUCTIVITY METER WHEN USED WITH PROBE ASSEMBLIES
153-13-0000, 153-14-0000, 153-15-0000, 153-16-0000 OR 153-17-0000
FOR USE IN HAZARDOUS LOCATIONS CLASS I, DIVISION 1, GROUP D;
CLASS I, ZONE 0 AEx ia IIA T4 Ga; Ex ia IIA T4 Ga X
AMBIENT TEMPERATURE RANGE: -25°C TO +40°C

WARNING: BEFORE USING, CHANGING BATTERIES OR SERVICING THIS
DEVICE READ THE OPERATIONAL MANUAL
DRAWING 3350B153 OR THE INSERT DRAWING 3348C153

AVERTISSEMENT : AVANT D'UTILISER, DE CHANGER DE BATTERIE OU
D'ENTREtenir CETTE DISPOSITIF LIRE LE MANUEL OPÉRATIONNEL
DESSIN 3350B153 OU LE DESSIN INSERT 3348C153

BATTERY REQUIREMENTS: 3 - BATTERIES PANASONIC TYPE CR2016
EXIGENCES DE LA BATTERIE: 3 - BATTERIES PANASONIC TYPE CR2016

SERIAL NUMBER



IECEX Certificate of Conformity

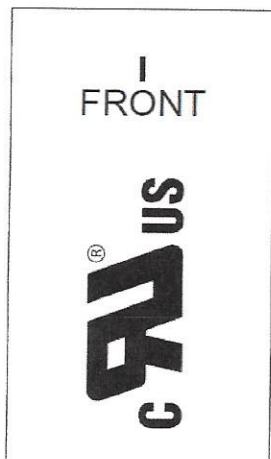
Annex to Certificate No.:

IECEX UL 21.0009X

Issue No.: 1

Page 2 of 3

Probe Part #153-13-0000



2,000 PS/M P/N 153-13-0000
EMCEE ELECTRONICS, INC.

Probe Part #153-14-0000



20,000 PS/M P/N 153-14-0000
EMCEE ELECTRONICS, INC.

Probe Part #153-15-0000



2,000 PS/CM P/N 153-15-0000
EMCEE ELECTRONICS, INC.



IECEX Certificate of Conformity

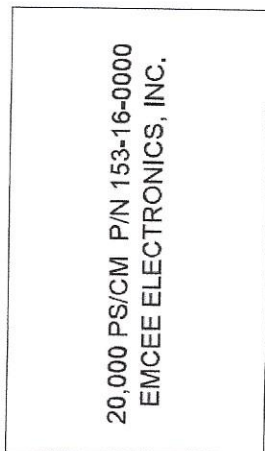
Annex to Certificate No.:

IECEX UL 21.0009X

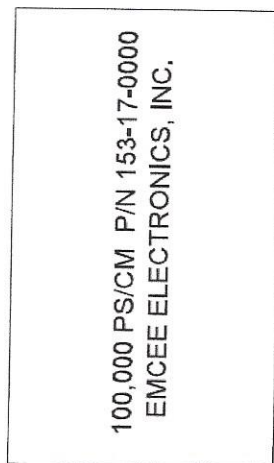
Issue No.: 1

Page 3 of 3

Probe Part #153-16-0000



Probe Part #153-17-0000



EU-TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- [3] EU-Type Examination Certificate Number: **UL 21 ATEX 2510X Rev. 1**
- [4] Product: **Digital Conductivity Meter, Model 1153A**
- [5] Manufacturer: **Emcee Electronics Inc.**
- [6] Address: **520 Cypress Ave., Venice, FL 34285 USA**
- [7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
- The examination and test results are recorded in confidential report no. **US/UL/ExTR21.0009/01.**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN IEC 60079-0:2018 EN 60079-11:2012**
- Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.
- [11] This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.
- [12] The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

 **II 1 G Ex ia IIA T4 Ga**

Certification Manager
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-03-14

Re-issued: 2023-08-29

Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

[13]

[14]

Schedule
EU-TYPE EXAMINATION CERTIFICATE No.
UL 21 ATEX 2510X Rev. 1

[15]

Description of Product

The Model 1153A is a portable, battery-operated electronic conductivity meter that measures the conductivity of liquid fuels. The device has varying sensing ranges of conductivity that vary based on the Probe Assembly accessory that is installed. Refer to the table below that outlines the sensing range and the correlating Probe Assembly part no.

Probe Assembly Part No.	Sensing Range
153-13-0000	0 - 2,000 pS/m
153-14-0000	0 - 20,000 pS/m
153-15-0000	0 - 2,000 pS/cm
153-16-0000	0 - 20,000 pS/cm
153-17-0000	0 - 100,000 pS/cm

Temperature range

The ambient temperature range is -25°C to +40°C.

Electrical data

Three Panasonic Type CR2016 batteries.

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17]

Specific conditions of use:

The Model 1153A enclosure contains aluminum which is painted. Care must be taken to avoid hazard due to impact or friction. If the paint on the equipment is damaged, then the device shall not be used.

[18]

Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

The trademark shown below will be used as the company identifier on the marking label.



or

EMCEE ELECTRONICS, INC.

or



The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



2023-08-30

Gary Sobie
EMCEE ELECTRONICS INC
520 CYPRESS AVE
VENICE, FL, 34285-4603, US

Your Reference:

Our Reference: File E134985, Volume 1 Sec 3

Order: 14514932

Project: 4790583606

Project Scope: FL - Emcee Electronics - 4790583606- E134985 - OERX - alternate component R208 for model 1153A

Dear Gary Sobie:

UL has completed the investigation under the above project and confirmed compliance of your product(s) with UL requirements. We appreciate that you have a choice of certification providers and thank you for choosing UL.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at the factory location(s) identified on the Authorization Page of UL File E134985, Volume 1. You are required to send a copy of this letter to all manufacturing locations authorized under UL File E134985, Volume 1.

The Follow-Up Services Procedure covering your product(s) will typically be provided by UL within 10 business days. Any information and documentation provided to you involving the UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Products that bear the UL Mark must be identical to those submitted to UL for evaluation and certification and must comply with the Follow-Up Services Procedure covering your product(s). Additional requirements related to the responsibilities of the Applicant and Manufacturer can be found under **Additional Resources** at <https://www.ul.com/fus>.

A UL certification is a valuable marketing tool meaning your product or company has successfully met stringent requirements. We encourage you to use your UL Mark and certification in your marketing activities. You can find information on how to accurately promote your UL certification at <https://www.ul.com/marketing>.

If you have any questions, please contact me or any of our customer service representatives. And, congratulations again on your achievement!

Sincerely,

Brian Lee
Engineer Project Associate
UL LLC
Brian.Lee@ul.com

Deborah Jennings-Conner
VP Regulatory Services
UL LLC
Deborah.Jennings-Conner@ul.com

d5cea39cb6f14e7889a08fdbb04b0aab



[1]

UNITED KINGDOM CONFORMITY ASSESSMENT
UK-TYPE EXAMINATION CERTIFICATE

[2]

**Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1**

[3]

UK-Type Examination Certificate No.: **UL21UKEX2274X Rev. 1**

[4]

Product: **Digital Conductivity Meter, Model 1153A**

[5]

Manufacturer: **Emcee Electronics Inc.**

[6]

Address: **520 Cypress Ave., Venice, FL 34285 USA**

[7]

This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.
The examination and test results are recorded in the confidential report **US/UL/ExTR21.0009/01**.

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-11:2012

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10]

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the Schedule to this certificate.

[11]

This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12]

The marking of the product shall include the following:

 **II 1 G Ex ia IIA T4 Ga**

Certification Officer
Andrew Moffat

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UKEx Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-03-25

Re-issued: 2023-09-22

Approved Body

UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100

[13]

[14]

Schedule
UK-TYPE EXAMINATION CERTIFICATE No.
UL21UKEX2274X Rev. 1

[15]

Description of Product

The Model 1153A is a portable, battery-operated electronic conductivity meter that measures the conductivity of liquid fuels. The device has varying sensing ranges of conductivity that vary based on the Probe Assembly accessory that is installed. Refer to the table below that outlines the sensing range and the correlating Probe Assembly part no.

Probe Assembly Part No.	Sensing Range
153-13-0000	0 - 2,000 pS/m
153-14-0000	0 - 20,000 pS/m
153-15-0000	0 - 2,000 pS/cm
153-16-0000	0 - 20,000 pS/cm
153-17-0000	0 - 100,000 pS/cm

Temperature range

The ambient temperature range is -25°C to +40°C.

Electrical data

Three Panasonic Type CR2016 batteries.

[16]

Test Report No. (associated with this certificate issue)

The test report no. is provided under item no. [8] on page 1 of this UK-Type Examination Certificate.

[17]

Specific conditions of use:

The Model 1153A enclosure contains aluminum which is painted. Care must be taken to avoid hazard due to impact or friction. If the paint on the equipment is damaged, then the device shall not be used.

[18]

Conditions of certification:

None

[19]

Essential Health and Safety Requirements (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

Additional information

The trademark shown below will be used as the company identifier on the marking label.



or

EMCEE ELECTRONICS, INC.

or



The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

[13]

[14]

Schedule

UK-TYPE EXAMINATION CERTIFICATE No.

UL21UKEX2274X Rev. 1

[20]

Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Compliance Label	3346B153	B	2022-03-01
Model 1153A Warnings and Safety	3348C153	C	2022-03-01
Model 1153A Operational Manual	3350B153	-	2022-03-01
Bill of Materials, Digital Conductivity Meter – Model 1153A	3356D153	D	2023-08-16
Bill of Materials for Overall Assembly			
Digital Conductivity Meter, 0 - 2000 ps/m (Part #153-00-0021)	3357B153	B	2021-09-16
Digital Conductivity Meter, 0 - 20,000 ps/m (Part # 153-00-0022)	3358B153	-	2021-09-17
Digital Conductivity Meter, 0 - 2,000 ps/cm (Part #153-00-0023)	3359B153	-	2021-09-17
Digital Conductivity Meter, 0 - 20,000 ps/cm (Part #153-00-0024)	3360B153	-	2021-09-17
Digital Conductivity Meter, 0 - 100,000 ps/cm (Part #153-00-0025)	3361B153	-	2021-09-17
Bill of Materials (BoM) for 1153 Pre-Amp Board (#4495) used in Probe Assembly			
Pre-Amp Board, 0 – 2,000 ps/m, w/ Temp (Part #153-13-0000)	3362B153	-	2021-09-17
Pre-Amp Board, 0 – 20,000 ps/m, w/ Temp (Part #153-14-0000)	3363B153	-	2021-09-17
Pre-Amp Board, 0 – 2,000 ps/cm, w/ Temp (Part #153-15-0000)	3364B153	-	2021-09-17
Pre-Amp Board, 0 – 2,000 ps/cm, w/ Temp (Part #153-16-0000)	3365B153	-	2021-09-17
Pre-Amp Board, 0 – 100,000 ps/cm, w/ Temp (Part # 153-17-0000)	3366B153	-	2021-09-17
Probe Labels			
Label for part #153-13-0000 0 – 2,000 ps/m	3351A153	A	2021-05-28
Label for part #153-14-0000 0 – 20,000 ps/m	3352A153	A	2021-05-28
Label for part #153-15-0000 0 – 2,000 ps/cm	3353A153	A	2021-05-28
Label for part #153-16-0000 0 – 20,000 ps/cm	3354A153	A	2021-05-28
Label for part #153-17-0000 0 – 100,000 ps/cm	3355A153	A	2021-05-28
Electrical Drawings			
1153 Power Board Schematic	2993L153	L	2022-02-02
1153 Display Board Schematic	2992H153	H	2020-07-21

[13]

[14]

Schedule

UK-TYPE EXAMINATION CERTIFICATE No.

UL21UKEX2274X Rev. 1

Title:	Drawing No.:	Rev. Level:	Date:
1153 Pre-Amp Board Schematic	2994F153	F	2021-05-04
Fabrication drawing - PC Board #4494 (Display Board)	3343A153	H	-
Fabrication drawing – PC Board #4495 (Pre-Amp Board)	3344A153	D	-
Fabrication drawing – PC Board #4496 (Power Board)	3345B153	N	-
Construction, Mechanical drawings			
Model 1153A Assembly	3349A153	A	2021-03-17
Outer Electrode (Part # 001-90-7342)	2785F153	F	2020-07-08
Insulator (Part # 001-90-7946)	2786J153	J	2020-07-08
Board Support (Part # 001-90-7375)	2806D153	D	2020-07-08
153 Housing Body (Part #001-90-7372)	2808F153	F	2021-02-24
Meter Cap (Part # 001-90-7341)	2845F153	F	2021-03-02
Case Casting (RAW) (Part # 001-90-7336)	2869K153	K	2020-07-08
Battery Removal Paddle	2881B153	B	2020-07-08
Battery Removal Handle	2882C153	C	2020-07-08
Modified Hex Tool	2883B153	B	2020-07-08
Display Panel (Part #001-90-7335)	2885H153	H	2021-04-08
Grounding Socket (Part #001-90-7346)	2887C153	C	2020-07-08
Board Retainer Block (Part #001-90-7374)	2889E153	E	2020-07-08
Connector Key (Part #001-90-7376)	2890C153	C	2020-07-08
Modi. Battery Clip (Part #001-90-6610)	2891B153	B	2020-07-08
Upper Case (From Casting) (Part #001-90-7373)	2892F153	F	2021-03-02
Cap Casting (RAW) (Part #001-90-7337)	2893F153	F	2020-07-08
Switch Contact (Part #001-90-7380)	2900C153	C	2020-07-08
153 LCD Display (Part #001-90-7345)	2911E153	E	2020-07-08
Battery Retainer (Part #001-90-7329)	3064D153	D	2020-07-08
Temperature Tip Insulator (Part #001-90-7224)	3110B153	B	2020-07-08


Solutions

A UKAS accredited certification body No. 4705

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This certificate may only be reproduced in its entirety and without any change, schedule included

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[14]

Schedule
UK-TYPE EXAMINATION CERTIFICATE No.
UL21UKEX2274X Rev. 1

Title:	Drawing No.:	Rev. Level:	Date:
Temperature Tip (Part #001-90-7225)	3111B153	B	2020-07-08
Inner Electrode (Part #001-90-396)	3152C153	C	2020-07-08