



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 19.0066X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2024-07-31)
Date of Issue:	2024-09-05		Issue 2 (2022-02-02)
Applicant:	Barksdale, Inc. 3211 Fruitland Ave Los Angeles California 90058 United States of America		Issue 1 (2021-02-02)
Equipment:	Pressure Transmitter types H455E, 455E, 452E & 454E (Intrinsic Safety)		Issue 0 (2019-10-02)
Optional accessory:			
Type of Protection:	Intrinsic safety "ia"		
Marking:	Ex ia IIC T4 Ga Ex ia IIIC T135°C Da IP66 & IP67 -40°C ≤ Tamb ≤ +80°C		

Approved for issue on behalf of the IECEx
Certification Body:

Stelios Roumbedakis

Position:

Certification Manager

Signature:
(for printed version)

S. Roumbedakis

Date:
(for printed version)

2024-09-05

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
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Ellesmere Port, CH65 4LZ
United Kingdom





IECEX Certificate of Conformity

Certificate No.: **IECEX CML 19.0066X**

Page 2 of 4

Date of issue: 2024-09-05

Issue No: 4

Manufacturer: **Barksdale, Inc.**
3211 Fruitland Ave
Los Angeles
California 90058
United States of America

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 Reports:

[GB/CML/ExTR19.0092/00](#)

[GB/CML/ExTR22.0010/00](#)

[GB/CML/ExTR24.0129/01](#)

Quality Assessment Report:

[GB/CML/QAR20.0012/03](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX CML 19.0066X**

Page 3 of 4

Date of issue: 2024-09-05

Issue No: 4

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Pressure Transmitter types H455E, 455E, 452E and 454E are intrinsically safe pressure transmitters suitable for use in environments requiring equipment protection level Ga or Da. The equipment comprises a pressure sensor and electronic assembly within a sealed stainless-steel enclosure. The equipment can either be supplied as a 2 wire 4-20mA with or without HART or as a three-wire version with a separate signal output. The signal output can either be Voltage or ratiometric output (by build options). The 2-wire version is connected to the safe area via a barrier whereas the 3 wire versions are connected to two barriers.

The equipment may be supplied with flying leads or with a variety of two-part connector types and there are numerous available options for different pressure ranges, units, and process connections.

Intrinsic safety is achieved by limiting energy storage and discharge, and by connecting to the non-hazardous area via an intrinsically safe interface device(s).

Refer to Certificate Annex for full product description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Certificate Annex for Specific Conditions of Use.



IECEX Certificate of Conformity

Certificate No.: **IECEX CML 19.0066X**

Page 4 of 4

Date of issue: 2024-09-05

Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1

This variation introduces the following change:

1. Update to IECEx QAR to GB/CML/QAR20.0012. No other technical changes have taken place.

Issue 2

This variation introduces the following changes:

1. Addition of models 452E and 454E.
2. Introduction of an alternative New Digital Amplifier to 455E model.

Issue 3

This variation introduces the following change:

1. The addition of monolithic sensor option.

Issue 4

This variation introduces the following change:

1. Minor drawing changes.

Annex:

[IECEX CML 19.0066X Issue 4 Certificate Annex.pdf](#)

Annexe to: IECEx CML 19.0066X Issue 4
Apparatus: Pressure Transmitter types H455E, 455E, 454E & 452E
Applicant: Barksdale, Inc.



Description

The Pressure Transmitter types H455E, 455E, 452E and 454E are intrinsically safe pressure transmitters suitable for use in environments requiring equipment protection level Ga or Da. The equipment comprises a pressure sensor and electronic assembly within a sealed stainless-steel enclosure. The equipment can either be supplied as a 2 wire 4-20mA with or without HART or as a three-wire version with a separate signal output. The signal output can either be Voltage or ratiometric output (by build options). The 2-wire version is connected to the safe area via a barrier whereas the 3 wire versions are connected to two barriers.

The equipment may be supplied with flying leads or with a variety of two-part connector types and there are numerous available options for different pressure ranges, units, and process connections.

Intrinsic safety is achieved by limiting energy storage and discharge, and by connecting to the non-hazardous area via an intrinsically safe interface device(s).

The equipment has the following safety description:

Model	Type	Ui	Ii	Ci	Li	Pi
H455E	HART 4-20 mA	30 VDC	100 mA	2.2 nF	30 µH	750 mW
455E	Current Output	30 VDC	100 mA	27.384 nF	0 µH	750 mW
452E	Voltage Output	30 VDC	100 mA	54.984 nF	0 µH	750 mW
454E	Ratiometric Output	20 VDC	100 mA	46.320 nF	0 µH	500 mW

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. The equipment is not capable of withstanding the 500V insulation test required by Clause 6.3.13 of IEC 60079-11:2011. This shall be taken into account when installing the equipment.



Certificate Annex IECEx
Version: 10.0 Approval: Approved



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