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 11.0031X**

Page 1 of 4

Status: **Current**

Issue No: 10

Date of Issue: 2023-11-13

Applicant: **Daniel OpCo, LLC**
9750 W Sam Houston
Parkway N Suite 100,
Houston, TX 77064
United States of America

Equipment: **Series 1200 and 1500 Turbine Meters and RME**

Optional accessory:

Type of Protection: **Flameproof "db"**

Marking: Ex db IIB T6 Gb

Ex db IIC T6 Gb

-40°C to +60°C

Certificate history:

Issue 9 (2021-07-23)
Issue 8 (2020-12-18)
Issue 7 (2017-11-30)
Issue 6 (2016-07-06)
Issue 5 (2014-10-23)
Issue 4 (2014-01-31)
Issue 3 (2012-12-11)
Issue 2 (2011-12-15)
Issue 1 (2011-12-07)
Issue 0 (2011-08-15)

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)

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 Solutions (US)
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America

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Manufacturer: **Daniel OpCo, LLC**
9750 W Sam Houston
Parkway N Suite 100,
Houston, TX 77064
United States of America

Manufacturing locations:

Daniel OpCo, LLC
9750 W Sam Houston
Parkway N Suite 100,
Houston, TX 77064
United States of America

Daniel Measurement and Controls, S.de R.L de C.V.
Avenida Ishikawa 1221
Chihuahua, 31183
Mexico

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 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

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/ExTR17.0116/00 US/UL/ExTR17.0116/01 US/UL/ExTR17.0116/02
US/UL/ExTR17.0116/03

Quality Assessment Report:

US/UL/QAR21.0025/01

IECEx Certificate of Conformity

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

*NOTE: This certificate was temporarily SUSPENDED over the period of **2024-12-13 to 2025-04-24** at the request of the issuing IECEx Certification Body (ExCB) following their consultation with the Applicant. This suspension does NOT affect products manufactured prior to **2024-12-13** or after **2025-04-24**. Any product manufactured during the suspension period of **2024-12-13 to 2025-04-24** cannot be considered to be IECEx Certified under this Certificate. Any comment may be directed to the Applicant or ExCB.*

The Series 1200 and 1500 turbine meters are electronic flow meters that measure and transmit data and produce signals directly proportional to the rate of liquid flow through the meter. These signals are amplified and shaped by an internal preamp. The internal preamp is housed in the UMB LME (Universal Mounting Box Local Mounting Enclosure) that contains a cover that is threaded on to the housing to form a threaded joint. The other end of the UMB LME is fitted with the turbine flow tube/mounting pad by a spigot joint to complete the Ex d flameproof enclosure. The standard design of the spigot joint has a longer cylindrical section for Group IIC requirements and the conversion design of the spigot joint has a shorter cylindrical section for Group IIB requirements.

The RME (Remote Mounted Electrical Enclosure) is the UMB LME but mounted remotely from the meter body when the process temperature is outside the ambient temperature range.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The joint between the LME cover and housing is a threaded joint with a minimum of seven full threads engaged. For the Group IIB version, the joint between the LME housing and Sensor housing is a spigot joint with a minimum axial length of 13.61 mm, radial length of 3.18 mm, maximum axial clearance of 0.07 mm, and maximum radial clearance of 0.05 mm. For the Group IIC version, the joint between the LME housing and Sensor housing is a spigot joint with a minimum axial length of 26.16 mm, radial length of 3.18 mm, and maximum clearance of 0.07 mm.
- Device is to be remote mounted when the process temperature is outside the ambient temperature range.
- To minimize the risk of electrostatic charge, provisions shall be made for adequate grounding and equipment shall be installed in such a manner so that accidental discharge shall not occur.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1: Updated manufacturing information to reflect the Mexico location.

Issue 2: Updated drawings were provided with all changes being minor in nature and not affecting the flameproof "d" protection of the device.

Issue 3: Drawings were updated to correct part no. reference.

Issue 4: Addition of new models and updated to the new edition of IEC 60079-0.

Issue 5: Drawings are being updated to reflect minor nomenclature change. No construction change made.

Issue 6: Addition of alternate remote mounting enclosure (RME) material. No other constructional changes being made; applicable drawings have been updated.

Issue 7: Addition of an internal electronics option with battery. Update of standard editions to the most recent versions.

Issue 8: Update company name and add manufacturing location.

Issue 9: Minor clarifications and updates to drawings that do not affect the protection methods. Removed obsolete models from certificate. Updates IEC 60079-0, Edition 6 to Edition 7.

Issue 10: Update company name and add manufacturing location.

Annex:

Annex to IECEx UL 11.0031X Issue 10.pdf

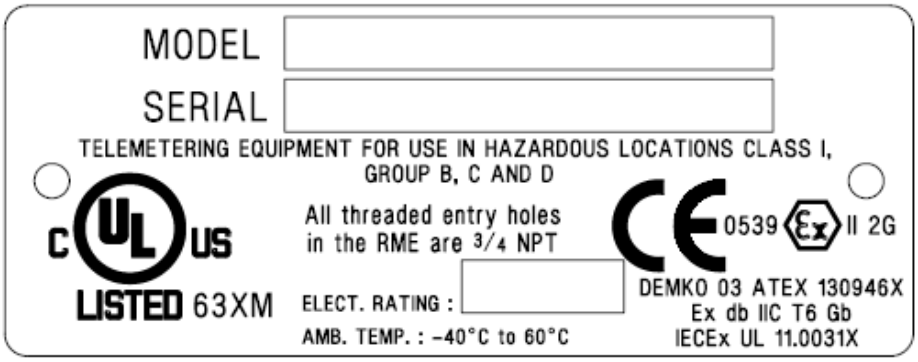
IECEx Certificate of Conformity

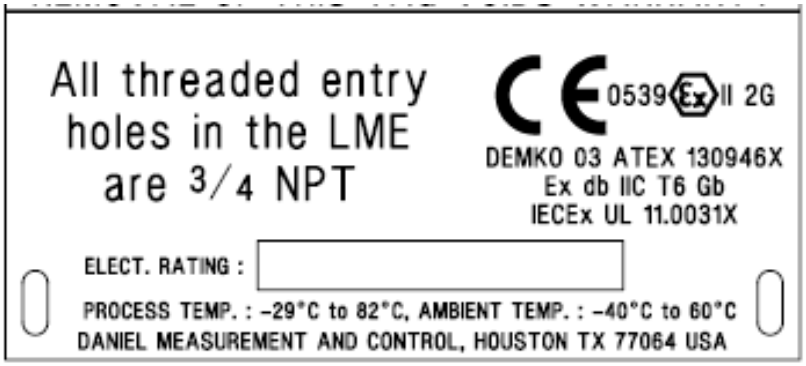
PARAMETERS RELATING TO THE SAFETY

Input:
10 to 30 Vdc
Output:
Powered Pulse - 0 to 5 V, 0 to 5 kHz, 20 mA max
Variable Voltage - 0 to Supply Voltage, 0 to 5 kHz, 70 mA max
Open Collector - 30 Vdc max, 0 to 5 kHz, 125 mA max, 0.5 W max

MARKING

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





ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment defined above has to have successfully passed before delivery:

Routine tests according to IEC 60079-1 cl. 16 are not required, as the enclosures have been successfully tested at four times the reference pressure.