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 09.0010X**

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Status: **Current**

Issue No: 15

Date of Issue: 2019-09-30

Applicant: **Honeywell Analytics Inc.**
405 Barclay Boulevard
Lincolnshire, IL 60069
United States of America

Equipment: **Universal Transmitter, Gas Detector Series XNX*********

Optional accessory:

Type of Protection: **Flameproof "db", Intrinsic Safety "ia", Dust Ignition Protection by Enclosure "tb"**

Marking: Ex db IIC T6…T4 Gb

Ex db [ia IIC Ga] IIC T6…T4 Gb

Ex tb [ia IIIC Da] IIIC T85°C Db

Ex tb IIIC T85°C Db

-40°C ≤ Tamb ≤ +65°C

Certificate history:

Issue 14 (2019-04-10)
Issue 13 (2018-08-09)
Issue 12 (2018-07-26)
Issue 11 (2018-04-06)
Issue 10 (2017-10-31)
Issue 9 (2017-08-25)
Issue 8 (2017-07-31)
Issue 7 (2016-06-30)
Issue 6 (2015-07-01)
Issue 5 (2013-09-30)

Approved for issue on behalf of the IECEx Certification Body: **Katy A. Holderdge**

Position: **Senior Staff Engineer**

Signature: (for printed version)

Date:

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

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

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Certificate No.: **IECEx UL 09.0010X**

Date of issue: 2019-09-30

Issue No: 15

Manufacturer:
Honeywell Analytics Inc.
405 Barclay Boulevard
Lincolnshire, IL 60069
United States of America

Additional manufacturing locations:
Honeywell Analytics Ltd.
Hatch Pond House
4 Stinsford Road
Nuffield Estate
Poole, Dorset
BH17 0RZ
United Kingdom

Honeywell Analytics Asia Pacific Co., Ltd (Cheonan Factory)
28, 2gongdan 2-ro, Seobuk-gu
Cheonan-si
Chungcheongnam-do, 31075
Korea, Republic of

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

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

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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:

US/UL/ExTR16.0127/08

Quality Assessment Reports:

GB/BAS/QAR08.0002/08 GB/SIR/QAR11.0027/05 NL/DEK/QAR12.0080/05

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

Universal Transmitter, Gas Detector Series XNX

These devices are permanently mounted gas detectors housed in a flameproof and dust ignition protected enclosure. The enclosure is provided with 5 openings, which may be fitted with a M25 plug when not in use. The device has a glass window through which a display is used for monitoring and calibrating the device. The device may be shipped with or be wired to an Ex Certified flameproof and dust ignition protection by enclosure sensor in the end use application. When the MPD sensor is provided, it is threaded into the opening at the bottom of the enclosure. If another Ex Certified flameproof and dust ignition protection by enclosure sensor is added in the end use application, it must have at least 5 threads engaged.

The device may also contain a HART Barrier and/or EC I.S. Barrier providing intrinsically safe circuits. The HART Barrier circuits exit the enclosure through an integral sealed two pin connector. When the HART Barrier is not installed the opening is provided with a M25 plug. The EC I.S. Barrier circuits exit the enclosure through a five pin connector, connected to the opening at the bottom of the enclosure. When the EC I.S. Barrier is not installed the opening is provided with a M25 plug or may be used with the MPD or other sensor.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The following applies to the HART Barrier intrinsically safe circuits: For installations in which both the Ci and Li of the intrinsically safe apparatus exceeds 1% of the Co and Lo parameters of the associated apparatus (excluding the cable), then 50% of Co and Lo parameters are applicable and shall not be exceeded, i.e. the Ci of the device plus the C of the cable must be less than or equal to 50% of the Co of the associated apparatus, and the Li of the device plus the L of the cable must be less than or equal to 50% of the Lo of the associated apparatus.
- For circuits connected to the EC barrier in which the capacitance and inductance exceed 1% of the permitted values, then the maximum permitted capacitance is limited to 600nF for group IIC and 1uF for group IIIC.
- The connection to the HART circuit shall be rated a minimum of IP 6X.
- 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.
- The flameproof joints are not intended to be repaired.

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Equipment (continued):

I. Series

XNX - Universal Transmitter

II. Agency/Approval

A - ATEX

III. Port Threads

M - M25

IV. Enclosure

S - Stainless

A - Aluminum

V. Sensor (Personality Type)

E - Electrochem with EC I.S. Barrier

I - Infared

V - Milivolt

VI. Interface Option

N - None

R - Relay

M - Modbus

F - Foundation Field Bus

VII. Local HART

N - None

H - Local HART

VIII. Sensor and Range (MPD - AM*** see below)

NNN - None

CB1 - (Catalytic Bead %LEL)

IF1 - (IR %LEL Flam) -IF1

IV1 - (IR CH4 0-5% Vol) - IV1

ICX - Where X can be 1-9 (CO2)

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1: The manufacturer submitted documents to clarify the Barrier housing thickness, label updates, non-protective component changes and O-ring material. No changes were made to the devices affecting the protection methods. The changes made to the devices are considered to be in compliance with the applicable standards.

Issue 2: The manufacturer added the Foundation Field Bus option board for an alternate construction of the device. Additionally, a new lithium coin cell was added as an alternate component. Various drawings were also updated.

Issue 3: Added Dust Protection and upgraded to IEC 60079-0, 6th Edition.

Issue 4: Added revised drawings to include engravings on plug drawing and the ability to include the requested agencies on the label drawing. Added manufacturing location, Poole, UK.

Issue 5: Revised construction and associated drawings.

Issue 6: For type protection ‘d’, the device was updated to Group IIC. Minor changes were made to several documents that did not impact safety.

Issue 7: A new ExTR US/UL/ExTR16.0127/00 replaces all issues of US/UL/ ExTR 09.0011. Correction to certificate cover pages and update to newest directive.

Issue 8: Minor drawing updates.

Issue 9: Standards updated to newest editions of IEC 60079-1 and IEC 60079-31.

Issue 10: Minor revisions to existing circuit boards.

Issue 11: Addition of manufacturing location. Removal of IEC 60079-26 from ExTR and CoC

Issue 12: Alternate optical isolators and minor construction changes to the ECC XPIS circuit board.

Issue 13: Update to drawings to reflect change in component.

Issue 14: Update to the latest edition of IEC 60079-0.

Issue 15: Addition of alternate epoxy material in the transformer of intrinsic safe circuitry, and minor revisions to label, manual, and associated documentation

Annex:

Annex to IECEx UL 09.0010X Issue 14.pdf

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Certificate No.: IECEx UL 09.0010X

Issue No.: 14

TYPE DESIGNATION

Nomenclature for type *XNX Universal Transmitter:*

XNX	A	M	A	E	-	N	H	CB1
I	II	III	IV	V	-	VI	VII	VIII

I. Series
XNX – Universal Transmitter

II. Agency/Approval
A – IECEx/ATEX

III. Port Threads
M – M25

IV. Enclosure
S – Stainless
A – Aluminum

V. Sensor (Personality Type)
E – Electrochem with EC I. S. Barrier
I – Infrared
V – Millivolt

VI. Interface Option
N – None
R – Relay
M – Modbus
F – Foundation Field Bus

VII. Local HART
N – None
H – Local HART

VIII. Sensor and Range
NNN – None
CB1 - (Catalytic Bead %LEL)
IF1 - (IR %LEL Flam)- IF1
IV1 - (IR CH4 0-5% Vol) – IV1
ICX - Where X can be 1-9 (CO_2)

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PARAMETERS RELATING TO THE SAFETY

The ambient temperature range is -40 °C ≤ Tamb ≤ +65 °C.

XNX enclosure may be marked either T6 or T4 depending on if the MPD adapter is provided. If the MPD adapter is being employed, the XNX enclosure must be marked with a T4 rating. The XNX can be marked with a T6 temperature code if the MPD adapter is not employed.

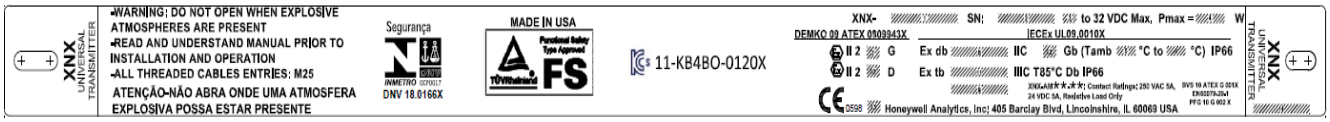
Input voltage: 18-32 VDC, 16-32 VDC

Relay outputs: 250 VAC, 30 VDC, 5A

Intrinsically safe specifications:
Um: 250 V

HART I.S. Entity Parameters				EC I.S. Entity Parameters	
Uo	24.15 V	Ui	21.85 V	Uo	5.88 V
Io	136 mA	Ii	120 mA	Io	84 mA
Po	0.83 W	Pi	1.0 W	Po	0.123 W
Co	0.122 µF	Ci	0.0 µF	Co	10 µF
Lo	1.4 mH	Li	0.0 mH	Lo	1 mH

MARKING



ROUTINE EXAMINATIONS AND TESTS

Routine tests according to IEC 60079-11 cl. 11.2 for the transformers used in the HART I.S. barrier and the EC I.S. barrier is required to determine if the transformer can withstand 1500 V between the input and output winding for 60 seconds. Alternatively, the test may be carried out at a minimum of 1800 V for 1 second.