CERTIFICATE OF CONFORMITY

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** **FM17US0034X**
3. **Equipment:** **XNX Series Universal Transmitters**
   (Type Reference and Name)
4. **Name of Listing Company:** **Honeywell Analytics**
5. **Address of Listing Company:** **405 Barclay Boulevard**
   Lincolnshire, Illinois 60069
   United States
6. The examination and test results are recorded in confidential report number:

   3035953 dated 21st November 2011

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

   FM Class 3600:2018, FM Class 6325:2005, FM Class 6340:2002
   ANSI/ISA 92.0.01, Part I-1998:1998, ANSI/ISA 12.13.01-2000:2000
   ANSI/IEC 60529:2004, ANSI/ISA-92.04.01, Part I-2007:2007
   ANSI/ISA 60079-0 (12.00.01)-2013:2013, ANSI/UL 60079-1:2015
   ANSI/ISA 60079-11:2014

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

Certificate issued by:

J. E. Marquedant
Manager, Electrical Systems

14 December 2018
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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SCHEDULE

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10. Equipment Ratings:

COMBUSTIBLE, TOXIC and OXYGEN GAS DETECTOR CONTROL UNITS, Fixed
Suitable for installation in Class I, Zone 1, AEx db [ia] IICT6 Gb Ta = -40°C to +65°C

TOXIC GAS DETECTORS, Fixed
Flameproof with intrinsically safe outputs for installation in Class I, Zone 1, AEx db [ia] IICT6 Gb Ta = -40°C to +65°C, IP66
Refer to the complete description below for complete ratings for use with different detector heads.

COMBUSTIBLE GAS DETECTORS, Fixed
Flameproof with intrinsically safe outputs for installation in Class I, Zone 1, AEx db [ia] IIC T4 Gb Ta = -40°C to +65°C

11. The marking of the equipment shall include:

COMBUSTIBLE, TOXIC and OXYGEN GAS DETECTOR CONTROL UNITS, Fixed
Class I, Zone 1, AEx db [ia] IICT6 Gb = -40°C to +65°C

TOXIC GAS DETECTORS, Fixed
Class I, Zone 1, AEx db [ia] IICT6 Gb Ta = -40°C to +65°C, IP66

COMBUSTIBLE GAS DETECTORS, Fixed
Class I, Zone 1, AEx db [ia] IIC T4 Gb Ta = -40°C to +65°C

12. **Description of Equipment:**

COMBUSTIBLE, TOXIC and OXYGEN GAS DETECTOR CONTROL UNITS, Fixed

Stationary Single Channel 4-20 mA Stand alone Combustible or Toxic Gas Detector Control Unit. The XNX Universal Transmitter is suitable for installation in Class I, Zone 1, AEx db [ia] IICT6 Gb Ta = -40°C to +65°C locations when installed per control drawing 1226E0402 or 1226E0454. The XNX Universal Transmitter can connect to any FM Approved combustible point gas detector heads which monitor 0-100% LEL gas-in-air atmospheres and combustible open path gas detectors which monitor LEL·meter gas concentrations. The XNX Universal Transmitter connects to any FM Approved toxic gas detector heads which monitor toxic (ppm and %) gas-in-air atmospheres. The XNX Universal Transmitter connects to any FM Approved oxygen depletion detector heads which monitors up to 21% O2 gas-in-air atmospheres. The XNX Universal Transmitter communicates to the detector head via a proprietary protocol, 20mA or millivolt input. The XNX Universal Transmitter provides a 4-20 mA signal proportional to the gas detector head's measuring range of gas of interest with HART as the standard communications protocol. Additional optional interfaces are either relay (two alarm relays and 1 fault relay rated 250 VAC, 5A/24 VDC, 5A) , Modbus, or Foundation Fieldbus communications. The apparatus complies with ANSI/ISA-12.13.01-2000: Performance Requirements for Combustible Gas Detectors; ISA–92.0.01-1998 for Hydrogen Sulfide Toxic Gas Detectors; ISA-92.04.01-2007 for Oxygen-Deficient/Oxygen-Enriched Atmospheres; FM6325: Performance Requirements for Combustible Open Path Gas Monitors and FM6340 for Carbon Monoxide and Carbon Dioxide Gas Detectors.

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Accessories: Calibration Cup p/n: S3KCAL, Calibration Gas Flow Adapter p/n: 1226A0411, Weatherproof Housing p/n: SPXCDWP, Magnet Wand/Screwdriver p/n: 1226-0254

XNX abc-def-g, XNX Universal Transmitter a = Model: UT or BT
b = Material: A or S
c = Sensor: E, V or I
d = Output: N, R, M or F
e = Communication: N or H
f = MPD: NNN, CB1 or IC1
g = Z for Brazil manufacturer

Specifications - The manufacturer's specifications are as follow:

Storage Temperature: -40°C to +65°C
Operating Temperature: -40°C to +65°C
Relative Humidity: 15 to 90% RH, non-condensing
Supply Parameters: 16-32 Vdc, (24 Vdc nominal); 18-32 Vdc with Optima or Excel
Measurement Signal: 4-20 mA
Calibration: Magnet (Local) or HART (optional)
Main application firmware: Version 114

TOXIC GAS DETECTORS, Fixed

Stationary Single Channel 4-20 mA Toxic Gas and Oxygen Detector. The XNX Series Toxic gas (EC and MPD) and Oxygen (EC) Detector consists of an XNX Universal Transmitter with an XNX toxic gas or oxygen sensor cartridge. The XNX Toxic gas and Oxygen Detector are constructed of stainless steel and include a ¾" NPT thread for connection to the XNX Universal Transmitter. The XNX Universal Transmitter with a remote Toxic gas or Oxygen Detector and HART adapter is flameproof with intrinsically safe outputs for installation in Class I, Zone 1, AEx db [ia] IICT6 Gb Ta = -40°C to +65°C, IP66, when installed per control drawing 1226E0402. The XNX Universal Transmitter provides a 4-20 mA signal proportional to the gas detector head's measuring range of gas of interest with HART as the standard communications protocol. Additional optional interfaces are either relay (two alarm relays and 1 fault relay rated 250 VAC, 5A/24 VDC, 5A) , Modbus, or Foundation Fieldbus communications.

The XNX with electrochemical (EC) Gas Detector Head: The XNX Universal Transmitter with EC sensor monitors either hydrogen sulfide or carbon monoxide toxic gas-in-air atmospheres or oxygen in air atmospheres (oxygen depletion). The XNX EC sensor includes a weatherproof cap as part of the EC sensor assembly. The XNX EC sensor cartridge mounts either directly to the XNX Universal Transmitter by ¾ inch NPT threads or remotely up to 50 feet (15 meters). Remote connection requires remote sensor mounting kit P/N S3KRMK. The XNX Universal Transmitter with integral EC sensor and HART adapter is flameproof with intrinsically safe outputs for installation in Class I, Zone 1, AEx db [ia] IICT6 Gb with Ta limited to the operating temperature range of the attached sensor (refer to specifications below), IP63, per control drawing 1226E0402. The Transmitter T-Code is limited to that of the attached sensor when the sensor is fitted locally, T4. The EC sensors are intrinsically safe for installation in Class I, Zone 1, AEx ia IIC T4 when installed per control drawing 3000E3159. The apparatus complies with ISA–92.0.01-1998 for Hydrogen Sulfide Toxic Gas Detectors; ISA-92.04.01-2007 for Oxygen-Deficient/Oxygen-Enriched Atmospheres; and FM6340 for Carbon Monoxide Gas Detectors with manufacturer's operating temperature

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accuracies of < ± 10% of reading at +20°C to +55°C; < ± 20% of reading at -10°C to +20°C and < ± 30% of reading at -10°C to -20°C.
The XNX with infrared (MPD) Gas Detector Head: The XNX Universal Transmitter with MPD sensor monitors carbon dioxide toxic gas-in-air atmospheres. The XNX toxic gas sensor models MPD-BTIC1/MPD-UTIC1 are used with weatherproof housing: P/N SPXCDWP (for IP66 compliance) or without the weatherproof housing. The XNX MPD CO2 gas sensor mounts either directly to the XNX Universal Transmitter by ¾ inch NPT threads or remotely up to 650 feet (200 meters) using 16 AWG wire. The XNX Universal Transmitter with integral MPD CO2 sensor and HART adapter is flameproof with intrinsically safe outputs for installation in Class I, Zone 1, AEx db [ia] IICT6 Gb Ta = -20°C to +50°C when installed per control drawing 1226E0402. The XNX toxic gas sensor models MPD-BTIC1/MPD-UTIC1 are flameproof for use in Class I, Zone 1, AEx d IIB+H2 T4 hazardous (classified) locations. The apparatus complies with FM6340 for Carbon Dioxide Gas Detectors.

Accessories: Calibration Cup p/n: S3KCAL, Calibration Gas Flow Adapter p/n: 1226A0411, Weatherproof Housing p/n: SPXCDWP, Magnet Wand/Screwdriver p/n: 1226-0254

XNX abc-def-g, XNX Universal Transmitter a = Model: UT or BT
b = Material: A or S
c = Sensor: E or V
d = Output: N, R, M or F
e = Communication: N or H
f = MPD: NNN or IC1
g = Z for Brazil manufacturer

Sensors (EC): XNXXSC1FM, XNXXSO1FM and XNXXSH1FM

Specifications - The manufacturer's specifications are as follows:

Storage Temperature (EC): 0°C to +20°
Storage Temperature (MPD): -20°C to +50°C
Operating Temperature: -40°C to +55°C (H2S)
Operating Temperature: -30°C to +55°C (O2)
Operating temperature: -20°C to +55°C (CO)
Operating temperature: -20°C to +50°C (CO2)
Relative Humidity (EC): 15 to 90% RH, non-condensing
Relative Humidity (MPD): 5 to 95% RH, non-condensing
Supply Parameters: 16-32 Vdc, (24 Vdc nominal), 6.2 Watts max.
Measurement Signal: 4-20 mA
Calibration: Magnet (local) or HART (optional)

COMBUSTIBLE GAS DETECTORS, Fixed

Stationary Single Channel 4-20 mA Combustible Gas Detector. The XNX Series combustible Gas Detector consists of a XNX Universal Transmitter with an XNX combustible gas sensor cartridge. The XNX combustible gas sensor cartridge is a catalytic bead Gas Detector Head housed within a stainless steel enclosure. The XNX combustible gas sensor includes ¾" NPT threads for connection to the XNX Universal Transmitter. The XNX combustible gas sensors are models MPD-UTCB1/MPD-BTCB1 for 0-100% LEL of

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Methane gas-in-air or Hydrogen gas-in-air with Calibration Cap P/N 1226A0411, with or without p/n 02000-A-1640 Weatherproof cap. The XNX combustible gas sensor cartridge mounts either directly to the XNX Universal Transmitter by ¾ inch NPT threads or remotely up to 260 feet (80 meters) using 16 AWG wire. Remote connection requires remote sensor junction box. The CSA certified model 705 sensor is not FM Approved for Hazardous (Classified) Locations and therefore cannot be used with the FM Approved XNX Universal Transmitter. The XNX Universal Transmitter with integral combustible sensor and HART adapter is flameproof with intrinsically safe outputs for installation in Class I, Zone 1, AEx db [ia] IIC T4 Gb Ta = -40°C to +65°C when installed per control drawing 1226E0402 or 1226E454. The XNX Universal Transmitter uses HART over 3-wire 4-20mA as the standard communications protocol. Additional optional communication interfaces are relay communication, Modbus, or Foundation Fieldbus. There are two alarm relays and 1 fault relay rated 250 VAC, 5A/24 VDC, 5A.

Accessories: Calibration Gas Flow Adapter p/n: 1226A0411, Weatherproof cap p/n: 02000A1640, Magnet Wand/Screwdriver p/n: 1226-0254

XNX abV-cde-f, XNX Universal Transmitter a = Model: UT or BT
b = Material: A or S
c = Output: N, R, M or F
d = Communication: N or H
e = MPD: NNN or CB1
f = Z for Brazil manufacturer

Specifications - The manufacturer's specifications are as follow:

Storage Temperature: -40°C to +65°C
Operating Temperature: -40°C to +65°C
Relative Humidity: 15 to 90% RH, non-condensing
Supply Parameters: 16-32 Vdc, (24 Vdc nominal), 6.5 Watts max.
Measurement Signal: 4-20 mA
Calibration: Magnet (local) or HART (optional)

13. **Specific Conditions of Use:**

COMBUSTIBLE, TOXIC and OXYGEN GAS DETECTOR CONTROL UNITS, Fixed
TOXIC GAS DETECTORS, Fixed
COMBUSTIBLE GAS DETECTORS, Fixed

1. The sintered flame arrestor of the MPD Sensor assembly meets the impact test requirements according to the low level risk of mechanical danger. Therefore, when the MPD Sensor is included, the XNX Universal Transmitter must be located and installed such that the risk of impact is reduced.
2. Certification does not cover Daisy chained XNX combustible gas transmitters, HART, MODBUS or Foundation Fieldbus used for combustible gas performance. The HART, MODBUS or Foundation Fieldbus may only be used for data collection or record keeping with regard to combustible gas detection.
3. The XNX enclosure is painted in a non-metallic paint, the certificate is marked with an "X" and the following Condition of Safe Use or equivalent has to be applied: "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"

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4. The flameproof joints are not intended to be repaired.

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
21st November 2011	Original Issue.
9th February 2017	Supplement 2: Report Reference: – RR208194 dated 9th February 2017 Description of the Change: Addition of Brazil label
14th December 2018	Supplement 3: Report Reference: – PR449909 dated 14th December 2018 Description of the Change: Hardware and firmware updates. Documentation updates. Flameproof ratings revised to "IIC"

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