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 FMG 07.0006X**

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Status: **Current**

Issue No: 20

Date of Issue: 2023-11-21

Applicant: **Mine Safety Appliances**
1000 Cranberry Woods Drive
Cranberry Township, PA 16066
United States of America

Equipment: **Ultima X Series Controller, Ultima XE Sensor, Ultima XI Sensor, Ultima XIR Sensor**

Optional accessory: Refer to Equipment section of this certificate.

Type of Protection: **Construction, Test and Marking of type of protection "db", "n", "ia" and "[ib]"**

Marking: IECEx FMG 07.0006X
Refer to annex.

Certificate history:

Issue 19 (2023-01-26)
Issue 18 (2022-07-28)
Issue 17 (2021-10-15)
Issue 16 (2020-02-03)
Issue 15 (2014-08-06)
Issue 14 (2014-05-09)
Issue 13 (2013-11-06)
Issue 12 (2013-01-15)
Issue 11 (2012-03-13)
Issue 10 (2012-02-02)

Approved for issue on behalf of the IECEx Certification Body: **J. E. Marquedant**

Position: **VP, Manager - Electrical Systems**

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:

FM Approvals LLC
1151 Boston-Providence Turnpike
Norwood, MA 02062
United States of America

FM Approvals
Member of the FM Global Group

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Manufacturer: **Mine Safety Appliances**
1000 Cranberry Woods Drive
Cranberry Township, PA 16066
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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11:2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15:2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-29-1:2016 Edition:2.0	Explosive atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases

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/FMG/ExTR07.0004/00
US/FMG/ExTR07.0004/01
US/FMG/ExTR07.0004/02
US/FMG/ExTR07.0011/00
US/FMG/ExTR08.0007/00
US/FMG/ExTR08.0007/01
US/FMG/ExTR08.0009/00
US/FMG/ExTR08.0009/01
US/FMG/ExTR08.0009/02
US/FMG/ExTR08.0009/03
US/FMG/ExTR08.0009/04
US/FMG/ExTR08.0009/05
US/FMG/ExTR08.0009/06
US/FMG/ExTR08.0009/07
US/FMG/ExTR08.0009/08
US/FMG/ExTR08.0009/09
US/FMG/ExTR08.0009/10
US/FMG/ExTR08.0009/11
US/FMG/ExTR08.0009/12
US/FMG/ExTR08.0009/13
US/FMG/ExTR08.0009/14
US/FMG/ExTR08.0009/15
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US/FMG/ExTR08.0009/18
US/FMG/ExTR08.0009/19
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Quality Assessment Report:

FR/INE/QAR08.0011/13

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

Controllers: Ultima XL, Ultima XE Main

Sensors: Ultima XE Sensor, Ultima XI Sensor, Ultima XIR Sensor

Accessories: Ultima Calibrator, Ultima Controller, Ultima XE Sensor Weather/Wind/Sensor Guard P/N 10028904, Ultima XI and Ultima XIR Environmental Guard P/N 10041265, Ultima X Power Supply, HART Module

SPECIFIC CONDITIONS OF USE: YES as shown below:
1) Upon installation of the Ultima XL Control Unit, the label shall be permanently marked to show the type of explosion protection used for the installation.

2) The UltimaX The Ultima XE Sensor, Ultima XI Sensor and Ultima XIR shall be interconnected with an UltimaX Control Unit for compliance with 60079-29-1

3) The Ultima XI Sensor shall be connected directly to a junction box or instrument suitable for the area of installation to provide protection for the flying leads.

4) The Ultima XE Sensor and the Ultima XIR Sensor shall be connected directly to an Ultima X Series Control Unit or remote junction box.

5) The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.

6) Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Gap analysis for IEC 60079-0 from Ed 5 to Ed 6 and Ed 6 to Ed 7.
Gap analysis for IEC 60079-1 from Ed 5 to Ed 6 and Ed 6 to Ed 7.
Gap analysis for IEC 60079-11 from Ed 5 to Ed 6.
Gap analysis for IEC 60079-15 from Ed 3 to Ed 4
Gap analysis for IEC 60079-29-1 from Ed 1 to Ed 2

Documentation Updates; minor label modifications were required as part of the standards update.

Minor changes to the electronics in the sensor enclosures, covering combustible (catalytic bead), toxic (electrochemical), oxygen, and oxygen solvent types; no changes to electronics in the transmitter/controller enclosure.

Ultima XIR Sensor was not evaluated as part of this project and remains at IEC 60079-0 from Ed 5 to Ed 6, IEC 60079-1 from Ed 5 to Ed 6

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Additional information:
Annex: IECEx FMG 07.0006X provides marking information.

Annex:

IECEx FMG 07.0006X Issue 20 Annex_1.pdf

FM Approvals LLC
1151 Boston-Providence Turnpike
Norwood, MA 02062
United States of America

Marking

Ultima XL with XP Port:
Ex db [ib] IIC T4 Gb Ta = -40 ˚C to +60 ˚C IP66
Ex nA [ib] IIC T4 Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima XL without XP Port:
Ex db IIC T4 Gb Ta = -40 ˚C to +60 ˚C IP66
Ex nA IIC T4 Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima XE Main with XP Port:
Ex db [ib] IIC T4 Gb Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima XE Main without XP Port:
Ex db IIC T4 Gb Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima XE Sensor:
Ex db IIC T4 Gb Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima XI Sensor:
Ex db IIC T5 Gb Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima XIR Sensor:
Ex db IIC T5 Gb Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

HART Module:
Ex db [ib] IIC T5 Gb Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima X Power Supply:
Ex db IIC T4 Gb Ta = -40 ˚C to +60 ˚C IP66
IECEx FMG 07.0006X

Ultima Calibrator
Ex ia IIC T3 Ga
IECEx FMG 07.0006X

Ultima Controller:
Ex ia IIC T3 Ga
IECEx FMG 07.0006X