



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx UL 15.0047X

Issue No: 1

Certificate history:

Issue No. 1 (2016-10-04)

Issue No. 0 (2015-12-22)

Status: **Current**

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Date of Issue: **2016-10-04**

Applicant: **Halogen Systems Inc.**
919 Incline Way, Unit 11
Incline Village, NV 89451
United States of America

Equipment: **Oxidant Sensor, EX-P-HT4**

Optional accessory:

Type of Protection: **Flameproof "db", Intrinsic safety "ib"**

Marking:

Ex db ib IIB T5 Gb

-20°C to +55°C

Maximum Process Temperature +40°C

*Approved for issue on behalf of the IECEx
Certification Body:*

Katy A. Holdredge

Position:

Senior Staff Engineer

*Signature:
(for printed version)*

Date:

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

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





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Manufacturer: **Halogen Systems Inc.**
919 Incline Way, Unit 11
Incline Village, NV 89451
United States of America

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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

*This Certificate **does not** indicate compliance with electrical 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/ExTR15.0056/01](#)

Quality Assessment Report:

[US/UL/QAR15.0012/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The device is an oxidant sensor rated 24 V, 350 mA, made with a 316 stainless steel flameproof enclosure. It is intended to detect total oxidants, temperature, and conductivity in water. The flameproof enclosure houses nearly all the circuitry and the 12 V motor in the sensor head end. This motor is powered by a non-intrinsically safe circuit (both the motor and circuit are fully contained within the flameproof enclosure) and is used to control the magnetically coupled impeller located in the sensor cap on top of the sensor head. The three electrodes under the sensor cap are the only electrical parts (except supply wires) that exit the flameproof enclosure, and they are intrinsically safe "ib" based on protective circuitry inside the flameproof enclosure. There are no other external intrinsically safe circuits provided, and there are no intrinsically safe circuits that need to be connected or adjusted in the field. Factory-sealed flying leads exit the other end of the enclosure for supply connection in the field.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Adjacent wiring compartment shall be IECEx certified complying with the connection facility and termination compartment requirements of IEC 60079-0. It shall be made of metal in order to provide external grounding for the sensor.

Flameproof joints are not intended to be repaired.

The device shall be installed such that the epoxy at the supply wiring side and the non-metallic parts at the sensor head end are protected from ultraviolet (UV) light exposure.

Do not open when an explosive atmosphere is present.

Apparatus shall be supplied by a circuit of Overvoltage category II.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1: Minor changes were made to the construction. Testing was conducted to remove the requirement of routine overpressure testing for the alternative construction.