

ATEX System Certificate

Epsilon Certificate Number:

Epsilon 05SYS1435X

This certificate is issued for the following equipment:

Rupture disk indicator – Type Zensor

Manufactured and submitted by:

Zook Enterprises LLC
16809 Park Circle Drive
Chagrin Falls
OH 44022
USA

The equipment shall be designed and constructed in accordance with the specification set out in the schedule herein and documents referred to therein.

This Certificate is issued subject to the conditions of Epsilon Compliance and any additional conditions as may be prescribed.

This Certificate does not imply that the equipment meets all statutory requirements in any particular industry or circumstance.

Directive:

ATEX Directive, 94/9/EC

Standard:

EN50039

Project Number:

ETS1475

Issue Date:

31st July 2005

Report Number:

ETS(A)1475/A/1

On Behalf of Epsilon Compliance



S L D'Henin
Certification Manager



This certificate may only be used in its entirety and without change



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Specification:

Assessment of the equipment against the requirements of the Harmonised European Standard EN50039 “Electrical apparatus for potentially explosive atmospheres. Intrinsically safe electrical systems ‘i’”.

The equipment, when connected as stated in the following schedule, satisfies the requirements of the Harmonised European Standard EN50039 and the ATEX Directive 94/9/EC

Equipment Description:

The rupture disk indicator is designed to provide an alarm to indicate when a rupture disk has burst. The indicator is classified as ‘simple apparatus’ under the definition as described in EN50020.

Ratings:

The indicator is specifically designed for use with graphite rupture disks. The disk and sensing element (tantalum) are integral parts of the sensing circuit. The electrical ratings are: 24 VDC maximum voltage and 20mA maximum current.



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Epsilon Compliance (UK),
Drury Lane, Drury, Buckley, CH7 3DU, UK.

Telephone: +44(0)1244 541551
Fax: +44(0)1244 543888

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Special Conditions of Certification:

1. The external wiring must be either separate cable for each intrinsically safe circuit, or multicore cables complying with the following conditions:
 - (a) The cores must have a suitable radial thickness of insulation (e.g polyethylene with a minimum radial thickness of 0.2 mm)
 - (b) The insulation of each core must be capable of withstanding an rms test voltage of 500 V.
 - (c) Where conductive screens are used to separate intrinsically safe circuits the coverage must be at least 63% of the surface area.
 - (d) The insulation must be capable of withstanding an rms test voltage of 1000 V between a bundle comprising one half of the conductors and a bundle comprising the other half of the conductors.
2. The sensors must be installed such that an ingress protection rating of IP20 is maintained.
3. The external electrical cable must not exceed the values of capacitance and inductance as specified on the intrinsically safe barrier used.
4. The equipment shall be installed in accordance with the European Standard EN 60079-14:1997 "Electrical apparatus for explosive gas atmospheres. Part.14 Electrical installations in hazardous areas (other than mines)."
5. The hazardous area zone in which the sensors may be installed will be dependant on the intrinsically safe barrier used. Zone 0 when the sensor is fed via a EEx [ia] barrier and Zone 1 when the sensor is fed via a EEx [ib] barrier.
6. The intrinsically safe barriers shall be selected with respect to the maximum electrical ratings of the sensor as listed above.



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Descriptive Documents

The documentation describing the design of the sensors is held in Epsilon technical file number ETS1475.



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