



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 ITS 13.0018X	Issue No: 1	<u>Certificate history:</u> Issue No. 1 (2014-11-13) Issue No. 0 (2014-02-20)
Status:	Current	Page 1 of 4	
Date of Issue:	2014-11-13		
Applicant:	Ex Innovations Ltd Trading as Raxton Kingsway South Westgate Aldridge West Midlands WS9 8FS United Kingdom		
Electrical Apparatus:	CT Breather Drains		
<i>Optional accessory:</i>			
Type of Protection:	Ex d, e, t		
Marking:	IECEX ITS 13.0018X Ex d I/ IIC Mb/ Gb Ex e I/ IIC Mb/ Gb Ex tb IIIC Db IP6X		

Approved for issue on behalf of the IECEX
Certification Body:

V K Varma

Position:

Certification Officer

Signature:
(for printed version)

Date:

Vijay K. Varma
2014-11-13

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:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SB
United Kingdom





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Manufacturer: Ex Innovations Ltd Trading as Raxton
Kingsway South
Westgate
Aldridge
West Midlands
WS9 8FS
United Kingdom

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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2008-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

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:

GB/ITS/ExTR13.0020/00

GB/ITS/ExTR13.0020/01

Quality Assessment Report:

GB/SIR/QAR07.0016/05



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The CT Breather/Drains are for venting / draining of Ex d, tb or e enclosures, when used with Ex d enclosures they are suitable for internal volumes up to and including 190ltrs in volume.

The CT Breather / Drains are designed to allow moisture emission from either a Flameproof Type 'Ex d', Dust ignition protection 'Ex tb' enclosures or an Increased Safety Type 'Ex e' enclosures. Each device comprises either a brass or a stainless steel body with an M20, M25, 1/2" NPT or 3/4" NPT entry thread. The body is machined such that a dust/moisture seal, manufactured from sintered copper/bronze alloy which can be optionally nickel plated. The device is designed to be screwed into the wall of the enclosure. 'O' ring seal materials fitted into the Breather/Drain are provided in nitrile, viton, EPDM, neoprene, silicone or fluorosilicone to suit the application.

CONDITIONS OF CERTIFICATION: YES as shown below:

I. The interfaces between the Breather/Drains and associated enclosures cannot be defined. Therefore it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.

II. At their point of mounting, these devices are approved for use at the following temperatures dependant on the type of o-ring:

O-ring Material	Limiting temperature
Nitrile	-20°C to +80°C
EPDM	-30°C to +125°C
Neoprene	-20°C to +100°C
Viton	-5°C to +150°C
Silicone	-30°C to +150°C
Fluorosilicone	-50°C to +150°C

III. The reference pressure is limited to 4000 kPA (40 Bar) maximum

IV. For flameproof applications these devices shall not be used with Ex d enclosures of a volume greater than 190ltrs or with maximum enclosure dimensions greater than 650 mm x 650mm x 440mm

V. For flameproof applications a temperature rise of 26.8K has been measured on the external surface of the element up to an including the reference pressure volume of 190 litres. For use in Acetylene atmospheres further testing is required to confirm the value. This value is to be taken into account when determining the Temperature Class of the equipment to which the breather is fitted

VI. The breather drains do not dissipate any energy other than the expulsion of heated gas in the event of an internal explosion (see above). For Ex e applications the temperature class will be dependant on the enclosure into which it is installed.



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

ISSUE 0: IECEXITS13.0018X replaces IECEXITS13.0018U which was created for the CT breathers as components

ISSUE 1: Intertek Project G101806462: To remove the restriction on the breathers mounting position