



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 SIR 08.0024X** issue No.: **5**
Status: **Current**
Date of Issue: **2014-06-10** Page 1 of 4

Certificate history:
Issue No. 5 (2014-6-10)
Issue No. 4 (2013-12-6)
Issue No. 3 (2013-1-30)
Issue No. 2 (2012-6-7)
Issue No. 1 (2008-11-20)
Issue No. 0 (2008-5-13)

Applicant: **EX Innovations Ltd., Trading as Redapt**
Jepson Court
Tancred Close
Queensway
Royal Leamington Spa
Warwickshire CV31 3RZ
United Kingdom

Electrical Apparatus: **Breather / Drains**
Optional accessory:


Type of Protection: **Ex e and dust**

Marking: Ex e I/IIc Mb/Gb Ex e IIC Gb
Ex tb IIIC Db IP66 Ex tb IIIC Db IP66
Ta = -70°C to 180°C (Dependant on construction material and O-ring fitted,
refer to Conditions of Certification)

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

Position: **Certification Manager**

Signature:
(for printed version)


2014-6-10

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:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira
CERTIFICATION



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Manufacturer: **EX Innovations Ltd., Trading as Redapt**
Unit 1
1 Kingsway South
Aldridge
Walsall 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 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5
IEC 60079-31 : 2008 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
Edition: 1
IEC 60079-7 : 2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition: 4

*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/SIR/ExTR08.0057/00
GB/SIR/ExTR13.0323/00

GB/SIR/ExTR08.0147/01

GB/SIR/ExTR12.0082/00

Quality Assessment Report:

GB/SIR/QAR06.0014/00
GB/SIR/QAR06.0014/03
GB/SIR/QAR06.0014/06

GB/SIR/QAR06.0014/01
GB/SIR/QAR06.0014/04

GB/SIR/QAR06.0014/02
GB/SIR/QAR06.0014/05



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Breather/Drains are designed to allow moisture emission from Increased Safety Type 'Ex e' enclosures. Each device comprises a brass body with an M20, M25 or M32 entry thread. The body is machined such that a dust/moisture seal, manufactured from Hydrophilic Polyethylene or sintered bronze, can be pressed in place. Drainage channels through the body allow for the passage of moisture through the filter. The device may be screwed into the wall of an enclosure or into a through hole, being secured by a locknut.

Alternative materials of manufacture:

Groups I and II – Brass, mild steel or stainless steel

Group II only - Glass filled nylon (Durathon glass filled nylon BKV30) or aluminium

Alternative equivalent entry threads:

NPT, NPS BSPP, BSPT, Imperial Conduit, ET or Pg

O' ring seals:

'O' ring seals materials fitted into the Breather/Drain may be provided in Nitrile, Viton, EPDM, Neoprene, Silicone or Fluorosilicone

Surface coating:

The products may additionally be metallic plated to suit the application.

CONDITIONS OF CERTIFICATION: YES as shown below:

Refer to the Annexe



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

Issue 1 - this Issue introduced the following changes:	
1	The drain holes were re-positioned and re-sized as defined in the associated ExTR, in consequence, the special point for noting that specifies the wall thickness of the associated enclosure has been removed
Issue 2 - this Issue introduced the following change:	
1	The applicant has advised us that their address has been changed from Units 46 & 47, Darlaston Central Trading Estate, Salisbury Street, Darlaston, West Midlands WS10 8XB to that currently shown.
Issue 3 - this Issue introduced the following change:	
1.	The recognition that the company name and address has changed from Redapt Ltd, Westgate, Aldridge, West Midlands WS9 8FS to EX Innovations Ltd., Trading as Redapt at Jepson Court, Tancred Close, Queensway, Royal Leamington Spa, Warwickshire CV31 3RZ.
2	The introduction of a Condition of Manufacture.
Issue 4 - this Issue introduced the following changes:	
1.	Following appropriate assessment to demonstrate compliance with the latest technical knowledge for dust requirements, the previously listed documents, IEC 61241-0:2006 and IEC 61241-0:2006 were replaced by IEC 60079-31:2008, the marking was already in accordance with this latest standard.
2.	GB/SIR/ExTR08.0147/00/00 was replaced by GB/SIR/ExTR08.0147/00/01.
Issue 5 - this Issue introduced the following change:	
1.	The certificate was changed from a Component 'U' certificate into an Equipment certificate at this variation.

Annexe to: IECEx SIR 08.0024X Issue 4
Applicant: EX Innovations Ltd., Trading as Redapt
Apparatus: Breather / Drains



O' ring seals

'O' ring seals materials fitted into the Breather/Drain may be provided in the following materials to suit the application:

Nitrile	EPDM	Silicone
Viton	Neoprene	Flurosilicone

Surface coating:

The products may additionally be metallic plated to suit the application.

Conditions of Certification

The end user shall note the following limitations:

1. These breather/drains are only suitable for bottom entry applications.
2. The breather/drains with three, 3 mm drain holes shall only be used with increased safety enclosures that have a minimum wall thickness of 2 mm, there is no restriction on the wall thickness for breather/drains with two, 5 mm drain holes.
3. The products shall be selected for a temperature range at their point of mounting based upon the combination of interface seal and material of construction:

Construction material	Limiting temperature
Metallic body	Dependant on filter and seal material
Nylon body	-50°C to +125°C, unless limited by filter material
HDPE dust/moisture seal	-50°C to +85°C
Metallic dust/moisture seal	Dependant on body and interface material

Interface O-ring Material	Limiting temperature
Nitrile	-30°C to +100°C
EPDM	-50°C to +125°C
Neoprene	-40°C to +100°C
Viton	-20°C to +180°C
Silicone	-50°C to +180°C
Fluorosilicone	-70°C to +150°C

4. The interfaces between the breather/drains and associated enclosure cannot be defined. Therefore, it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.
5. The clearance holes for metric male threaded products, suitable for clearance hole applications of Increased safety enclosures are to have a diameter of 0.3 to 0.5 mm larger than the major diameter of the male thread.

Conditions of manufacture

The Manufacturer shall comply with the following:

1. These products shall be marked in accordance with the information as specified in this certificate and related reports.

Date: 02 June 2014

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Sira Certification Service

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