



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 SIR 09.0088X**

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Certificate history:

Status: **Current**

Issue No: 5

Issue 4 (2020-07-30)

Issue 3 (2014-06-06)

Issue 2 (2012-09-04)

Issue 1 (2011-06-10)

Issue 0 (2009-12-09)

Date of Issue: 2021-05-19

Applicant: **Topworx Inc**
3300 Fern Valley Road
Louisville
Kentucky
40213
United States of America

Equipment: **DXR-R*M***** Switchbox**

Optional accessory:

Type of Protection: **Increased Safety, Encapsulation and Dust**

Marking: Ex e mb IIC T4 Gb
Ex tb III C T66°C Db IP67
Ambient Range:
24 Vdc Asco valve: -20°C to +44°C
115 Vac/230 Vac Asco valve: -20°C to +37°C

Approved for issue on behalf of the IECEx
Certification Body:

Neil Jones

Position:

Certification Manager

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 www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom

sira
CERTIFICATION





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Manufacturer: **Topworx Inc**
3300 Fern Valley Road
Louisville
Kentucky
40213
United States of America

Additional
manufacturing
locations:

Emerson Machinery Equipment (Shenzhen) Co. Ltd.
Fisher Controls Division
Bao Heng Technology Industry Park
North Hong Long 2nd Road
District 68
Bao'an District Shenzhen 518101
China

Emerson Automation Fluid Control & Pneumatics Poland Sp. z o. o. (Emerson AFCP Poland Sp. z o.o.)
Kurczaki 132
Lodz 93-331
Poland

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 60079-0:2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5

IEC 60079-18:2004 Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus
Edition: 2.0

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 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:

GB/SIR/ExTR09.0183/00
GB/SIR/ExTR14.0112/00

GB/SIR/ExTR11.0091/00
GB/SIR/ExTR20.0142/00

GB/SIR/ExTR12.0219/00
GB/SIR/ExTR21.0088/00

Quality Assessment Reports:

GB/BAS/QAR06.0020/10

GB/SIR/QAR07.0025/08

NL/DEK/QAR11.0004/06



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The DXR-**M***** Switchbox monitors the position of a valve by providing electrical feedback and optional visual indication. It uses a glass fibre reinforced polyester enclosure that houses the following devices:

- One Topworx Cube, either 2-reed or 4-reed - supply: 1 A/125 V maximum.
- Two Asco Joucomatic piezo valves (IECEx SIR 06.0109X, BAS98ATEX2168X), which may be one of the following types:
 - EM5 PVX 30200018: 24 Vdc, 3 W
 - EM5 PVX 30200017: 115 Vac, 5 W.
 - EM5 PVX 30200017: 230 Vac, 5 W.

The enclosure comprises an upper and lower housing that is fitted with a metallic or a non-metallic bush. The shaft that passes through these bushes is connected to the driving source in the lower housing and is used to activate the internal equipment, this includes the optional visual indication of the shaft rotational position which is located in the upper housing. The enclosure is provided with moulded threaded bushings for the installation of the internal apparatus, chassis plates etc. and the lower housing can be fitted with metallic or non-metallic hubs that accommodate threaded entries and facilitate the attachment of an air operated valve. The enclosure also has an internal and external earth facility or an earth continuity chassis plate. The cover joint is provided with an "O" ring to maintain the ingress protection of the enclosure

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The DXR-**M***** Switchbox shall only be installed in a location where there is a low risk of mechanical damage.
2. The DXR-**M***** Switchbox shall not be used inside liquid fuel metering pumps, dispensers and remote pumping units.
3. The Asco piezo valve shall be connected to a supply protected by a fuse capable of interrupting the prospective short circuit current of that supply.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue, Issue 5, recognises the following change; refer to the certificate annex to view a comprehensive history:

1. GB/BAS/QAR13.0005/03 was replaced by NL/DEK/QAR11.0004/06.

Annex:

[IECEx SIR 09.0088X Annexe Issue 5.pdf](#)

Annexe to: IECEx SIR 09.0088X Issue 5
Applicant: Topworx Inc.
Apparatus: DXR-R*M***** Switchbox



Conditions of Manufacture

1. The DXR-R*M***** Switchbox covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.
2. The finished, manufactured Topworx Cube shall be subjected to a visual inspection in accordance with clause 9.1 of IEC 60079-18:2004. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decompression, failure in adhesion or softening.
3. An electric strength test in accordance with clause 9.2 of IEC 60079-18:2004 shall be carried out at 1000 V + 2 Un, or 1500 Vac, whichever is the greater, for 60 seconds on the encapsulated Topworx Cube. Alternatively, if this test voltage is multiplied by 1.2 times, it may be applied for at least 100 ms. The voltage shall be applied between the circuits joined together and the outer enclosure wrapped in aluminium foil

Full certificate change history

Issue 1 – this Issue introduced the following changes:

- i. The IP64 on the DXR (resin) enclosures was replaced with IP67.
- ii. Following appropriate re-assessment, IEC 61241-1:2004 Ed 1 was replaced by IEC 60079-31:2008 Ed 1.
- iii. The list of supporting standards was corrected.

Issue 2 – this Issue introduced the following change:

- i. To allow an alternative silicone gasket/O-ring material to be used on the enclosure, shaft and valve manifold where applicable.

Issue 3 – this Issue introduced the following change:

- i. The introduction of two additional manufacturing locations:

Emerson Machinery Equipment (Shenzhen) Co. Ltd.
Fisher Controls Division
Bao Heng Technology Industry Park
North Hong Long 2nd Road
District 68
Bao'an District
Shenzhen 518101
China

Emerson Process Management Magyarország Kft.
Fisher Controls International LLC
H-8001 Székesfehérvár
Berenyi U
72-100
Hungary

Issue 4 – this Issue introduced the following change:

- i. The change to the name of the facility in Poland was recognised;
From: ASCO Numatics Sp. z o.o. To: Emerson Automation Fluid Control & Pneumatics Poland Sp. z o.o.

Issue 5 – this Issue introduced the following change:

- i. GB/BAS/QAR13.0005/03 was replaced by NL/DEK/QAR11.0004/06