



# 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](http://www.iecex.com)

Certificate No.: **IECEX SIR 07.0093X** issue No.:8

Status: **Current**

Date of Issue: **2014-06-06** Page 1 of 5

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

Certificate history:  
Issue No. 8 (2014-6-6)  
Issue No. 7 (2013-12-20)  
Issue No. 6 (2012-12-17)  
Issue No. 5 (2012-9-20)  
Issue No. 4 (2012-8-3)  
Issue No. 3 (2012-3-23)  
Issue No. 2 (2011-10-19)  
Issue No. 1 (2009-5-28)  
Issue No. 0 (2008-3-19)

Electrical Apparatus: **Types DXP and DXS Switchboxes**  
Optional accessory:

Type of Protection: **Flameproof and Dust**

Marking: **Markings for Gas**  
Ex d IIC T6 or Ex d IIB+H2 T6  
Ta = -60°C to +60°C  
Ex d IIC T5 or Ex d IIB+H2 T5  
Ta = -60°C to +75°C  
Ex d IIC T4 or Ex d IIB+H2 T4  
Ta = -60°C to +110°C  
Ex d IIC T3 or Ex d IIB+H2 T3  
Ta = -60°C to +175°C

**Markings for Dust**  
Ex tb IIIC T85°C Db  
Ta = -50°C to +60°C  
Ex tb IIIC T100°C Db  
Ta = -50°C to +75°C  
Ex tb IIIC T135°C Db  
Ta = -50°C to +110°C

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

Position: **Certification Support Officer**

Signature:  
(for printed version)

Date: **2014-06-06**

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: **TopWorx Inc.**  
3300 Fern Valley Road  
Louisville  
Kentucky 40233  
**United States of America**

**Additional Manufacturing location(s):**

<b>Emerson Machinery Equipment (Shenzhen) Co. Ltd.</b> Fisher Controls Division Bao Heng Technology Industry Park North Hong Long 2nd Road District 68 Bao'an District Shenzhen 518101 China	<b>Emerson Proces Management Magyarország Kft.</b> Emerson Process Management Magyarország Kft. Fisher Controls International LLC H-8001 Székesfehérvár Berenyi U 72-100 Hungary
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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:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*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/ExTR08.0031/00	GB/SIR/ExTR09.0066/00	GB/SIR/ExTR11.0263/00
GB/SIR/ExTR11.0298/00	GB/SIR/ExTR12.0194/00	GB/SIR/ExTR12.0234/00
GB/SIR/ExTR12.0317/00	GB/SIR/ExTR12.0318/00	GB/SIR/ExTR13.0334/00
GB/SIR/ExTR14.0112/00		

Quality Assessment Report:

GB/BAS/QAR06.0020/05	GB/BAS/QAR13.0005/00	GB/SIR/QAR07.0025/04
GB/SIR/QAR07.0025/05	US/UL/QAR06.0009/00	



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The Type DXP switchbox comprises a rectangular base and cover manufactured in aluminium. The base and cover has a boss with a bronze sleeve bearing, through which passes the switch shaft. Cams with magnets are attached to the shaft to operate sensors within the enclosure. The enclosure is provided with either a flat flange joint or a serrated joint for gas group IIB+H<sub>2</sub> or group IIC applications respectively. The cover securing bolts are Grade A2-70 stainless steel.

The rectangular base and cover can be manufactured from stainless steel to form a Type DXS Switchbox; in this case the cover/base joint is a flat flange only (IIB+H<sub>2</sub>) and the sleeve bearing is not provided.

The enclosure may contain a combination of switches, a fieldbus module, pilots and terminal strips up to the maximum thermal dissipation of 10 W. The pilots provide feedback to control a pneumatic valve attached to the side of the enclosure.

The switch box is rated up to 240 V, 15 A.

When marked for dust, the enclosures have an IP66/IP67 rating.

Refer to EQUIPMENT (continued) Condition of Manufacture

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The IIC enclosures are excluded from use in carbon disulphide atmospheres.
2. The air pressure to the valve block, when fitted, shall not exceed 10.0 bar.
3. For ambient temperatures above 110°C, the degrees of ingress protection IP66 and IP67 are not endorsed by Sira.
4. The slotted hexagonal head cover screws are not of standard form; they shall only be replaced with identical screws sourced from the equipment manufacturer.
5. The hexagonal head cover screws are to be replaced only with stainless steel A2-70 or A4-80 screws to ISO 35061.
6. Cover fasteners are to be tightened to a torque value of 10.85 Nm (8ft/lbs) minimum.



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## EQUIPMENT(continued):

### Conditions of manufacture

The Manufacturer shall comply with the following:

1. The manufacturer shall conduct a routine overpressure test on each unit to be marked with a -60°C ambient, unless manufacture from stainless steel, at the following pressures; for at least 10 s as required by clause 16.1 of IEC 60079-1:2007. There shall be no permanent damage or deformation to the enclosure.

Gas group IIC	Gas group IIB+H2
28 bar	19.1 bar



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

Issue 1 to Issue 7 – for changes refer to Issue 7	
Issue 8 – this Issue introduced the following change:	
1	The introduction of two additional manufacturing locations: Emerson Machinery Equipment (Shenzhen) Co. Ltd. Fisher Controls Division Bao Heng Technology Industry Park North Hong Long 2 <sup>nd</sup> 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