# 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 BAS 11.0023X**

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Certificate history:

Status: **Current**

Issue No: 3

Issue 2 (2020-07-14)
Issue 1 (2014-04-10)
Issue 0 (2011-12-12)

Date of Issue: 2021-06-22

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

Equipment: **D2-FF Valvetop Switchbox**

Optional accessory:

Type of Protection: **Type of Protection 'nA nC' & 'tc'**

Marking: **Ex nA nC IIC T6 Gc (-20°C ≤ Ta ≤ +50°C)**
**Ex tc III C T80°C Dc IP67 (-20°C ≤ Ta ≤ +50°C)**

Approved for issue on behalf of the IECEx Certification Body: **Mr R S Sinclair**

Position: **Technical Manager**

Signature: (for printed version)

M POWNEY
Certification Manager

Date: 22/6/2021

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:

**SGS Baseefa Limited**
**Rockhead Business Park**
**Staden Lane**
**Buxton, Derbyshire, SK17 9RZ**
**United Kingdom**

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

Additional manufacturing locations:

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

**Emerson Machinery Equipment (Shenzhen) Co. Ltd**
101 Building 2, COFCO Park
Honglang North 2nd Road
Xin'an Street
Bao'an District
Shenzhen 518101
**China**

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 60079-15:2010** Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

**IEC 60079-31:2008** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
Edition:1

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 Report:

GB/BAS/ExTR11.0279/00

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 D2-FF Valvetop Switchbox is designed to control and provide feedback of the position of an actuator / valve combination located in the hazardous area via a Foundation Fieldbus or FISCO network.

The equipment comprises an enclosure either made of stainless Steel (DXS models), coated aluminium (DXP models) or glass fibre reinforced resin enclosure (DXR models) housing a FF CC Electronic Unit, up to two certified piezoelectric pilot valves and up to two limit switches. A shaft assembly passes through the enclosure base to which a disc with metallic contacts is fitted to activate limit switches fitted around the shaft. Based on the inputs from the devices fitted, the FF CC Electronic Unit processed the information and communicates it via the Fieldbus network. The FF CC Electronic Unit also controls the operation of the pilot valves, when fitted, which are connected to the pneumatic valves attached to the side of the enclosure.

On top of the Switchbox enclosure a visual indicator is fitted which mechanically connects to the shaft assembly inside to provide an indication of the position of the actuator / valve to which the equipment is connected.

External connections to the equipment are made using a plug and socket connector with screw terminals via one of two threaded entries on either side of the enclosure. The installation of external connections and the plugging of the unused entry must be carried out using appropriate Ex e or Ex n cable glands or blanking plug components with a minimum IP rating of IP67 certified by an approved certification body.

See Certificate Annex for model range & input parameters.

**SPECIFIC CONDITIONS OF USE: YES as shown below:**
1. When fitted, only non-combustible fluids may be used in the pneumatic circuit.

2. **DXR Models Only**: The equipment shall only be installed in a location where there is a low risk of mechanical damage. The enclosure constitutes a potential electrostatic risk and must only be cleaned with a damp cloth.

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

**Variation 3.1**

Update of alternative manufacturing address only.

File Reference: **21/0437**

**Annex:**

IECEx BAS 11.0023X Annex Issue 0.pdf

**Baseefa**
Rockhead Business Park
Staden lane, Buxton, Derbyshire
SK17 9RZ
United Kingdom



**D2-FF Valvetop Switchbox**

Model Range

The following model range is covered by this certificate:

Enclosure

Piezo Pilot Valve

| DXP | F | L | 2 | * | * | * | * | P | * | * | * |
|---|---|---|---|---|---|---|---|---|---|---|---|

DXP = Coated Aluminium
DXS = Stainless Steel
DXR = Glass Fibre Reinforced Resin

P = 6V Fail O/C
R = 6V Fail L/P

* Denotes any number or character

Input Parameters – Bus Connector J1

Maximum Working Voltage = 32V d.c