

1 **TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**

3 Type Examination Certificate Number: **Baseefa11ATEX0036X – Issue 1**

3.1 In accordance with Article 41 of Directive 2014/34/EU, Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

4 Product: **D2-FF Valvetop Switchbox**

5 Manufacturer: **Topworx Incorporated**

6 Address: **3300 Fern Valley Road, Louisville, Kentucky, 40213 United States of America**

7 This re-issued certificate extends Type Examination Certificate No. Baseefa11ATEX0036X to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products of Category 3 intended for use in potentially explosive atmospheres given in Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018 EN IEC 60079-15:2019 EN 60079-31:2014

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment and not to specific items of equipment subsequently manufactured.

12 The marking of the product shall include the following:

⊕ II 3GD Ex ec nC IIC T6 Gc (-20°C ≤ Ta ≤ +50°C)
Ex tc IIIC T80°C Dc IP67 (-20°C ≤ Ta ≤ +50°C)

SGS Fimko Oy Customer Reference No. **2191**

Project File No. **21/0624**

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Schedule

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14 Certificate Number Baseefa11ATEX0036X – Issue 1

15 Description of Product

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.

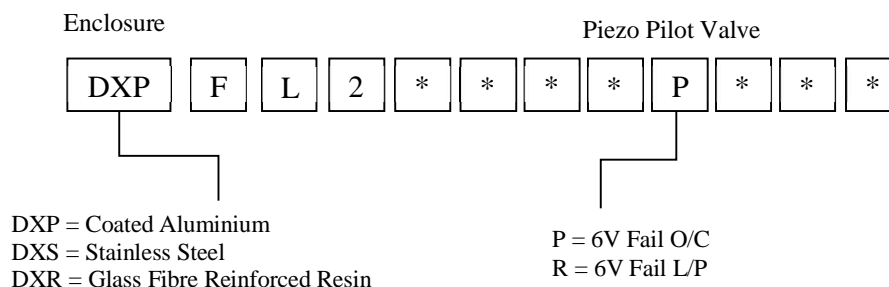
On top of the Switchbox enclosure a visual indicator is fitted which mechanically connects to the shaft assembly inside to provide an indication of the position of the actuator / valve to which the equipment is connected.

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.

Input Parameters – Bus Connector J1

Maximum Working Voltage = 32V d.c

The following model range is covered by this certificate: -



* Denotes any number or character

16 Report Number

See Certificate History

17 Specific Conditions of Use

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.
3. The cable glands fitted by the user must be appropriately certified in accordance with the requirements of IEC 60079-0 and provide a minimum degree of protection of at least IP67.
4. Unused entries into the enclosure must be fitted by the user with appropriately certified blanking elements that maintain the IP67 rating of the equipment.
5. The equipment must be installed in an area of Pollution Degree 2 or better, as defined in IEC 60664-1.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
ES-02193-1	1 of 8	AD	02/25/2022	Assembly, Board FF CC Board
ES-02193-1	2 of 8	AD	02/25/2022	Assembly, Board Button and LED (X1)
ES-02193-1	3 of 8	AD	02/25/2022	Assembly, Board Power (X4)
ES-02193-1	4 of 8	AD	02/25/2022	Assembly, Board Micro (X3)
ES-02193-1	5 of 8	AD	02/25/2022	Assembly, Board Pilot Valve (X2) Schematic PCB
ES-02193-1	6 of 8	AD	02/25/2022	Assembly, Board FF CC Board
ES-02193-1	7 of 8	AD	02/25/2022	Assembly, Board PCB Specification
ES-02193-1	8 of 8	AD	02/25/2022	Assembly, Board CC Board
CERT-ES-02517-1	1 of 1	AB	03/16/2022	Assembly, Nameplate DXP/DXS/DXR W/D2-FF Non-Sparking

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
CERT-ES-02495-1	1 of 4	c	10/26/11	Assembly, FF Device DXP / DXS
CERT-ES-02495-1	2 of 4	c	10/26/11	Assembly, FF Device DXR
CERT-ES-02495-1	3 of 4	c	10/26/11	Assembly, Shaft D2-FF DXP/DXS/DXR
CERT-ES-02495-1	4 of 4	c	10/26/11	Switchbox Circuit Diagram
ES-01962-1	1 to 4	2	4/19/11	Board, Button, FF
ES-02040-1	1 & 2	4	4/19/11	Assembly, FF Device

The above drawings are associated and held with IECEx Certificate No. IECEx BAS 11.0023X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa11ATEX0036X	12 December 2011	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR11.0279/00. Project File No. 10/0255.
Baseefa11ATEX0036X Issue 1	9 June 2022	To confirm that the current design meets the requirements of EN IEC 60079-0:2018, EN IEC 60079-15:2019 and EN 60079-31:2014. The D2-FF Valvetop Switchbox was additionally assessed for type of protection 'ec' against the requirements of EN 60079-7: 2015+A1:2018.

Certificate No.	Date	Comments
		<p>The equipment is now marked as shown below:</p> <p>⊕ II 3 GD Ex ec nC IIC T6 Gc (-20°C ≤ Ta ≤ +50°C)</p> <p>Ex tc IIIC T80°C Dc IP67 (-20°C ≤ Ta ≤ +50°C)</p> <p>Test Report No. GB/BAS/ExTR22.0047/00. Project File No. 21/0624.</p>
For drawings applicable to each issue, see original of that issue.		