1 # EU - TYPE EXAMINATION CERTIFICATE

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

3 EU - Type Examination Certificate Number: **Baseefa11ATEX0035X – Issue 1**

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-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 EC-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 EC Type Examination Certificate No. Baseefa11ATEX0035X 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, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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 60079-11:2012** **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 EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:

Ⓔx II 2GD **Ex ib IIC T4 Gb (-20°C ≤ T_a ≤ +50°C)**
Ex tb IIIC T80°C Db IP67 (-20°C ≤ T_a ≤ +50°C)

SGS Fimko Oy Customer Reference No. **2191** Project File No. **21/0624**

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13 **Schedule**

14 **Certificate Number Baseefa11ATEX0035X – 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 certified FF CC Electronic Unit, up to two certified piezoelectric pilot valves, up to two limit switches and an optional potentiometer position sensor. A shaft assembly passes through the enclosure base to which either a potentiometer is connected to provide positional information from the actuator / valve connected or a disc with metallic contacts is fitted to activate limit switches fitted around the shaft, or a combination of both. 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.

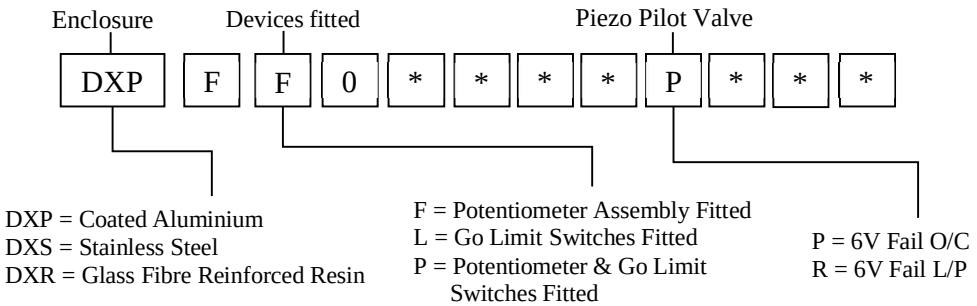
Input Parameters: Bus Connector J1 pins 1 to 3
I.S Parameters

U_i	=	30V	C_i	=	5nF
I_i	=	380mA	L_i	=	10µH
P_i	=	1.5W			

FISCO Input Parameters

U_i	=	17.5V	C_i	=	5nF
I_i	=	380mA	L_i	=	10µH
P_i	=	5.32W			

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.

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:

None

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
CERT-ES-02496-1	1 of 1	g	10/27/11	Assembly, Nameplate DXP/DXR/DXS W/D2-FF I.S.

The above drawings are associated and held with IECEx Certificate No. IECEx BAS 11.0022X

The following drawings are removed from this ATEX certificate and IECEx BAS 11.0022X:

Number	Sheet	Issue	Date	Description
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
ES-02193-1	1 of 8	6	08/18/11	Assembly, Board FF CC Board Schematic PCB
ES-02193-1	2 of 8	6	08/18/11	Assembly, Board Button and LED (X1) Schematic PCB
ES-02193-1	3 of 8	6	08/15/11	Assembly, Board Power (X4) Schematic PCB
ES-02193-1	4 of 8	6	08/18/11	Assembly, Board Micro (X3) Schematic PCB
ES-02193-1	5 of 8	5	05/24/11	Assembly, Board Pilot Valve (X2) Schematic PCB
ES-02193-1	6 of 8	6	08/18/11	Assembly, Board FF CC Board
ES-02193-1	7 of 8	6	08/18/11	Assembly, Board PCB Specification
ES-02193-1	8 of 8	6	08/18/11	Assembly, Board FF CC Board Parts List

20 Certificate History

Certificate No.	Date	Comments
Baseefa11ATEX0035X	12 December 2011	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR11.0276/00. Project File No. 10/0255.
Baseefa11ATEX0035X Issue 1	6 June 2022	To confirm that the equipment meets the requirements of EN IEC 60079-0:2018, EN 60079-11:2012 and EN 60079-31:2014 and permit changes in the list of certification drawings that do not affect the certification assessment. Specifically, the drawings for the Ex Component FF CC Electronic Unit, which is separately certified and has its own Certificate of Conformity No. IECEx BAS 10.0125U were removed. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR22.0046/00. Project File No. 21/0624.
For drawings applicable to each issue, see original of that issue.		