1 # TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3	Type Examination Certificate Number:	**BAS22UKEX0040X Issue 1**
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 product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS United Kingdom Ltd. (formerly SGS Baseefa Ltd.) 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 Schedule 1 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended).

8.1 The BAS prefix to the Certificate Number indicates that the certificate was issued by SGS Baseefa Ltd. prior to the name change to SGS United Kingdom Ltd. Such certificates remain valid with their original number.

The examination and test results are recorded in a confidential report identified in the revision table at item 20.

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

EN IEC 60079-0: 2018 EN IEC 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 and of the specified product and not to specific products 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 Customer Reference No. **2191** Project File No. **23/0548**

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UKAS PRODUCT CERTIFICATION
0191

pp P. Oates
R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS United Kingdom Limited

13 # Schedule

14 ## Certificate Number BAS22UKEX0040X – 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.

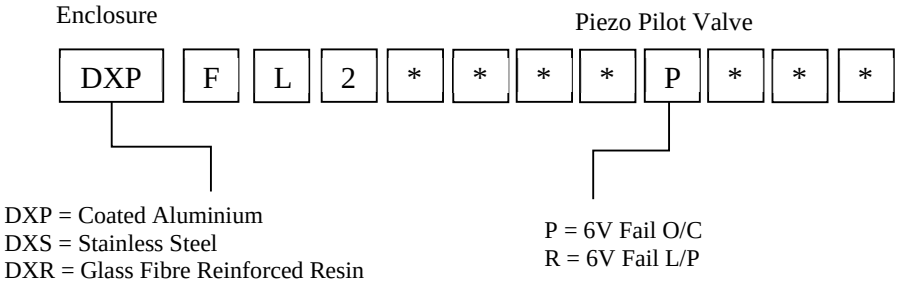
On top of the Switchbox enclosure a visual indicator is fitted which mechanically connects to the shaft assembly inside to provide an indication of the position of the actuator / valve to which the equipment is connected.

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 Item 20 – 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	Compliance
13	LVD type requirements	Manufacturer responsibility
14	Overloading of equipment (protection relays, etc.)	User/Installer responsibility
21 (1)	External effects	User/Installer responsibility
21 (2)	Aggressive substances, etc.	User/Installer responsibility

19 Drawings and Documents

Other than for Issue 0, Drawings and Documents that are introduced at a new edition of the certificate are marked with an asterisk symbol:

Number	Sheet	Issue	Date	Description
CERT-ES-09222-1	1 of 1	AA	03/14/2022	Assembly, Nameplate DXP/DXS/DXR W/D2-FF Non-Sparking

Refer to Baseefa11ATEX0036X for all other drawings.

20 Certificate History

Certificate No.	Date	Comments
BAS22UKEX0040X Issue 0	6 June 2022	Prime Certificate Report Number: GB/BAS/ExTR22.0047/00 Project Number: 21/0624 Original issue of the certificate
BAS22UKEX0040X Issue 1	21 December 2023	To permit minor drawing changes not affecting the certification assessment. Report Number: GB/SGS/ExTR23.0165/00. Project Number: 23/0548.
For drawings applicable to each issue, see original of that issue.		