



**UNITED KINGDOM CONFORMITY ASSESSMENT**

**1 UK 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 Certificate Number: **CSAE 21UKEX1402X** Issue: **2**

4 Product: **Switchboxes / Type DXP and Type DXS**

5 Manufacturer: **Topworx Inc.**

6 Address: **3300 Fern Valley Road, Louisville, Kentucky 40213, USA**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Regulations. The examination and test results are recorded in the confidential reports listed in Section 14.2.

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

EN IEC 60079-0:2018                      EN 60079-1:2014                      EN 60079-31:2014

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

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

11 This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall be in accordance with Regulation 41 and include the following:



II 2GD

**Marking for Group IIC/IIB+H<sub>2</sub>**

Ex db IIC T6 Gb or Ex db IIB+H<sub>2</sub> T6 Gb

Ta = -60°C to +60°C

Ex db IIC T5 Gb or Ex db IIB+H<sub>2</sub> T5 Gb

Ta = -60°C to +75°C

Ex db IIC T4 Gb or Ex db IIB+H<sub>2</sub> T4 Gb

Ta = -60°C to +110°C

Ex db IIC T3 Gb or Ex db IIB+H<sub>2</sub> T3 Gb

Ta = -60°C to +175°C

**Marking for Group IIIC**

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

Name: M Halliwell  
Title: Director of Operations



**Certificate No. CSAE 21UKEX1402X**  
**CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK**

This certificate and its schedules may only be reproduced in its entirety and without change  
QD-1599 Issue 4 (2022-08-22)

## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

**CSAE 21UKEX1402X  
Issue 2**

#### 13 DESCRIPTION OF PRODUCT

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 + H2 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 + H2) 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.

The enclosure fasteners are stainless steel M8x1.25 – 6H, reduced shank A2-70 grade fasteners.

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

#### **Incorporated Amendments**

The product description includes the following applicable amendments from the previous supporting assessments. Only amendments directly applicable to UKCA certification have been included in this list. The amendments are numbered to include a reference to the variation at which these were introduced.

**Amendment 1** - This variation introduced the following changes:

- i. To permit the use within a combustible dust laden atmospheres in accordance with the requirements of IEC 60079-0:2007 and IEC 61241-1:2004.

**Amendment 2** - This variation introduced the following changes:

- i. The recognition of minor drawing modifications; these amendments, which are fully described in the associated Sira report, are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
- ii. The external valve block pressure was raised, the special condition for safe use being modified accordingly.

**Amendment 3** - This variation introduced the following changes:

- i. To permit the metal enclosures to be given an IP67/66 ingress protection rating. The marking in Section 12 was amended accordingly.

**Amendment 4** - This variation introduced the following changes:

- i. The introduction of an alternative internal arrangement which is designated the Type FF 2.0 Module.
- ii. Minor drawing modifications were recognised.

**Amendment 5** - This variation introduced the following changes:

- i. The equipment was permitted to be used in an ambient temperature up to 175°C, the marking is amended accordingly and a Special condition for safe use was added to reflect the change.

## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

**CSAE 21UKEX1402X  
Issue 2**

**Amendment 6** - This variation introduced the following changes:

- i. The ambient temperature range has been extended to -60°C for category 2G only.
- ii. The requirement for routine overpressure testing has been removed for enclosures suitable for a -50°C ambient temperature limit, in addition, a routine overpressure testing requirement for enclosures suitable for -60°C was added.
- iii. The DXP can be fitted with the following switch types:
  - SPDT - 250 V ac at 1.5 A NO Proximity - 250 V ac at 0.2A
  - SPDT - 250 V ac at 0.5 A NO Proximity - 60 V dc at 0.2 A
  - DPDTh - 110 V ac at 6 A NC Proximity - 8 V dc at 3 mA
  - PNP Proximity - 30 V dc at 0.2 A

**Amendment 7** - This variation introduced the following change:

- i. The removal of routine overpressure testing on model variants with stainless steel housings was endorsed.
- ii. Clarification of the special fastener head, on drawing numbers ES-00238-1, was approved.
- iii. The recognition of minor drawing modifications; the leading edge of the bushing from 0.5 mm x 30° to 1.0 mm x 10° to aid assembly, these amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.

**Amendment 8** - This variation introduced the following change:

- i. The introduction of two additional manufacturing locations:
  - Emerson Machinery Equipment (Shenzhen) Co. Ltd.
  - Fisher Controls Division
  - Bao Heng Technology Industry Park
  - North Hong Long 2nd 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

**Amendment 9** - This variation introduced the following change:

- i. The introduction of an advanced HART protocol module variant, HART v7 Model ES-04900-1, to be used in various HART module assemblies.
- ii. Numerous drawing changes have been made.  
Drawing updates to the following scheduled drawings:
  - ES-00238-1 revision 12 to 15;
  - S-S01-0006 revision 2 to 4;
  - S-S01-0008 revision 18 to 23;
  - Drawing ES-01141-1 at revision 9 has been replaced rev 12 to include the HART v7 Module ES-04900-1, and updates to the other module assemblies it can be used in;

## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

**CSAE 21UKEX1402X**

**Issue 2**

- The following nameplate drawings have been updated to include revised markings that are required by the standards upgrade: CERT-ES-01148-1; CERT-ES-01149-1; CERT-ES-03278-1; CERT-ES-03279-1; and CERT-ES-03288-1.
- The following nameplate drawings have become obsolete and removed from the list of scheduled drawings: CERT-ES-03440-1; CERT-ES-03442-1; CERT-ES-03443-1; and CERT-ES-03444-1.
- Drawing S-S01-0007 rev 25 to rev 27 has been updated for various minor changes, detailed in the assessment report.
- Drawing S-S01-0012 rev 22 to rev27 has been updated for various minor changes, detailed in the assessment report.

**Amendment 10** - This variation introduced the following change:

- i. The change of manufacturing location;

From:

Emerson Process Management  
Magyarország Kft.  
Fisher Controls International LLC,  
H-8001 Székesfehérvár,  
Berenyi U, 72-100,  
Hungary

To:

ASCO Numatics Sp.z o.o.  
Kurczaki 132  
93 331 Lodz  
Poland

**Amendment 11** - This variation introduced the following change:

- i. The change to the name of the facility in Poland was recognised:

From:

ASCO Numatics Sp. z o.o.

To:

Emerson Automation Fluid Control & Pneumatics Poland Sp. z o.o.

**Amendment 12** - This variation introduced the following change:

- i. Addition of an alternative hall effect sensor connected to HART v7, Model ES-04900-1 module certified under IECEx SIR 16.0107U and Sira 16ATEX2342U.

**Amendment 13** - This variation introduced the following change:

- i. Addition of an alternate construction of the external indicator.
- ii. Manufacturer address change for Shenzhen location

**SCHEDULE**

**UK TYPE EXAMINATION CERTIFICATE**

**CSAE 21UKEX1402X  
Issue 2**

**Amendment 14** - This variation introduced the following change:

- i. References to factory locations were removed from the certificate, leaving the applicants name and address only.

**Variation 1** - This variation introduced the following change:

- i. Revision to manufacturer drawings. These amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
- ii. Modification to stopping plugs PS-00177-1 to PS-00177-7. Introduction of new stopping plug, PS-00177-8.

**Variation 1** - This variation introduced the following change:

- i. Addition of new variant of aluminium enclosure for Gas Group "IIC" classification.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Reports and Certificate History**

Issue	Date	Report number	Comment
0	09 August 2022	R80088225A	The release of the prime certificate.
1	27 February 2023	R80147059A	The Issue covers the following changes: <ul style="list-style-type: none"> <li>• The listed 'Variations' 1 to 14 inclusive in the Description of Product were updated to 'Amendment'.</li> <li>• The Specific Conditions of Use were re-numbered.</li> <li>• The introduction of Variation 1.</li> </ul>
1	13 July 2023	R80170723A	The introduction of Variation 1.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

- 15.1 The IIC enclosures are excluded from use in carbon disulphide atmospheres.
- 15.2 The air pressure to the valve block, when fitted, shall not exceed 10.0 bar.
- 15.3 For ambient temperatures above 110°C, the degrees of ingress protection IP66 and IP67 are not endorsed by CSA Group Testing Ltd.
- 15.4 The slotted hexagonal head cover screws are not of standard form; they shall only be replaced with identical screws sourced from the equipment manufacturer.
- 15.5 The hexagonal head cover screws are to be replaced only with stainless steel A2-70 or A4-80 screws to ISO 35061.
- 15.6 Cover fasteners are to be tightened to a torque value of 10.85 Nm (8ft/lbs) minimum.
- 15.7 Only suitably certified cable entry devices or conduit shall be used for connections and unused openings shall be blanked off using a suitable ATEX certified plug.
- 15.8 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall



## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

**CSAE 21UKEX1402X**

**Issue 2**

not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)**

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

17 **PRODUCTION CONTROL**

17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders

17.2 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 EN 60079-1:2014. There shall be no permanent damage or deformation to the enclosure.

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



**UK UK  
CANI**

CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK

This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 4 (2022-08-22)

Page 6 of 6



## Certificate Annexe

**Certificate Number:** CSAE 21UKEX1402X  
**Product:** Switchboxes / Type DXP and Type DXS  
**Manufacturer:** Topworx Inc.

### Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
CERT-ES-09048-1	1 of 1	AA	14 Jul 22	NAMEPLATE Markings DXP/DXS Ex db IIB + H2
CERT-ES-09049-1	1 of 1	AA	14 Jul 22	ASSEMBLY, NAMEPLATE & Artwork DXP/DXS IIC
CERT-ES-09050-1	1 of 1	AA	14 Jul 22	DXP/S IIB + H2, T6/T5/T4, SILICON
CERT-ES-09052-1	1 of 1	AA	14 Jul 22	DXP/S IIB + H2/ IIC, T3, SILICON
ES-01141-1	1 of 1	12	16 May 18	DXP/DXS IIC Certification Drawing
ES-01506-1	1 of 1	3	06 Dec 12	Enclosure specification
S-AV1-0003	1 of 1	15	29 Sep 11	General Assembly – DXS Valve
SK-1256	1 of 1	C	06 Jan 12	General Assembly – FF2.0 Module
ES-04900-1*	1 of 1	4	15 May 17	HART Module Assembly
S-S01-0008	1 of 1	23	16 May 18	Upper Casting -DXP
S-S01-0007	1 of 1	27	16 May 18	Lower Casting -DXP With Ports
S-S01-0012	1 of 1	27	07 Jun 18	Lower Casting -DXP Without Ports
S-S01-SS08	1 of 1	6	29 Sep 11	Upper Casting -DXS
S-S01-SS07	1 of 1	15	18 Nov 13	Lower Casting -DXS With Ports
S-S01-SS12	1 of 1	15	18 Nov 13	Lower Casting -DXS Without Ports
ES-00746-1	1 of 1	2	14 May 09	Serration Joint Details - Lower Casting
ES-00747-1	1 of 1	4	29 Sep 11	Serration Joint Details – Upper Casting
ES-01068-1	1 of 1	1	25 Mar 08	Serration Joint Match Details
ES-00157-1	1 of 1	7	18 Nov 13	Switch Shaft Assembly
S-S01-0016	1 of 1	11	18 Nov 13	Switch Shaft - Standard
S-S01-0017	1 of 1	11	18 Nov 13	Switch Shaft - Universal
S-S01-0006	1 of 1	4	16 May 18	Bushing, Oil impregnated
S-S01-0013	1 of 1	5	12 Oct 07	Sinter
ES-00238-1	1 of 1	15	16 May 18	Cover Bolt
PS-00177-1	1 of 1	5	05 Dec 11	Blanking Plug
ES-00874-1	1 of 1	2	29 Sep 11	EDS Cube Assembly
S-A01-0001-M	1 of 1	14	29 Sep 11	Switch Assembly - SPDT
S-A01-0030	1 of 1	20	18 Nov 13	Switch Assembly - DPDT
S-A01-0032	1 of 1	12	29 Sep 11	Switch Assembly – L2
S-A01-0001-F	1 of 1	11	29 Sep 11	Switch Assembly – P & F
S-A01-0010	1 of 1	5	02 Jan 05	Target Assembly
ES-08221-1	1 of 1	AA	02 Dec 20	Schematic AH8503 Hall Effect Sensor
ES-08619-1	1 to 2	AA	02 Dec 20	Assembly Drawing AH8503 Hall Effect Sensor
ES-08220-1	1 to 2	AA	02 Dec 20	AH8503 Hall Effect Sensor
ES-08605-1	1 of 1	AA	02 Dec 20	Lower Casting, DXP Base With Valve Ports
ES-08752-1	1 of 1	AA	02 Dec 20	Lower Casting, DXP Base Without Valve Ports
ES-04311-1	1 to 5	AA	02 Dec 20	D-SERIES Master Assy Ex d, Ex ia, Ex e & Ex nA nC Enclosure



**UKUK  
CANI**

CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK

This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 4 (2022-08-22)

Page 1 of 2





## Certificate Annexe

**Certificate Number:** CSAE 21UKEX1402X  
**Product:** Switchboxes / Type DXP and Type DXS  
**Manufacturer:** Topworx Inc.

Drawing	Sheets	Rev.	Date (Stamp)	Title
ES-08567-1	1 of 1	AA	02 Dec 20	Contactless Positioner Hall Effect Sensor Board Housing
ES-08568-1	1 of 1	AA	02 Dec 20	CPS Magnet Holder Hall Effect Sensor Magnet Lid
ES-08569-1	1 of 1	AA	02 Dec 20	CPS Magnet Holder Hall Effect Sensor Magnet Holder
ES-08570-1	1 of 1	AA	02 Dec 20	Contact Position Sensor Assembly
ES-08599-1	1 of 1	AA	02 Dec 20	CPS Ring Magnet

### Issue 1

Drawing	Sheets	Rev.	Date (Stamp)	Title
ES-00746-1	1 of 1	6	18 Nov 22	MODIFICATION, CASTING IIC
ES-00747-1	1 of 1	7	18 Nov 22	MODIFICATION, CASTING IIC
PS-00177-1	1 of 1	AD	15 Feb 23	PLUG, HOLE
S-S01-0007	1 of 1	AD	18 Nov 22	LOWER CASTING, DXP BASE WITH VALVE PORTS
S-S01-0008	1 of 1	AC	18 Nov 22	UPPER CASTING, DXP LID
S-S01-0012	1 of 1	AE	18 Nov 22	LOWER CASTING, DXP BASE WITHOUT VALVE PORTS
S-S01-0013	1 of 1	8	18 Nov 22	FLAME ARRESTOR, DXP
S-S01-0016	1 of 1	13	18 Nov 22	SHAFT, STANDARD
S-S01-0017	1 of 1	14	18 Nov 22	SHAFT, NAMUR
S-S01-SS07	1 of 1	16	18 Nov 22	LOWER CASTING, DXS W/PORTS
S-S01-SS08	1 of 1	13	18 Nov 22	UPPER CASTING, DXS

### Issue 2

Drawing	Sheets	Rev.	Date (Stamp)	Title
ES-06649-1	1 of 1	AE	01 Jul 23	Lower Casting, DXP IIC Base with Valve Ports
ES-06650-1	1 of 1	AD	01 Jul 23	Lower Casting, DXP IIC Base without Valve Ports



**UK UK  
CANI**

CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK

This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 4 (2022-08-22)

Page 2 of 2