1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 14ATEX2122X** Issue: **10**

4 Equipment: **TX* Series Valve Position Indicators**

5 Applicant: **TopWorx Inc.**

6 Address: 3300 Fern Valley Road
Louisville
Kentucky 40213
USA

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

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012 IEC 60079-31:2014

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

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2GD①
Ex ia IIC T② Gb (Ta = -②°C to +②°C)
Ex tb IIIC T②°C Db (Ta = -②°C to +②°C)
IP66/67

① II 2G for products bearing a T3 temperature class.
② The temperature class, ambient temperature range and surface temperature depend on devices used in the construction of these products, see Conditions of Manufacture.

Signed: M Halliwell
Title: Director of Operations

PRODUCTS
RvA C 652

Project Number 80188648

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 14ATEX2122X**
Issue 10

13 **DESCRIPTION OF EQUIPMENT**

The Valve Position Indicators consist of a metal enclosure (approximately 150 mm x 100 mm by 60 mm) comprising a body and a lid. There is a plastic dome housing a visual indicator; the dome does not contribute to the ingress protection. There are threaded entries to allow the installation of cable glands.

Enclosures types

Model	Body	Lid	Dome
TXP	Aluminium	Aluminium	Lexan
TXS	Stainless Steel	Stainless Steel	Lexan

Internally, a rotating cam activates a number of internal devices that sense the status of the valve position. The approved internal devices are as shown in the Condition of Manufacture section of the certificate.

Variation 1 - This variation introduced the following changes:

i. The following reductions in the lower ambient temperature were approved for devices intended for use in flammable gas atmospheres:
   - -65°C for Valve Position Indicators containing only simple switches
   - -60°C for PTB-certified P+F switches to; for group IIC gas certification only

ii. The introduction of a T3 temperature class option; this applies to Valve Position Indicators containing only simple switches that are intended for use in flammable gas atmospheres.

iii. An existing Condition of Manufacture was reviewed and revised to recognise new values and to clarify the content.

iv. The addition of line fault detection options for devices intended for use in flammable gas atmospheres with T4 and T3 temperature classes; as a result, a new condition of manufacture was added.

v. The address of the manufacturing location in China was changed from Fisher Controls Division, Bao Heng Technology Industry Park, North Hong Lang 2nd Road, District 68 Bao'an District, Shenzhen 518101 to Fisher Controls Division, Bao Heng Technology Industry Park, Liu Xian 1st Road, District 68, Bao'an District, Shenzhen 518101.

vi. The address of the manufacturing location in Hungary was changed from H-8001 Szekesfehervar Berenyi U, 72-100 to Holland Fasor 6, Székesfehérvár.

Variation 2 - This variation introduced the following change:

i. To include the component-certified Series 36 Go Switch (option Q) as an alternative option for the Series 35 Go Switch, with resulting amendments to the Conditions of Manufacture.

Variation 3 - The introduction of the change of manufacturing location:

From:	To:
Emerson Process Mgmt Magyarorszag Holland Fasor 6 Szekesferhervar, Hungary 8000	ASCO Numatics Sp.z o.o. Kurczaki 132 93 331 Lodz Poland

Variation 4 - This variation introduced the following changes:

i. The introduction of the Series 36SD GO Switch, associated with new sensing options D2, D4.
ii. Condition of Manufacturer referencing "Internal Components Table" was revised to include D sensing options to ID 17 LED Board and add ID 17 to include the new Go Switch.
iii. Condition of Manufacturer referencing "The temperature class, ambient temperature range and surface temperature" was revised to add ID 17; to include the temperature class, ambient temperature range and surface temperature information for the new Go Switch.

Variation 5 - This variation introduced the following change:

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

From:	To:
ASCO Numatics Sp. z o.o.	Emerson Automation Fluid Control & Pneumatics Poland Sp. z o.o.

Variation 6 - This variation introduced the following changes:

i. Add new ambient ranges for Pepperl +Fuchs Switches and sensors (Internal component ID 18) when used without any other components.
ii. Add T5 temperature code for Simple Switches (Internal Component ID 1 to 6).
iii. The Specific Conditions of Use and Conditions of Manufacture were amended.

Variation 7 - This variation introduced the following changes:

i. Upgrade standard from EN 60079-0:2012/A11:2013 to EN IEC 60079-0:2018.
ii. Update standard from IEC 60079-31:2013 to EN 60079-31:2014.
iii. Update Ex component list and evaluate ASCO part "3021....IA" to EN IEC 60079-0:2018.
iv. Update routine dielectric testing requirement by including 1.2 times AC/DC test voltage options with duration of 1 sec.
v. Remove reference to alternative factory addresses from the certificate.

Variation 8 - This variation introduced the following changes:

i. Conditions of Manufacture is revised to replace the Novotechnic WAL305 potentiometer with a generic 10k potentiometer that has a 0.5 mm separation distance through a solid insulation.
ii. Manufacturer's Name & Address for ATEX certification is revised to reflect the latest QAN.

Variation 9 - This variation introduced the following change:

i. Inclusion of ES-04900-2 component as an approved internal device in the Condition of anufacture.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	22 August 2014	R70004819B	The release of the prime certificate.
1	02 November 2015	R70024654A	The introduction of Variation 1.

SCHEDULE

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Issue 10

Issue	Date	Report number	Comment
2	27 October 2016	R70070892B	This Issue covers the following changes: • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(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. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 1
3	31 January 2019	R70209081A	The introduction of variation
4	19 March 2019	R70212945A	The introduction of Variation 4.
5	15 October 2019	1136	Transfer of certificate Sira 14ATEX2122X from Sira Certification Service to CSA Group Netherlands B.V.
6	30 July 2020	R80050077A	The introduction of Variation 5.
7	14 September 2020	R80047581A	The introduction of Variation 6.
8	26 September 2022	R80103690A	The introduction of Variation 7.
9	08 January 2024	R80188970A	The introduction of Variation 8.
10	05 April 2024	R80188649A	The introduction of Variation 9.

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

15.1 The 4-20 mA loop circuit and the various additional sub-assemblies (switches, sensors, valves, etc.) shall be treated as separate intrinsically safe circuits.

15.2 The entity parameters for simple switches that are not covered by a certificate are Ui = 30 V, Ii = 200 mA and Pi = 0.72 W/switch (T4) or Pi = 0.34 W/switch (T5/T6). The entity parameters of certified devices fitted shall be obtained from the applicable certificate.

15.3 If the equipment is fitted with a HART v7 Module, it may be supplied with a bonding strap that could be used to connect the shield (screen) of the cable to ground when installed in a metallic enclosure. In this case, the user/installer shall take this into consideration and ensure that earthing arrangements of the final circuitry comply with the requirements of the relevant Code of Practice.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 The Valve Position Indicators shall only be fitted with devices that that are listed in the table below. Where applicable; these devices shall also conform to the certificates, supplements and amendments that are also listed therein. Because the exact composition of the Valve Position Indicator is variable, Topworx Inc. shall:

- Supply the installer/end user with a full set of appropriate certificates and instructions that are relevant to the contents of the enclosure
- Indicate which certificates apply to the contents of the enclosure.

Internal Components Table

ID*	Device	Sensing option	Type	Description
1	Mechanical switch	K	V7	Simple switch
2	Go switch	L	35 Series	Simple switch
3	Micro/Limit switch	M	VS10N001C2	Simple switch
4	Reed switch	P	HSR-V933	Simple switch
5	Reed switch	R	LV-ELE145	Simple switch
6	DPDT Micro switch	T	Cherry Burrell E19 or ITW DPDT-ZZ #26-804	Simple switch
7	ASCO Electro-valve Module	1 or 2	3021....IA	INERIS 03ATEX0249X issue 4
9	Pepperl + Fuchs Slot Type Initiators	N	SJ... & SC... (supply types 1, 2 + 3)	PTB 99ATEX2219X issue 1 plus supplement 1
10	Pepperl + Fuchs Cuboidal Inductive Proximity sensor	E	Type NJ2-V3-N... (supply types 1, 2 + 3)	PTB 00ATEX2032X issue 1 plus supplement 1
11	Pepperl + Fuchs Cuboidal Inductive Proximity sensor	E	All other types (supply types 1, 2 + 3)	PTB 00ATEX2032X issue 1 plus supplement 1
12	Pepperl + Fuchs cylindrical inductive sensors	N	Types NC... and NJ... (supply types 1, 2 + 3)	PTB 00ATEX2048X issue 1 plus supplements 1, 2, 3, 4
13	Pepperl + Fuchs SN sensors	N	Types NJ... and SJ... (supply types 1, 2 + 3)	PTB 00ATEX2049X issue 1 plus supplements 1, 2
14	TopWorx 4-20 mA transmitter module & associated potentiometer	X	N/A	Sira 12ATEX2192U issue 3
15	Turk Two Wire Proximity Sensors	N	Type ...-...-.Y1.-..../...	KEMA 02ATEX1090X issue 8
16	Go switch	Q	36 Series	Baseefa 15ATEX0137U
17	GO Switch	D	36 SD Series (D2 or D4)	DEM 19ATEX2173U
18	Pepperl+Fuchs Switches/sensors	N, E, B, F, J, V, 3 and N_+N _ _ _	SC, SJ, NC or NJ (Only one type of switch to be used as per drawing CERT-ES-08677-1 without any other components)	PTB 00ATEX2032X issue 1 PTB 00ATEX2048X issue 1 PTB 00ATEX2049X issue 1 PTB 99ATEX2219X issue 1
19	HART v7	G	ES-04900-2	IECEx SIR 16.0107U Issue 2 Sira 16ATEX2342U Issue 4 CSAE 21UKEX2700U Issue 1

* This number was created by CSA Sira and is used as a cross-reference to enable the marking that is applicable to each permissible device to be specified.

17.4 The temperature class, ambient temperature range and surface temperature depend on the devices used in the construction of these Valve Position Indicators, the manufacturer shall therefore mark their products in accordance with the table below.

ID (see table above)	Gas or dust	Ambient temperature range (°C)	Temperature class or T*°C
1, 2, 3, 4, 5 and 6	Gas	-65 to +55	T6
		-65 to +70	T5
		-65 to +85	T4
		-65 to +100	T3
	Dust	-50 to +55	T75°C
		-50 to +85	T104°C
7	Gas	-40 to +56	T4
	Dust	-40 to +56	T75°C
9	Gas	-60 to +47	T4
	Dust	-50 to +47	T75°C
10	Gas	-60 to +56	T4
	Dust	-50 to +56	T75°C
11	Gas	-60 to +35	T4
	Dust	-50 to +35	T75°C
14	Gas	-40 to +52	T4
	Dust	-40 to +52	T75°C
15	Gas	-25 to +42	T4
	Dust	-25 to +42	T75°C
16	Gas	-55 to +55	T6
		-55 to +85	T4
		-55 to +100	T3
	Dust	-50 to +55	T75°C
		-50 to +85	T104°C
17	Gas	-55 to +55	T6
		-55 to +85	T4
	Dust	-50 to +55	T75°C
		-50 to +85	T104°C
18	Gas	Tamb and Tcode will depend on number of switches inside, as marked on internal labels (reference drawing CERT-ES08677-1)	
	Dust	-50 to +85	T104°C
19	Gas	-40 to +80	T5
	Dust	-40 to +80	T104°C

17.5 Line fault detection shall not be fitted to equipment marked with a T6 temperature class.

17.6 When the equipment incorporates a 4-20 mA Transmitter Module, the output from the 4-20mA Transmitter Module shall only be connected to a 10k potentiometer, that has a 0.5 mm separation distance through a

solid insulator, also located within the Valve Position Indicator. When the 4-20 mA Transmitter Module is fitted, a maximum of two switches is permitted.

17.7 The manufacturer shall carry out a dielectric strength test on 100% of manufactured units in accordance with EN 60079-11:2012 as follows: apply a voltage of 500 Vrms to all input terminals and the outer enclosure for a minimum of 60 s. Alternatively, apply a test voltage of 600 Vrms for 1 sec; or a test voltage of 707 Vdc for 60 sec; or a test voltage of 845 Vdc for 1 sec. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

17.8 The earthing facility of the Series 36 GO switch shall not be used.

Certificate Annexe

Certificate Number: **Sira 14ATEX2122X**

Equipment: **TX* Series Valve Position Indicators**

Applicant: **TopWorx Inc.**

Issue 0

Drawing No.	Sheets	Rev	Date (Sira stamp)	Title
CERT-ES-01846-1	1 of 1	18	31 Jul 14	Marking, TX-series, ATEX
CERT-ES-03606-1	1 of 1	13	31 Jul 14	GA, TX-series, IECEx/ATEX

Issue 1

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-03606-1	1 of 1	14	25 Aug 15	GA, TX-series, IECEx/ATEX
CERT-PS-00675-1	1 to 3	3	10 Sep 15	Assembly, Board Go Numar Simulator (schematic pcb, layout board, parts list.
CERT-ES-02175-1	1 of 1	4	10 Sep 15	Assy, Sub switch 35
CERT-ES-01846-1	1 of 1	19	23 Sep 15	Marking, TX-series, ATEX

Issue 2

Drawing	Sheets	Rev.	Date(Sira stamp)	Title
CERT-ES-01846-1	1 of 1	20	30 Sep 16	Marking, TX-series, ATEX
CERT-ES-03606-1	1 of 1	16	01 Sep 16	TXP/S Master assembly

Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-01846-1	1 of 1	22	11 Feb 19	Nameplate
CERT-ES-02343-1	1 of 1	17	17 Jan 19	Nameplate Schedule Dwg

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-02343-1	1 of 1	18	15 Feb 19	Nameplate
ES-06719-1	1 to 4	1	15 Feb 19	Sensor Assembly MINI-GO
ES-06720-1	1 to 2	2	15 Feb 19	Switch Assembly Mini GO & Euro-Connector Assembly
ES-06753-1	1 of 1	1	15 Feb 19	Wiring Diagram DS & SS
ES-06752-1	1 of 1	1	15 Feb 19	Wiring Diagram D2, D4

Issues 5 and 6 - No new drawings were introduced.

Issue 7

Drawing	Sheets	Rev.	Date (Stamp)	Title
CERT-ES-08677-1	1 to 7	AA	29 Jul 20	Internal labels

Issue 8 - No new drawings were introduced.

Issue 9

Drawing	Sheets	Rev.	Date (Stamp)	Title
CERT-ES-02205-1	1 of 1	AA	19 Dec 23	Assembly, Potentiometer

Issue 10 - No new drawings were introduced.