



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 13ATEX2364X** Issue: **8**

4 Equipment: **TV\* Series Valve Position Indicators**

5 Applicant: **1. TopWorx  
2. Emerson Machinery Equipment (Shenzhen) Co. Ltd.  
3. Emerson Automation Fluid Control & Pneumatics Poland Sp. z o.o.**

6 Address: **1. 3300 Fern Valley Road, Louisville, Kentucky 40213, USA  
2. Fisher Controls Division, Bao Heng Technology Industry Park, Liu Xian 1<sup>st</sup> Road, District 68, Bao'an District, Shenzhen 518101, China  
3. Kurczaki, 132, 93 331 Lodz, Poland**

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 60079-0:2012/A11:2013      EN 60079-11:2012      EN 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:

**TVH & TVL**



II 2GD•

Ex ia IIC T, Gb (T<sub>a</sub> = -, °C to +, °C)

Ex tb IIIC T, °C Db (T<sub>a</sub> = -, °C to +, °C)

IP66/68 or IP64 dependent upon type of 'O' ring fitted

**TVA & TVF**



II 2G

Ex ia IIC T, Gb (T<sub>a</sub> = -, °C to +, °C)

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

Project Number 80047581

Signed: J A May

Title: Director of Operations

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CSA Group Netherlands B.V.  
Utrechtseweg 310,  
6812 AR, Arnhem,  
Netherlands



## SCHEDULE

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#### 13 DESCRIPTION OF EQUIPMENT

The Valve Position Indicator consists of an enclosure (approximately 150 mm x 100 mm by 60 mm) made up of a body and a lid. All models have a visual indicator of valve position. In models with an all-metal enclosure, there is an additional plastic dome housing the indicator; the dome does not contribute to the ingress protection. Models with a Lexan lid have no additional dome. There are threaded entries to allow the installation of cable glands.

#### Enclosures types

Model	Body	Lid	Dome	Protection method(s)
TVA	Lexan	Lexan	None	ia
TVF	Aluminium	Lexan	None	ia
TVH	Stainless Steel	Stainless Steel	Lexan	ia, tb
TVL	Aluminium	Aluminium	Lexan	ia, tb

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 'Conditions 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 2<sup>nd</sup> Road, District 68 Bao'an District, Shenzhen 518101 to Fisher Controls Division, Bao Heng Technology Industry Park, Liu Xian 1<sup>st</sup> 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 as an alternative option for the Series 35 Go Switch, with resulting amendments to the Conditions of Manufacture.



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

- i. The addition of a LED circuit board, sensing option S, to enclosure models TVF/TVL/TVH to be used in conjunction with listed sensing options K, M, P, Q2 and R, the relevant Conditions of Manufacture being supplemented.
- ii. Rationalisation of the marking drawings.
- iii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012 is replaced by EN 60079-0:2012/A11:2013 and IEC 60079-31:2013 was replaced by EN 60079-31:2014 in the list of standards

**Variation 4** - The introduction of the change of manufacturing location

From:	To:
Emerson Process Management	ASCO Numatics Sp.z o.o.
Magyarország Kft.	Kurczaki 132
Fisher Controls International LLC,	93 331 Lodz
H-8001 Székesfehérvár,	Poland
Berenyi U, 72-100,	
Hungary	

**Variation 5** - This variation introduced the following change:

- i. The introduction of the Series 36SD GO Switch, associated with new sensing options D2, D4 or DS.
- ii. Condition of Manufacturer referencing "Internal Components Table" was revised to include D sensing options to ID 17 LED Board and add ID 18 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 18; to include the temperature class, ambient temperature range and surface temperature information for the new Go Switch.

**Variation 6** - 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.

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

- i. Add new ambient ranges for Pepperl +Fuchs Switches and sensors (Internal component ID 19) 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 to reflect these changes.

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	22 August 2014	R70004819A	The release of the prime certificate.
1	22 January 2016	R70024654A	The introduction of Variation 1.

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Issue	Date	Report number	Comment
2	27 October 2016	R70070892A	This Issue covers the following changes: <ul style="list-style-type: none"><li>• 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.)</li><li>• The introduction of Variation 2.</li></ul>
3	29 January 2018	R70144764A	The introduction of Variation 3.
4	07 March 2019	R70209081A	The introduction of Variation 4.
5	20 March 2019	R70212944A	This Issue covers the following changes: <ul style="list-style-type: none"><li>• The standards listed in Section 9 were amended to correct a typographical error.</li><li>• The introduction of variation 5.</li></ul>
6	15 October 2019	0607	Transfer of certificate Sira13ATEX2364X from a Sira Certification Service to CSA Group Netherlands B.V.
7	30 July 2020	R80050077A	The introduction of Variation 6.
8	14 September 2020	R80047581A	The introduction of Variation 7.

#### 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  $U_i = 30 \text{ V}$ ,  $I_i = 200 \text{ mA}$  and  $P_i = 0.72 \text{ W/switch (T4)}$  or  $P_i = 0.34 \text{ W/switch (T5/T6)}$ . The entity parameters of certified devices fitted must be obtained from the applicable certificate.

#### 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.

# Certificate Annexe



Certificate Number: Sira 13ATEX2364X

Equipment: TV\* Series Valve Position Indicators

Applicant: TopWorx

## Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-03351-1	1 of 1	17	17 Jan 19	NAMEPLATE
CERT-ES-03353-1	1 of 1	20	17 Jan 19	NAMEPLATE
CERT-ES-04334-1	1 of 1	11	31 Jul 14	GA, TV-series, IECEx/ATEX

## Issue 1

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-03606-1	1 of 1	12	25 Aug 15	GA, TV-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-03351-1	1 of 1	17	17 Jan 19	NAMEPLATE
CERT-ES-03353-1	1 of 1	20	17 Jan 19	NAMEPLATE

## Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-04334-1	1 of 1	15	01 Sep 16	GA, TV-series, IECEx/ATEX
CERT-ES-03351-1	1 of 1	17	17 Jan 19	NAMEPLATE
CERT-ES-03353-1	1 of 1	20	17 Jan 19	NAMEPLATE

## Issue 3

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-03354-1	1 of 1	16	19 Jan 18	Marking, TVF, TVA, IECEx/ATEX
CERT-ES-03355-1	1 of 1	18	19 Jan 18	Marking, TVL, TVH, IECEx/ATEX
CERT-ES-04334-1	1 to 3	19	19 Jan 18	GA, TV-series, IECEx/ATEX
ES-05116-1	1 to 5	4	24 Jan 18	LED PCB - schematic, BoM, artwork & assembly

Drawings CERT-ES-03351-1 and CERT-ES-03353-1 from the ATEX certificate have been replaced by drawings CERT-ES-03354-1 and CERT-ES-03355-1 respectively

## Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-03354-1	1 of 1	17	11 Feb 19	MARKINGS
CERT-ES-03355-1	1 of 1	19	11 Feb 19	MARKINGS

## Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CERT-ES-03354-1	1 of 1	18	08 Feb 19	Markings, TVF, TVA Ex/ Schedule Drawing
CERT-ES-03355-1	1 of 1	20	08 Feb 19	Markings, TVL, TVH Ex ia Schedule Drawing
ES-06719-1	1 to 4	1	08 Feb 19	Sensor Assembly MINI-GO
ES-06720-1	1 to 2	2	08 Feb 19	Switch Assembly Mini GO & Euro-Connector Assembly
ES-06752-1	1 of 1	1	08 Feb 19	Wiring Diagram D2, D4, S2 & S4
ES-06753-1	1 of 1	1	08 Feb 19	Wiring Diagram DS & SS

Issues 6 and 7. No new drawings were introduced.

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# Certificate Annexe



Certificate Number: Sira 13ATEX2364X

Equipment: TV\* Series Valve Position Indicators

Applicant: TopWorx

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## Issue 8

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

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