

# 1 EU - TYPE EXAMINATION CERTIFICATE

## 2 Product or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU – Annex III

3 EU - Type Examination Certificate No.: **TRAC13ATEX0005X (incorporating variations V1 to V3)**

4 Product: **Valve Controller, VSD / VPX Series**

5 Manufacturer: **Imtex Controls Ltd.,**

6 Address: **Unit 4, Tenth Avenue, Deeside Industrial Park, Deeside, Flintshire, CH5 2UA  
United Kingdom**

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

8 Element Materials Technology, Notified Body number 0891, 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.

The examination and test results are recorded in the confidential report **TRA-011757-33-00A, TRA-011757-33-01A & TRA-020980-33-00A.**

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

**EN60079-0:2012/A11:2013    EN60079-1:2007    EN60079-11:2012  
EN60079-31:2009**

Except in respect of those requirements listed at section 18 of the schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to 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 this product shall include the following:

 **II 2 G D**

**Ex d [ia] IIC T6 Gb Tamb = -\*°C to +60°C**

**Ex d [ia] IIC T4 Gb Tamb = -\*°C to +85°C**

**Ex tb IIIC T85°C Db IP6X Tamb = -\*°C to +60°C**

**Ex tb IIIC T135°C Db IP6X Tamb = -\*°C to +85°C**

\*See Special Condition for Manufacture No.3

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.

*S.P. Winsor*

S P Winsor, Certification Manager

Issue date: 2016-08-05

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13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

14 TRAC13ATEX0005X (incorporating variations V1 to V3)

15 Description of Product

The VSD / VPX series of Valve Controllers are designed to provide high accuracy feedback of valve position, with comprehensive diagnostics, for use with plant control systems and can be used in hazardous gas or dust atmospheres. The equipment is mounted to a valve via a mounting plate and mounting kit. A shaft on the bottom of is physically linked to the valve and passes into the flameproof IP6X enclosure. This shaft can be linked internally to a variety of internal components - micro switches, position transmitters, reed switches, proximity sensors etc depending on the end user requirements. This shaft can also be equipped to provide a physical 'open/closed' type of visual indication.

The proximity and position sensors are approved intrinsically safe components that can be fitted within the enclosure therefore with regard to gas atmospheres these are associated equipment.

There are many options available for the internal components that can be fitted but the enclosure is the same for all models. Two faces contain the entry ports into the enclosure and can be supplied as M20, M25, 1/2 or 3/4 NPT threaded entries. A breakdown of the models covered by this approval is given below:

FUNCTION	ENCLOSURE	CONDUIT	OUTPUT DRIVE	INDICATOR	COMMUNICATION	UNIT POWER
01 - Base Model Only No Additional Switches/Sensors	S - 316SS Cover & Housing	Z - (6) M20 x 1.5	S - 2 Pin Drive	R - RED CLOSED / GREEN OPEN (ABS material of construction)	0 - No Additional Comms	P - Internal (SOV Parasite)
xxP - Positioner Variant of Electronics P added after feature number indicates that the positioner variant of the electronics board is used	L - 316L SS Cover & Housing	Y - (3) M25 x 1.5 & (3) M20 x 1.5	N - NAMUR Drive	B - BLUE CLOSED / WHITE OPEN (ABS material of construction)	1 - Foundation Fieldbus	E - External Power Supply
xxL - Line Break Variant of Electronics L added after feature number indicates that the line break variant of the electronics board is used	9 - High Pressure Die Cast Aluminium Cover & Housing	X - (2) M25 x 1.5 & (4) M20 x 1.5		E - RED CLOSED / YELLOW OPEN (ABS material of construction)	2 - HART	C - Additional Capacitor
14 - DPDT Mechanical Switch up to 10 amps @ 125/250 VAC up to 0.5 amps @ 125 VDC Not Recommended for I.S. Circuits		W - (1) M25 x 1.5 & (5) M20 x 1.5		Y - NAVY CLOSED / YELLOW OPEN (ABS material of construction)	3 - Bluetooth	
16 - SPDT Mechanical Switch up to 10 amps @ 125/250 VAC up to 0.5 amps @ 125 VDC Not Recommended for I.S. Circuits		V - (6) 1/2"NPT		O - NO VISUAL INDICATOR	4 - Wireless HART	
17 - SPDT Gold Contact Mechanical Switch up to 1 amp @ 125 VAC up to 0.5 amps @ 30VDC Suitable for I.S. Circuits - See I.S. Parameters on Unit		U - (3) 3/4" NPT & (3) 1/2"NPT			5 - Modbus	
25 - SPDT Reed Switch Max Current: 3 Amps Max Power: 100 Watts/VA Suitable for I.S. Circuits - See I.S. Parameters on Unit		T - (2) 3/4" NPT & (4) 1/2"NPT			6 - Other (use Feature)	
40 - SPST Reed Switch 0.15 Amps @ 125VAC/30VDC Suitable for I.S. Circuits - See I.S. Parameters on Unit		S - (1) 3/4" NPT & (5) 1/2"NPT				
42 - V3 Style Proximity Sensor Op Voltages (sensor dependent) 10 to 60VDC Op Current (sensor dependent) 2 to 400mA Some Sensors Suitable for I.S. Circuits - See I.S. Parameters on Unit						
43 - Non V3 Style Proximity Sensor Op Voltages (sensor dependent) 10 to 60VDC Op Current (sensor dependent) 2 to 400mA Some Sensors Suitable for I.S. Circuits - See I.S. Parameters on Unit						
70 - POSITION TRANSMITTER - Resistive 4-20mA @ 10 - 40 VDC monitor may include up to 2 additional switch/sensors from functions 16, 17, 25, 40, 42 or 43 Transmitter Suitable for I.S. Circuits - See Criteria on Unit						
90 - Non V3 Style Proximity Sensor With Fieldbus Communication Not Suitable for I.S. Circuits						

  

REV	DRAWN	DATE	CHK'D	ECO	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	TITLE
	PT	22.6.12		12-1882		Type VSD/VPX - Master Model Description
A	PT	3.12.12		12-1964	SURFACE FINISH: TOLERANCES:	
B	PT	10.1.13		13-1979	LINEAR: ANGULAR:	
C	PT	15.2.13		13-2019		
D	PT	10.5.16		14-2502		

  

**Part Number Compilation:**

VSD16SYSR1P-100

Type Designator
Function
Enclosure
Conduit Entry
Output Drive
Indicator
Communication
Power

  

**NOTE 1:**  
The exact detail of switches/sensors/transmitters fitted in the monitor is not fully specified by the basic part number. The 'feature designator' provides a mechanism for cross-referencing to a centralised log establishing the make and model of parts fitted in a given unit.

**NOTE 2:**  
The 'base' VSD or VPX Unit comprises a main board with electronics. The VSD variant normally includes a separate, internally wired 4-20mA transmitter whilst the VPX variant has an integrated transmitter.

**13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE**

**14 TRAC13ATEX0005X (incorporating variations V1 to V3)**

**16 Test report No. (associated with this certificate issue):** TRA-020980-33-00A.

**17 Specific Conditions of Use**

1. The equipment shall not be subjected to a build up of dust and is to be cleaned regularly to prevent a buildup of dust forming on the enclosure.
2. The intrinsically safe components shall be supplied by an ATEX approved barrier.

**18 Essential Health and Safety Requirements (Directive Annex II)**

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:

<u>Clause</u>	<u>Subject</u>
None	None

**19 Drawings and Documents**

The list of controlled manufacturer's drawings and documents is given in Appendix A to this schedule.

**20 Routine Tests**

1. The Aluminium enclosures shall be subjected to a routine pressure test in accordance with EN 60079-1:2007, Clause 16.1 at a minimum pressure of 14.93 bar for at least 10 seconds. There shall be no permanent deformation of the joints, damage to the enclosure or leakage through the walls.

**21 Specific Conditions for Manufacture**

1. The input parameters markings for the intrinsically safe components shall be determined from their respective certificate numbers depending upon whether they are required for ATEX.
2. Care should be taken to ensure that the minimum and maximum temperature information on the intrinsically safe components used within the VSD/VPX valve controller is observed and satisfies the Tamb parameters and the T-class for the VSD/VPX units.
3. Note that minimum ambient markings will depend on approved intrinsically safe components, if fitted, as will the parameters. Units will be marked accordingly at the point of manufacture in line with their individual intrinsically safe equipment approvals. However minimum permitted ambient in all cases is -40°C.

22 Photographs



23 Details of Markings

**Valvescan**  
**IP6 Valve Controller**  
ATEX CERTIFICATE NO: TRAC13ATEX0005X

Model:	Serial:
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Exd [ia] IIC T6 Gb Tamb = - °C to +60°C & Ex tb IIIC T85°C Db IP6X	
Exd [ia] IIC T4 Gb Tamb = - °C to +85°C & Ex tb IIIC T135°C Db IP6X	

INTRINSICALLY SAFE COMPONENTS (connect to safe area via Certified Barrier):

INTRINSICALLY SAFE INFORMATION:			
U <sub>i</sub>	V	L <sub>i</sub>	μH
I <sub>i</sub>	mA	C <sub>i</sub>	nF
P <sub>i</sub>	W		



Ex II 2 GD



CE 0518


**CONSULT INSTRUCTIONS PRIOR TO INSTALLATION, OPERATION or MAINTENANCE**

**WARNING: DO NOT OPEN WHEN ENERGISED, OR FOR 15 MIN AFTER DE-ENERGISING WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.**

**WARNING: FOR T<sub>amb</sub> +85°C, CABLE GLANDS OR CONDUCTORS IN CONDUIT ENTRIES SHALL BE RATED +100°C (MIN)**


**Warning: Electrostatic Hazard - See Instructions**


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**24 Details of Variations to this Certificate**

This certificate is a consolidated certificate and reflects the latest status of the certification, including the following variations:

- Variation V1- Add Trade agent TRAC13AXTEX0029X
- Variation V2- Change of address and update of label.
- Variation V3- Addition of a new Aluminium enclosure, inclusion of 'ia' intrinsically safe and VPX models.

**25 Notes to CE marking**

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

**26 Notes to this certificate**

Element Materials Technology certification reference: **TRA-020980-33-00A**.

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body 0891 is the designation for Element Materials Technology Warwick Ltd (formerly known as TRaC Global Ltd).

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. Variation 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.

**TA1: TRAC13ATEX0029X V2**

**CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC13ATEX0005X V3**

**APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS**

<b>Title:</b>	<b>Drawing No.:</b>	<b>Rev. Level:</b>	<b>Date:</b>
External Earthing Clamp	A100353	*	2008-09-22
Type VSD/VPX – Master model Description	A190281-X	D	2016-05-10
Title plate IECEx / ATEX Unit	A160190	F	2016-05-10
Intrinsically Safe Information – VSD/VPX	A190292	B	2016-05-10
VSD Unit – Housing	C100190	G	2013-02-28
VSD StSt Cover	C110150	C	2013-02-28
VDS/VPX General Layout	J100411	C	2016-05-10
VSD Shaft Assembly	J100418	A	2012-12-03
Flamepath Gaps	J100419	B	2013-02-28
Volume Calculation for VSD/VPX Assenbly	J100420	A	2016-05-10
Termination Spacing in VSD Unit	J100421	A	2012-10-03
VSD/VPX Exd Requirements	J100422	A	2016-05-10
Installation, Operating and Maintenance VSD/VPX – IECEx/ATEX (Sheets 1 to 3)	VSD-IOM-004	-	2016-06-28
VSD Unit – w/ 2 x V3 Mech	VSD16SZSR0-I00	*	2013-01-16
Type VSD to IVC/IHP24 Cross Over- Master Model Description	A190281-VAL	*	2013-06-22