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 V4)**

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 2812, 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:

Ex II 2 G D

Ex d [ia] IIC T6 Gb Tamb = -*ºC to +60ºC

Ex d [ia] IIC T4 Gb Tamb = -*ºC to +85ºC

Ex tb IIIC T85ºC Db IP6X Tamb = -*ºC to +60ºC

Ex tb IIIC T135ºC Db IP6X Tamb = -*ºC to +85ºC

***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, Certification Manager

Issue date: 2019-11-01

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Element Materials Technology Rotterdam B.V.
Registered in the Netherlands. Registered Office: PO Box 6854, 4802 HW, Breda, Netherlands
Company Reg No. 24170257

13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

14 TRAC13ATEX0005X (incorporating variations V1 to V4)

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, ½ or ¾ NPT threaded entries. A breakdown of the models covered by this approval is given below:

Type VSD/VPX - see NOTE 2

FUNCTION

01 - Base Model Only
No Additional Switches/Sensors

xxP - Positioner Variant of Electronics
'P' added after feature number indicates that the positioner variant of the electronics board is used

xxL - Line Break Variant of Electronics
'L' added after feature number indicates that the line break variant of the electronics board is used

14 - DPDT Mechanical Switch
up to 10 amps @ 125/250 VAC
up to 0.5 amps @ 125 VDC
Not Recommended for I.S. Circuits

16 - SPDT Mechanical Switch
up to 10 amps @ 125/250 VAC
up to 0.5 amps @ 125 VDC
Not Recommended for I.S. Circuits

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

25 - SPDT Reed Switch
Max Current: 3 Amps
Max Power: 100 Watts/VA
Suitable for I.S. Circuits - See I.S. Parameters on Unit

40 - SPST Reed Switch
0.15 Amps @ 125VAC/30VDC
Suitable for I.S. Circuits - See I.S. Parameters on Unit

42 - V3 Style Proximity Sensor
Op Voltages (sensor dependent) 10 to 60VDC 10 to 250VAC
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 10 to 250VAC
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

ENCLOSURE

S - 316SS Cover & Housing

L - 316L SS Cover & Housing

9 - High Pressure Die Cast Aluminium Cover & Housing

CONDUIT

Z - (6) M20 x 1.5

Y - (3) M25 x 1.5 & (3) M20 x 1.5

X - (2) M25 x 1.5 & (4) M20 x 1.5

W - (1) M25 x 1.5 & (5) M20 x 1.5

V - (6) 1/2"NPT

U - (3) 3/4" NPT & (3) 1/2"NPT

T - (2) 3/4" NPT & (4) 1/2"NPT

S - (1) 3/4" NPT & (5) 1/2"NPT

OUTPUT DRIVE

S - 2 Pin Drive

N - NAMUR Drive

INDICATOR

R - RED CLOSED / GREEN OPEN (ABS material of construction)

B - BLUE CLOSED / WHITE OPEN (ABS material of construction)

E - RED CLOSED / YELLOW OPEN (ABS material of construction)

Y - NAVY CLOSED / YELLOW OPEN (ABS material of construction)

O - NO VISUAL INDICATOR

COMMUNICATION

0 - No Additional Comms

1 - Foundation Fieldbus

2 - HART

3 - Bluetooth

4 - Wireless HART

5 - Modbus

6 - Other (use Feature)

UNIT POWER

P - Internal (SOV Parasite)

E - External Power Supply

C - Additional Capacitor

FEATURE

- IXX - Exd ib Feature Designator Non I.S. Components See Note 1 below
- AXX - Exd ib Feature Designator ATEX Only See Note 1 below
- BXX - Exd ib Feature Designator ATEX and IECEx See Note 1 below

Part Number Compilation:

VSD16SYSR1P-I00

Feature
Power
Communication
Indicator
Output Drive
Conduit Entry
Enclosure
Function
Type Designator

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 seperate, internally wired 4-20mA transmitter whilst the VPX variant has an integrated transmitter.

REV	DRAWN	DATE	CHK'D	ECO
	PT	22.6.12		12-1882
A	PT	3.12.12		12-1964
B	PT	10.1.13		13-1979
C	PT	15.2.13		13-2019
D	PT	10.5.16		16-2502

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES:
LINEAR:
ANGULAR:

TITLE:

Type VSD/VPX - Master Model Description

16 Test report No. (associated with this certificate issue): N/A

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:

Clause	**Subject**
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

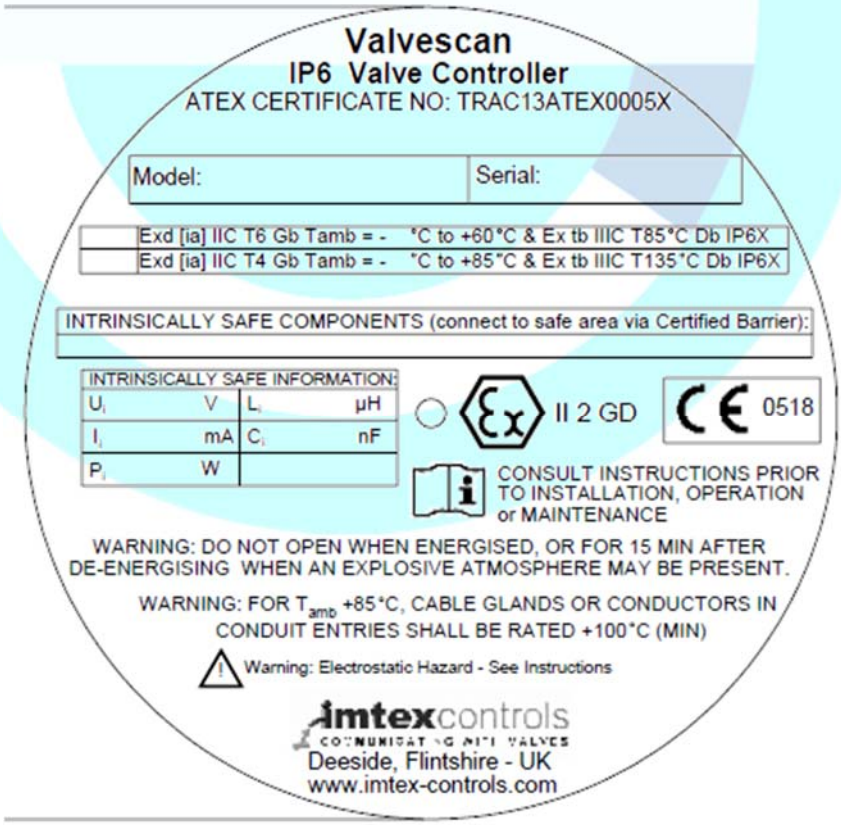
1. The input parameters markings for the intrinsically safe components shall be determined from their respective certificate numbers depending upon whether they are required for ATEX.

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



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.
- Variation V4 - This certificate was originally issued by Notified Body number 0891 under Directive 2014/34/EU. The technical file has been transferred to Element Notified Body number 2812 without further assessment or evaluation.

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: NR-IMTQ-0002

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

Notified Body number 2812 is the designation for Element Materials Technology Rotterdam BV.

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

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

TRAC13ATEX0005X (incorporating variations V1 to V4)

APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
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