1 # EC TYPE EXAMINATION CERTIFICATE

2 Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC – Annex III

3 EC Type Examination Certificate No.: **TRAC13ATEX0029X (incorporating variation V1 to V2)**

4 Equipment: **Intelligent Valve Controller - IVC24; Intelligent Diagnostic Controller – IDC24-F; Intelligent Hydraulic Positioner - IHP24**

5 Manufacturer: **Val controls A/S**

6 Address: **Limfjordsvej 3, DK-6715, Esbjerg N, Denmark**

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

8 TRaC Global Ltd, Notified Body number 0891 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system 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 **TRA-011757-33-00A &**

TRA-011757-33-02A.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in section 18 of the schedule to this certificate, has been assured by compliance with:

EN60079-0:2012 **EN60079-1:2007** **EN60079-11:2012**

EN60079-31:2009

10 If the sign “X” is placed after the certificate number then this indicates that the equipment or protective system is subject to special conditions of safe use specified in the schedule to this certificate.

11 This EC-Type Examination certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of this equipment or protective system shall include the following:

Ex II 2 G D **Ex d [ib] IIC T6 Gb T_{amb} = -*ºC to +60ºC**

Ex d [ib] IIC T4 Gb T_{amb} = -*ºC to +85ºC

Ex tb IIIC T85ºC Db T_{amb} = -*ºC to +60ºC

Ex tb IIIC T135ºC Db T_{amb} = -*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 TRaC Ex Certification Scheme.

S P Winsor, Certification Team Leader

Issue date: 2015-03-20

Copy No.: 1e

Form RF355 is16A

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13 **SCHEDULE TO EC TYPE EXAMINATION CERTIFICATE**

14 **TRAC13ATEX0029X (incorporating variations V1 to V2)**

15 **General description of equipment or protective system included within the scope of this certificate**

The IVC24/IHP24/IDC24-F 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.

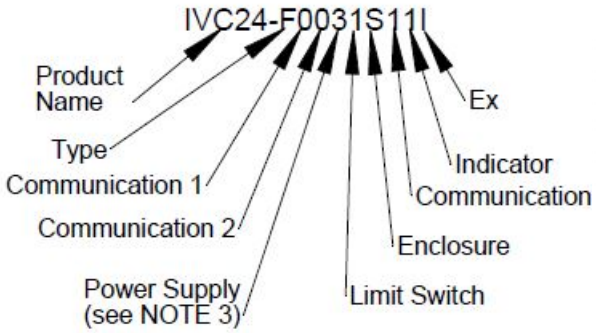
The proximity and position sensors are approved intrinsically safe components that can be fitted within the enclosure therefore with regard to gas atmospheres these are associated equipment.

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:

IVC24-F / IHP24-F - see NOTE 1

COMMUNICATION 1	COMMUNICATION 2	POWER SUPPLY	LIMIT SWITCH	ENCLOSURE	CONDUIT ENTRIES	INDICATOR	EX
0 - No Additional Comms	0 - None	3 - ESD Controller (SIL)	0 - Base Model Only No Additional Switches/Sensors	S - 316SS Cover & Housing	1 - (6) M20 x 1.5	1 - RED CLOSED / GREEN OPEN (ABS material)	I - Exd ib Feature Designator No I.S. Components See Note 1 below
1 - HART Control Loop	1 - Bluetooth	4 - ESD Controller (SIL) + extra 24VDC Supply	1 - (2) SPDT Mechanical Switch up to 10 amps @ 125/250 VAC up to 0.5 amps @ 125 VDC Not Recommended for I.S. Circuits	L - 316L SS Cover & Housing		0 - NO VISUAL INDICATOR	A - Exd ib Feature Designator ATEX Only See Note 1 below
2 - HART Transmitter Loop			2 - (2) SPDT Reed Switch Max Current: 3 Amps Max Power: 100 Watts/VA Suitable for I.S. Circuits - See I.S. Parameters on Unit				B - Exd ib Feature Designator ATEX and IECEx See Note 1 below
3 - Modbus RTU			3 - (2) V3 Style Proximity Sensor Op Voltages 10 to 60VDC 10 to 250VAC Op Current 2 to 400mA Some Sensors Suitable for I.S. Circuits - See I.S. Parameters on Unit				
4 - Foundation Fieldbus							
5 - Wireless HART							

Valcontrols Part Number Compilation:



A list of controlled Manufacturer's Documents is given in Appendix A to this schedule.

16 **Test report No.:** **TRA-011757-33-00A** & **TRA-011757-33-02A.**

17 **"Special Conditions of Safe Use" for Ex Equipment, if any:**

1. The equipment shall not be subjected to a build up of dust and is to be cleaned regularly to prevent a build up of dust forming on the enclosure.

2. The intrinsically safe components shall be supplied by an ATEX/IECEx approved barrier.

18 **Essential health and safety requirements**

Covered by application of the standards listed in section 9 of this certificate and the assessment conducted in the test report listed in section 16 of this certificate.

19 **Additional information**

"Routine tests", if any:

None.

"Special conditions for manufacture", if any:

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.

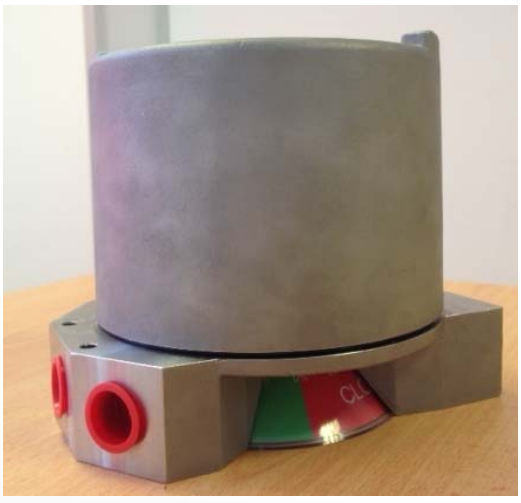
2. Care should be taken to ensure that the minimum and maximum temperature information on the intrinsically safe components used within the IVC24/IHP24 valve controller is observed and satisfies the T_{amb} parameters and the T-class for the IVC24/IHP24 units.

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.

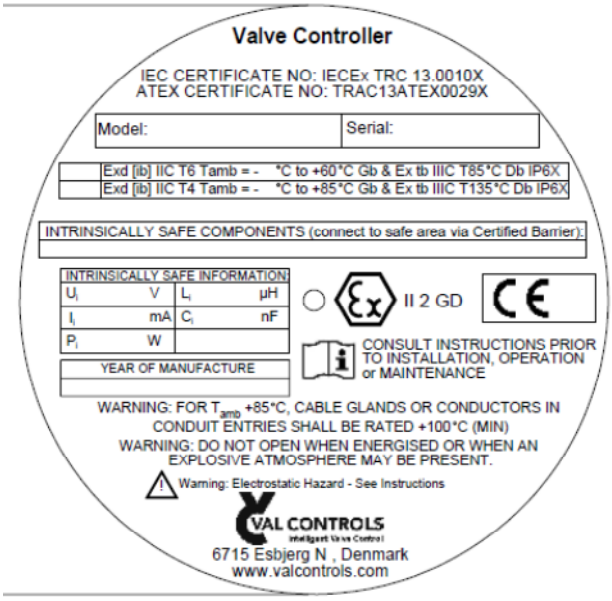
Other information, if any:

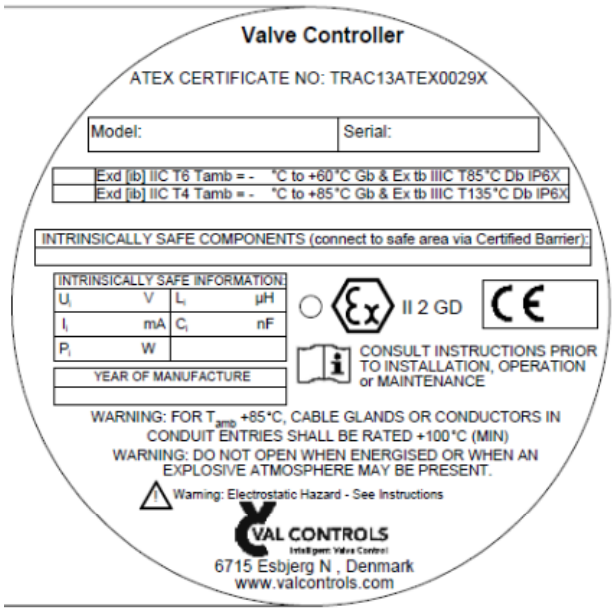
None.

Photographs



Details of markings





See Special Condition for Manufacture No.1 for details of marking parameters.

See Special Condition for Manufacture No.3 for details of marking T_{amb}.

Details of variations to this certificate

- Variation V1 – update to scheduled drawings list.
- Variation V2 – addition of model Intelligent Diagnostic Controller – IDC24-F

Notes to CE marking

In respect of CE Marking, TRaC Global Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

Notes to this certificate

TRaC certification reference: **TRA-026091-32-00.**

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

This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations.

Conditions of manufacturing and production control are the same as for equipment detailed within certificate

TRAC13ATEX0005X V2

APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
External Earthing Clamp	A100353	*	2008-09-22
Master Model Description	A190281-EX-VAL	*	2014-03-10
Intrinsically Safe Information	A190292-VAL	*	2014-03-10
Housing	C100190-VAL	*	2014-03-10
Cover	C110150-VAL	*	2014-03-10
General Layout	J100411-VAL	*	2014-03-10
Shaft Assembly	J100418-VAL	*	2014-03-10
Flamepath Gaps in Assembly	J100419	B	2013-02-28
Volume Calculation for Assembly	J100420-VAL	*	2014-03-10
Termination Spacing	J100421-VAL	*	2014-03-10
Exd Requirements	J100422-VAL	*	2012-03-10
Typical Assembly – w/ 2 x V3 Mech	J100432-VAL	*	2014-03-10
Installation, Operating & Maintenance - IVC24 – IECEx/ATEX Unit	IVC-IOM-002	*	2013-06-24
Title Plate IECEx / ATEX Unit	A160190-VAL	A	2013-06-26
IVC/IDC/IHP24 Identification Format	A190281-VAL	B	2015-02-18

*no information provided.