

# 1 EC-TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 94/9/EC**

3 EC-Type Examination Certificate No: **FM06ATEX0027X**  
4 Equipment or protective system: **T950X-AabK I/P Converter**  
(Type Reference and Name)  
5 Name of Applicant: **ControlAir Inc.**  
6 Address of Applicant: **8 Columbia Drive**  
**Amherst, NH 03031 USA**

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

8 FM Approvals Ltd, notified body number 1725 in accordance with Article 9 of 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 intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
The examination and test results are recorded in confidential report number 3028313EC dated 23<sup>rd</sup> May 2007

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:  
EN 60079-0: 2006 EN 60079-11:2007

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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



II 1 G Ex ia IIB T4 Ta = -40 °C to +70 °C

**Andrew Was**  
**General Manager, FM Approvals Ltd.**

Issue date: 23<sup>rd</sup> May, 2007



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# SCHEDULE



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## 13 Description of Equipment or Protective System:

The T950X is an electro-mechanical current to pressure converter. The unit's electronics operate on a 30 volt 4 to 20 mA current loop. The circuitry for the T950X is contained on two multi-layer printed circuit boards that are mounted inside an aluminum flameproof enclosure.

The ambient operating temperature range of the T950 is -40°C to +70°C

### *T950X-AabK I/P Converter*

#### Energy Limitation Parameters

Ui = 30 Volts, Ii = 125 mA, Pi = 0.7 W, Ci = 1 nF, Li = 2.2 mH

a = Output Pressure: C, D, E

b = Options: A, B, T

## 14 Special Conditions for Safe Use:

1. The I/P transducer enclosure contains aluminium and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
2. Using the box provided on the nameplate, the User shall permanently mark the protection type chosen for the specific installation. Once the type of protection has been marked it shall not be changed.

## 15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

## 16 Test and Assessment Procedure and Conditions:

This EC-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's ATEX Certification Scheme.

## 17 Approved Drawings

| Drawing No: | Rev | Date<br>(mm/dd/yy) | Title / Description                      |
|-------------|-----|--------------------|--|
| 416-729-038 | 9   | 09/20/06           | HOUSING, machined T-950XP I/P Transducer |
| 416-729-039 | 4   | 11/09/05           | HOUSING, CAST T-950XP I/P Transducer     |
| 416-764-115 | 5   | 12/19/05           | BODY, CAST T900 Transducer               |
| 416-779-002 | 8   | 9/20/06            | Actuator MANIFOLD, MACHINED T950XP       |
| 416-779-003 | 6   | 11/09/05           | Actuator MANIFOLD, Cast T950XP           |

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| Drawing No: | Rev | Date<br>(mm/dd/yy) | Title / Description                        |
|-------------|-----|--------------------|--|
| 420-990-051 | -   | 02/17/06           | ATEX ASSEMBLY DRAWING                      |
| 426-714-013 | 3   | 11/03/05           | COVER, CAST T950XP Transducer              |
| 431-990-025 | 4   | 02/05/07           | CONTROL DRAWING, T950 Intrinsically Safe   |
| 432-729-040 | 3   | 08/05/03           | HOUSING, PAINTED T950-XP Explosion-proof   |
| 432-764-116 | 2   | 01/09/03           | Body, Machined, Output FED T900 Transducer |
| 436-701-001 | 2   | 07/10/02           | Ball                                       |
| 436-714-012 | 5   | 10/26/06           | COVER, MACHINED T-950XP Transducer         |
| 436-714-015 | 3   | 4/13/00            | Cover, Plastic T950-XP Transducer          |
| 436-732-517 | -   | 09/14/06           | ATEX LABEL, BLANK                          |
| 436-736-002 | 1   | 03/05/88           | Pintle, Supply                             |
| 436-743-033 | 3   | 07/10/02           | RETAINER, Molded T900 Transducer           |
| 436-764-163 | 5   | 12/19/06           | BODY, MACH GENERIC T900 Transducer         |
| 436-780-005 | 3   | 03/12/98           | NOZZLE, MACHINED, T-950XP Explosion-proof  |
| 438-502-096 | -   | 12/21/06           | ATEX Housing Assembly T950XP Transducer    |
| 438-520-001 | 3   | 03/22/04           | MANIFOLD ASSEMBLY T950XP Transducer        |
| 438-532-156 | -   | 12/21/06           | ATEX Sub-Assy 4-20mA 3-15psi T950XP        |
| 438-549-002 | -   | 01/22/07           | ATEX CONDUIT SEAL ASS'Y                    |
| 438-729-093 | -   | 12/21/06           | HOUSING, ATEX MACHINING                    |
| 441-622-037 | -   | 3/13/06            | Type 950XP Instructions                    |
| 442-714-014 | 1   | 03/28/01           | COVER, PAINTED T950-XP Explosion-proof     |
| 442-722-031 | -   | 01/19/07           | ATEX CONDUIT FITTING                       |
| 442-732-982 | -   | 02/16/06           | ATEX LABEL, ETCHED                         |
| 442-737-066 | 3   | 06/01/06           | Piston, Finished T900 Transducer           |
| 442-737-067 | 2   | 06/01/06           | Piston, Finished T900 Transducer           |
| 442-739-019 | 1   | 11/14/99           | PIPE PLUG, COATED 1/4 NPT REG.'s           |
| 442-739-021 | 1   | 03/03/04           | Plug, Bottom, Finished T900 Transducer     |
| 442-748-147 | 1   | 05/02/06           | Screw, Orifice, Plated T950 Transducer     |
| 442-748-148 | -   | 12/14/00           | Screw, Orifice, Drilled T950 Transducer    |
| 442-754-040 | 1   | 03/14/01           | Spacer, Painted T900 Transducer            |
| 442-754-058 | 2   | 01/23/07           | SPACER, CHROMATED T900 Transducer          |
| 442-764-117 | 1   | 03/07/01           | BODY, PAINTED, T900 Transducer             |
| 442-764-209 | 2   | 06/20/05           | BODY, CHROMATED T900 Transducer            |
| 445-744-015 | -   | 12/30/04           | RETAINING RING, #2, T950XP                 |
| 445-745-002 | 2   | 06/13/06           | Grooved Stud, Label T950XP Transducer      |
| 445-748-098 | 1   | 05/02/06           | SCREW, BOTTOM PLUG T900 Transducer         |
| 445-748-100 | 1   | 05/02/06           | SCREW, BUILD T900 Transducer               |
| 445-748-112 | 1   | 05/02/06           | SCREW, T900 Transducer                     |
| 445-748-116 | 1   | 05/02/06           | SCREW, COVER, 500X Transducer - NEMA 4X    |
| 445-748-122 | 1   | 05/02/06           | SCREW, MANIFOLD T-950XP Explosion-proof    |
| 445-748-217 | 1   | 05/02/06           | SCREW, 3-48 x 1/4, T950                    |

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| Drawing No: | Rev  | Date<br>(mm/dd/yy) | Title / Description                           |
|-------------|------|--------------------|---|
| 445-748-230 | -    | 12/21/06           | ATEX COVER LOCK SETSCREW                      |
| 445-749-034 | -    | 11/19/96           | O-RING, T900 Transducer                       |
| 445-749-035 | -    | 11/19/96           | O-RING, T900 Transducer                       |
| 445-749-037 | -    | 03/12/97           | O-RING, T900 Transducer                       |
| 445-749-039 | -    | 04/13/98           | O-RING, NOZZLE T-950XP Explosion-proof        |
| 445-749-040 | -    | 03/16/98           | O-RING, COVER, T950XP                         |
| 445-749-048 | -    | 02/27/02           | O-RING, T900 & T950XP                         |
| 445-762-051 | 1    | 05/18/06           | Lockwasher T950XP Transducer                  |
| 445-762-087 | -    | 10/10/05           | GROUND CUP WASHER                             |
| 445-773-019 | -    | 03/01/05           | ATEX M20 CONDUIT ADAPTER                      |
| 445-901-003 | -    | 08/04/98           | Terminal Block, 2-Pole T950-XP I/P Transducer |
| 446-539-002 | 1    | 10/21/99           | Terminal Block Assembly T950-XP Transducer    |
| 446-700-076 | 2    | 04/26/02           | DIAPHRAGM, CONTROL, T900 Transducer           |
| 446-700-077 | 2    | 04/26/02           | DIAPHRAGM, PROTECTOR, T900 Transducer         |
| 446-714-016 | -    | 04/23/01           | Cover, Vent T950XP Transducer                 |
| 446-724-012 | -    | 11/18/96           | GASKET, BOTTOM T900 Transducer                |
| 446-724-015 | 2    | 10/19/99           | GASKET, MANIFOLD T-950XP Explosion-proof      |
| 446-737-060 | -    | 11/18/96           | Piston, Machined T900 Transducer              |
| 446-737-061 | -    | 11/18/96           | Piston, Machined T900 Transducer              |
| 446-739-002 | 1    | 06/05/06           | Plug, HEX Socket Pressure T-100 REG           |
| 446-741-002 | -    | 07/21/97           | PROTECTOR STICKER, T900 Transducer            |
| 446-747-004 | 2    | 09/14/95           | SCREEN, 500X Transducer                       |
| 446-748-146 | 1    | 01/03/01           | SCREW, MACHINED, T950XP                       |
| 446-750-002 | 1    | 08/08/91           | Seat, Supply T-100 REG.                       |
| 446-750-003 |      | 04/01/88           | SEAT, EXHAUST T-100                           |
| 446-750-010 | 1    | 06/27/05           | SEAT, EXHAUST T -100                          |
| 446-754-039 | 1    | 07/12/04           | SPACER, MACHINED T900 Transducer              |
| 446-755-006 |      | 05/13/88           | Spring, Supply T-100 REG.                     |
| 446-755-087 |      | 01/06/98           | Spring, Start-up T900 Transducer              |
| 446-762-003 | 1    | 07/01/88           | WASHER, SERRATED T-100 REG.                   |
| 446-762-049 |      | 11/20/96           | WASHER, WEIGHT T900 Transducer                |
| 446-765-008 | 3    | 07/10/02           | INSERT, ACTUATOR, T900 Transducer             |
| 446-777-005 | 2    | 09/09/04           | FLAME ARREST, 1/4 DIA. T950                   |
| 446-777-006 | 2    | 09/09/04           | FLAME ARREST, 3/8 DIA. T950                   |
| 446-778-006 |      | 08/18/97           | DUCKBILL Check Valve T500X - NEMA 4X          |
| 446-799-009 | 1    | 10/20/99           | Circuit Board T950-XP Transducer              |
| 446-799-013 | 3    | 06/01/04           | Circuit Board, IS, IP-15 T900 Transducer      |
| 446-799-028 | SMT3 | 09/21/04           | Valve Controller T900 Board 3 Top Side Assy   |
| 446-901-015 | 3    | 01/18/05           | QuickPack Actuator, IS T900 Transducer        |
| 448-503-024 | -    | 12/19/00           | ORIFICE SCREW ASSY T950XP Transducer          |

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| Drawing No:          | Rev | Date<br>(mm/dd/yy) | Title / Description                                 |
|----------------------|-----|--------------------|---|
| 448-504-045          | 2   | 06/24/05           | Diaphragm Assembly T900 Transducer                  |
| 448-504-046          | 1   | 01/24/03           | DIA. PROTECTOR ASSY, T900 Transducer                |
| 448-505-086          | 2   | 02/07/01           | Body Assembly T900 Transducer                       |
| 448-512-001          | -   | 12/30/04           | COVER ASSY, T950XP                                  |
| 448-537-005          | 0   | 11/05/98           | NOZZLE ASSY, T950XP                                 |
| 910-0013-000-B2-BPSI | -   | 04/15/04           | I/P EP Board 2 Option 15 PSI Model T900             |
| 910-013-000-B2-SCH   | 3   | 04/14/04           | Schematic Valve Controller Board 2                  |
| 910-013-000-B3-SCH   | 1   | 04/09/01           | Schematic Valve Controller Board 3                  |
| 911-013-000-B2-Mach  | 4.1 | 04/14/04           | Valve Controller T900 Board 2 Machining Drawing     |
| 911-013-000-B3-Mach  | 1.1 | 04/09/21           | Valve Controller T900 Board 3 Machining Drawing     |
| 911-013-00-B3-BIP    | -   | 09/09/04           | I/P Board 3   |
| ELM021100            | A   | -                  | ELM Series Terminal Block Board Mount (Page 2 of 3) |

A handwritten signature in black ink, appearing to be "E.M.", written over a curved line that underlines the signature.

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