

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM09ATEX0012X

4 Equipment or protective system: T550-abck I/P Converter  
(Type Reference and Name)

5 Name of Applicant: ControlAir Inc

6 Address of Applicant: 8 Columbia Drive  
Amherst, NH 03031  
United States of America

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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 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 confidential report number:

3035402 dated 09<sup>th</sup> April 2009

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 60079-0:2012+A11:2013 and EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. 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



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Ardle  
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email=damien.mcardle@fmapprov  
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**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 12<sup>th</sup> August 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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F ATEX 020 (Mar/2019)

Page 1 of 3

# SCHEDULE

to EU-Type Examination Certificate No. FM09ATEX0012X

**13 Description of Equipment or Protective System:**

The Type 550-A I/P Converter converts a current input signal to a linearly proportional pneumatic output pressure.

T550-abck I/P Converter

Energy Limitation Parameters:

$U_i = 30V$ ,  $I_i = 125mA$ ,  $P_i = 0.70W$ ,  $C_i = 0$ ,  $L_i = 0$

a = input signal: A, C, D, E or F

b = Output Pressure Range: C, D, E, F, G, H, I, J or K

c = Electrical Connection: A, D or T

**14 Specific Conditions of Use:**

1. The enclosure is made of aluminum. If mounted in an area where the use of Category 1G apparatus is required, it shall be installed such that even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded

**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 EU-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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# **SCHEDULE**

to EU-Type Examination Certificate No. FM09ATEX0012X

## 18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
09 <sup>th</sup> April 2009	Original Issue.
12 <sup>th</sup> August 2019	Supplement 1: Report Reference: RR219504 dated 08 <sup>th</sup> August 2019 Description of change: EN60079-0 updated to Edition 6 (2012+A11:2013) and EN60079-11 updated to Edition 6 (2012). EN60079-26 removed from standards list. Certificate updated from EC-Type format to EU-Type. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809



**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM07ATEX0002X

4 Equipment or protective system: T-590-AabK I/P Converter  
(Type Reference and Name)

5 Name of Applicant: ControlAir Inc.

6 Address of Applicant: 8 Columbia Drive  
Amherst, NH 03031  
United States of America

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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 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 confidential report number:

3030620EC dated 15<sup>th</sup> June 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 60079-0:2012+ A11:2013 and EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. 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 IIC T\* Ta = -55°C to Ta max

\*Temperature class and maximum ambient temperature as indicated on Page 2.

 Digitally signed by  
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mapprovals.com, c=IE

**Richard Zammitt**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 09<sup>th</sup> April 2019

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T: +353 (0) 1761 4200 E-mail: [atex@fmapprovals.com](mailto:atex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

# SCHEDULE

to EU-Type Examination Certificate No. FM07ATEX0002X

## 13 Description of Equipment or Protective System:

The T590 is an electro-mechanical current to pressure converter. The unit's electronics operate on a 4 to 20 mA current loop. The ambient operating temperature range of the T590 is -55°C to 85°C, however the temperature class and the maximum permitted operating temperature are dependant on the Energy Limitation Parameters specified below. The circuitry for the T590 is contained on a single circuit board that is mounted to the transducer's drive coil on the aluminium manifold and covered with a plastic cover. The I/P Converter is intended to be installed within an additional enclosure.

### **T590-AabK. I/P Converter.**

II 1 G Ex ia IIC T\* Ta = -55°C to Ta max

a = Output Pressure: C, D, E

b = Connection: M, P

### *Energy Limitation Parameters*

Temperature Class	Ta max	I <sub>i</sub>	U <sub>i</sub>	P <sub>i</sub>
T4	85°C	60 mA	38.8 V	2.328 W
T4	85°C	100 mA	30 V	3.0 W
T4	80°C	120 mA	28 V	3.36 W
T4	70°C	150 mA	25.5 V	3.825 W
T5	70°C	60 mA	38.8 V	2.328 W
T5	55°C	100 mA	30 V	3 W
T5	45°C	120 mA	28 V	3.36 W
T5	85°C	23 mA	6.75 V	0.155 W
T6	60°C	50 mA	42.5 V	2.125 W
T6	55°C	60 mA	38.8 V	2.328 W

## 14 Specific Conditions of Use:

1. The non-metallic cover of the I/P converter is considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.
2. The I/P converter enclosure's metal base must be mounted as part of a bonded structure.
3. The I/P converter enclosure contains aluminium and is considered to constitute a potential risk of ignition by impact or friction and must be taken into account during installation.
4. The user shall permanently mark the protection type chosen. Once the type of protection has been marked is 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 EU-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.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# SCHEDULE

to EU-Type Examination Certificate No. FM07ATEX0002X

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe 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 Europe Ltd's ATEX Certification Scheme.

## 17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

## 18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
19 <sup>th</sup> June 2007	Original Issue.
13 <sup>th</sup> May 2013	<u>Supplement 1:</u> Report Reference: – 3023940rev130401 dated 1 <sup>st</sup> May 2013 and 3023940rev130416 dated 1 <sup>st</sup> May 2013. Description of the Change: Documentation update with document obsolescence and CDL reformatting.
09 <sup>th</sup> April 2019	<u>Supplement 2:</u> Report Reference: – RR216273 dated 12 <sup>th</sup> November 2019. Description of the Change: Documentation update, update of standards. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# 1 TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU

3 Type Examination Certificate No: FM07ATEX0003X

4 Equipment or protective system: T-590-AabK I/P Converter  
(Type Reference and Name)

5 Name of Applicant: ControlAir Inc.

6 Address of Applicant: 8 Columbia Drive  
Amherst, NH 03031  
United States of America

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 Europe Ltd. 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:

3030620EC dated 15<sup>th</sup> June 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 60079-0:2012+ A11:2013 and EN 60079-15:2010

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

11 This Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. 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 3 G Ex nL IIC T\* Ta = -55°C to Ta max

II 3 G Ex nA nL IIC T6 Ta = -55°C to +85°C

\*Temperature class and maximum ambient temperature as indicated in description.

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**Richard Zammitt**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 09<sup>th</sup> April 2019

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# SCHEDULE

to Type Examination Certificate No. FM07ATEX0003X

## 13 Description of Equipment or Protective System:

The T590 is an electro-mechanical current to pressure converter. The unit's electronics operate on a 4 to 20 mA current loop. The ambient operating temperature range of the T590 is -55°C to 85°C, however the temperature class and the maximum permitted operating temperature are dependant on the Energy Limitation Parameters specified below. The circuitry for the T590 is contained on a single circuit board that is mounted to the transducer's drive coil on the aluminium manifold and covered with a plastic cover. The I/P Converter is intended to be installed within an additional enclosure.

### **T590-AabK. I/P Converter. (Ex nL version)**

II 3 G Ex nL IIC T\* Ta = -55°C to Ta max

a = Output Pressure: C, D, E

b = Connection: M, P

### *Energy Limitation Parameters*

Temperature Class	Ta max	I <sub>i</sub>	U <sub>i</sub>	P <sub>i</sub>
T4	85°C	60 mA	38.8 V	2.328 W
T4	85°C	100 mA	30 V	3.0 W
T4	80°C	120 mA	28 V	3.36 W
T4	70°C	150 mA	25.5 V	3.825 W
T5	70°C	60 mA	38.8 V	2.328 W
T5	55°C	100 mA	30 V	3 W
T5	45°C	120 mA	28 V	3.36 W
T5	85°C	23 mA	6.75 V	0.155 W
T6	60°C	50 mA	42.5 V	2.125 W
T6	55°C	60 mA	38.8 V	2.328 W

### **T590-AabK. I/P Converter. (Ex nL version)**

II 3 G Ex nAnL IIC T6 Ta = -55°C to +85°C

a = Output Pressure: C, D, E

b = Connection: M, P

Input parameters

U<sub>i</sub> = 40 V ; I<sub>i</sub> = 20 mA

## 14 Specific Conditions of Use:

1. The non-metallic cover of the I/P converter is considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.
2. The I/P converter enclosure's metal base must be mounted as part of a bonded structure.
3. The I/P converter enclosure contains aluminium and is considered to constitute a potential risk of ignition by impact or friction and must be taken into account during installation.
4. If the T590 I/P Converter is installed as Category 3 equipment, Then it shall be installed in an Enclosure which maintains an ingress protection rating of IP54 and meets the enclosure requirements of EN 50014 or EN 60079-0.
5. The user shall permanently mark the protection type chosen. Once the type of protection has been marked it shall not be changed.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**



# SCHEDULE

to Type Examination Certificate No. FM07ATEX0003X

**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 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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by FM Approvals Europe Ltd.

**18 Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
19 <sup>th</sup> June 2007	Original Issue.
13 <sup>th</sup> May 2013	<u>Supplement 1:</u> Report Reference: – 3023940rev130401 dated 1 <sup>st</sup> May 2013 and 3023940rev130416 dated 1 <sup>st</sup> May 2013. Description of the Change: Documentation update with document obsolescence and CDL reformatting.
09 <sup>th</sup> April 2019	<u>Supplement 2:</u> Report Reference: – RR216273 dated 12 <sup>th</sup> November 2018. Description of the Change: Documentation update. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM08ATEX0049X

4 Equipment or protective system: T595XP Current-to-Pressure Transducer  
(Type Reference and Name)

5 Name of Applicant: ControlAir, Inc.

6 Address of Applicant: 8 Columbia Drive  
Amherst, NH 03031  
United States of America

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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 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 confidential report number:

3031829EC dated 09<sup>th</sup> December 2008

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 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-31:2014  
and EN 60529:1991+A1:2000+A2:2013

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. 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 2 G Ex db IIB+H2 T6 Gb Ta = -40°C to +75°C

II 2 D Ex tb IIIC T85°C Db Ta = -40°C to +75°C

*Damien McArdle*  
**FM Approvals**  
Member of the FM Global Group

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**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 22<sup>nd</sup> July 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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# SCHEDULE

to EU-Type Examination Certificate No. FM08ATEX0049X

**13 Description of Equipment or Protective System:**

The T595XP is an electro-mechanical current to pressure converter. The unit operates on a 40 Vdc, 4 mA to 20 mA current loop. The ambient operating temperature range of the T595XP is -40°C to +75°C and has an Ingress Protection rating of IP65.

The housing is constructed of epoxy-painted A380/A383 Aluminum Alloy and is available with a threaded blank cover. The enclosure contains one M20 x 1.5 or ½-inch NPT wiring entry. The housing is provided with internal grounding connection, a cover o-ring for environmental protection and flame arrestors which are press-fit into the base of the housing.

**T595XP-Aabc. I/P Transducer.**

a = Output pressure C, D, or E.

b = Connection M, N or P.

c = Options K, K2 or R.

**14 Specific Conditions of Use:**

1. The user shall permanently mark the protection type chosen. Once the type of protection has been marked it shall not be changed.
2. The flameproof joints of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flameproof joints is necessary.
3. Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard due to impact or friction on the equipment enclosure.

**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 EU-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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# SCHEDULE

to EU-Type Examination Certificate No. FM08ATEX0049X

## 18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
11 <sup>th</sup> December 2008	Original Issue.
17 <sup>th</sup> April 2009	<u>Supplement 1:</u> Report reference: 3035877EC dated 16 <sup>th</sup> April 2009 Description of change: Add Special conditions of Safe Use and updated drawings.
13 <sup>th</sup> March 2013	<u>Supplement 2:</u> Report reference: 3031829ECrev130124 dated 15 <sup>th</sup> February 2013 Description of change: Add ½" 14 NPT / M20 x 1.5 conduit adapter.
25 <sup>th</sup> April 2013	<u>Supplement 3:</u> Report reference: 3031829ECrev130124 dated 15 <sup>th</sup> February 2013 Description of change: Correction to Supplement 2 – Change description should read: Add integral M20 x 1.5 entry thread to housing.
01 <sup>st</sup> August 2014	<u>Supplement 4:</u> Report reference: 3031829rev140515 dated 28 <sup>th</sup> July 2014 Description of change: Minor change to ground screws not affecting the equipment safety.
02 <sup>nd</sup> February 2017	<u>Supplement 5:</u> Report reference: RR203720 dated 01 <sup>st</sup> February 2017 Description of change: Model code changes. Update standards to latest version.
22 <sup>nd</sup> July 2019	<u>Supplement 6:</u> Report reference: RR219500 dated 19 <sup>th</sup> July 2019 Description of change: Marking updated due to change in NB number. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM09ATEX0030X

4 Equipment or protective system: T595XP Current-to-Pressure Transducer  
(Type Reference and Name)

5 Name of Applicant: ControlAir, Inc.

6 Address of Applicant: 8 Columbia Drive  
Amherst, NH 03031  
United States of America

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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 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 confidential report number:

3035877EC dated 16<sup>th</sup> April 2009

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 60079-0:2012+A11:2013, EN 60079-11:2012 and EN 60529:1991+A1:2000+A2:2013

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. 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 IIC T\* Ta= -55°C to +85°C



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Member of the FM Global Group

**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 23<sup>rd</sup> July 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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F ATEX 020 (Mar/2019)

Page 1 of 3

# SCHEDULE

to EU-Type Examination Certificate No. FM09ATEX0030X

## 13 Description of Equipment or Protective System:

The T595XP is an electro-mechanical current to pressure converter. The unit operates on a 4 to 20 mA current loop. The ambient operating temperature range of the T595XP is dependent on the Energy Limitation Parameters as specified below. The T595XP has an Ingress Protection rating of IP65.

The housing is constructed of epoxy-painted A380/A383 Aluminum Alloy. The housing is available with a threaded blank cover. The enclosure contains one M20 x 1.5 wiring entry. The housing is provided with internal grounding connection. An o-ring is provided between the cover and base for environmental protection. Two sintered flames arrestors are pres-fit into the base of the housing.

### **T595XP-Aabc. I/P Converter.**

a = Output Pressure Range: C, D, or E.

b = Connection: M, N, or P.

c = Options K, K2, L or R.

### Energy Limitation Parameters

*Temperature Class	Ta	Ii	Ui	Pi
T4	85°C	60 mA	38.8 V	2.328 W
T4	85°C	100 mA	30 V	3.0 W
T4	80°C	120 mA	28 V	3.36 W
T4	70°C	150 mA	25.5 V	3.825 W
T5	70°C	60 mA	38.8 V	2.328 W
T5	55°C	100 mA	30 V	3.0 W
T5	45°C	120 mA	28 V	3.36 W
T5	85°C	23 mA	6.75 V	0.155 W
T6	60°C	50 mA	42.5 V	2.125 W
T6	55°C	60 mA	38.8 V	2.328 W

## 14 Specific Conditions of Use:

1. The User shall permanently mark the protection type chosen. Once the type of protection has been marked it shall not be changed.
2. The I/P converter enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction and must be taken into account during installation.

## 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 EU-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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# SCHEDULE

to EU-Type Examination Certificate No. FM09ATEX0030X

## 17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

## 18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
17 <sup>th</sup> April 2009	Original Issue.
13 <sup>th</sup> March 2013	<u>Supplement 1:</u> Reference: 3031829rev130124, dated 15 <sup>th</sup> February 2013 Description of Change: Add ½" 14 NPT / M20 x1.5 conduit adapter.
25 <sup>th</sup> April 2013	<u>Supplement 2:</u> Report reference: 3031829rev130124 dated 15 <sup>th</sup> February 2013 Description of change: Correction to Supplement 1 – Change description should read: Add integral M20 x 1.5 entry thread to housing.
01 <sup>st</sup> August 2014	<u>Supplement 3:</u> Report reference: 3031829rev140515 dated 28 <sup>th</sup> July 2014 Description of change: Minor change to ground screws not affecting the equipment safety.
22 <sup>nd</sup> December 2015	<u>Supplement 4:</u> Report reference: RR202976 dated 21 <sup>st</sup> December 2015 Description of change: Added additional model code options
03 <sup>rd</sup> February 2017	<u>Supplement 5:</u> Report reference: RR203720 dated 01 <sup>st</sup> February 2017 Description of change: Model code changes. Update standards to latest version.
23 <sup>rd</sup> July 2019	<u>Supplement 6:</u> Report reference: RR219500 dated 19 <sup>th</sup> July 2019 Description of change: Marking updated due to change in NB number. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# 1 TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU

3 Type Examination Certificate No: FM09ATEX0031X

4 Equipment or protective system: T595XP Current-to-Pressure Transducer  
(Type Reference and Name)

5 Name of Applicant: ControlAir, Inc.

6 Address of Applicant: 8 Columbia Drive  
Amherst, NH 03031  
United States of America

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 Europe Ltd. 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:

3035877EC dated 16<sup>th</sup> April 2009

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 60079-0:2012+A11:2013, EN 60079-15:2005, EN 1127-1:2011 and  
EN 60529:1991+A1:2000+A2:2013

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

11 This Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. 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 3 G Ex nL IIC T6...T4 Ta= -55°C to 85°C  
II 3 G Ex nA nL IIC T6 Ta= -55°C to 85°C



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Digitally signed by Damien Mc Ardle  
DN: cn=Damien Mc Ardle, o=FM Approvals, ou=FM Approvals Europe Ltd, email=damien.mcardle@fmapprovals.com, c=IE  
Date: 2019.07.22 15:49:40 +01'00'

**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 22<sup>nd</sup> July 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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# SCHEDULE

to Type Examination Certificate No. FM09ATEX0031X

**13 Description of Equipment or Protective System:**

The T595XP is an electro-mechanical current to pressure converter. The unit operates on a 4 mA to 20 mA current loop. The ambient operating temperature range of the T595 is dependent on the energy limitation Parameters as specified below. The T595XP has an Ingress Protection rating of IP65.

The housing is constructed of epoxy-painted A380/A383 Aluminum Alloy. The housing is available with a threaded blank cover. The enclosure contains one M20 x 1.5 wiring entry. The housing is provided with internal grounding connection. An o-ring is provided between the cover and base for environmental protection. Two sintered Flame arrestors are press-fit into the base of the housing.

***T595XP-Aabc. I/P Converter.***

II 3 G Ex nL IIC T6...T4 Ta = -55°C to +85°C; IP65

a = Output Pressure Range: C, D, or E.

b = Connection: M, N, or P.

c = Options K, K2, L or R.

**Energy Limitation Parameters**

Temperature Class	Ta	li	Ui	Pi
T4	85°C	60 mA	38.8 V	2.328 W
T4	85°C	100 mA	30 V	3.0 W
T4	80°C	120 mA	28 V	3.36 W
T4	70°C	150 mA	25.5 V	3.825 W
T5	70°C	60 mA	38.8 V	2.328 W
T5	55°C	100 mA	30 V	3.0 W
T5	45°C	120 mA	28 V	3.36 W
T5	85°C	23 mA	6.75 V	0.155 W
T6	60°C	50 mA	42.5 V	2.125 W
T6	55°C	60 mA	38.8 V	2.328 W

***T595XP-Aabc. I/P Converter.***

II 3 G Ex nA nL IIC T6 Ta = -55°C to +85°C; IP65

a = Output Pressure Range: C, D, or E.

b = Connection: M, N, or P.

c = Options K, K2, L or R.

**Input Parameters**

Ui = 40 V; li = 20 mA

**14 Specific Conditions of Use:**

The user shall permanently mark the protection type chosen. 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.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# SCHEDULE

to Type Examination Certificate No. FM09ATEX0031X

**16 Test and Assessment Procedure and Conditions:**

This 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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by FM Approvals Europe Ltd.

**18 Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
17th April 2009	Original Issue.
13th March 2013	<u>Supplement 1:</u> Report Reference: 3031829rev130124; dated 15 <sup>th</sup> February 2013 Description of Change: Add ½" 14 NPT / M20 x 1.5 conduit adapter.
25 <sup>th</sup> April 2013	<u>Supplement 2:</u> Report reference: 3031829rev130124; dated 15 <sup>th</sup> February 2013 Description of change: Correction to Supplement 1 – Change description should read: Add integral M20 x 1.5 entry thread to housing.
04 <sup>th</sup> August 2014	<u>Supplement 3:</u> Report reference: 3031829rev140515 dated 28 <sup>th</sup> July 2014 Description of change: Minor change to ground screws not affecting the equipment safety.
22 <sup>nd</sup> December 2015	<u>Supplement 4:</u> Report reference: RR202976 dated 21 <sup>st</sup> December 2015 Description of change: Added additional model code options.
06 <sup>th</sup> February 2017	<u>Supplement 5:</u> Report reference: RR203720 dated 01 <sup>st</sup> February 2017 Description of change: Model code changes. Update standards to latest version.
22 <sup>nd</sup> July 2019	<u>Supplement 6:</u> Report reference: RR219500 dated 19 <sup>th</sup> July 2019 Description of change: Marking updated due to change in NB number. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM08ATEX0048X

4 Equipment or protective system: T900-AbcK Current to Pressure Converter  
(Type Reference and Name)

5 Name of Applicant: ControlAir Inc

6 Address of Applicant: 8 Columbia Drive  
Amherst, NH 03031  
United States of America

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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 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 confidential report number:

3034081 dated 19<sup>th</sup> January 2009

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 60079-0:2012+A11:2013 and EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. 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



Member of the FM Global Group

Digitally signed by Damien Mc Ardle  
DN: cn=Damien Mc Ardle, o=FM Approvals, ou=FM Approvals Europe Ltd,  
email=damien.mcardle@fmapprovals.com, c=IE  
Date: 2019.08.12 09:16:03 +01'00'

**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 12<sup>th</sup> August 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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F ATEX 020 (Mar/2019)

Page 1 of 3

# SCHEDULE

to EU-Type Examination Certificate No. FM08ATEX0048X

**13 Description of Equipment or Protective System:**

The Type 900-A..K I/P Converter converts a current or voltage input signal to a linearly proportional pneumatic output pressure. It utilizes a closed loop pressure feedback system that closely controls output and compensates for vibration, mounting angle, temperature and supply pressure variations.

Energy Limitation Parameters follows:

$U_i = 30V$ ,  $I_i = 125mA$ ,  $P_i = 0.70W$ ,  $C_i = 1nF$ ,  $L_i = 2.2mH$

Model Code options:

b = Output Pressure Range: C, D, E, F, G or H

c = Connection: A, D or T

**14 Specific Conditions of Use:**

1. The I/P transducer enclosure contains aluminum 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.

**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 EU-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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

**18 Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
19 <sup>th</sup> January 2009	Original Issue.
12 <sup>th</sup> August 2019	<u>Supplement 1:</u> Report Reference: RR219503 dated 08 <sup>th</sup> August 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# SCHEDULE



to EU-Type Examination Certificate No. FM08ATEX0048X

Date	Description
	Description of the Change: EN60079-0 updated to Edition 6 (2012+A11:2013) and EN60079-11 updated to Edition 6 (2012). EN60079-26 removed from standards list. Product Description in Section 13 updated to include electrical ratings and model code options. Certificate updated from EU-Type to EC-Type format. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.



**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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T: +353 (0) 1761 4200 E-mail: [atex@fmapprovals.com](mailto:atex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM06ATEX0018X

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  
United States of America

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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of the 26<sup>th</sup> 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 confidential report number:

3028313 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 60079-0:2012+A11:2013 and EN 60079-1:2014

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. 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 2 G Ex db IIB + H<sub>2</sub> T6 Gb Ta = -20°C to +70°C

  
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Member of the FM Global Group

Digitally signed by Damien Mc Ardle  
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Date: 2019.11.20 12:10:37 Z

**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 20<sup>th</sup> November 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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T: +353 (0) 1761 4200 E-mail: [atex@fmapprovals.com](mailto:atex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

F ATEX 020 (Mar/2019)

Page 1 of 3

# SCHEDULE

to EU-Type Examination Certificate No. FM06ATEX0018X

**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, 4-20 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

**14 Specific Conditions of Use:**

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 EU-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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

**18 Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
23 <sup>rd</sup> May 2007	Original Issue.
03 <sup>rd</sup> November 2008	<u>Supplement 1:</u> Report Reference: - 3028313supp1 dated 03 <sup>rd</sup> November 2008 Description of the Change: Minor changes to drawing not affecting explosion safety
13 <sup>th</sup> February 2009	<u>Supplement 2:</u> Report Reference: - 3028313supp2 dated 13 <sup>th</sup> February 2009 Description of the Change: Addition of Natural Gas media option
20 <sup>th</sup> November 2019	<u>Supplement 3:</u> Report Reference: - RR219403 dated 18 <sup>th</sup> November 2019. Description of the Change: Update of EN60079-0 to 6 <sup>th</sup> edition (2012+A11:2013) and update of EN60079-1 to 7 <sup>th</sup> edition (2014)

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# **SCHEDULE**



to EU-Type Examination Certificate No. FM06ATEX0018X

Date	Description
	Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809



**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Europe Limited, One Georges Quay Plaza, Dublin. Ireland. D02 E440  
T: +353 (0) 1761 4200 E-mail: [atex@fmapprovals.com](mailto:atex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)



# 1 EU-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 2014/34/EU

3 EU-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  
United States of America

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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of the 26<sup>th</sup> 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 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 60079-0:2012+A11:2013 and EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. 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 Ga Ta= -40°C to +70°C

  
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Member of the FM Global Group

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Approvals, ou=FM Approvals Europe  
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s.com, c=IE  
Date: 2019.11.20 12:20:19 Z

**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 20<sup>th</sup> November 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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# SCHEDULE

to EU-Type Examination Certificate No. FM06ATEX0027X

**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, Li = 125 mA, Pi = 0.7 W, Ci = 1 nF, Li = 2.2 mH

a = Output Pressure Range: C, D, or E.

b = Options: A, B, T or E.

**14 Specific Conditions of Use:**

1) The I/P transducer enclosure contains aluminum 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 EU-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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# **SCHEDULE**

to EU-Type Examination Certificate No. FM06ATEX0027X

## 18 **Certificate History**

**Details of the supplements to this certificate are described below:**

<b>Date</b>	<b>Description</b>
23 <sup>rd</sup> May 2007	Original Issue.
03 <sup>rd</sup> Nov 2008	<u>Supplement 1:</u> Reference: 3028313EC supplement 1 dated 03 <sup>rd</sup> November 2008. Description of Change: Minor changes to drawings.
13 <sup>th</sup> Feb 2009	<u>Supplement 2:</u> Report reference: 3028313EC supplement 2 dated 13 <sup>th</sup> February 2009. Description of change: Addition of Natural Gas media option
06 <sup>th</sup> January 2016	<u>Supplement 3:</u> Report reference: RR203193 dated 05 <sup>th</sup> January 2016. Description of change: Corrected errors in the CDL.
20 <sup>th</sup> November 2019	<u>Supplement 4:</u> Report reference: RR219403 dated 18 <sup>th</sup> November 2019. Description of change: Update of EN60079-0 to Edition 6, 2012:+A11:2013 and update of EN60079-11 to Edition 6, 2012 Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

# 1 TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU

3 Type Examination Certificate No: FM06ATEX0028X

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  
United States of America

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 Europe Ltd. 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 60079-0:2012+A11:2013, EN 60079-15:2005 and EN1127-1:2011

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

11 This Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. 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 3 G Ex nA nL IIC T6 Gc Ta= -40°C to 70°C

  
Digitally signed by Damien Mc Ardle  
DN: cn=Damien Mc Ardle, o=FM Approvals, ou=FM Approvals Europe Ltd, email=damien.mcardle@fmapprovals.com, c=IE  
Date: 2019.11.20 12:21:49 Z

**Damien Mc Ardle**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 20<sup>th</sup> November 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Europe Limited, One Georges Quay Plaza, Dublin. Ireland. D02 E440  
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# SCHEDULE



to Type Examination Certificate No. FM06ATEX0028X

**13 Description of Equipment or Protective System:**

The T950 is an electro-mechanical current to pressure converter. The unit operates on a 4 mA to 20 mA current loop. The circuitry for the T950X is contained in two multi-layer printed circuit boards that are mounted inside an aluminum flameproof enclosure.

The ambient operating temperature range of the T950 is  $T_a = -40^{\circ}\text{C}$  to  $70^{\circ}\text{C}$

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

Energy Limitation Parameters

$U_i = 30$  Volts,  $I_i = 125$  mA,  $P_i = 0.7$  W,  $C_i = 1$  nF,  $L_i = 2.2$  mH

a = Output Pressure Range: C, D, or E.

b = Options: A, B, T or E.

**14 Specific Conditions of Use:**

The user shall permanently mark the protection type chosen. 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 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 Europe 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 Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by FM Approvals Europe Ltd.

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# SCHEDULE

to Type Examination Certificate No. FM06ATEX0028X

## 18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
23 <sup>rd</sup> May 2007	Original Issue.
03 <sup>rd</sup> November 2008	<u>Supplement 1:</u> Report reference: 3028313EC supplement 1 dated 03 <sup>rd</sup> November 2008. Description of Change: Minor changes to drawings.
13 <sup>th</sup> February 2009	<u>Supplement 2:</u> Report reference: 3028313EC supplement 2 dated 13 <sup>th</sup> February 2009. Description of change: Addition of Natural Gas media option
06 <sup>th</sup> January 2016	<u>Supplement 3:</u> Report reference: RR203193 dated 05 <sup>th</sup> January 2016. Description of change: Corrected errors in the CDL.
20 <sup>th</sup> November 2019	<u>Supplement 4:</u> Report reference: RR219403 dated 18 <sup>th</sup> November 2019. Description of change: Update of EN60079-0 to Edition 6, 2012:+A11:2013 and addition of EN1127-1:2011 standard. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

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#### **EU-Declaration of Conformity**

In accordance with European Directive 2014/34/EU

This document declares that the following non-electrical equipment:

T90, T300, T330, T340, T350, T360, T370, T380, T390, T400, T600  
T650, T700, T710, T800, T6000, T6500, T6600

Including all options/accessories except "G", pressure gauge  
Are in conformity with the provisions of EU Directive 2014/34/EU  
For use in potentially explosive atmospheres.  
This declaration applies to mechanical equipment only.

#### **Applicable European standards:**

BS EN 80079-36:2016 Basic method and requirements  
BS EN 80079-37:2016 Protection by constructional safety "c"

Equipment Group, Category and Location  
II 2 G (IIC T6 Gas Zones 1 and 2) EPL Gb  
II 2 D (IIIC T6 Dust Zones 21 and 22) EPL Db

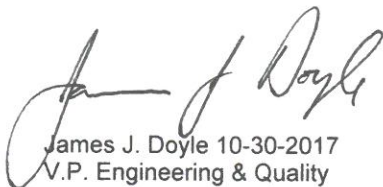
User of equipment to follow installation, operation and maintenance instructions.

Additional precautions for use in potentially explosive atmospheres must be observed:

- Plastic Knob: constitutes a potential electrostatic discharge hazard; clean with a damp cloth
- Aluminum enclosure: constitutes a potential risk of ignition by impact or friction;  
Care must be taken to prevent impact or friction.
- User shall periodically clean devices to prevent the accumulation of dusts, especially in hot environments.

Notified Body  
FM Approvals Ltd.  
1 Windsor Dials  
Windsor, Berkshire, SL4 1RS, UK

Technical file number issued 8-6-2010: 3040611

A handwritten signature in black ink, appearing to read "James J. Doyle".

James J. Doyle 10-30-2017  
V.P. Engineering & Quality