

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:
(Type Reference and Name) Type 590 I/P Transducer

5 Name of Applicant: ControlAir LLC

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 15th 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 IEC 60079-0:2018, EN IEC 60079-7:2015+A1:2018 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 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 ic IIC T* Gc Ta = -55°C to Ta max

II 3 G Ex ec ic IIC T6 Gc Ta = -55°C to +85°C

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



Richard Zammitt
Certification Manager, FM Approvals Europe Ltd.

Issue date: 24th August 2022

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

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13 Description of Equipment or Protective System:

The Type 590 is an electro-mechanical current to pressure transducer. The unit's electronics operate on a 4 to 20 mA current loop. The ambient operating temperature range of the Type 590 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 Type 590 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.

Type 590-AabK. I/P Transducer

II 3 G Ex ic IIC T* Gc Ta = -55°C to Ta max

a = Output Pressure: C, D, E

b = Connection: M, P

Energy Limitation Parameters

*Temperature class	Ta	li	Ui	Pi
T6	60 °C	50 mA	42.5 V	0.53 W
T6	55 °C	60 mA	38.8 V	0.58 W
T5	70 °C	60 mA	38.8 V	0.58 W
T5	55 °C	100 mA	30 V	0.75 W
T5	45 °C	120 mA	28 V	0.84 W
T4	85 °C	60 mA	38.8 V	0.58 W
T4	85 °C	100 mA	30 V	0.75 W
T4	80 °C	120 mA	28 V	0.84 W
T4	70 °C	150 mA	25.5 V	0.95 W
T5	85 °C	23 mA	6.75 V	0.038 W

T590-AabK. I/P Transducer.

II 3 G Ex ec ic IIC T6 Gc Ta = -55°C to +85°C

a = Output Pressure: C, D, E

b = Connection: M, P

Input parameters

Ui = 40 V ; li = 20 mA

14 Specific Conditions of Use:

1. The non-metallic cover of the I/P transducer is considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.
2. The I/P transducer enclosure's metal base must be mounted as part of a bonded structure.
3. The I/P transducer 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 Type 590 I/P Transducer shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.
5. The Type 590 I/P Transducer shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with EN IEC 60079-0.
6. The user shall permanently mark the protection type chosen. Once the type of protection has been marked it shall not be changed.

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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. The technical documentation is maintained under project id 3023942.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
19 th June 2007	Original Issue.
13 th May 2013	<u>Supplement 1:</u> Report Reference: – 3023940rev130401 dated 01 st May 2013 and 3023940rev130416 dated 1 st May 2013. Description of the Change: Documentation update with document obsolescence and CDL reformatting.
09 th April 2019	<u>Supplement 2:</u> Report Reference: – RR216273 dated 12 th 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.
21 st August 2019	<u>Supplement 3:</u> Report Reference: – RR219501 dated 20 th August 2019. Description of the Change: Documentation updates. EN60079-15 reverted back to Edition 3 (2005) and addition of EN1127-1:2011 Standard.
16 th March 2020	<u>Supplement 4:</u> Report Reference: RR222390 dated 10 th March 2020. Description of the Change: 1) Label updates due to change in company logo 2) Company name change from ControlAir Inc. to ControlAir LLC.

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Date	Description
24 th August 2022	<p><u>Supplement 5:</u> Report Reference: PR460291 dated 02nd August 2022. Description of the Change:</p> <ol style="list-style-type: none">1) Update to standards used: EN IEC 60079-0, EN IEC 60079-7 and EN 60079-11.2) Update to the label to add UKCA certification details.3) Consolidation of descriptive documents.4) Rewording of Specific Conditions of Use.

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