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UNITED KINGDOM CONFORMITY ASSESSMENT

TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres – UKSI 2016:1107 (as amended)**

3 **Type Examination Certificate No: FM21UKEX0093X**

4 **Equipment or protective system: Type 590 I/P Transducer
(Type Reference and Name)**

5 **Name of Applicant: Controlair LLC**

6 **Address of Applicant: 8 Columbia Dr
Amherst
NH 03031
United States**

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, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in confidential report number:

3030620EC PR460291 dated 2nd August 2022

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 with the Regulations. Further requirements of the Regulations apply to the manufacturing process and supply of this product. 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.



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Foxit PhantomPDF Version: 10.1.5

**Victor Aluko-Oginni
Certification Manager, FM Approvals Ltd.**

Issue date: 6th September 2022

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

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F UKEX 029 (Jan/21)



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SCHEDULE

to Type Examination Certificate No. FM21UKEX0093X

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-Aabc. I/P Transducer

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

a = Output Pressure: C, D, E

b = Connection: M, P

c = Options: K, L

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 Converter.

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

a = Output Pressure: C, D, E

b = Connection: M, P

c = Options: K, L

Input parameters

Ui = 40 V ; li = 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. 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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SCHEDULE

to Type Examination Certificate No. FM21UKEX0093X

15 Essential Health and Safety Requirements:

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated 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 UKCA Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Regulations in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's UKCA 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 Ltd.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
6 th September 2022	Original Issue.

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