



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX QPS 21.0003X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-03-19

Applicant: **Accutron Instruments Inc.**
11 Mary Street
Sudbury, Ontario P3C 1B4
Canada

Equipment: **Accutron Plus IS Airflow**

Optional accessory:

Type of Protection: **"i"**

Marking: **IECEX QPS 21.0003X**
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Approved for issue on behalf of the IECEx
Certification Body:

D, Adams, P.Eng.

Position:

Manager, Hazardous Locations Department [Ex Equipment]

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

QPS
Evaluation Services Inc.
81 Kelfield St
Unit 8
Toronto, Ontario M9W 5A3
Canada





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Manufacturer: **Accutron Instruments Inc.**
11 Mary Street
Sudbury, Ontario P3C 1B4
Canada

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[CA/QPS/ExTR21.0002/00](#)

Quality Assessment Report:

[CA/QPS/QAR21.0001/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Accutron Plus IS Airflow System can be used for airflow measurements in the area of a mine known as the drift, or measuring output airflow from large mine fans. The airflow measurements are made using ultrasonic Transducer assemblies. The use of a particular system is identified in the model part number as shown below.

- ACCIS-SYS-002-DR (Drift)
- ACCIS-SYS-002-FN (Fan)

There are no differences in the internal hardware or intrinsically safe circuitry between the two models. The operational differences are only in the physical mounting hardware which is different for the drift and fan models.

The basic operation of the Airflow System uses ultrasonic pulses which are sent back and forth between two transducers across the drift through the air current or across a fan output. The difference in time between the ultrasonic signal sending time and receiving time is directly proportional to the airflow.

J1 Power Supply

- $U_i = 12.6\text{Vdc}$
- $I_i = 2.5\text{A}$
- $C_i = 0.0\mu\text{F}$
- $L_i = 0.0\text{mH}$

J2 Isolated 4-20mA Output

- $U_i = 28\text{Vdc}$
- $I_i = 93\text{mA}$
- $P_i = 0.65\text{W}$
- $C_i = 1\mu\text{F}$
- $L_i = 5\mu\text{H}$

J3 Isolated RS485 – Power Externally

- $U_i = 5.88\text{Vdc}$
- $I_i = 3.25\text{A}$
- $I_i = 0.5\text{A}$

Thermal

- $C_i = 0.3\mu\text{F}$
- $L_i = 0.0\text{mH}$

SPECIFIC CONDITIONS OF USE: YES as shown below:

- CAUTION – The Accutron Plus IS Airflow system must only be installed in a manner that will avoid an ignition hazard due to impact or friction.
- WARNING – DO NOT OPEN WHEN COAL DUST IS PRESENT
- CAUTION – The cover screws must be torqued to a value of $4.5\text{N}\cdot\text{m}$ (40in*lbs)
- CAUTION – Refer to IS control drawing during installation.
- ATTENTION – No user replaceable parts. Contact the manufacturer for service.