



QPS Evaluation Services Inc
Testing, Certification and Field Evaluation Body
Accredited in Canada, the USA, and Internationally

Certificate Number
QPS 21ATEX5001X

EU Type Examination Certificate

- (1) **Equipment intended for use in potentially explosive atmospheres - Directive 2014/34/EU**
- (2) EU Type Examination Certificate Number: **QPS 21ATEX5001X** Issue Number: 0
- (3) Product: **Accutron IS Airflow Monitor**
- (4) Manufacturer: Accutron Instruments Inc
- (5) Address: 11 Mary Street
Sudbury, Ontario
P3C 1B4 Canada
- (6) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (7) QPS Evaluation Services Inc. 81 Kelfield St., Units 7-9, Toronto, ON M9W 5A3, Canada, Notified Body Number 2900, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 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 test report no. ATX35466-1
- (8) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

Standard	Edition
EN IEC 60079-0	2018
EN 60079-11	2012

The following documents describe the equipment or component defined in this certificate:
Issue #0

Title:	Drawing No.:	Rev. Level:	Date:
System Documentation List	ACCIS-IECEX-SYS-001-DOCLIST	0.5	09/01/2021
Equivalent Lumped LCR for System	ACCIS-IECEX-SYS-001-EQCCT	rev 0	03/23/2020
System Drawing	ACCIS-IECEX-SYS-001-DWG	rev 0	03/23/2020
Functional Explanation	ACCIS-IECEX-SYS-001-FE	rev 0	03/23/2020
Bill of Material	ACCIS-IECEX-SYS-001-BOM	rev 0	03/23/2020
Block Diagram of System	ACCIS-IECEX-SYS-001-BKDIAG	rev 0	03/23/2020
Input / Output Parameters for J1, J2, J3	ACCIS-IECEX-SYS-001-PORTPRMTRS	rev 0	03/23/2020
System Documentation Map	ACCIS-IECEX-SYS-001-DOCMAP	rev 0	03/23/2020



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Bill of Material	ACCIS-IECEX-SYS-001-WIRESPEC	rev A	12/01/2010
Bill of Material	ACCIS-IECEX-SYS-001-PCBSPEC	rev A	12/07/2010
Maintaining IP65 Rating	ACCIS-IECEX-SYS-001-INSTGUIDE	rev 0	03/23/2020
Bill of Material	ACCIS-CNTRL-ASY-003-BOM	rev 0	03/23/2020
Control Box Sub-Assemblies	ACCIS-CNTRL-ASY-003-DWG	rev 0	03/23/2020
Bill of Material	ACCIS-CNTRL-ENC-002-BOM	rev 1	12/18/2020
Control Box Enclosure	ACCIS-CNTRL-ENC-002-DWG	rev D	09/01/2021
*Wiring Diagram	ACCIS-CNTRL-WIRE-002-DWG	Rev 0.1	10/22/2021
Gerber Files	ACCIS-MBD-PWC-005	Gerber Files (7)	N/A
PCB layout	ACCIS-MBD-PWC-005-DWG	rev 3	02/25/2011
Bill of Material	ACCIS-MBD-ASY-002-BOM	rev G	09/01/2020
Motherboard Schematic	ACCIS-MBD-ASY-004-SCH	rev 3	09/01/2020
Gerber Files	ACCIS-BAB-PWC-001	Gerber Files (9)	N/A
PCB Layout	ACCIS-BAB-PWC-001-DWG	Rev 5	05/09/2013
Bill of Material	ACCIS-BAB-ASY-001-BOM	rev H	09/01/2020
Baby Board Schematic	ACCIS-BAB-ASY-001-SCH	rev 7	10/31/2013
Bill of Material	ACCIS-CNTRL-INTCAB-001-BOM	rev A	07/08/2010
Internal Transducer cable	ACCIS-CNTRL-INTCAB-001-SCH	rev B	02/24/2011
Barrier Board Fix	ACCIS-BARBT-ASY-FIX-DWG	Rev 0	11/06/2013
Gerber files	ACCIS-BARBT-PWC-003	Gerber Files (7)	N/A
PCB Layout	ACCIS-BARBT-PWC-003-DWG	rev 7	06/21/2013
Bill of Material	ACCIS-BARBT-ASY-002-BOM	rev N	08/10/2021
Barrier Board schematic	ACCIS-BARBT-ASY-003-SCH	rev 9	09/01/2020
Functional Explanation	ACCIS-BARBT-ASY-002-FE	rev A	07/28/2010
Barrier Board Zener Diode Placement	ACCIS-BARBT-ASY-002-DWG	rev B	11/05/2010
Bill of Material	ACCIS-BCKPLT-ASY-003-BOM	rev 0	03/23/2020
Back Panel Layout	ACCIS-BCKPLT-ASY-003-DWG	rev 0	03/23/2020
Bill of Material	ACCIS-CABXXX-ASY-001-BOM	rev B	05/16/2011
Cable Assembly Wiring Detail	ACCIS-CABXXX-ASY-002-SCH	rev A	06/08/2010
Bill of Material	ACCIS-XDC-ASY-001-BOM	rev B	02/17/2011
Transducer Assembly	ACCIS-XDC-ASY-002-DWG	rev B	02/18/2011
Functional Explanation	ACCIS-XDC-ASY-001-FE	rev A	07/28/2010
Transducer Enclosure	ACCIS-XDC-ENC-002-DWG	rev D	02/24/2011
Bill of Material	ACCIS-XDC-ENC-002-BOM	rev B	11/16/2010
Transducer Enclosure	ACCIS-XDC1-ENC-001-DWG	rev A	02/17/2011
ESD Sticker Drawing	XDC-ESDSTKR1-001-DWG	Rev C	08/23/21
ESD Sticker Drawing	XDC-ESDSTKR2-001-DWG	Rev A	01/07/2011
ESD Sticker Drawing	XDC-ESDSTKR3-001-DWG	rev C	08/23/2021
Bill of Material	ACCIS-XDC1-ENC-001-BOM	rev A	02/17/2011
Gerber Files	ACCIS-UXDC-PWC-004	Gerber Files (8)	N/A



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PCB Layout	ACCIS-UXDC-PWC-004-DWG	rev 2	07/29/2010
Bill of Material	ACCIS-UXDC-ASY-002-BOM	rev H	06/23/2021
Transducer Circuit Schematic	ACCIS-UXDC-ASY-003-SCH	rev 4	09/01/2020
Bill of Material	ACCIS-XDC-INTCAB-001-BOM	rev B	07/28/2010
Internal Transducer Assembly	ACCIS-XDC-INTCAB-002-SCH	rev B	07/28/2010
Label	Airflow Monitor IS	-	Jan 4, 2022

- (9) If an 'X' suffix appears after the certificate number, it that the equipment is subject to conditions of safe use
- (10) This EU Type Examination certificate only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- (11) The marking of the product shall include the following:



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(12) **SCHEDULE**

(13) **to EU Type Examination Certificate**

Issue No. **0**

(14) **Description**

The Accutron IS Airflow System, ACCIS-IECEX-SYS-001, 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-IECEX-TXD-001-DR (Drift)
- ACCIS-IECEX-TXD-001-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

(15) **Electrical data**

J1 Power Supply <ul style="list-style-type: none">• $U_i = 12.6\text{Vdc}$• $I_i = 2.5\text{A}$• $C_i = 0.0\mu\text{F}$• $L_i = 0.0\text{mH}$	J2 Isolated 4-20mA Output <ul style="list-style-type: none">• $U_i = 28\text{Vdc}$• $I_i = 93\text{mA}$• $P_i = 0.65\text{W}$• $C_i = 1\mu\text{F}$• $L_i = 5\mu\text{H}$	J3 Isolated RS485 – Power Externally <ul style="list-style-type: none">• $U_i = 5.88\text{Vdc}$• $I_i = 3.25\text{A}$• $I_i = 0.5\text{A}$• Thermal• $C_i = 0.3\mu\text{F}$• $L_i = 0.0\text{mH}$
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(16) **Installation instructions:**

Document	Sheets	Rev	Title
Manual	41	V2022.01.17	ACCUTRON IS AIRFLOW MONITOR Intrinsically Safe Airflow Metering Systems Technical / Operations Manual

(17) **Report Number**

ATX35466-1

(18) **Specific conditions of use**

1. 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
2. WARNING – DO NOT OPEN WHEN COAL DUST IS PRESENT
3. CAUTION – The cover screws must be torqued to a value of 4.5N*m (40in*lbs)
4. CAUTION – Refer to IS control drawing during installation
5. ATTENTION – No user replaceable parts. Contact the manufacturer for service

(19) **Essential Health and Safety Requirements**

Covered by the standards listed at item (8).

(20) **Test documentation**

As listed in Report No. ATX35466-1

(21) **Certificate history**

Issue 0 - initial certificate

Issued By: Dave Adams

Signature: 

Date: February 2, 2022