1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 15ATEX2152X** Issue: **4**

4 Equipment: **Transducer Sensors/AC8**, AC9**, TA8**, TA9**, VE9**, LP8**, LP9** Series**

5 Applicant: **CTC - Connection Technology Center, Inc.**

6 Address: 7939 Rae Blvd.
Victor
New York 14564
USA

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 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 the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 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 identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

I M1
Ex ia I Ma
Ta @-40°C to +121°C

II 1G
Ex ia IIC T3 -T4 Ga
T3: Ta @ -40°C to +121°C
T4: Ta @ -40°C to +80°C

II 2D
Ex ib IIIC T135°C ... T143°C Db
T143°C: Ta @ -40°C to +121°C
T135°C: Ta @ -40°C to +80°C

Signed: Michelle Halliwell

Title: Senior Director of Operations

PRODUCTS RvA C 652

Project Number 80042041

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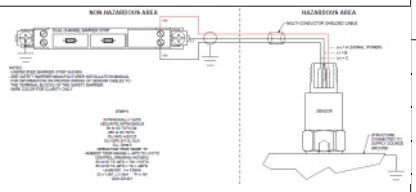
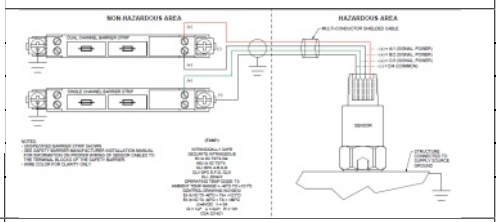
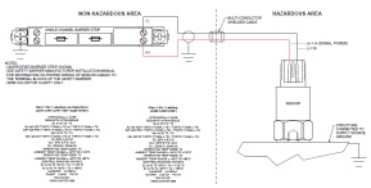
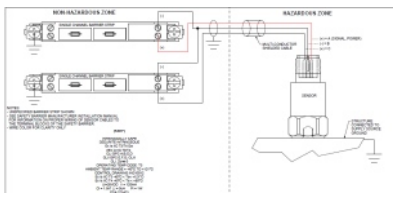
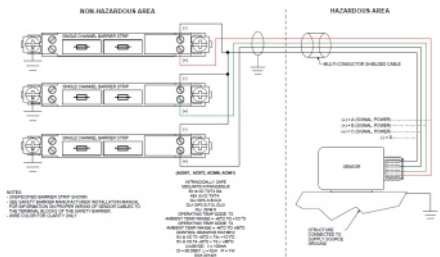
13 **DESCRIPTION OF EQUIPMENT**

The devices, powered by IS Barriers matching the Entity Parameters, are transducer sensors used for acceleration measurement by means of piezo-electric devices. The piezo-electric device is subjected to compression pressure from a mass which produces a voltage in proportion to the acceleration. For the AC9** Series, the voltage is then amplified by internal electronic circuitry producing a 10 mV/g, 50 mV/g, or 100 mV/g signal. The TA9* Series is referred to as the accelerometer because it has a temperature output that is different from the AC9*. The sensors are mounted onto the desired surface using a threaded bolt.

The AC9** has sensing elements that are smaller than the TA9** series which allows it to be a compact version with one element, a version that measures two axis (biaxial) and a version that measures three axis (triaxial). Both the AC9** and TA9** come in cases that have the connector pins coming out of the top (top exit) and the side (side exit).

In terms of connectors and cables, involved models overlap slightly as shown below:
A- Refer to DWG INS10012 for connections' details:

2 Pin Vibration Sensors Connected to 1 Single Channel Barrier	3 Pin Vibration Sensors - Connected to 1 Dual Channel Barrier - or 2 Single Channel barrier	4 Pin Vibration Sensors - Connected to 1 Dual Channel Barrier & 1 Single Channel barrier - or 3 Single Channel barrier
AC91 Series	TA91 Series	AC957 Series
LP8* Series	AC979 Series	AC972 Series
LP9* Series	AC82 Series	AC980 Series
VE9 Series	AC86 Series	AC981 Series
AC96 Series		TA82 Series
AC83 Series		
AC90 Series		
AC970 Series		
AC974 Series		
AC976 Series		
		

- Standard accelerometers and velocity sensors have 2 pins and uses 2 wire cable, 1 wire is for the sensing element and 1 common.
- The Biaxial, designated sensors have 3 pins and uses 3 wire cables. For the biaxial sensor 2 wires are for the different sensing elements and 1 common. For temperature, 1 wire is for signal, 1 for temperature, 1 shared common. For negative voltage and low power, 1 wire is for signal, 1 for power, and 1 for ground.
- The Triaxial designated sensors have 4 pins and a 4 wire cable. For Triaxial 1 wire for each of the 3 sensing elements and 1 for common. For low power with temperature, 1 wire is for signal, 1 for temperature, 1 for power and 1 for shared common.

For entity parameters and models specified with or without integral cables refer to section 1.4.

B- For each model maximum allowable integral cable length as shown below:

1- For models utilising blocking diodes the maximum cable length would be 1600 ft (488 m)
2- For models not utilising blocking diodes the maximum cable length would be 200 ft (61 m)

Models With Integral Cables	Maximum Integral Cable Length
AC901-XR, AC902-XR	200 ft (61 m)
AC903-XR, AC904-XR	200 ft (61 m)
AC905-XR, AC906-XR	200 ft (61 m)
AC970-XR THROUGH AC979-XR AC980-XR THROUGH AC989-XR	200 ft (61 m)
AC812-XR, AC814-XR AC822-XR, AC824-XR	200 ft (61 m)
AC865-XR, AC866-XR	200 ft (61 m)
TA81-XR, TA82-XR	200 ft (61 m)
AC911-XR, AC912-XR, AC913-XR, AC914-XR, AC915-XR, AC916-XR, AC917-XR, AC918-XR	1600 ft (488 m)
AC961-XR, AC952-XR, AC963-XR, AC964-XR, AC965-XR, AC966-XR, AC967-XR, AC968-XR	1600 ft (488 m)
TA91*-XR	1600 ft (488 m)
LP80*-XR, LP81*-XR, LP90*-XR, LP91*-XR	1600 ft (488 m)
LP85*-XR, LP86*-XR, LP95*-XR, LP96*-XR	1600 ft (488 m)
VE901-XR, VE902-XR	1600 ft (488 m)

C- For models specified with integral cables the following list to be utilised:

Part Number	Capacitance	Resistance	Inductance
CB102	48.0 pF/ft	10.0Ω/1000ft	0.081µH/ft
CB103*	49 pF/ft	9.7Ω/1000ft	0.047µH/ft
CB193*	49 pF/ft	9.7Ω/1000ft	0.047µH/ft
CB111	45.0 pF/ft	10.0Ω/1000ft	0.084µH/ft

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Part Number	Capacitance	Resistance	Inductance
CB190*	36 pF/ft	9.5Ω/1000ft	0.19µH/ft
CB296	35 pF/ft	42Ω/1000ft	0.062µH/ft
CB212	41 pF/ft	13.0Ω/1000ft	0.092µH/ft
CB191*	44.13 pF/ft	11.9Ω/1000ft	0.18µH/ft
CB192*	37.15 pF/ft	16.41Ω/1000ft	0.20µH/ft
CB298	27.9 pF/ft	15.4Ω/1000ft	0.21µH/ft

*NOTE: These cables are only acceptable for use in sensors rated for a maximum ambient of +80°C.

Accelerometers' nomenclature have been adjusted to present the distinguished type of enclosure and PCB enclosed.

A- Previously assessed accelerometers models taking into consideration the new designations:
(Used for Class I Division 1, Zone 0 and Zone 1)

Item number	Model Nomenclature	Entity Parameters
AC Series with and without Integral Cables (DWG INS 10170)		
1- Without integral cable	AC901-1R, AC902-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 11.51 nF Li = 0 µH
2- With integral cable	AC901-XR, AC902-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 51.7 nF Li = 336 µH
3- Without integral cable	AC903-1R, AC904-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 24.02 nF Li = 0 µH
4- With integral cable	AC903-XR, AC904-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 64.02nF Li = 336 µH
5- Without integral cable	AC905-1R, AC906-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 64.02nF Li = 336 µH

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Item number	Model Nomenclature	Entity Parameters
6- With integral cable	AC905-XR, AC906-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.85nF Li = 336 µH
7- Without integral cable	AC911-1R, AC912-1R, AC913-1R, AC914-1R, AC915-1R, AC916-1R, AC917-1R, AC918-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 28nF Li = 0µH
8- With integral cable	AC911-XR, AC912-XR, AC913-XR, AC914-XR, AC915-XR, AC916-XR, AC917-XR, AC918-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
9- Without integral cable	AC961-1R, AC952-1R, AC963-1R, AC964-1R, AC965-1R, AC966-1R, AC967-1R, AC968-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
10- With integral cable	AC961-XR, AC952-XR, AC963-XR, AC964-XR, AC965-XR, AC966-XR, AC967-XR, AC968-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
11- Without integral cable	AC970-1R THROUGH AC979-1R AC980-1R THROUGH AC989-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 28nF Li = 0µH
12- With integral cable	AC970-XR THROUGH AC979-XR AC980-XR THROUGH AC989-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 40nF Li = 40.2µH
TA Series with and without Integral Cables (DWG INS 10170)		
13- Without integral cable	TA91*-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 1.5nF Li = 40.2µH

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Item number	Model Nomenclature	Entity Parameters
14- With integral cable	TA91*-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 82nF Li = 336µH

B- New added and assessed accelerometers models including the new designations:
(Used for Class I Division 1, Zone 0 and Zone 1)

Item number	Model Nomenclature	Entity Parameters
AC Series with and without Integral Cables (DWG INS 10170)		
1- Without integral cable	AC812-1R, AC814-1R AC822-1R, AC824-1R	Ui = 6VDC Ii = 0.5A Pi = 1W Ci = 266nF Li = 0µH
2- With integral cable	AC812-XR, AC814-XR AC822-XR, AC824-XR	Ui = 6VDC Ii = 0.5A Pi = 1W Ci = 278.2nF Li = 42µH
3- Without integral cable	AC865-1R, AC866-1R	Ui = -28VDC Ii = 120mA Pi = 1W Ci = 46nF Li = 0µH
4- With integral cable	AC865-XR, AC866-XR	Ui = -28VDC Ii = 120mA Pi = 1W Ci = 58.2nF Li = 42µH
TA Series with and without Integral Cables (DWG INS10170)		
5- Without integral cable	TA81*-1R, TA82-1R	Ui = 6VDC Ii = 0.5A Pi = 100mW Ci = 268.5nF Li = 0µH
6- With integral cable	TA81-XR, TA82-XR	Ui = 6VDC Ii = 0.5A Pi = 100mW Ci = 268.5nF Li = 0µH
LP Series with and without Integral Cables (DWG INS 10170)		

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Item number	Model Nomenclature	Entity Parameters
7- Without integral cable	LP80*-1R, LP81*-1R, LP90*-1R, LP91*-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
8- With integral cable	LP80*-XR, LP81*-XR, LP90*-XR, LP91*-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
9- Without integral cable	LP85*-1R, LP86*-1R, LP95*-1R, LP96*-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
10- With integral cable	LP85*-XR, LP86*-XR, LP95*-XR, LP96*-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
VE Series with and without Integral Cables (DWG INS 10170)		
11- Without integral cable	VE901-1R, VE902-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
12- With integral cable	VE901-XR, VE902-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH

Variation 1 - This variation introduced the following changes:

i. Assessment of new accelerometers' added models. The description was amended to recognise these new models. The Special Conditions of Use and Conditions of Manufacture were also amended.
ii. Addition of the full nomenclature for all accelerometers' models to the report.
iii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012 was replaced by EN IEC 60079-0:2018
iv. Changing all accelerometers assessed models' entity parameters to match corresponding Schematics.
v. Updating Schematics to reflect applied changes, updating nameplates and instruction manual.
vi. Excluding accelerometers' obsolete models and those of different marking.

vii. The ambient temperature range was corrected to include the T4 marking which had previously been omitted.

Variation 2 - This variation introduced the following change:

i. Addition of Marking, Ex ia I Ma.

Variation 3 - This variation introduced the following change:

i. Corrected Product Name/Model Number.
ii. Updated Markings to include Ex ib IIIC T135°C ... T143°C Db.
iii. Updated Product Description.
iv. Updated Specific Conditions of Use.
v. Updated Manufacturer's Documents.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	12 June 2015	R70009243A	The release of the prime certificate.
1	05 November 2019	R70206069A	This Issue covers the following changes: • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 1.
2	31 October 2019	1611	Transfer of certificate Sira 15ATEX2152X from Sira Certification Service to CSA Group Netherlands B.V.
3	06 March 2023	R80132561A	The introduction of Variation 2.
4	28 March 2025	R80042039A	The introduction of Variation 3.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 All models of the assessed equipment are required to be connected to a properly rated I.S. barrier as per DWG INS10012. The Ui & Ii parameters are the worst case voltage and current from the combination of these barriers, but they cannot appear at the same time. It is the end-users' responsibility to ensure that the combined voltage and current of the connected barriers does not exceed the values of Table A.1 of IEC 60079-11:2011 Ed 6.

15.2 Cables of the following part numbers are restricted only for use with sensors of a maximum ambient temperature of + 80°C, The manufacturer shall ensure that the product is marked accordingly:

- CB103
- CB190
- CB191
- CB192
- CB193

15.3 Maximum Cable lengths are specified and these maximum values shall not be exceeded as per the following list:

Models With Integral Cables	Maximum Integral Cable Length
AC901-XR, AC902-XR	200 ft (61 m)
AC903-XR, AC904-XR	200 ft (61 m)
AC905-XR, AC906-XR	200 ft (61 m)
AC970-XR THROUGH AC979-XR AC980-XR THROUGH AC989-XR	200 ft (61 m)
AC812-XR, AC814-XR AC822-XR, AC824-XR	200 ft (61 m)
AC865-XR, AC866-XR	200 ft (61 m)
TA81-XR, TA82-XR	200 ft (61 m)
AC911-XR, AC912-XR, AC913-XR, AC914-XR, AC915-XR, AC916-XR, AC917-XR, AC918-XR	1600 ft (488 m)
AC961-XR, AC952-XR, AC963-XR, AC964-XR, AC965-XR, AC966-XR, AC967-XR, AC968-XR	1600 ft (488 m)
TA91*-XR	1600 ft (488 m)
LP80*-XR, LP81*-XR, LP90*-XR, LP91*-XR	1600 ft (488 m)
LP85*-XR, LP86*-XR, LP95*-XR, LP96*-XR	1600 ft (488 m)
VE901-XR, VE902-XR	1600 ft (488 m)

15.4 The entity parameters of the vibration sensors and integrated cables shall not be exceeded as per the marked nameplates. Refer to the following controlled document**s** for details:

- INS10170

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 The equipment shall be subjected to dielectric strength test using test voltage of 500 VAC applied between circuit and earth for 60 seconds. Alternatively, a voltage of 20% higher may be applied for 1 second. There shall be no evidence of flashover or breakdown and the maximum current flowing during the test shall not exceed 5 m A r.m.s. at any time. Refer to IEC 60079-11:2011 Ed. 6 clause 6.3.13.

17.4 Cables of the following part numbers are restricted only for use with sensors of a maximum ambient temperature of + 80°C, The manufacturer shall ensure that the product is marked accordingly:

CB103 CB190 CB191 CB192 CB193

Certificate Annexe

Certificate Number: **Sira 15ATEX2152X**

Equipment: **Transducer Sensors/AC9** Series and TA9** Series**

Applicant: **CTC - Connection Technology Center,** Inc.

Issue 0

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
INS10012	1 to 8	F	11 Jun 15	Intrinsic Safe Sensor Control Drawing
INS10013	1 to 3	C	08 Jun 15	Sensors, Pin Connectors, Intrinsically Safe Models
INS10014	1 to 6	B	08 Jun 15	Sensors, Integral Cables, Hazardous Area Models
INS10015	1 of 1	A	08 Jun 15	Labelling, Intrinsically Safe Sensor, Top Connector
INS10017	1 of 1	D	08 Jun 15	Labelling Matrix, Intrinsically Safe Sensors, AC Series
INS10019	1 of 1	0	08 Jun 15	Trace, AC Series Amplifier, Intrinsically Safe
INS10020	1 of 1	0	08 Jun 15	Layout, AC Series Amplifier, Intrinsically Safe
INS10025	5 of 6	F	11 Jun 15	Label Drawing, IS SENSOR
INS10030	1 of 1	A	08 Jun 15	Ceramic, Piezoelectric, Schedule Drawing
INS10031	1 of 1	A	11 Jun 15	Sensing Element Assembly
INS10035	1 to 3	D	11 Jun 15	Class 1 Div 2/Zone 2 Sensor Control Drawing
INS10038	1 of 1	C	08 Jun 15	AC Series Labelling Matrix for Division 2
INS10043	1 of 1	A	08 Jun 15	Labelling Matrix, Intrinsically Safe Sensors, TA Series
INS10044	1 of 1	A	08 Jun 15	Trace, AC Small Series Amplifier, Intrinsically Safe
INS10045	1 of 1	A	08 Jun 15	Trace, TA Series Temperature Circuit Board, Intrinsically Safe
INS10048	1 of 1	A	08 Jun 15	AC Small Series Schematic, Intrinsically Safe
INS10049	1 of 1	A	08 Jun 15	IS Temp board Schematic
INS10051	1 of 1	C	08 Jun 15	Amplifier Low cap Low Noise 100mV/g BOM
INS10053	1 of 1	C	08 Jun 15	BOM Amplifier 100mV/g Low Noise & Low Cap IS version
INS10053	1 of 1	C	08 Jun 15	SCH Amplifier 100mV/g Low Noise & Low Cap IS version
INS10056	1 of 1	A	08 Jun 15	New Low Cap IS Sensor board
INS10057	1 of 1	A	08 Jun 15	10 mV/G IS board Bill of Materials
INS10058	1 of 1	A	08 Jun 15	50 mV/G IS board Bill of Materials
INS10059	1 of 1	A	08 Jun 15	100 mV/G IS board Bill of Materials

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
INS10012	16	K	23 Aug 19	Intrinsic Safe Sensor Control Drawing
INS10013	3	E	23 Aug 19	Sensors, Pin Connector, Hazardous Area
INS10014	6	C	23 Aug 19	Sensors, Accelerometers, With Integral Cable, Hazardous Area
INS10015	1	A	23 Aug 19	Labelling, Hazardous Locations
INS10019	1	0	23 Aug 19	Trace, AC Series Amplifier, Intrinsically Safe
INS10020	1	0	23 Aug 19	Layout, AC Series Amplifier, Intrinsically Safe
INS10021	1	A	23 Aug 19	Trace Locations, LP Series, Side 1 & Side 2
INS10022	1	A	23 Aug 19	Parts Location, LP Series, Side 1 & Side 2
INS10026	2	D	23 Aug 19	LP 4-20mA SCHEMATIC
INS10027	2	B	23 Aug 19	IS 100mV/g SCHEMATIC
INS10028	2	B	23 Aug 19	IS 50mV/g SCHEMATIC
INS10029	2	B	23 Aug 19	IS 10mV/g SCHEMATIC
INS10031	2	D	23 Aug 19	Sensing Element, Hazardous Area Models
INS10044	1	A	23 Aug 19	Trace, AC Small Series Amplifier, Intrinsically Safe
INS10045	1	A	23 Aug 19	Trace, TA Series Temperature Circuit Board, Intrinsically Safe
INS10048	2	C	23 Aug 19	AC Small Series Schematic, Intrinsically Safe
INS10049	1	A	23 Aug 19	IS Temp Board Schematic

Certificate Annexe

Certificate Number: **Sira 15ATEX2152X**

Equipment: **Transducer Sensors/AC9** Series and TA9** Series**

Applicant: **CTC - Connection Technology Center,** Inc.

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
INS10053	2	C	23 Aug 19	Intrinsically Safe Low Capacitance Accelerometer (100, 50, 10 mV/g) BOM and Schematic
INS10074	2	A	23 Aug 19	Schematic / BOM For IS Velocity Amp Board
INS10076	2	A	23 Aug 19	Schematic / BOM For IS Ultra Low Power Amp Board
INS10078	2	A	23 Aug 19	Amp Schematic / BOM For IS Low Frequency Board
INS10084	2	A	23 Aug 19	IS Negative Voltage Schematic / BOM
INS10106	8	A	23 Aug 19	AC Series Marking File
INS10107	2	A	23 Aug 19	LP Marking Drawing, Division 1 / Zone 0,1
INS10108	1	A	23 Aug 19	VE Marking File, Division 1 / Zones 0,1
INS10109	2	A	23 Aug 19	TA Marking File, Division 1 / Zones 0,1

Issue 2 No new drawings were introduced

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
INS10106	1 to 8	B	03 Feb 23	AC SERIES MARKING FILE
INS10107	1 to 2	B	03 Feb 23	LP MARKING DRAWING, DIVISION 1 / ZONE 0,1
INS10108	1 of 1	B	03 Feb 23	VE MARKING FILE, DIVISION 1 / ZONES 0,1
INS10109	1 to 2	B	03 Feb 23	TA MARKING FILE, DIVISION 1 / ZONES 0,1
INS10025	1 to 13	M	06 Feb 23	MARKING / LABELING, HAZARDOUS LOCATIONS SENSOR
MNX10014	1 to 7	D	20 Feb 23	PRODUCT MANUAL
INS10012	1 to 16	L	22 Feb 23	INTRINSIC SAFE SENSOR CONTROL DRAWING

Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
INS10012	1 to 16	N	25 Mar 25	INTRINSIC SAFE SENSOR CONTROL DRAWING
INS10170	1 to 15	A	25 Mar 25	MARKING / LABELING, HAZARDOUS LOCATIONS SENSOR
MNX10126	1 to 8	A	25 Mar 25	Intrinsically Safe Sensors Product Manual

The following drawings no longer form part of the certification drawing list:

Drawing	Sheets	Rev.	Date (Stamp)	Title
INS10106	1 to 8	B	03 Feb 23	AC SERIES MARKING FILE
INS10107	1 to 2	B	03 Feb 23	LP MARKING DRAWING, DIVISION 1 / ZONE 0,1
INS10108	1 of 1	B	03 Feb 23	VE MARKING FILE, DIVISION 1 / ZONES 0,1
INS10109	1 to 2	B	03 Feb 23	TA MARKING FILE, DIVISION 1 / ZONES 0,1
INS10025	1 to 13	M	06 Feb 23	MARKING / LABELING, HAZARDOUS LOCATIONS SENSOR
MNX10014	1 to 7	E	20 Feb 23	PRODUCT MANUAL

1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 15ATEX2152X** Issue: **4**

4 Equipment: **Transducer Sensors/AC8**, AC9**, TA8**, TA9**, VE9**, LP8**, LP9** Series**

5 Applicant: **CTC - Connection Technology Center, Inc.**

6 Address: 7939 Rae Blvd.
Victor
New York 14564
USA

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 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 the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 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 identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

I M1
Ex ia I Ma
Ta @-40°C to +121°C

II 1G
Ex ia IIC T3 -T4 Ga
T3: Ta @ -40°C to +121°C
T4: Ta @ -40°C to +80°C

II 2D
Ex ib IIIC T135°C ... T143°C Db
T143°C: Ta @ -40°C to +121°C
T135°C: Ta @ -40°C to +80°C

Signed: Michelle Halliwell

Title: Senior Director of Operations

PRODUCTS RvA C 652

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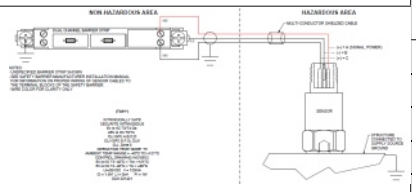
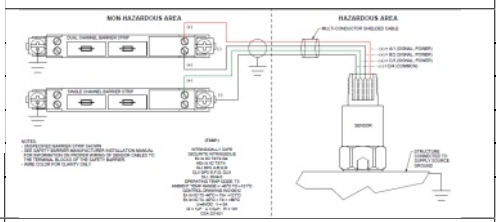
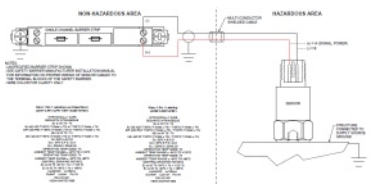
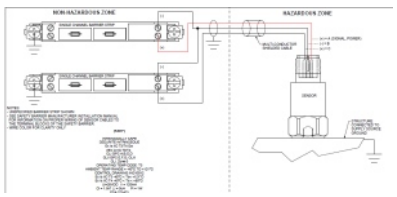
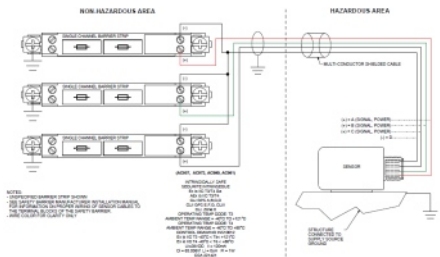
13 **DESCRIPTION OF EQUIPMENT**

The devices, powered by IS Barriers matching the Entity Parameters, are transducer sensors used for acceleration measurement by means of piezo-electric devices. The piezo-electric device is subjected to compression pressure from a mass which produces a voltage in proportion to the acceleration. For the AC9** Series, the voltage is then amplified by internal electronic circuitry producing a 10 mV/g, 50 mV/g, or 100 mV/g signal. The TA9* Series is referred to as the accelerometer because it has a temperature output that is different from the AC9*. The sensors are mounted onto the desired surface using a threaded bolt.

The AC9** has sensing elements that are smaller than the TA9** series which allows it to be a compact version with one element, a version that measures two axis (biaxial) and a version that measures three axis (triaxial). Both the AC9** and TA9** come in cases that have the connector pins coming out of the top (top exit) and the side (side exit).

In terms of connectors and cables, involved models overlap slightly as shown below:
A- Refer to DWG INS10012 for connections' details:

2 Pin Vibration Sensors Connected to 1 Single Channel Barrier	3 Pin Vibration Sensors - Connected to 1 Dual Channel Barrier - or 2 Single Channel barrier	4 Pin Vibration Sensors - Connected to 1 Dual Channel Barrier & 1 Single Channel barrier - or 3 Single Channel barrier
AC91 Series	TA91 Series	AC957 Series
LP8* Series	AC979 Series	AC972 Series
LP9* Series	AC82 Series	AC980 Series
VE9 Series	AC86 Series	AC981 Series
AC96 Series		TA82 Series
AC83 Series		
AC90 Series		
AC970 Series		
AC974 Series		
AC976 Series		
		

- Standard accelerometers and velocity sensors have 2 pins and uses 2 wire cable, 1 wire is for the sensing element and 1 common.
- The Biaxial, designated sensors have 3 pins and uses 3 wire cables. For the biaxial sensor 2 wires are for the different sensing elements and 1 common. For temperature, 1 wire is for signal, 1 for temperature, 1 shared common. For negative voltage and low power, 1 wire is for signal, 1 for power, and 1 for ground.
- The Triaxial designated sensors have 4 pins and a 4 wire cable. For Triaxial 1 wire for each of the 3 sensing elements and 1 for common. For low power with temperature, 1 wire is for signal, 1 for temperature, 1 for power and 1 for shared common.

For entity parameters and models specified with or without integral cables refer to section 1.4.

B- For each model maximum allowable integral cable length as shown below:

1- For models utilising blocking diodes the maximum cable length would be 1600 ft (488 m)
2- For models not utilising blocking diodes the maximum cable length would be 200 ft (61 m)

Models With Integral Cables	Maximum Integral Cable Length
AC901-XR, AC902-XR	200 ft (61 m)
AC903-XR, AC904-XR	200 ft (61 m)
AC905-XR, AC906-XR	200 ft (61 m)
AC970-XR THROUGH AC979-XR AC980-XR THROUGH AC989-XR	200 ft (61 m)
AC812-XR, AC814-XR AC822-XR, AC824-XR	200 ft (61 m)
AC865-XR, AC866-XR	200 ft (61 m)
TA81-XR, TA82-XR	200 ft (61 m)
AC911-XR, AC912-XR, AC913-XR, AC914-XR, AC915-XR, AC916-XR, AC917-XR, AC918-XR	1600 ft (488 m)
AC961-XR, AC952-XR, AC963-XR, AC964-XR, AC965-XR, AC966-XR, AC967-XR, AC968-XR	1600 ft (488 m)
TA91*-XR	1600 ft (488 m)
LP80*-XR, LP81*-XR, LP90*-XR, LP91*-XR	1600 ft (488 m)
LP85*-XR, LP86*-XR, LP95*-XR, LP96*-XR	1600 ft (488 m)
VE901-XR, VE902-XR	1600 ft (488 m)

C- For models specified with integral cables the following list to be utilised:

Part Number	Capacitance	Resistance	Inductance
CB102	48.0 pF/ft	10.0Ω/1000ft	0.081µH/ft
CB103*	49 pF/ft	9.7Ω/1000ft	0.047µH/ft
CB193*	49 pF/ft	9.7Ω/1000ft	0.047µH/ft
CB111	45.0 pF/ft	10.0Ω/1000ft	0.084µH/ft

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Part Number	Capacitance	Resistance	Inductance
CB190*	36 pF/ft	9.5Ω/1000ft	0.19µH/ft
CB296	35 pF/ft	42Ω/1000ft	0.062µH/ft
CB212	41 pF/ft	13.0Ω/1000ft	0.092µH/ft
CB191*	44.13 pF/ft	11.9Ω/1000ft	0.18µH/ft
CB192*	37.15 pF/ft	16.41Ω/1000ft	0.20µH/ft
CB298	27.9 pF/ft	15.4Ω/1000ft	0.21µH/ft

*NOTE: These cables are only acceptable for use in sensors rated for a maximum ambient of +80°C.

Accelerometers' nomenclature have been adjusted to present the distinguished type of enclosure and PCB enclosed.

A- Previously assessed accelerometers models taking into consideration the new designations:
(Used for Class I Division 1, Zone 0 and Zone 1)

Item number	Model Nomenclature	Entity Parameters
AC Series with and without Integral Cables (DWG INS 10170)		
1- Without integral cable	AC901-1R, AC902-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 11.51 nF Li = 0 µH
2- With integral cable	AC901-XR, AC902-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 51.7 nF Li = 336 µH
3- Without integral cable	AC903-1R, AC904-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 24.02 nF Li = 0 µH
4- With integral cable	AC903-XR, AC904-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 64.02nF Li = 336 µH
5- Without integral cable	AC905-1R, AC906-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 64.02nF Li = 336 µH

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Item number	Model Nomenclature	Entity Parameters
6- With integral cable	AC905-XR, AC906-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.85nF Li = 336 µH
7- Without integral cable	AC911-1R, AC912-1R, AC913-1R, AC914-1R, AC915-1R, AC916-1R, AC917-1R, AC918-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 28nF Li = 0µH
8- With integral cable	AC911-XR, AC912-XR, AC913-XR, AC914-XR, AC915-XR, AC916-XR, AC917-XR, AC918-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
9- Without integral cable	AC961-1R, AC952-1R, AC963-1R, AC964-1R, AC965-1R, AC966-1R, AC967-1R, AC968-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
10- With integral cable	AC961-XR, AC952-XR, AC963-XR, AC964-XR, AC965-XR, AC966-XR, AC967-XR, AC968-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
11- Without integral cable	AC970-1R THROUGH AC979-1R AC980-1R THROUGH AC989-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 28nF Li = 0µH
12- With integral cable	AC970-XR THROUGH AC979-XR AC980-XR THROUGH AC989-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 40nF Li = 40.2µH
TA Series with and without Integral Cables (DWG INS 10170)		
13- Without integral cable	TA91*-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 1.5nF Li = 40.2µH

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Item number	Model Nomenclature	Entity Parameters
14- With integral cable	TA91*-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 82nF Li = 336µH

B- New added and assessed accelerometers models including the new designations:
(Used for Class I Division 1, Zone 0 and Zone 1)

Item number	Model Nomenclature	Entity Parameters
AC Series with and without Integral Cables (DWG INS 10170)		
1- Without integral cable	AC812-1R, AC814-1R AC822-1R, AC824-1R	Ui = 6VDC Ii = 0.5A Pi = 1W Ci = 266nF Li = 0µH
2- With integral cable	AC812-XR, AC814-XR AC822-XR, AC824-XR	Ui = 6VDC Ii = 0.5A Pi = 1W Ci = 278.2nF Li = 42µH
3- Without integral cable	AC865-1R, AC866-1R	Ui = -28VDC Ii = 120mA Pi = 1W Ci = 46nF Li = 0µH
4- With integral cable	AC865-XR, AC866-XR	Ui = -28VDC Ii = 120mA Pi = 1W Ci = 58.2nF Li = 42µH
TA Series with and without Integral Cables (DWG INS10170)		
5- Without integral cable	TA81*-1R, TA82-1R	Ui = 6VDC Ii = 0.5A Pi = 100mW Ci = 268.5nF Li = 0µH
6- With integral cable	TA81-XR, TA82-XR	Ui = 6VDC Ii = 0.5A Pi = 100mW Ci = 268.5nF Li = 0µH
LP Series with and without Integral Cables (DWG INS 10170)		

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Item number	Model Nomenclature	Entity Parameters
7- Without integral cable	LP80*-1R, LP81*-1R, LP90*-1R, LP91*-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
8- With integral cable	LP80*-XR, LP81*-XR, LP90*-XR, LP91*-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
9- Without integral cable	LP85*-1R, LP86*-1R, LP95*-1R, LP96*-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
10- With integral cable	LP85*-XR, LP86*-XR, LP95*-XR, LP96*-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH
VE Series with and without Integral Cables (DWG INS 10170)		
11- Without integral cable	VE901-1R, VE902-1R	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 0nF Li = 0µH
12- With integral cable	VE901-XR, VE902-XR	Ui = 28VDC Ii = 120mA Pi = 1W Ci = 80.4nF Li = 336µH

Variation 1 - This variation introduced the following changes:

i. Assessment of new accelerometers' added models. The description was amended to recognise these new models. The Special Conditions of Use and Conditions of Manufacture were also amended.
ii. Addition of the full nomenclature for all accelerometers' models to the report.
iii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012 was replaced by EN IEC 60079-0:2018
iv. Changing all accelerometers assessed models' entity parameters to match corresponding Schematics.
v. Updating Schematics to reflect applied changes, updating nameplates and instruction manual.
vi. Excluding accelerometers' obsolete models and those of different marking.

vii. The ambient temperature range was corrected to include the T4 marking which had previously been omitted.

Variation 2 - This variation introduced the following change:

i. Addition of Marking, Ex ia I Ma.

Variation 3 - This variation introduced the following change:

i. Corrected Product Name/Model Number.
ii. Updated Markings to include Ex ib IIIC T135°C ... T143°C Db.
iii. Updated Product Description.
iv. Updated Specific Conditions of Use.
v. Updated Manufacturer's Documents.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	12 June 2015	R70009243A	The release of the prime certificate.
1	05 November 2019	R70206069A	This Issue covers the following changes: • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 1.
2	31 October 2019	1611	Transfer of certificate Sira 15ATEX2152X from Sira Certification Service to CSA Group Netherlands B.V.
3	06 March 2023	R80132561A	The introduction of Variation 2.
4	28 March 2025	R80042039A	The introduction of Variation 3.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 All models of the assessed equipment are required to be connected to a properly rated I.S. barrier as per DWG INS10012. The Ui & Ii parameters are the worst case voltage and current from the combination of these barriers, but they cannot appear at the same time. It is the end-users' responsibility to ensure that the combined voltage and current of the connected barriers does not exceed the values of Table A.1 of IEC 60079-11:2011 Ed 6.

15.2 Cables of the following part numbers are restricted only for use with sensors of a maximum ambient temperature of + 80°C, The manufacturer shall ensure that the product is marked accordingly:

- CB103
- CB190
- CB191
- CB192
- CB193

15.3 Maximum Cable lengths are specified and these maximum values shall not be exceeded as per the following list:

Models With Integral Cables	Maximum Integral Cable Length
AC901-XR, AC902-XR	200 ft (61 m)
AC903-XR, AC904-XR	200 ft (61 m)
AC905-XR, AC906-XR	200 ft (61 m)
AC970-XR THROUGH AC979-XR AC980-XR THROUGH AC989-XR	200 ft (61 m)
AC812-XR, AC814-XR AC822-XR, AC824-XR	200 ft (61 m)
AC865-XR, AC866-XR	200 ft (61 m)
TA81-XR, TA82-XR	200 ft (61 m)
AC911-XR, AC912-XR, AC913-XR, AC914-XR, AC915-XR, AC916-XR, AC917-XR, AC918-XR	1600 ft (488 m)
AC961-XR, AC952-XR, AC963-XR, AC964-XR, AC965-XR, AC966-XR, AC967-XR, AC968-XR	1600 ft (488 m)
TA91*-XR	1600 ft (488 m)
LP80*-XR, LP81*-XR, LP90*-XR, LP91*-XR	1600 ft (488 m)
LP85*-XR, LP86*-XR, LP95*-XR, LP96*-XR	1600 ft (488 m)
VE901-XR, VE902-XR	1600 ft (488 m)

15.4 The entity parameters of the vibration sensors and integrated cables shall not be exceeded as per the marked nameplates. Refer to the following controlled document**s** for details:

- INS10170

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 The equipment shall be subjected to dielectric strength test using test voltage of 500 VAC applied between circuit and earth for 60 seconds. Alternatively, a voltage of 20% higher may be applied for 1 second. There shall be no evidence of flashover or breakdown and the maximum current flowing during the test shall not exceed 5 m A r.m.s. at any time. Refer to IEC 60079-11:2011 Ed. 6 clause 6.3.13.

17.4 Cables of the following part numbers are restricted only for use with sensors of a maximum ambient temperature of + 80°C, The manufacturer shall ensure that the product is marked accordingly:

CB103 CB190 CB191 CB192 CB193

Certificate Annexe

Certificate Number: **Sira 15ATEX2152X**

Equipment: **Transducer Sensors/AC9** Series and TA9** Series**

Applicant: **CTC - Connection Technology Center,** Inc.

Issue 0

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
INS10012	1 to 8	F	11 Jun 15	Intrinsic Safe Sensor Control Drawing
INS10013	1 to 3	C	08 Jun 15	Sensors, Pin Connectors, Intrinsically Safe Models
INS10014	1 to 6	B	08 Jun 15	Sensors, Integral Cables, Hazardous Area Models
INS10015	1 of 1	A	08 Jun 15	Labelling, Intrinsically Safe Sensor, Top Connector
INS10017	1 of 1	D	08 Jun 15	Labelling Matrix, Intrinsically Safe Sensors, AC Series
INS10019	1 of 1	0	08 Jun 15	Trace, AC Series Amplifier, Intrinsically Safe
INS10020	1 of 1	0	08 Jun 15	Layout, AC Series Amplifier, Intrinsically Safe
INS10025	5 of 6	F	11 Jun 15	Label Drawing, IS SENSOR
INS10030	1 of 1	A	08 Jun 15	Ceramic, Piezoelectric, Schedule Drawing
INS10031	1 of 1	A	11 Jun 15	Sensing Element Assembly
INS10035	1 to 3	D	11 Jun 15	Class 1 Div 2/Zone 2 Sensor Control Drawing
INS10038	1 of 1	C	08 Jun 15	AC Series Labelling Matrix for Division 2
INS10043	1 of 1	A	08 Jun 15	Labelling Matrix, Intrinsically Safe Sensors, TA Series
INS10044	1 of 1	A	08 Jun 15	Trace, AC Small Series Amplifier, Intrinsically Safe
INS10045	1 of 1	A	08 Jun 15	Trace, TA Series Temperature Circuit Board, Intrinsically Safe
INS10048	1 of 1	A	08 Jun 15	AC Small Series Schematic, Intrinsically Safe
INS10049	1 of 1	A	08 Jun 15	IS Temp board Schematic
INS10051	1 of 1	C	08 Jun 15	Amplifier Low cap Low Noise 100mV/g BOM
INS10053	1 of 1	C	08 Jun 15	BOM Amplifier 100mV/g Low Noise & Low Cap IS version
INS10053	1 of 1	C	08 Jun 15	SCH Amplifier 100mV/g Low Noise & Low Cap IS version
INS10056	1 of 1	A	08 Jun 15	New Low Cap IS Sensor board
INS10057	1 of 1	A	08 Jun 15	10 mV/G IS board Bill of Materials
INS10058	1 of 1	A	08 Jun 15	50 mV/G IS board Bill of Materials
INS10059	1 of 1	A	08 Jun 15	100 mV/G IS board Bill of Materials

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
INS10012	16	K	23 Aug 19	Intrinsic Safe Sensor Control Drawing
INS10013	3	E	23 Aug 19	Sensors, Pin Connector, Hazardous Area
INS10014	6	C	23 Aug 19	Sensors, Accelerometers, With Integral Cable, Hazardous Area
INS10015	1	A	23 Aug 19	Labelling, Hazardous Locations
INS10019	1	0	23 Aug 19	Trace, AC Series Amplifier, Intrinsically Safe
INS10020	1	0	23 Aug 19	Layout, AC Series Amplifier, Intrinsically Safe
INS10021	1	A	23 Aug 19	Trace Locations, LP Series, Side 1 & Side 2
INS10022	1	A	23 Aug 19	Parts Location, LP Series, Side 1 & Side 2
INS10026	2	D	23 Aug 19	LP 4-20mA SCHEMATIC
INS10027	2	B	23 Aug 19	IS 100mV/g SCHEMATIC
INS10028	2	B	23 Aug 19	IS 50mV/g SCHEMATIC
INS10029	2	B	23 Aug 19	IS 10mV/g SCHEMATIC
INS10031	2	D	23 Aug 19	Sensing Element, Hazardous Area Models
INS10044	1	A	23 Aug 19	Trace, AC Small Series Amplifier, Intrinsically Safe
INS10045	1	A	23 Aug 19	Trace, TA Series Temperature Circuit Board, Intrinsically Safe
INS10048	2	C	23 Aug 19	AC Small Series Schematic, Intrinsically Safe
INS10049	1	A	23 Aug 19	IS Temp Board Schematic

Certificate Annexe

Certificate Number: **Sira 15ATEX2152X**

Equipment: **Transducer Sensors/AC9** Series and TA9** Series**

Applicant: **CTC - Connection Technology Center,** Inc.

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
INS10053	2	C	23 Aug 19	Intrinsically Safe Low Capacitance Accelerometer (100, 50, 10 mV/g) BOM and Schematic
INS10074	2	A	23 Aug 19	Schematic / BOM For IS Velocity Amp Board
INS10076	2	A	23 Aug 19	Schematic / BOM For IS Ultra Low Power Amp Board
INS10078	2	A	23 Aug 19	Amp Schematic / BOM For IS Low Frequency Board
INS10084	2	A	23 Aug 19	IS Negative Voltage Schematic / BOM
INS10106	8	A	23 Aug 19	AC Series Marking File
INS10107	2	A	23 Aug 19	LP Marking Drawing, Division 1 / Zone 0,1
INS10108	1	A	23 Aug 19	VE Marking File, Division 1 / Zones 0,1
INS10109	2	A	23 Aug 19	TA Marking File, Division 1 / Zones 0,1

Issue 2 No new drawings were introduced

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
INS10106	1 to 8	B	03 Feb 23	AC SERIES MARKING FILE
INS10107	1 to 2	B	03 Feb 23	LP MARKING DRAWING, DIVISION 1 / ZONE 0,1
INS10108	1 of 1	B	03 Feb 23	VE MARKING FILE, DIVISION 1 / ZONES 0,1
INS10109	1 to 2	B	03 Feb 23	TA MARKING FILE, DIVISION 1 / ZONES 0,1
INS10025	1 to 13	M	06 Feb 23	MARKING / LABELING, HAZARDOUS LOCATIONS SENSOR
MNX10014	1 to 7	D	20 Feb 23	PRODUCT MANUAL
INS10012	1 to 16	L	22 Feb 23	INTRINSIC SAFE SENSOR CONTROL DRAWING

Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
INS10012	1 to 16	N	25 Mar 25	INTRINSIC SAFE SENSOR CONTROL DRAWING
INS10170	1 to 15	A	25 Mar 25	MARKING / LABELING, HAZARDOUS LOCATIONS SENSOR
MNX10126	1 to 8	A	25 Mar 25	Intrinsically Safe Sensors Product Manual

The following drawings no longer form part of the certification drawing list:

Drawing	Sheets	Rev.	Date (Stamp)	Title
INS10106	1 to 8	B	03 Feb 23	AC SERIES MARKING FILE
INS10107	1 to 2	B	03 Feb 23	LP MARKING DRAWING, DIVISION 1 / ZONE 0,1
INS10108	1 of 1	B	03 Feb 23	VE MARKING FILE, DIVISION 1 / ZONES 0,1
INS10109	1 to 2	B	03 Feb 23	TA MARKING FILE, DIVISION 1 / ZONES 0,1
INS10025	1 to 13	M	06 Feb 23	MARKING / LABELING, HAZARDOUS LOCATIONS SENSOR
MNX10014	1 to 7	E	20 Feb 23	PRODUCT MANUAL