ANZEx

Australian/New Zealand Certification Scheme
for Explosion Protected Equipment

Certificate of Conformity

Ex EQUIPMENT

Certificate No.: **ANZEx 13.3010X**	*Current Issue:* 2	*Date of Issue:* 2022-03-22

Applicant: **Migatron Corporation**
935 Dieckman Street
Woodstock, IL 60098
USA

Equipment: Intrinsically Safe Ultrasonic Sensor
Model: RPS-409A-abcd-IS2-efgh

Type of Explosion Protection: Intrinsic Safety "ia"

Explosion Protection Marking:
Ex ia I Ma
Ex ia IIC T4 Ga
Ex ia IIIC T101ºC Da
-40°C ≤ Ta ≤ +60ºC

This certificate is granted subject to the requirements as set out in
Joint Accreditation System of Australia and New Zealand Publications
ANZEx System Rules 2020 & ANZEx Certified Equipment Scheme Rules 2021

Signed for and on behalf of issuing body

Name & Position Ujen Singh - Quality & Certification Manager

This certificate is not transferable and remains the property of the issuing body.
The status of this certificate can be confirmed through the database located at www.anzex.com.au

Certificate issued by:

TestSafe Australia
919 Londonderry Road, Londonderry NSW 2753 Australia

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Manufacturer: **Migatron Corporation**
935 Dieckman Street
Woodstock, IL 60098
USA

Additional Manufacturing Location(s): None

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 Ed 7	Explosive atmospheres Part 0: Equipment—General requirements
IEC 60079-11:2011 Ed 6	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"

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

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Schedule

Equipment Description:

Model RPS-409A-abcd-IS2-efgh is an intrinsically safe, barrier-powered analog ultrasonic sensor, which can be used for distance measurement and/or object detection.

Nomenclature for intrinsically safe probe:

RPS-409A	-	abc	d	-	IS2	-	efgh
I		II	III		I		IV

I - Basic Model

II - Operational Range: The maximum range of the sensor in inches is designated by abc and can be any number from 1 to 999.

III - Enclosure: Blank, enclosure and jam nut material Polyphenylene Sulfide (PPS). P, enclosure and jam nut material Polyvinyl Chloride (PVC).

IV - Additional Feature Suffixes: Can be any combination of alphanumeric characteristics (or blanks) that do not relate to the safety of the product (for marketing purposes only).

Electrical Ratings/Parameters

The following entity parameters shall be taken into account during installation:

Terminal nos.	Ui	Ii	Pi	Ci	Li
1, 3 (Power)	30 V	100 mA	0.75 W	negligible	negligible
2, 3 (Analog Output)	16 V	16 mA	0.064 W	negligible	negligible
4, 3 (Sync/Tx)	16 V	16 mA	0.064 W	negligible	negligible

Specific Conditions of Use:

1. The cable assembly used to connect to the sensor shall have an IP rating of IP67 or greater.

2. Dielectric strength of enclosure is not sufficient to insulate the RPS-409A-abcd-IS2-efgh from other equipment. The RPS-409A-abcd-IS2-efgh may be mounted onto a metal part if the metal part is earth grounded in accordance with local codes, as applicable, or it may be mounted on an insulated part. In either case, the enclosure must be segregated or insulated from live parts.

3. RPS-409A-IS2 sensors with Polyvinyl Chloride (PVC) enclosure do not have static dissipative properties. WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD, WIPE WITH A DAMP CLOTH.

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Register of Issues and Variations
includes the current issue

Issue 0 dated 2013-03-13

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs: US/UL/ExTR12.0001/00 UL LLC
QAR No. & Issuing CB: US/UL/QAR11.0011/00 UL LLC

File Reference: 2012/021291

Manufacturer's Documents/Drawings associated with this issue:

Document/Drawing Number	Pages / Sheets	Document/Drawing Title	Revision	Date
Ex01121211	1	RPS-409A-IS2 Protective Board Schematic	3	2012-10-10
Ex01121213	2	RPS-409A-IS2 Protective Board Bill Of Materials	3	2012-10-13
Ex04291115	1	RPS-409A-IS2 Protective Board Gerbers	3	2012-10-01
Ex01131211	1	RPS-409A-IS2 Main Board Schematic	3	2012-09-27
Ex01131214	3	RPS-409A-IS2 Main Board Bill Of Materials	3	2012-10-19
Ex04281112	1	RPS-409A-IS2 Main Board Gerbers	2	2012-08-08
Ex01171208	1	RPS-409A-IS2 Final Assembly Bill Of Materials	2	2012-10-18
Ex01171209	1	PPS-70S Transducer Assembly Bill Of Materials	2	2012-10-18
Ex01171210	1	PPS-135S Transducer Assembly Bill Of Materials	2	2012-10-18
Ex01171211	1	PPS-160S Transducer Assembly Bill Of Materials	2	2012-10-18
Ex03191208	1	Transducer Assembly Drawing	2	2012-10-18
Ex01311216	1	RPS-409A-IS2 Assembly Drawing	2	2012-10-19
Ex01101214	1	Formex GK-40 Insulator	3	2012-10-04
Ex02281313	4	RPS-409A-IS2 User Manual	1	2013-03-04
Ex05021114	2	RPS-409A-IS2 Control Drawing	2	2012-10-25
Ex02281310	1	RPS-409A-IS2 ANZEx Marking Label	1	2013-02-28
Ex04281111	1	RPS-409A-IS2 Enclosure Drawing	3	2012-10-10
Ex01191216	1	Transformer Drawing (Toko 126ANS-T1098Z)	2	2012-06-29

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Certificate No.: **ANZEx 13.3010X**	*Current Issue:* 2	*Date of Issue:* 2022-03-22

Issue 1 dated 2019-05-14

Variations Permitted by this Issue

- Minor changes to schedule drawings.
- Remove standard IEC 60079-26
- Move the electrical parameters from conditions of certification to electrical parameters section.

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs: US/UL/ExTR12.0001/01 UL LLC
QAR No. & Issuing CB: US/UL/QAR11.0011/05 UL LLC

File Reference: 2018/020116

Manufacturer's Documents/Drawings associated with this issue:

Document/Drawing Number	Pages / Sheets	Document/Drawing Title	Revision	Date
Ex01131211	1	RPS-409A-IS2 Main Board Schematic	4	2018-07-02
Ex01131214	3	RPS-409A-IS2 Main Board Bill of Materials	4	2018-07-02
Ex01101214	1	Formex GK-40 Insulator	4	2018-07-24

Issue 2 (current issue)

Variations Permitted by this Issue

- Device has been evaluated and updated to IEC 60079-0, 7th edition.
- Add new encapsulation, board layout, alternate PVC enclosure and components to the documentation.

Standards relevant for this issue:

IEC 60079-0:2017 Ed 7 Explosive atmospheres Part 0: Equipment—General requirements

IEC 60079-11:2011 Ed 6 Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs: US/UL/ExTR12.0001/02 UL LLC
QAR No. & Issuing CB: US/UL/QAR11.0011/06 UL LLC

File Reference: 2021/012882

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Manufacturer's Documents/Drawings associated with this issue:

Document/Drawing Number	Pages / Sheets	Document/Drawing Title	Revision	Date
Ex2021020800	1	RPS-409A-IS2 Protective Board Schematic (R9 Board)	1	2021-02-17
Ex2021020801	1	RPS-409A-IS2 Protective Board Bill of Materials (R9 Board)	1	2021-05-04
Ex2021020802	1	RPS-409A-IS2 Protective Board Trace Layouts (R9 Board)	1	2021-02-22
Ex01131211	1	RPS-409A-IS2 Main Board Schematic	5	2021-02-05
Ex01131214	3	RPS-409A-IS2 Main Board Bill of Materials	5	2021-03-05
Ex01171208	2	RPS-409A-IS2 Final Assembly Bill of Materials	3	2021-07-21
Ex2021022300	1	RPS-409A-IS2 Assembly Drawing (R9 Board)	1	2021-04-30
Ex02281313	4	RPS-409A-IS2 User Manual	2	2022-03-10
Ex05021114	2	RPS-409A-IS2 Control Drawing	3	2021-07-22
Ex02281310	1	RPS-409A-IS2 ANZEx Marking Label	2	2021-08-19
Ex04281111	1	RPS-409A-IS2 Enclosure Drawing	4	2021-07-20
Ex2021020101	1	PAR-70S Transducer Assembly Bill of Materials	1	2021-03-02
Ex2021020102	1	PAR-135S Transducer Assembly Bill of Materials	1	2021-03-02
Ex2021020103	1	PAR-160S Transducer Assembly Bill of Materials	1	2021-03-02
Ex2021020100	1	Transducer Assembly Drawing, PAR	1	2021-02-23