[1] # EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

[3] EU-Type Examination Certificate Number: **DEMKO 12 ATEX 1103028X Rev. 3**

[4] Product: **Intrinsically Safe Ultrasonic Sensor**

[5] Manufacturer: **Migatron Corp.**

[6] Address: **935 Dieckman Street, Woodstock, IL 60098 USA**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.

The examination and test results are recorded in confidential report no. **US/UL/ExTR12.0001/03.**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 **EN 60079-11:2012**
EN 50303:2000

[10] If the sign "**X**" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

[11] This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

[12] The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

I M1 / II 1 GD **Ex ia I/IIC T4 Ma/Ga**
Ex ia IIIC T101°C Da

Certification Manager
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2012-10-31
Re-issued: 2024-05-30

Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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[13] [14]

Schedule
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[15] Description of Product

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 type *RPS-409A-abcd-IS2-efgh*:

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 characters (or blanks) that do not relate to the safety of the product (for marketing purposes only).

Model RPS-429Ay-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-429A	y	-	abc	d	-	IS	2	-	efgh
I	II		III	IV		V	VI		VII

I – Basic Model
RPS-429A
II – Output Type:
A, analog current output
V, analog voltage output
III – Operational Range:
1 to 999, The maximum range of the sensor in inches is designated by abc. Zeroes are not used as placeholders, so “a” and “b” will be blank when not needed.
IV - Enclosure:
P, enclosure and jam nut material Polyvinyl Chloride (PVC).
V – Protection Technique
IS
VI – Markings:
2, International and North America Markings
VII – Additional Feature Suffixes:
Can be any combination of alphanumeric characters (or blanks) for alternate configurations, as allowed by the schedule drawings.

Performance testing

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Temperature range

The ambient temperature range is -40 °C ≤ Ta ≤ +60 °C.

Electrical data

Intrinsically safe specifications:

RPS-409A-abcd-IS2-efgh Entity Parameters					
Terminal Nos.	V_{max} or U_i	I_{max} or I_i	P_{max} or P_i	C_i	L_i
1,3 (Power)	30 V	100 mA	0.750 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

RPS-429AA-abcd-IS2-efgh Entity Parameters					
Terminal Nos.	Vmax or Ui	Imax or Ii	P_{max} or P_i	Ci	Li
2,3 (+)	30 V	120 mA	0.90 W	negligible	negligible
4,1 (-)					

[13] **Schedule**

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RPS-429AV-abcd-IS2-efgh Entity Parameters					
Terminal Nos.	Vmax or Ui	Imax or Ii	P_{max} or P_i	Ci	Li
1,3 (Power)	30 V	100 mA	0.750 W	negligible	negligible
2,4 (Analog Output)	16 V	16 mA	0.064 W	negligible	negligible
Terminal Nos.	V_{OC} or U_O	I_{SC} or I_O	P_O	C_a or C_O	L_a or L_O
2,4 (Analog Output)	7.14V	5.8 mA	0.011 W	13.5µF	1056 mH

Routine tests
None

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17] Specific conditions of use:

RPS-409A Series

- To maintain the IP67 rating of the sensor, the cable assembly used to connect to the sensor must have an IP rating of IP67 or greater.

RPS-409A-abc -IS2-efgh (Enclosure with Polyphenylene Sulfide (PPS))

- WARNING: 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.

RPS-409A-abcP-IS2-efgh (Enclosure with Polyvinyl Chloride (PVC))

- RPS-409A-IS2 sensors with Polyvinyl Chloride (PVC) enclosure do not have static dissipative properties, and the following Specific Conditions of Use; WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD, WIPE WITH A DAMP CLOTH.

RPS-429A Series

- To maintain the IP66/IP67 rating of the sensor, the cable assembly used to connect to the sensor must have the appropriate IP rating(s) for the installation location. Also the coupling nut on the cable assembly must be tightened according to the cable manufacturer's requirements.

RPS-429Ay-abcP-IS2-efgh (Enclosure with Polyvinyl Chloride (PVC))

- RPS-429Ay-abcP-IS2-efgh sensors (with Polyvinyl Chloride (PVC) enclosure) do not have static dissipative properties, and need the following Specific Conditions of Use; WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD, WIPE WITH A DAMP CLOTH.

[18] Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information
The Model RPS-409A-abcd-IS2-efgh has in addition passed the tests for Ingress Protection to IP67 in accordance with EN60529:1991+A1:2000+A2:2013.

The Model RPS-429Ay-abcd-IS2-efgh have in addition passed the tests for Ingress Protection to IP66 and IP67 in accordance with EN60529:1991+A1:2000+A2:2013.

The trademark Migatron Corp. will be used as the company identifier on the marking label.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.