

# EC-TYPE EXAMINATION CERTIFICATE



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[2]

**Equipment or Protective System intended for use  
in Potentially Explosive Atmospheres  
Directive 94/9/EC**

[3]

EC-Type Examination Certificate Number: **DEMKO 12 ATEX 1103028X Rev. 0**

[4]

Equipment or Protective System: **Distance Measurement/Object Detection Sensor**

[5]

Manufacturer: **Migatron Corp.**

[6]

Address: **935 Dieckman Street, Woodstock, IL 60098 USA**

[7]

This equipment or protective system 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 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems 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. **11NK03028**

[9]

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

**EN 60079-0:2012  
EN 60079-26:2007**

**EN 60079-11:2012  
EN 50303:2000**

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11]

This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system.  
These are not covered by the certificate.

[12]

The marking of the equipment or protective system shall include the following:

 **I M1 / II 1 GD Ex ia I/II C T4, Ex ia IIIC T101°C**

**Certification Manager**

Jan-Erik Storgaard

**Notified Body**

**Date of issue:** 2012-10-31

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[13]

[14]

**Schedule**  
**EC-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 12 ATEX 1103028X Rev. 0**  
**Report: 11NK03028**

[15]

Description of Equipment or protective system

Model RPS-409A-abc-IS2-defg is an intrinsically safe, barrier-powered analog ultrasonic sensor, which can be used for distance measurement and/or object detection. The optical radiation output of the apparatus with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 94/9/EC is not covered in this certificate.

Nomenclature for type *RPS-409A-abc-IS2-defg*:

RPS-409A - abc - IS2 - defg  
 I                    II                    I                    III

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 – 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).

Temperature range

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

Electrical data

Intrinsically safe specifications:

RPS-409A-abc-IS2-defg Entity Parameters					
Terminal Nos.	V <sub>max</sub> or U <sub>i</sub>	I <sub>max</sub> or I <sub>i</sub>	P <sub>max</sub> or P <sub>i</sub>	C <sub>i</sub>	L <sub>i</sub>
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

Installation instructions

None.

Mounting instructions

None.

Routine tests

None.

[16]

Report No.

Project Report No.: 11NK03028 (Hazardous Location Testing)

Documents:

**Description:****Drawing No.:****Rev. Level:****Date:**

Protective Board Schematic	Ex01121211	3	2012-10-10
Protective Board BOM	Ex01121213	3	2012-10-13
Protective Board Trace Layouts	Ex04291115	3	2012-10-01
Main Board Schematic	Ex01131211	3	2012-09-27
Main Board BOM	Ex01131214	3	2012-10-19
Main Board Trace Layouts	Ex04281112	2	2012-08-08
Final Assembly BOM	Ex01171208	2	2012-10-18
PPS-70S Transducer BOM	Ex01171209	2	2012-10-18
PPS-135S Transducer BOM	Ex01171210	2	2012-10-18
PPS-160S Transducer BOM	Ex01171211	2	2012-10-18
Transducer Assembly	Ex03191208	2	2012-10-18
Assembly Drawing	Ex01311216	2	2012-10-19
Board-to-Board Insulator Drawing	Ex01101214	3	2012-10-04
User Manual	Ex01231214	2	2012-10-13
Control Drawing	Ex05021114	2	2012-10-25
Marking Label	Ex01181213	2	2012-10-13
Enclosure Drawing	Ex04281111	3	2012-10-10
Transformer Drawing	Ex01191216	2	2012-06-29



[13]

[14]

**Schedule**  
**EC-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 12 ATEX 1103028X Rev. 0**  
**Report: 11NK03028**

[17] Special conditions for safe use:

- 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.
- **WARNING:** Dielectric Strength of enclosure is not sufficient to insulate the RPS-409A-abc-IS2-defg from other equipment. The RPS-409A-abc-IS2-defg 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.

[18] Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Annex III of ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

The Model RPS-409A-abc-IS2-defg has in addition passed the tests for Ingress Protection to IP67 in accordance with EN60529: 1991/A1 2001.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

