IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx OBAC 23.0008X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2023-10-26		
Applicant:	**AIUT Sp. z o.o.** Wyczółkowskiego 113 44-109 Gliwice **Poland**		
Equipment:	**9415-x0001 Radar Sensor**		
Optional accessory:			
Type of Protection:	**intrinsic safety "ia"**		
Marking:	Ex ia IIA T3 Ga		

Approved for issue on behalf of the IECEx Certification Body: **Piotr Tarnawski**

Position: **Head of Certification Body**

Signature:
(for printed version)

Date:
(for printed version) 2023-10-26

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Osrodek Badan, Atestacji i Certyfikacji OBAC Sp. z o.o.
Labedzka 21
44-121 Gliwice
Poland

IECEx Certificate of Conformity

Certificate No.: **IECEx OBAC 23.0008X**

Date of issue: 2023-10-26

Issue No: 0

Manufacturer: **Rochester Sensor, LLC**
1025 S Belt Line Road Suite 100
Coppell, TX 75019
United States of America

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

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 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

PL/OBAC/ExTR23.0008/00

Quality Assessment Report:

US/ETL/QAR20.0006/03

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Date of issue: 2023-10-26 Issue No: 0

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Radar Sensor 9415-x0001 is an intrinsically safe telemetry device designed for measuring liquid level in a tank. The device is mounted on the top of the tank with the use of a special glued or threaded adapter. As a sensor of fluid level radar chip is used. Information related to the measured level is presented on an LCD and can be read via 2,4GHz radio interface.
The device is powered by two non-replaceable lithium primary cells or through an external cable connection. All components are located on one printed board inside a plastic enclosure. The version with primary cells has no external connections. The second version has a permanently connected cable with two circuits – power supply and 0…5V analog signal output.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Ambient temperature range: $-40°C \leq T_a \leq +85°C$.
- Warning – Potential electrostatic charging hazard – see instructions.
- White wire in 9415-C0001 cable device version is active 0...5V output interface.
  In case of use this data output following intrinsically safe parameters (resulting from device power source) shall to be respected:
  $U_o = 5,88V$; $I_o = 0,131A$; $P_o = 0,193W$; $L_o = 150\mu H - L_c$; $C_o = 1000\mu F - C_c$,
  where L_c, C_c are total inductance and capacitance of connected cable.

Annex:

Annex IECEx OBAC 23.0008X.pdf

OBAC
Ośrodek Badań,
Atestacji i Certyfikacji Sp. z o.o.
ul. ŁABĘDZKA 21,
44-121 Gliwice

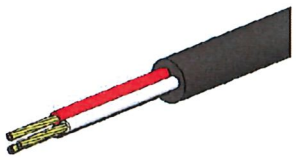
Annex to IECEx OBAC 23.0008X Issue 0

Rated data:

Power supply 9415-B0001-00	Two primary cells 3,6V
Power supply 9415-C0001-xx	External via cable, Un=5V
Ambient temperature	$-40°C \leq T_a \leq +85°C$
Radio frequency range	2,4GHz band
Maximum radio power	≤4mW
Data output interface 9415-C0001-xx	Analog signal 0...5V
Housing material	Plastic
Degree of protection	Not less than IP20 (IEC 60529)
Maximum allowable cable capacity	60pF/ft
Maximum allowable cable inductivity	0,2µH/ft

Parameters related to intrinsic safety (cable version 9415-C0001-xx)
- power source and 0...5V output interface (if used)
$U_i = 6,6V$, $I_i = 0,45A$, $P_i = 0,7W$,
$L_i = L_c$, $C_i = 430\mu F + C_c$
where C_c, L_c means total capacitance and inductance of connected cable.
Only cables with parameters not higher than 60pF/ft and 0,2µH/ft can be used (max length 50ft).
Maximum allowable cable capacitance and inductance is 3nF and 10µH.

White wire in 9415-C0001 cable device version is active 0...5V output interface.
In case of use this data output following intrinsically safe parameters (resulting from device power source) shall to be respected:
$U_o = 5,88V$; $I_o = 0,131A$; $P_o = 0,193W$; $L_o = 150\mu H - L_c$; $C_o = 1000\mu F - C_c$,
where L_c, C_c are total inductance and capacitance of connected cable



Wires:

RED – power supply
WHITE – data – 0...5V output interface
BLACK – ground

Type verification (versions):

9415-x0001

9415-B0001-00 battery version (no external connections)
9415-C0001-xx cable version (power supply and voltage output)
└ cable length in feet (up to 50ft)

IECEx Test Report Summary

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ExTR Ref. No.:	**PL/OBAC/ExTR23.0008/00**	Page 1 of 1
ExTR Free Ref. No.:	**PL/OBAC/ExTR23.0008/00**	Status:**Issued**
List of Standards Covered:	**IEC 60079-0:2017 Edition:7.0 , IEC 60079-11:2011 Edition:6.0**	Date of issue:**2023-10-26**

Issuing ExTL: **OBAC - Osrodek Badan, Atestacji i Certyfikacji OBAC Sp. z o.o.**

Endorsing ExCB: **OBAC - Osrodek Badan, Atestacji i Certyfikacji OBAC Sp. z o.o.**

Manufacturer: **Rochester Sensor, LLC**
1025 S Belt Line Road Suite 100
Coppell, TX 75019

Location of Manufacturer: **United States of America**

Ex Protection: **intrinsic safety "ia"**
Ex ia IIA T3 Ga

Ratings: **Power supply :**
9415-B0001-00 : Two primary cells 3,6V
9415-C0001-xx : External via cable, Un=5V
Ambient temperature : -40°C ≤ Ta ≤ +85°C
Radio frequency range : 2,4GHz band
Maximum radio power : ≤4mW
Data output interface
9415-C0001-xx : 0...5V
Housing material : Plastic
Degree of protection : Not less than IP20 (IEC 60529)
Maximum allowable cable capacity : 60pF/ft
Maximum allowable cable inductivity : 0,2µH/ft

Parameters related to intrinsic safety :
see certificate attachment

Equipment: **Radar Sensor**

Model Reference: **9415-x0001**

Related IECEx Certificates:

IECEx OBAC 23.0008X Issue 0

Comments: