



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx TUR 19.0005X Issue No: 0 Certificate history:
Issue No. 0 (2019-09-11)

Status: Current Page 1 of 4

Date of Issue: 2019-09-11

Applicant: Rheonics GmbH
Technopark 2
8406 Winterthur
Switzerland

Equipment: SRV and SRD Sensor
Optional accessory:

Type of Protection: Ex ia

Marking:

Ex ia IIC/IIB T6/T5/T4/T3 Ga X

T6: Ta = -40°C....+70°C

T5: Ta = -40°C....+85°C

T4: Ta = -40°C....+120°C

T3: Ta = -40°C....+185°C

Approved for issue on behalf of the IECEx
Certification Body:

Dipl.-Ing. Klauspeter Graffi

Position:

Head of Certification Body

Signature:
(for printed version)

Date:


2019-09-11

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany





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Manufacturer: Rheonics GmbH
Technopark 2
8406 Winterthur
Switzerland

Additional Manufacturing location(s):

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 apparatus 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 electrical 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:

[DE/TUR/ExTR19.0005/00](#)

Quality Assessment Report:

[DE/TUR/QAR19.0013/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

SRV: A sensor to measure viscosity of a liquid in which its active end is immersed

SRD: A sensor to measure simultaneous density and viscosity of a liquid in which its active end is immersed.

The sensors are made in type of protection Ex ia and can be installed in hazardous gas atmospheres of up to zone 0. The sensors are available in different housing variants.

EX-relevant accessories include an impact shield to protect the cable connector at the rear of the sensor from damage when installed in an environment where it is not protected by surrounding objects. A slotted cage is available for protecting the fluid end of the sensor from damage by large particles (> 8mm) that may be carried by the fluid.

Electrical data:

The inductance of the coil is effectively reduced to L_i by its infallible resistance.

Parameter	Pt1000 circuit	Transducer Coil
U_i	9V	7.3V
I_i	5mA	730mA
P_i	41mW	1.3W
C_i	negligible	negligible
L_i	negligible	<99.5uH

Environmental data:

Ambient and fluid temperature T_a :

T6: $T_a = -40^{\circ}\text{C} \dots +70^{\circ}\text{C}$

T5: $T_a = -40^{\circ}\text{C} \dots +85^{\circ}\text{C}$

T4: $T_a = -40^{\circ}\text{C} \dots +120^{\circ}\text{C}$

T3: $T_a = -40^{\circ}\text{C} \dots +185^{\circ}\text{C}$

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The max. ambient and fluid temperature T_a depends on the temperature class of the explosive atmosphere:

T6: $T_a = -40^{\circ}\text{C} \dots +70^{\circ}\text{C}$

T5: $T_a = -40^{\circ}\text{C} \dots +85^{\circ}\text{C}$



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T4: Ta = -40°C....+120°C

T3: Ta = -40°C....+185°C

2. The sensor has to be included into the equipotential bonding system.