



# 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](http://www.iecex.com)

Certificate No.: IECEx EESF 19.0025X

Issue No: 0

Certificate history:

[Issue No. 0 \(2019-08-30\)](#)

Status: **Current**

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Date of Issue: **2019-08-30**

Applicant: **Vaisala Oyj**  
Vanha Nurmijärventie 21  
01670 Vantaa  
**Finland**

Equipment: **PR-21-S Process Refractometer**

Optional accessory: *n/a*

Type of Protection: **Intrinsically Safe**

Marking:

Ex ia IIC T4 Ga

Tamb -20 °C ... +65 °C

Approved for issue on behalf of the IECEx  
Certification Body:

Kari Koskela

Position:

Expert

Signature:  
(for printed version)

Date:

30.8.2019

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](#).

Certificate issued by:

**Eurofins Expert Services Oy**  
Kivimiehentie 4,  
FI-02150 Espoo  
Finland



Expert Services



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Manufacturer: **Vaisala Oyj**  
Vanha Nurmijärventie 21  
01670 Vantaa  
**Finland**

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:

[FI/EESF/ExTR19.0027/00](#)

Quality Assessment Report:

[FI/EESF/QAR19.0011/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Inline refractometer sensor, type PR-21-S is intended for measuring liquid concentration in the process line. The measurement is based on the refraction of light in the process medium.  
The sensor communicates with Indicating Transmitter is located on the safe area via I.S. isolator. Transmitter input signal is two-wire 4 mA ... 20 mA DC current signal (power supply and communication in the same pair) which is proportional to process solution concentration.

Electrical data:

The maximum input values of the refractometer PR-21-S are:

$U_i = 24 \text{ V}$   
 $I_i = 250 \text{ mA}$   
 $P_i = 1.3 \text{ W}$   
 $C_i = 100 \text{ nF}$   
 $L_i = \text{negligible}$

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. Allowed temperature range is  $T_{amb} -20 \text{ }^\circ\text{C} \dots +65 \text{ }^\circ\text{C}$
2. The aluminium part of the enclosure is subject to mechanical spark ignition hazard caused by impact or friction.



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**EQUIPMENT (continued):**

IECEX VTT 13.0014X: Prime certificate

Issue 1: Minor non-I.S. changes in manufacturing documents.

IECEX EESF 19.0025X: Vaisala Oyj has acquired K-Patents Oy and its Ex products. Manufacturing location has been changed to Vaisala's facilities. ExCB name changed from VTT Expert Services to Eurofins Expert Services.