



# 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 19.0024X

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: **Process Refractometer types PR-43-AC, PR-43-GC, PR-43-PC, PR-43-AP, PR-43-GP,  
PR-43-PP and PR-44-PL with Isolator PR-10930**

Optional accessory: *n/a*

Type of Protection: **Intrinsically Safe**

Marking:

Process Refractometer:  
Ex ia IIC T4 Ga  
Ex ia I Ma  
Tamb -40 °C ... +65 °C  
Isolator:  
Ex nA [ia Ga] IIC T4 Gc  
Tamb -40 °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



**eurofins**

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:

<b>IEC 60079-0 : 2017</b> Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-15 : 2010</b> Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
<b>IEC 60079-25 : 2010-02</b> Edition:2.0	Explosive atmospheres – Part 25: Intrinsically safe electrical systems

*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/ExTR19.0026/00](#)

Quality Assessment Report:

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



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## Schedule

### EQUIPMENT:

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

Process Refractometer types Process Refractometer types PR-43-AC, PR-43-GC, PR-43-PC, PR-43-AP, PR-43-GP, PR-43-PP and PR-44-PL intended to be used with Isolator PR-10930.

System parts are an 'Exi-isolator', a fixed connection cable and process refractometer types PR-43 or type PR-44 alternatively. With respect to intrinsic safety, both sensor types are identical. The isolator is Equipment Protection Level (EPL) Gc associated apparatus for supplying Equipment Protection Level (EPL) Ga/ Ma refractometer. The "nA" isolator is supplied from 24 V DC power supply and has a LAN-connection (Standard Ethernet IEEE 802.3) and a connection for 4...20 mA current loop. The isolator has an intrinsically safe Ex [ia] output for Ex ia refractometer. The maximum length of the connection cable between the isolator and refractometer is 200 meters.

The metal parts of the enclosures shall be grounded.

### Electrical data

PR-10930 Isolator:

**Un = 24 V**

**In = 150mA**

Ex [ia] associated apparatus, 24 V DC, LAN and mA loop inputs:

**Um = 250 V r.m.s**

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

The allowed ambient temperature range is Tamb -40 °C ... +65 °C.

The connection cable shall be delivered by the manufacturer. The maximum cable length is 200 meters.

The refractometers shall not be subjected to any mechanism that would cause electrostatic charging. Cleaning shall be done with damp cloth.



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## **EQUIPMENT (continued):**

IECEx VTT 15.0003X: Prime certificate

Issue 1: Introduction of certified types PR-43-GC and PR-43-GP. Alternative "Large LED card" added.

Issue 2: Introduction of the Cooling Cover option. Minor material, mechanical and electrical changes.

IECEx EESF 19.0024X: 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.