

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM19US0183X
3. **Equipment:** PR-23-a Refractometer
(Type Reference and Name)
4. **Name of Listing Company:** Vaisala Oyj
5. **Address of Listing Company:** P.O. Box 26
Helsinki, FI-00421
Finland

6. The examination and test results are recorded in confidential report number:
3026104 dated 10th May 2007

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3611:2018, FM Class 3810:2018, ANSI/UL 121201:2017,
ANSI/UL 61010-1:2012

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. **Equipment Ratings:**
Nonincendive for use in Class I, Division 2, Groups A, B, C & D Hazardous (Classified) Locations

11. The marking of the equipment shall include:

Class I Division 2, Groups A, B, C, D; T6 Ta = -20°C to +45°C

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

1 November 2019

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE



US Certificate Of Conformity No: FM19US0183X

12. Description of Equipment:

General - The PR-23 Series Refractometers are sensing devices used for concentration measurement of liquids. The PR-23-RP Process Refractometer is a heavy-duty model of the PR-23 Series to be used in the petroleum and refinery industry. The PR-23-RP sensor wetted parts material is stainless steel (316 L, Alloy 20, or Hastelloy C276) with a stainless steel sensor housing.

Ratings - The PR-23 series Refractometers operate at 24Vdc, 100mA maximum. The ambient operating temperature range for the refractometers is -20°C to +45°C. The process temperature range is -40°C to +150°C.

PR-23-a Refractometer

a = AC, AP, GC, GP, M, MS, SD, W, or RP

13. Specific Conditions of Use:

Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application, including a tool removable cover.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
10 th May 2007	Original Issue.
14 th October 2008 to 9 th October 2014	Supplement 1-3: See certificate dated 9 th October 2014 for details.
1 st November 2019	Supplement 4: Report Reference: – RR220553 dated 1 st November 2019. Description of the Change: Update to new certificate format. Nonincendive re-examination performed.

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