

CERTIFICATE OF CONFORMITY



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

2. **Certificate No:** FM19US0184

3. **Equipment:** PR-21-S Process 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:

3050975 dated 21st April 2014

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, ANSI/NEMA 250:1991, ANSI/IE 60529:2004

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; Type 4X; IP65

11. The marking of the equipment shall include:

Class I Division 2, Groups A, B, C, D; T6 Ta = -20°C to +45°C; Type 4X; IP65

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
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



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12. Description of Equipment:

General - The PR-21-S Refractometer measures liquid concentration in process line using the refraction of light in the liquid. The refractometer provides 4 to 20 mA DC output signals.

Ratings - The PR-21-S Refractometer is supplied from an external source with a voltage of 24Vdc with a current of 40mA. The ambient operating temperature range of the equipment is -20°C to +45°C.

PR-21-S-a-b-c-FM-d-e Process Refractometer

- a = Refractive Index Range Limits: 50 or 57
- b = Process Connection: L, D, A, N, M, or J
- c = Sensor Wetted Parts Material: SS or XS
- d = Sensor Length: STD, LPL, or LPS
- e = Prism Wash: HPY, HPN, HPS, HPX, or YPY

13. Specific Conditions of Use:

N/A

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
21 st April 2014	Original Issue.
1 st November 2019	Supplement 1: 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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