

CERTIFICATE OF CONFORMITY



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

2. Certificate No: FM18US0120

3. Equipment:
(Type Reference and Name) Model TS121LP Oxygen Transmitter

4. Name of Listing Company: Endress+Hauser SICK GmbH+Co. KG

5. Address of Listing Company: Bergener Ring 27, Ottendorf-Okrilla, 01458, Germany

6. The examination and test results are recorded in confidential report number:

3041321 dated 6th May 2011

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

FM 3600:2022, FM 3611:2021, FM 3810:2021, ANSI/IEC 60529:2020, ANSI/UL 61010-1:2019, ANSI/UL 121201:2025

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:

Transmitter: Nonincendive for Class 1, Division 2, Groups A, B, C and D, Ta = -20°C to +60°C

Sensor: Suitable for Class I, Division 1, Groups A, B, C and D, Ta = -20°C to +80°C

Enclosure rating; IP66.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

9 March 2026



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. One Technology Way, Norwood, MA 02062 USA

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11. The marking of the equipment shall include:

Transmitter:

Class I Division 2, Groups A, B, C, D; T4 Ta = -20°C to +60°C; IP66

Sensor:

Class I, Division 1, Groups A, B, C and D T4 Ta = -20°C to +80°C; IP66

12. Description of Equipment:

General - The TS121LP Oxygen Transmitter utilizes a tunable diode laser gas spectrometer, built into a measurement probe, to measure the oxygen content of process gases. The Transmitter comprises an aluminum enclosure and welded stainless steel temperature sensing probe Approved for installation in a Division 2 hazardous location, and a stainless steel cylindrical probe Approved for in-pipe installation in a Division 1 hazardous location. The aluminum enclosure houses the Transmitter's electronics and a laser diode. The Transmitter's oxygen sensing probe contains a mirror for reflecting the laser's output back to the Transmitter. The laser radiation is enclosed within the enclosure and is not accessible without disassembling the equipment with the use of a tool.

Ratings - The equipment operates from a supply voltage of 11 to 36 VDC. The Transmitter's electronics are rated for operation over an ambient temperature range of -20°C to 60°C. The Transmitter's oxygen sensing probe is rated for use over an ambient temperature range of -20°C to 80°C.

TS121LPabcdehijk. Oxygen Transmitter

a = Installation type: A, B, C, F, G or H

b = Filter type: 1, 2 or 3

c = Analog output range for oxygen: A, B, C, D, E or X

d = Signal output: 1 or 2

e = Fault state current for analog output: A or B

f = Relay settings: 1, 2, 3 or 4

g = Cable bushing: A or B

h = In-line calibration option: 1 or 2

i = Operating manual language: B, D, F or I

j = Approval: 1

k = Wetted O-Rings: B(FFKM), C(FKM), F(FFKM), or G(FKM).

13. Specific Conditions of Use:

None

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.

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16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
6 May 2011	Original Issue.
20 May 2018	<u>Supplement 3:</u> Report Reference: – RR213716 dated 20 May 2018 Description of the Change: Hardware Modifications to TS121LP, extend type code, Stop of current laser diode supply, document clean up, change of supplier for sealing O2 sensor. Reformat into new Style Certificate.
18 March 2025	<u>Supplement 4:</u> Report Reference: RR244896 dated 18 March 2025. Description of the Change(s): Company name change. Documentation updates. Certificate reformatted.
9 March 2026	<u>Supplement 5:</u> Report Reference: PR475629 dated 9 March 2026. Description of the Change(s): 1. Addition of alternative, machined aluminum housing 2. FM3600 updated to latest edition (2022) 3. FM3611 and FM3810 updated to latest edition (2021) 4. ANSI/IEC 60529:2004 updated to ANSI/IEC 60529:2020 5. ANSI/UL 121201:2025 added to Standards List 6. ANSI/UL 61010-1:2019 added to Standards List

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