

CERTIFICATE OF CONFORMITY



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

2. **Certificate No:** FM16US0310X
3. **Equipment:** NIVOTESTER FTL 325N, FTL 325P
(Type Reference and Name) Level Limit Switch

4. **Name of Listing Company:** Endress+Hauser SE+Co KG

5. **Address of Listing Company:** Hauptstrasse 1
Postfach 1261
Maulburg, D79689
Germany

6. The examination and test results are recorded in confidential report number:
3010989 dated 3rd October 2001

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

FM Class 3600:2022, FM Class 3610:2021, FM Class 3810:2021, ANSI/UL 61010-1:2018,
ANSI/ISA 60079-0:2020, ANSI/UL 60079-11:2018

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.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

8 February 2023
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



Member of the FM Global Group

US Certificate Of Conformity No: FM16US0310X

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:

Associated Intrinsically Safe Apparatus for connection to Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G Hazardous (Classified) Locations in accordance with control drawing XA01431F or XA01433F; Associated Intrinsically Safe Apparatus [AEx ia Ga] for connection to Class I, Zone 0, Group IIC in accordance with control drawing XA01431F or XA01433F; Associated Intrinsically Safe Apparatus [AEx ia Da] for connection to Zone 20, Group IIIC Hazardous (Classified) Locations in accordance with control drawing XA01431F or XA01433F.

11. The marking of the equipment shall include:

Intrinsically Safe connections to:

Class I, Zone 0, [AEx ia Ga] IIC

Zone 20, [AEx ia Da] IIIC

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G

Ta = -20°C to +60°C

Ta = -20°C to +50°C (row mounting type)

12. **Description of Equipment:**

General - The NIVOTESTER Level Limit Switch Model FTL 325N and FTL 325P are power supplies and level limit detection devices located in non-hazardous locations with connections to intrinsically safe level limit switches located in hazardous locations. Model FTL 325N connects to level limit switches with NAMUR output signals and the Model FTL 325P connects to level limit switches with PFM output signals. The NIVOTESTER switches are available with one or three intrinsically safe level switch channels.

Construction - The NIVOTESTER enclosure is designed for mounting on a "top hat rail mounting system" according to EN 50022 and is constructed of metallic parts and plastic materials. The plastic materials have flammability ratings of ANSI/UL94 V-0 and are suitable for continuous temperatures of 115°C.

Ratings - The NIVOTESTER Level Limit Switch Model FTL 325N and FTL 325P operates at 85 to 253Vrms, 50/60Hz, or 20 to 30Vac / 20 to 60Vdc. Maximum power for FTL325N: The maximum power for the AC version is 1.75W single channel or 2.75W for the 3-channel version. The DC version has a maximum power of 1.2W for a single channel and 2.25W for the 3-channel option. Maximum power for FTL325P: The maximum power for the AC version is 2.0W single channel or 4.2W for the 3-channel version. The DC version has a maximum power of 1.7W for a single channel and 4.0W for the 3-channel option. The ambient operating temperature range of the FTL325N and FTL325P is -20°C to 60°C, -20°C to +50°C (row mounting type).

FTL325N-abcd. Level Limit Switch.

Entity Parameters; Refer to Control Drawing XA01431F.

a = Certificates: O or P

b = Model: 1-9 or A-Z.

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c = Power Supply: A or E.
d = Output: 1 or 3.

FTL325P-abcd. Level Limit Switch.

Entity Parameters; Refer to Control Drawing XA01433F.

a = Certificates: O or P
b = Model: 1-9 or A-Z.
c = Power Supply: A or E.
d = Output: 1 or 3.

13. Specific Conditions of Use:

1. The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP54.

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
3 rd October 2001	Original Issue.
20 th December 2016	<u>Supplement 1:</u> Report Reference: – 3058492 dated 20 th December 2016 Description of the Change: The PCB containing the power supply and a single channel was redesigned due to obsolete parts. The standards have been updated to latest editions.
8 th February 2023	<u>Supplement 2:</u> Report Reference: – PR464075 dated 8 th February 2023. Description of the Change: 1) FM3600 updated to latest edition (2022) 2) FM3610 and FM3810 updated to latest edition (2021) 3) ANSI/ISA 61010-1:2004 updated to ANSI/UL 61010-1:2018 4) ANSI/ISA 60079-0:2013 updated to ANSI/UL 60079-0:2020 5) ANSI/UL 60079-11:2013 updated to ANSI/UL 60079-11:2018

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