

1 EU-TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No:** FM12ATEX0037X

4 **Equipment or protective system:** FTL825 Nivotester Liquiphant FailSafe
(Type Reference and Name) Power Supply & Level Limit Detection Device

5 **Name of Applicant:** Endress+Hauser SE+Co. KG

6 **Address of Applicant:** Hauptstraße 1
Postfach 1261
Maulburg, D79689
Germany

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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

3044839 dated 30th May 2012

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018 and EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:



II (1) G [Ex ia Ga] IIC

II (1) D [Ex ia Da] IIIC



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Digitally signed by Damien Mc Ardle
DN: cn=Damien Mc Ardle, o=FM Approvals, ou=FM Approvals Europe Ltd, email=damien.mcardle@fmapprovals.com, c=IE
Date: 2019.10.11 10:58:27 +01'00'

Damien Mc Ardle
Certification Manager, FM Approvals Europe Ltd.

Issue date: 11th October 2019

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FM Approvals Europe Ltd. One Georges Quay Plaza, Dublin. Ireland. D02 E440
T: +353 (0) 1761 4200 E-mail: atex@fmapprovals.com www.fmapprovals.com

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13 Description of Equipment or Protective System:

The Nivotester Liquiphant FailSafe Type FTL825 is a power supply and level limit detection device for intrinsically safe level limit switch Liquiphant FailSafe FTL8x with electronic insert FEL85 (NAMUR output signal). The Nivotester is an associated intrinsically safe apparatus for installation outside the explosion hazardous area. The connected transmitters may be located in hazardous locations.

The Type FTL825 is housed in a polymeric electronic enclosure meeting the requirements of IP20 designed for mounting on a "top hat rail" or DIN rail. The intrinsic outputs (terminal 82, 83 and 91, 92) are located at the top of the module and all non-intrinsically safe terminals are located at the bottom of the module thereby meeting the separation requirements. The FTL825 is designed to be mounted in an enclosure meeting the requirements of IP65.

Ambient temperature range at the FTL825 is -20°C to 60°C when mounted alone or -20°C to 50°C when mounted next to other modules or mounted in the field enclosure.

Electrical data:

Intrinsically Safe Output circuit (terminals 82 and 83 or 91 and 92):

$U_o \leq 22Vdc$; $I_o \leq 166mA$; $P_o \leq 970mW$; $C_o \leq 0.165\mu F$; $L_o \leq 2.8mH$;

Input circuit (AC version):

Supply voltage 85...253VAC, 50/60Hz, $\leq 3.8VA$ (AC supplied) or 85...253Vdc $\leq 2.0W$ (dc supplied)

Input circuit (DC version):

Supply voltage 20...30VAC, 50/60Hz, $\leq 3.6VA$ (AC supplied) or 20...60Vdc, $\leq 2.5W$ (dc supplied)

Relay outputs:

AC – 250VAC 2A, $\leq 500VA$;

DC – 40Vdc 2A, $\leq 80W$

Model Codes:

FTL825-abcdefg. Nivotester Liquiphant FailSafe

a = Approvals: (B2 or 8B)

b = Housing: (3 or 9(different color))

c = Power Supply: (A or E)

d = Switch output: (4)

e = Addition Approvals: (LC, LE, LF, LV, LG and LH)

f = Accessory Enclosed: (PA)

g = Tagging: (Z1)

14 Specific Conditions of Use:

1. The device is an associated apparatus: Only use the device outside explosion hazardous areas.
2. There must be a distance (thread measure) of at least 50 mm between intrinsically safe and non-intrinsically safe terminals
3. To achieve an ingress protection of at least IP55 to EN 60529: Protect the device from dust and humidity, e.g. in control rooms, or located in a suitable protective housing.

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15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
07 th June 2012	Original Issue.
02 nd May 2013	<u>Supplement 1:</u> Report Reference: – 3048190 dated 22 nd April 2013 Description of the Change: <ol style="list-style-type: none">1. minor component value changes,2. addition of capacitors for EMC3. artwork pad changes for better thermal behavior4. update EN60079-0 to the latest edition
11 th October 2019	<u>Supplement 2:</u> Report Reference: – RR220321 dated 25 th September 2019 Description of the Change: Update EN IEC 60079-0 to latest edition (7 th :2018). Removal of EN 60079-26 from the assessment Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

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