



# 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: FM14ATEX0040X

4. Equipment or protective system: Soliswitch FTE20/OFTE20 Level Limit Switch  
(Type Reference and Name)

5. Name of Applicant: Endress + Hauser Wetzler GmbH + Co KG

6. Address of Applicant Obere Wank 1, D-87484 Nesselwang, 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:

3046971 dated 6<sup>th</sup> June 2014

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, EN 60079-31:2014, EN 60529:1991+A1:2000+A2:2013

10. 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.

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 D Ex ta IIIC T110°C Da (Process connection in the vessel)  
II 2 D Ex tb IIIC T110°C Db (Electronics enclosure in Zone 21 & 22)  
Tamb = -20°C to +60°C

Certificate issued by:

4 April 2025

Certification Manager, FM Approvals Europe Ltd.

Date

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

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## **SCHEDULE**

EU-Type Examination Certificate No. FM14ATEX0040X

### **13. Description of Equipment or Protective System:**

The Soliswitch, type FTE20 and OFTE20 are paddle type level limit switches for granular solids. They operate on the principle of a rotating paddle that when in contact with the process will stop rotating and operate a switch contact. The Type, OFTE20, is identical to FTE20, with identical mechanical dimension and material but with a different color additive.

#### **Operation Temperature Ranges:**

The ambient operating temperature range of the Soliswitch FTE20/OFTE20 is -20°C to 60°C. Process temperature range is -20°C to +60°C.

#### **Electrical data:**

20...28VDC; 24VAC; 115VAC and 230VAC, 50/60Hz, 3.5VA

The equipment enclosure has an ingress protection rating of IP66.

Refer to the Annex for Model Codes.

### **14. Specific Conditions of Use:**

1. To prevent the risk of electrostatic sparking, non-metallic surfaces should be cleaned with a damp cloth.

### **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:

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**SCHEDULE**

EU-Type Examination Certificate No. FM14ATEX0040X

Date	Description
12 June 2014	Original Issue.
28 April 2015	<u>Supplement 1:</u> Report Reference: 3053910 dated 20 <sup>th</sup> April 2015. Description of the Change: Addition of Model OFTE20 which has the same electronics with an additional polymeric enclosure of the same material and dimensions but in a different color. All documentation has been updated with new drawing identification numbering as a result of Endress+Hauser's new documentation system requirements.
18 April 2019	<u>Supplement 2:</u> Report Reference: RR218141 dated 1 <sup>st</sup> April 2019. Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809. EN60079-0:2012 is updated to EN60079-0:2012 + A11:2013. EN60079-31:2009 (Ed 1) is updated to EN60079-31:2014 (Ed 2). EN60529:1991 + A1:2000 (Ed 2.1) is updated to EN60529:1991 + A1:2000 + A2:2013 (Ed 2.2).
9 March 2021	<u>Supplement 3:</u> Report Reference: RR225462 dated 05 <sup>th</sup> March 2021. Description of the Change: Added Specific Condition of Use and "X" to certificate number. Added Tamb to Section 12. Added Model code options, including c = YY (shaft, up to 600 mm). EN60079-0:2012+A11:2013 is updated to EN IEC 60079-0:2018.
28 July 2021	<u>Supplement 4:</u> Report Reference: RR228590 dated 27 <sup>th</sup> July 2021. Description of the Change: Removed non-technical document from critical document list.
4 March 2024	<u>Supplement 5:</u> Report Reference: RR240352 dated 1 March 2024. Description of the Change(s): Minor non-safety related drawing revisions
4 April 2025	<u>Supplement 6:</u> Report Reference: RR245559 dated 4 April 2025. Description of the Change(s): Model Code changes to add New Shaft versions.

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## ANNEX

### FTE20-BI

#### Description of Equipment:

##### **FTE20-BIbcdefgh. Soliswitch Level Limit Switch.**

b = Process connection Material: 11 (Thread NPT 1 ½; PBT), 12 (Thread NPT 1 ¼; PBT), 13 (Thread G1 ½; PBT), 14 (Thread NPT 1 ½; 3034), 15 (Thread NPT 1 ¼; 3034), 16 (Thread G1 ½; PBT)

c = Version, Length: AA (Shaft, 75mm), AB (Shaft, 100mm), AC (Shaft, 120mm), AD (Shaft, 200mm), AE (Shaft, 300mm), AF (Rope, 2000mm, shortable), YY (shaft, up to 600 mm), AG (Shaft, 400mm, vertical), AH (Shaft, 500mm, vertical), AI (Shaft, 600mm, vertical)

d = Power Supply: 1 (20 – 28VDC), 2 (24VAC), 3 (115VAC), 4 (230VAC)

e = Paddle Material: 1 (Standard; 304), 2(Fold-away; 304)

f = Additional Option: CA (Rotation monitoring)

g = Accessory Mounted: Not allowed

h = Accessory Enclosed: PA (weather protection cover)

### OFTE20-BI

#### Description of Equipment:

##### **OFTE20-BIbcdefghi. Soliswitch Level Limit Switch.**

b = Process connection Material: 11 (Thread NPT 1 ½; PBT), 12 (Thread NPT 1 ¼; PBT), 13 (Thread G1 ½; PBT), 14 (Thread NPT 1 ½; 303), 15 (Thread NPT 1 ¼; 303), 16 (Thread G1 ½; PBT)

c = Version, Length: AA (Shaft, 75mm), AB (Shaft, 100mm), AC (Shaft, 120mm), AD (Shaft, 200mm), AE (Shaft, 300mm), AF (Rope, 2000mm, shortable), YY (shaft, up to 600 mm), AG (Shaft, 400mm, vertical), AH (Shaft, 500mm, vertical), AI (Shaft, 600mm, vertical)

d = Power Supply: 1 (20 – 28VDC), 2 (24VAC), 3 (115VAC), 4 (230VAC)

e = Paddle Material: 1 (Standard; 304), 2(Fold-away; 304)

f = Customer: NN (Neutral, light grey (RAL7035))

g = Additional Option: CA (Rotation monitoring)

h = Accessory Mounted: Not allowed

i = Accessory Enclosed: PA (weather protection cover)

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# Blueprint Report

**Endress+Hauser Wetzler GmbH+Co KG 1000008070**

**Class No. 3616**

**Original Project I.D. 3046971**

**Certificate I.D. FM14ATEX0040X**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
		Safety Instructions XA01034F/09/A3/xx.xx,	
10000005112	B	XA01355O/09/A3/xx.xx	RR240352
10000005113	B	Nameplate IECEx_ATEX	RR225462
10000005114	A	FTE20_G3_4_0048	3053910
10000005570	A	Control Drawing FM XA01331F/09/EN/xx.xx	RR240352
CAE000036-XXXX-410	A	CircuitDiagram(APP) FTE20 Standard Board 24VDC	RR240352
CAE000036-XXXX-411	A	CircuitDiagram(APP) FTE20 Standard Board AC	RR240352
CAE000036-XXXX-600	A	AssemblyPlan (APP) A FTE20 Standard Board 24VDC	RR240352
CAE000036-XXXX-601	A	AssemblyPlan (APP) A FTE20 Standard Board AC	RR240352
CAE000036-XXXX-620	A	AssemblyPlan (APP) B FTE20 Standard Board 24VDC	RR240352
CAE000036-XXXX-621	A	AssemblyPlan (APP) B FTE20 Standard Board AC	RR240352
CAE000036-XXXX-801	A	ConductivePattern(APP) A1 FTE20 Standard Board	RR240352
CAE000036-XXXX-802	A	ConductivePattern(APP) B1 FTE20 Standard Board	RR240352
CAE000043-XXXX-410	B	CircuitDiagram(APP) FTE20 Option Board 24VDC	3053910
CAE000043-XXXX-411	B	CircuitDiagram(APP) FTE20 Option Board 24VAC	3053910
CAE000043-XXXX-413	B	CircuitDiagram(APP) FTE20 Option Board 110VAC	3053910
CAE000043-XXXX-414	B	CircuitDiagram(APP) FTE20 Option Board 230VAC	3053910
CAE000043-XXXX-600	B	AssemblyPlan (APP) A FTE20 Option Board 24VDC	3053910
CAE000043-XXXX-601	B	AssemblyPlan (APP) A FTE20 Option Board 24VAC	3053910
CAE000043-XXXX-603	B	AssemblyPlan (APP) A FTE20 Option Board 110VAC	3053910
CAE000043-XXXX-604	B	AssemblyPlan (APP) A FTE20 Option Board 230VAC	3053910
CAE000043-XXXX-620	B	AssemblyPlan (APP) B FTE20 Option Board 24VDC	3053910
CAE000043-XXXX-621	B	AssemblyPlan (APP) B FTE20 Option Board 24VAC	3053910
CAE000043-XXXX-623	B	AssemblyPlan (APP) B FTE20 Option Board 110VAC	3053910
CAE000043-XXXX-624	B	AssemblyPlan (APP) B FTE20 Option Board 230VAC	3053910
CAE000043-XXXX-801	D	ConductivePattern(APP) A1 FTE20 Option Board	3053910
CAE000043-XXXX-802	D	ConductivePattern(APP) B1 FTE20 Option Board	3053910
QUD_F0048_descriptionATEX_IECEx	04.00	Technical description for ATEX / IECEx	RR245559