



## EU-TYPE EXAMINATION CERTIFICATE

1 Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

2 EU-Type Examination Certificate Number: CSANe 24ATEX1288X Issue: 2

3 Equipment: Ultrasonic flowmeter, model FLOWSIC900 and FLOWSIC610

4 Manufacturer: Endress+Hauser SICK GmbH+Co. KG

5 Address: Bergener Ring 27  
01458 Ottendorf-Okrilla  
Germany

6 This product and any acceptable variation thereto, is specified in the schedule to this certificate and the documents therein referred to.

7 CSA Group Netherlands B.V., Notified Body No. 2813 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

8 The examination and test results are recorded in the confidential reports listed in item 16.2.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-11:2012

10 Where additional criteria beyond those given here have been used, they are listed in item 18 in the Schedule.

11 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed in item 17 of this certificate.

12 This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance with the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product, these are not covered by this certificate.

13 The marking of the product shall include the following (additional marking is provided in the Schedule as a part of item 15, if applicable):



II 2(1) G

Ex db ia [ia Ga] IIA T4 Gb, for FLOWSIC900

Ex db ia [ia Ga] IIC T4 Gb, for FLOWSIC610

-40 °C ≤ Ta ≤ +60 °C

Signed: M Halliwell  
Title: Senior Director of Operations  
Date 14 January 2026



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## SCHEDULE

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EU-Type Examination Certificate Number: CSANe 24ATEX1288X Issue: 2

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### Description:

The ultrasonic flow meter FLOWSIC900 and FLOWSIC610 measures the flow of gas or liquid in pipelines utilizing an ultrasonic technology. Model FLOWSIC900 is intended for measurement of LNG flow and model FLOWSIC610 is intended for measurement of gaseous hydrogen flow.

Both models consist of SPU (Signal Processing Unit), Model FLOWSIC900 consists of SPU Holder, Ultrasonic transducers with connection cables (Multi Coax cables for ultrasonic transducers and the sensor cable for Pt 1000 sensor) and meter body. Model FLOWSIC610 consists of common meter body and SPU connected, with ultrasonic sensors connected inside of the meter body.

#### FPH (FLOWSIC Platform Housing):

FPES electronics is installed inside the flameproof chamber.

ATEX certificate: CSANe 24ATEX1287U, Marking: II 2 G Ex db ia IIC Gb

#### PPT (PCB Pass Through):

ATEX Certificate: CSANe 24ATEX1286U, Marking: II 2 G Ex db ia IIC Gb

#### FPES (FLOWSIC Platform Electronics Stack):

ATEX Certificate: CSANe 24ATEX1289U, Marking: II (1) G [Ex ia Ga] IIA for model FLOWSIC900 or II (1) G [Ex ia Ga] IIC for model FLOWSIC610

Model FLOWSIC900, Entity parameters, in type of protection Ex ia IIA:

Transducer, MCX Connectors J100-J115, values per connector:					
Uo = 18.1 V	Io = 1293 mA	Po = 1159 mW	Ci = 0 nF	Co = 7.45 $\mu$ F	Lo = 0.17 mH
Service, connector M12 ( <i>to the side of the Ex-i chamber</i> ):					
Uo = 6.42 V	Io = 117 mA	Po = 410 mW	Ci = 110 nF	Co = 999.7 $\mu$ F	Lo = 10.39 mH
Display, connector M12 ( <i>front of the Ex-i chamber</i> ):					
Uo = 6.42 V	Io = 117 mA	Po = 410 mW	Ci = 13.2 nF	Co = 999.7 $\mu$ F	Lo = 10.39 mH
Interface for additional pressure sensor, connector J205, J206, J208 inside of the Ex i chamber					
Uo = 7.42 V	Io = 190 mA	Po = 322 mW	Ci = 3.742 $\mu$ F	Co = 174 $\mu$ F	Lo = 3.94 mH

Model FLOWSIC610, Entity parameters, in type of protection Ex ia IIC:

Service, connector M12, to the side of the Ex-i chamber:					
Uo = 6.42 V	Io = 117 mA	Po = 410 mW	Ci = 0.3 $\mu$ F	Co = 24.58 $\mu$ F	Lo = 2.59 mH
Display, connector M12, front of the Ex-i chamber:					
Uo = 6.42 V	Io = 117 mA	Po = 410 mW	Ci = 0.3 $\mu$ F	Co = 24.68 $\mu$ F	Lo = 2.59 mH
Interface for additional pressure sensor, connector J205, J206, J208 inside of the Ex i chamber					
Uo = 6.85 V	Io = 153 mA	Po = 236 mW	Ci = 0 $\mu$ F	Co = 16.8 $\mu$ F	Lo = 1.51 mH

**Variation 1** - This variation introduced the following changes:

- i. To include model FLOWSIC610 based on the TIS project 80228074.
- ii. To change the applicant/manufacturer's name from SICK Engineering GmbH to Endress+Hauser SICK GmbH+Co. KG
- iii. To include editorial corrections in conditions of safe use of Model FLOWSIC900.



**Variation 2** - This variation introduced the following changes:

- i. remove Special Condition of use related to piezoelectric hazard
- ii. Revision of Ultrasonic Sensor Documentation: Eliminate the existing construction drawings of the ultrasonic sensor and replace them with a defined list of critical components essential to its construction.

**16 Drawings and documents:**

**16.1 Technical documents:**

Refer to Certificate Annex.

**16.2 Associated reports and certificate history:**

Issue	Date	Report number	Comment
0	11 February 2025	R80196701A	The release of the prime certificate.
1	10 July 2025	R80245406A	The introduction of Variation 1.
2	14 January 2026	R80266947A	The introduction of Variation 2.

**17 Specific conditions of use (denoted by "X" after the certificate number):**

- 17.1 The flameproof joints of the flameproof enclosure are not intended to be repaired.
- 17.2 The painted, coated, or non-metallic parts of the flow meter may pose a potential hazard due to electrostatic charge. To ensure safe operation, the flow meter must not be installed in environments where external conditions could lead to the accumulation of electrostatic charge on its non-metallic surfaces. To prevent static discharge, any parts of the flow meter, which are painted, coated or non-metallic, should only be cleaned using a damp cloth.
- 17.3 The threaded entries to the flameproof enclosure must be closed with suitably certified cable glands or blind plugs.
- 17.4 The non-intrinsically safe field wiring of the flow meter must be supplied with a 24 Vdc SELV/PELV or similar power supply compliant with  $U_m = 60$  V voltage.
- 17.5 The maximum prospective short circuit current at the connections to non-intrinsically safe circuits shall not exceed 50 A.
- 17.6 An external earth conductor is required between the external Grounding terminal of the enclosure and earth. This earth conductor must have a copper cross-sectional area  $\geq 4 \text{ mm}^2$ , be permanently installed and adequately mechanically protected.

**18 Essential health and safety requirements of Annex II (EHSRs):**

The relevant EHSRs that are not addressed by the standards listed in item 9 of this certificate have been identified and conformity of the product demonstrated in the reports listed in item 16.2.

**19 Remarks and additional information:**

The use of this certificate is subject to the regulations applicable to holders of CSA Group Netherlands B.V. certificates.

Compliance of the product with the applicable safety requirements of the relevant industrial standards has not been verified and is not covered by this certificate.



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19.1 Conditions of manufacture:

19.1.1 See Report R80266947A.



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## Certificate Annexe

### Document History

#### Issue – 0

##### Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
9384875	1 of 1	00	11 Dec 24	FL900 OVERALL DRAWING CERT
E397494	1 to 76	04	17 Jan 25	Technical Description, Project: FLOWSIC900
9386687	1 to 3	01	11 Dec 24	TYPE LABEL
E385851	1 of 1	0.5	11 Dec 24	BLOCK DIAGRAM FLOWSIC900
E405011	1 to 2	00	11 Dec 24	WIRING DIAGRAM FLOWSIC900
9386296	1 to 2	00	11 Dec 24	Control Drawing
E358929	1 to 8	00	21 Jan 25	FL900 EXCERPT OF OPERATING INSTRUCTION
9409815	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 1.5 MHz (Dimensional Drawing)
9411726	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 1.5 MHz (Cross section and scheme of the electrical connection)
9409799	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 3.5 MHz (Dimensional Drawing)
9411724	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 3.5 MHz (Cross section and scheme of the electrical connection)
E126957	1 of 1	00	11 Dec 24	SCH-ULTRASONIC TRANSDUCER CERT
E400885	1 to 3	00	11 Dec 24	BOM_US-Transducer
9396536	1 of 1	01	11 Dec 24	Battery Cover Electronics Carrier
9367784	1 of 1	01	16 Dec 24	M12 Plug System - Service Interface
9389513	1 of 1	00	11 Dec 24	M12 Plug System - Display Interface

#### Issue – 1

##### Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
9408212	1 of 1	00	30 Jun 25	FLOWSIC610 OVERALL DRAWING CERT
9406506	1 to 2	00	30 Jun 25	CONTROL DRAWING FLOWSIC610
E407917	1 to 73	02	30 Jun 25	Technical Description FLOWSIC610
9407511	1 to 4	00	30 Jun 25	TYPE LABEL MU Ex
E419247	1 of 1	--	30 Jun 25	PROBE HPF10MB100P14T3
E419206	1 of 1	--	30 Jun 25	PROBE H2-100 V1
E126957	1 of 1	00	30 Jun 25	SCH-ULTRASONIC TRANSDUCER CERT
E423273	2 of 2	00	30 Jun 25	Wiring Diagram Flowsic610
E420646	1 of 1	00	30 Jun 25	US-Transducer FLOWSIC610
E423179	1 to 9	01	30 Jun 25	Excerpt of Operating Instructions, Flowsic610

#### Issue – 2

##### Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
E397494	1 to 76	07	8 Dec 25	Technical Description, Project: FLOWSIC900
E407917	1 to 73	03	8 Dec 25	Technical Description FLOWSIC610
E423179	1 to 9	02	24 Nov 25	Excerpt of Operating Instructions, Flowsic610
E358929	1 to 8	02	24 Nov 25	FL900 EXCERPT OF OPERATING INSTRUCTION

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Documents Removed

Drawing	Sheets	Rev.	Date (Stamp)	Title
9409815	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 1.5 MHz (Dimensional Drawing)
9411726	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 1.5 MHz (Cross section and scheme of the electrical connection)
9409799	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 3.5 MHz (Dimensional Drawing)
9411724	1 of 1	00	11 Dec 24	Ultrasonic Transducer – 3.5 MHz (Cross section and scheme of the electrical connection)

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