



CNEX-GLOBAL

[1] EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 2014/34/EU**



[3] EU-Type Examination Certificate Number: **CNEX 25 ATEX 0033 X Issue 0**

[4] Equipment : **Ultrasonic Gas Flow Meter model Deltawave SUF Series**

[5] Manufacturer : **Systec Controls Devices (Tianjin) Co., Ltd**

[6] Address : **No.15, Jingli Road, Science and Technology Park, Economic and Technological
Development Zone, Beichen, District, Tianjin, China**

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

[8] CNEX-Global B.V., Notified Body number 2614, in accordance with Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **P24154A-CS**.

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

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

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to specific conditions for use specified in the schedule to this certificate.

[11] This EU – Type examination certificate relates only to the design of the specified equipment or protective system. Further requirements of the Directive apply to the manufacture 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 the following:

II 1G Ex ia IIC T4 Ga

Certification officer : Hou Yandong

Date of issue : 2026-01-19

Signature:

Certification Body: CNEX-Global B.V., Utrechtseweg 310-B42, 6812 AR Arnhem, The Netherlands

This certificate may only be reproduced in its entirety and without any change, including schedule

SCHEDULE

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[15] Description of equipment:

The Ultrasonic Gas Flow Meter model Deltawave SUF Series is a multi-channel ultrasonic measurement principle-based flow meter. This flow meter is constructed in type of explosion protection intrinsic safety "Ex i". The number of ultrasonic sound channels varies with the diameter. Specifically, DN25 is single-channel, DN32~DN50 is dual-channel, and DN80~DN300 is four-channel. The gas ultrasonic flow meter consists of a valve body and a control section.

The valve body comes in two types: cast and welded. DN25~DN80 diameters are cast from ZL101A-T6 aluminum alloy, while DN100~DN300 diameters are welded from carbon steel or stainless steel.

The control section includes a lower housing, analog board, battery pack, mainboard bracket, power board, mainboard, membrane keypad, SUF transparent window, SUF faceplate, SUF display cover, magnet, and nameplate. The lower housing is fixed to the valve body with four M6*16 hexagon socket head cap screws.

Nomenclature for model SUF 1 2 3 – 4 5 6 7 8 9 10 11 12:

Position	Meaning	Optional Code	Code Description
1	Series	11	Series 11
2	Converter	0	Standard Converter
3	Type	0	Pipeline Type
4	Explosion-proof Grade	N	Non - explosion - proof
		E	China Explosion-proof CNEX
		A	International Explosion - proof ATEX
5	Accuracy Class	1	Class 1 Accuracy
6	Protection Class	8	spare
		5	IP65
7	Nominal Pressure	1	1.6MPa
8	Power supply	T	3.6V Battery
		B	24VDC
		2	spare
		F	3.6V Battery + 24VDC
9	Caliber	025	DN25
		032	DN32
		040	DN40
		050	DN50
		080	DN80
		100	DN100
		150	DN150
		200	DN200
		250	DN250

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		300	DN300
10	Output Interface	F	Frequency Pulse (Maximum frequency of output pulse signal is 4kHz, External 2.7-28VDC driving voltage required)
		M	Metering Pulse (1 per 1Nm ³ , External 2.7-28VDC driving voltage required)
		R	RS-485 (MODBUS-RTU protocol, no external power supply required)
		A	4-20mA (external power supply required)
		C	Pulse + 4-20mA + RS-485
11	Additional	N	None
		T	Third-party Verification
12	Plant code	U00	Standard Product
		U11	New Product

Electrical Data:

Power supply : 24 VDC

Battery supply : 3.6 VDC

Intrinsic safety parameters:

Port Name	Ui (V)	Ii (mA)	Pi (mW)	Equivalent capacitance Ci (μ F)	Equivalent inductance Li (μ H)
External Power port (+24V, GND1)	28	93	651	0.04	negligible
4~20mA signal port (Io, GND1)	28	93	651	0.04	negligible
RS485 communication port (485A,485B)	6.6	65	110	4.6	533

Internal power supply:

Three lithium batteries model ER34615, 3.6V, made by Wuhan Sunmoon Battery Co. Ltd..
(connected in parallel)

Mounting Instructions:

See manufacturer's instructions.

Installation Instructions:

See manufacturer's instructions.

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Routine tests:

Detailed in the Test Report Cover document. (P24154A-CS).

[16] Descriptive Documents:

Detailed in the Test Report Cover document. (P24154A-CS).

[17] Specific Conditions for Use:

The ambient temperature range is limited to -25 °C...+60 °C.

When used in zone 0, measures should be taken to avoid ignition by impact or friction spark.

The installed battery pack is a type ER34615 3.6V Primary Lithium battery, made by Wuhan Sunmoon Battery Co. Ltd. When needed, the batteries may only be replaced by staff authorized by the manufacturer.

To avoid ignition hazards caused by electrostatic charges during normal use, maintenance, and cleaning, suitable precautions must be taken.

[18] Essential Health and Safety Requirements:

The Essential Health and Safety Requirements are covered by the standards listed at item [9].

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

Additional Information:

The enclosure of the Ultrasonic Gas Flow Meter model Deltawave SUF Series successfully passed the tests for the Ingress Protection Level IP65 to EN 60529.