



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx SIR 19.0046X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-01-24

Applicant: **Dandong Top Electronics Instrument (Group) Co., Ltd.**
No.10 Huanghai Street, Zhenxing District, Dandong City, Liaoning Province,
118000
China

Equipment: **Variable Area Flowmeter (Rotameter), Model MTF Series**

Optional accessory:

Type of Protection: **Flameproof and Intrinsic Safety**

Marking:

Ex db IIC T* Gb	Ta = -40°C to 60°C/70°C /80°C
Ex ia IIC T* Ga	Ta = -40°C to 70°C
Temperature code T* depends on the process temperature, refer to Specific Conditions of Use	

Approved for issue on behalf of the IECEx
Certification Body:

Neil Jones

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom





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Manufacturer: **Dandong Top Electronics Instrument (Group) Co., Ltd.**
No.10 Huanghai Street, Zhenxing District, Dandong City, Liaoning Province,
118000
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Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[GB/SIR/ExTR20.0006/00](#)

Quality Assessment Report:

[DE/TUR/QAR13.0005/02](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The MTF Series Variable Area Flowmeter comprises a flowmeter transmitter with Process medium pipeline and a 10mm thick glass window with cemented joints on transmitter. It is designed for two types of protection: Flameproof and Intrinsic safety. There are two independent flame proof chamber separated by a cemented construction and a cylindrical joints between transmitter body and terminal box, and the fastener is M6x16 stainless steel (304) with yield strength more than 205MPa. There is a cable entry with Spec. M20x1.5 in terminal box only. There are five printed circuit boards in the product: power terminal board, main board, measure module board, power module board and LCD board which are designed as intrinsic safe.

Refer to Annexe for additional information.

Conditons of Manufacture

The Manufacturer shall comply with the following:

1. In accordance with IEC 60079-11:2011 clause 10.3, each manufactured sample of the equipment shall be subjected to an electric strength test using a test voltage of 500 Vac applied between the input terminal and enclosure. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annexe.

Annex:

[IECEx SIR 19.0046X Annexe Issue 0.pdf](#)

Annexe to: IECEx SIR 19.0046X Issue 0
 Applicant: Dandong Top Electronics Instrument (Group) Co., Ltd
 Apparatus: Variable Area Flowmeter (Rotameter), Model MTF Series



EQUIPMENT (continued)

The entity parameter for the product is:

Input Parameter	
Terminals: +, -	
Ui	30Vdc
Ii	93mA
Pi	0.66W
Ci	0μF
Li	0μH

Breakdown of the model number MTF series Variable Area Flow Meter is as follows:

Model	Code	Contents	
MTF -	A	Local indicator and remote transducer (dual display) metal tube variable area flow meter	
	B	Remote transducer(digital display) metal tube variable area flow meter	
	C	Local indicator (pointer display) metal tube variable area flow meter	
		1	1.6MPa
		2	2.5Mpa, 2.0 Mpa (Class150)
		3	4.0MPa
		4	6.3Mpa, 5.0 Mpa (Class300)
		5	10.0Mpa, 11.0 Mpa (Class600)
	
		015	DN15
		020	DN20
		025	DN25
		040	DN40
		050	DN50
		080	DN80
		100	DN100
		H	Wetted material : 304
		R	Wetted material : 316L
		P	Wetted material : lining with PTFE
		Q	Other material:
	/		

Annexe to: IECEx SIR 19.0046X Issue 0
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		i		Intrinsically safe
		d		Flame-proof type
			D	Operation Temperature : 0°C < T ≤ 200°C
			G	Operation Temperature : -40°C ≤ T ≤ 0°C 200°C < T ≤ 300°C
			Z	Damping type
			W	No damping type
			S	Horizontal installation
			C	Vertical installation
MTF -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specific Conditions of Use

1. Install only as per installation control drawing MTF.ISCD.
2. Temperature code depends on process temperature as follows:

For Ex ia:

T-code	Ambient Temperature	Process Temperature
T4	-40 to 70°C	-40 to 125°C
T5	-40 to 70°C	-40 to 90°C

For Ex db:

T-code	Ambient Temperature	Process Temperature
T6	-40 to 60°C	-40 to 75°C
T5	-40 to 70°C	-40 to 90°C
T4	-40 to 80°C	-40 to 125°C
T3	-40 to 80°C	-40 to 185°C

3. The yield strength of special fasteners shall be more than 205MPa.
4. The enclosure is manufactured from ADC12 aluminium alloy. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.
5. The equipment has flameproof joints, which differ from those in IEC 60079-1, when maintaining the flameproof joints, manufacturer shall be contacted for guidance.