



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx CQM 19.0006X

Issue No: 0

Certificate history:

Issue No. 0 (2019-08-28)

Status: **Current**

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Date of Issue: **2019-08-28**

Applicant: **Shenyang VibroTech Instruments INC**

Room 206, No.7Xinlong Street, HunNan New District, Shenyang City, Postal  
code:110179

**China**

Equipment: **Vibration transmitter VT9285 series**

*Optional accessory:*

Type of Protection: **Ex "I"**

Marking:

Ex ia IIC T4 Ga IP66

Tamb:-55°C ~ +80°C

*Approved for issue on behalf of the IECEx  
Certification Body:*

Ji Xiaodong

*Position:*

General 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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**China Quality Mark Certification Group Co., Ltd.**  
No. 33 Zengguang Road, Haidian District,  
Beijing City, Postal code: 100048  
China





# IECEX Certificate of Conformity

Certificate No: IECEX CQM 19.0006X Issue No: 0  
Date of Issue: **2019-08-28** Page 2 of 3  
Manufacturer: **Shenyang VibroTech Instruments INC**  
Room 206, No.7Xinlong Street, HunNan New District, Shenyang City, Postal code:110179  
**China**

Additional Manufacturing location(s):  
**Shenyang VibroTech Instruments INC**  
Gate 17, No. 23-2, Yunfeng North Street, Tiexi District, Shenyang, Liaoning Province,  
Postal code: 110021  
China

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 apparatus 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 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0  
**IEC 60079-11 : 2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0  
**IEC 60079-26 : 2014-10** Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga  
Edition:3.0

*This Certificate **does not** indicate compliance with electrical 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:

[CN/CQM/ExTR19.0007/00](#)

#### Quality Assessment Report:

[CN/CQM/QAR19.0001/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

### General product information:

VT9285 series intrinsically safe Vibration Transmitters are designed to measure vibration parameters of revolving machines using digital circuit technology. The model definition is specified in attachment. The whole PCBA including vibration sensor, signal processing circuit is encapsulated. The output is a (4~20) mA analog signal proportional to the vibration parameter. Non-polarity protection circuit, TVS tube protection circuit and so on are used. Three series blocking diodes are used to protect against the internal capacitance effect caused by external connections. The intrinsically safe parameters are specified in attachment.

VT9285 series intrinsically safe Vibration Transmitters have 6 appearances specified in attachment, different from enclosure shapes or electrical connection types. Circuit designed and PCBA are same. If 1.5m M64816 Double Core Shielded Cable used, which is directly connected to PCB and is fixed by epoxy glue. The enclosures of the Vibration transmitters are made of stainless steel 316L or 304SS. Ingress protection of the enclosure is IP66.

VT9285 series intrinsically safe Vibration Transmitters can only be used with an Intrinsically Safe Barrier. The intrinsically safe electrical system should meet the requirements of IEC60079-25:2010 2.0<sup>th</sup> Edition.

### Rating:

Rated working voltage: (12-28)VDC; Current: (4~20)mA

### SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The ambient temperature is in the range of -55°C to +80°C.
2. The matching gland is metal material which contains less than 10%, by mass, in total of aluminium, magnesium, titanium, zirconium and less than 7.5% in total of magnesium, titanium and zirconium, the degree of protection (IP) reaches IP66, the thread meets 3/4 "NPT, 1 / 2" NPT, 1 "NPT or M20 x 1.5.

### Annex:

[Attachment to IECEX CQM 19.0006X issue 0.pdf](#)



# Attachment to Certificate

IECEX CQM 19.0006X issue No.:0



**Applicant: Shenyang VibroTech Instruments INC**

Room 206, No.7 Xinlong Street, HunNan New District, Shenyang, Liaoning  
Province, Postal Code:110179 China

**Electrical equipment:**

Vibration transmitter VT9285 series

**Description of equipment:**

1. Model definition

VT 9285 X AAA BCD EF GH

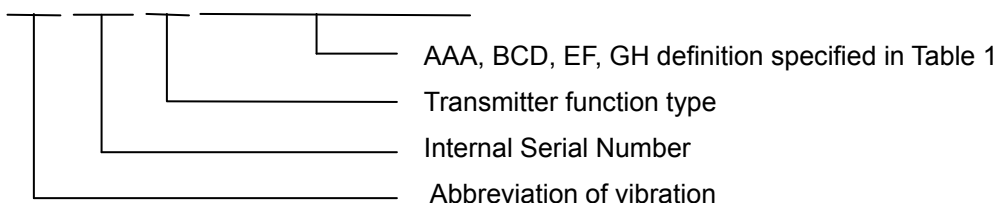


Table 1 Definition of X, AAA, BCD, EF, G

X		Transmitter function type
	B	2-wire
	H	2-wire with Hart enabled
For different functions, there are two software versions, VT9285B and VT9285H.		
AAA		Measuring range
vibration transmitter		
Peak value		
	121	25.4mm/s (1.0ips), pk
	122	12.7mm/s (0.5ips), pk
	123	50mm/s (2.0ips), pk
	124	125mm/s (5.0ips), pk
	125	10mm/s (0.4ips), pk
	126	20mm/s (0.8ips), pk
	127	16mm/s (0.65ips), pk
	128	75mm/s (3.0ips), pk
Root mean square value (RMS)		
	151	25.4mm/s (1.0ips), rms
	152	12.7mm/s (0.5ips), rms
	153	50mm/s (2.0ips), rms
	154	125mm/s (5.0ips), rms
	155	10mm/s (0.4ips), rms
	156	20mm/s (0.8ips), rms
	157	16mm/s (0.65ips), rms
	158	75mm/s (3.0ips), rms
Vibration acceleration transmitter		
Peak value		
	801	1g, pk



# Attachment to Certificate

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	802	2g, pk
	803	3g, pk
	804	5g, pk
Root mean square value (RMS)		
	831	1g, rms
	832	2g, rms
	833	3g, rms
	834	5g, rms
Vibration displacement transmitter		
	101	0-100um, pk-pk
	102	0-125um, pk-pk
	103	0-150um, pk-pk
	104	0-200um, pk-pk
	105	0-250um, pk-pk
	106	0-500um, pk-pk
	107	0-1000um, pk-pk
<b>B Mounting stud thread</b>		
	0	Integral 1/4"NPT
	1	Integral 1/2"NPT
	2	3/8"-24UNF×1/2"
	3	M8×1-12
	4	M10×1.25-12
	5	1/4"-20UNC
	6	1/4"-28UNF
	7	M8×1.25-12
	8	M10×1-12
	9	M10×1.5-12
	10	M12×1.75-12
	11	M20×1.5-12
	x	Custom, consult factory
<b>C Explosion-proof Grade</b>		
	2	IECEX, Ex ia IIC T4 Ga
<b>D Wiring</b>		
	0	4-20mA flying leads
	4	4-20mA MIL connector
	5	4-20mA shield cable,1.5m
	6	4-20mA armored shield cable,1.5m
	7	With 1/2NPT interface, shield cable,1.5m
	8	With 1/2NPT interface, armored shield cable,1.5m
<b>E High-pass filter</b>		
	0	default (2Hz) standard
	1	5Hz
	2	10Hz
	3	20H
	4	50Hz

	5	100Hz
	6	200Hz
<b>F</b>	<b>Low-pass filter</b>	
	0	default (1500Hz) standard
	1	500Hz
	2	1000Hz
	3	2000Hz
<b>G</b>	<b>Case material</b>	
	2	Integral 316L
	3	Integral 304SS
<b>H</b>	<b>Electrical interface</b>	
	0	No
	1	1/2"NPT
	2	3/4"NPT
	3	M20×1.5
	4	1"NPT

## 2. Apperances

There are six different appearances according to the value of "D" in model definition.



## 3. Intrinsically safe apparatus

Parameters	Ui(V)	Ii(A)	Pi(W)	Ci(nF)	Li(μH)
"D" in model definition					
0 or 4	28	0.1	0.7	0	0
5 or 6 or 7 or 8	28	0.1	0.7	0.2	1

Note: Parameters Ci:0.2nF and Li:1μH are required when 1.5m M64816 Double Core Shielded Cable used.