



# 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](http://www.iecex.com)

Certificate No.: **IECEx PTZ 18.0009X** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 2 [Issue 1 \(2021-05-06\)](#)  
[Issue 0 \(2019-01-30\)](#)  
Date of Issue: 2024-05-15  
Applicant: **Hauber Elektronik**  
Fabrikstraße 6  
72622 Nürtingen  
Germany  
Equipment: **Vibration control HE100.01, HE100.02, HE101.01, HE102.01 and HE103.01**  
Optional accessory:  
Type of Protection: **Equipment protection by flameproof enclosures "d", Equipment protection by intrinsic safety "i", Equipment dust ignition protection by enclosure "t"**  
Marking: **HE100.01**  
Ex db IIC T4 Gb  
Ex tb IIIC T120°C Db  
**HE100.02**  
Ex ib IIC T4 Gb  
Ex ib IIIC T125°C Db  
**HE101.01**  
Ex db IIC T4 Gb  
Ex tb IIIC T120°C Db  
**HE102.01**  
Ex db IIC T4 Gb  
Ex tb IIIC T120°C Db  
**HE103.01**  
Ex db IIC T4 Gb  
Ex tb IIIC T120°C Db  
Ta = -40°C to +60°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Dave Magee**

Position:

**Senior Director of Operations, Toronto**

Signature:  
(for printed version)

Date:  
(for printed version)

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](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**CSA Group**  
178 Rexdale Blvd.  
Toronto Ontario M9W 1R3  
Canada





# IECEX Certificate of Conformity

Certificate No.: **IECEX PTZ 18.0009X**

Page 2 of 4

Date of issue: 2024-05-15

Issue No: 2

Manufacturer: **Hauber Elektronik**  
Fabrikstraße 6  
72622 Nürtingen  
**Germany**

Manufacturing  
locations: **Hauber Elektronik**  
Fabrikstraße 6  
72622 Nürtingen  
**Germany**

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](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

[IEC 60079-11:2023](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

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 Reports:

[DE/PTZ/ExTR18.0010/00](#)

[DE/PTZ/ExTR18.0010/01](#)

[DE/PTZ/ExTR18.0010/02](#)

Quality Assessment Report:

[DK/ULD/QAR21.0004/02](#)



# IECEX Certificate of Conformity

Certificate No.: **IECEX PTZ 18.0009X**

Page 3 of 4

Date of issue: 2024-05-15

Issue No: 2

## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

### Serie HE100:

Vibration monitoring is used for measuring and monitoring of absolute bearing vibration of machines in accordance with the standard DIN ISO 10816.

The HE100.01 model has an integrated cable and is available as Ex d / Ex tb version. Model HE100.02 is the Ex ib version of the HE100 series and has an M12 plug connection. Only pin 1 and pin 3 of the plug connection are in use. The HE100.02 model is the Ex ib version of the HE100 series and has an M12 plug-in connection as standard and alternatively an integrated cable similar to the model HE100.01.

### Serie HE101.01:

Vibration monitoring is used for measuring and monitoring of absolute bearing vibration of machines in accordance with the standard DIN ISO 10816. Furthermore, this vibration monitoring has a temperature sensor for measuring the surface temperature of the machine. The HE101.01 model is Ex db / Ex tb.

### Serie HE102.01:

The vibration monitoring type HE102.01 is used for measuring and monitoring of Vibrations used on machines.

It has the following features:

- Operating principle: the two-wire system.
- Measured variable: The effective value (rms) of the vibration acceleration in g.
- Analog current output: Interference-proof direct current signal of 4 ... 20 mA, proportional to the measuring range of the monitoring.
- Cable break on the monitoring cable can be detected by a following signal conditioning instrument:  
Value of the DC signal <3.5 mA.

### Serie HE103.01:

The vibration monitoring type HE103.01 is used to measure and monitor the absolute Bearing vibration on machines used in accordance with the standard DIN ISO 10816.

It has the following features:

- Operating principle: the two-wire system.
- Measured variable: The effective value (rms) of the vibration velocity in mm / s.
- The RMS averaging time is 60 s.
- Analog current output: Interference-proof direct current signal of 4 ... 20 mA, proportional to the measuring range of the monitoring.
- Cable break on the monitoring cable can be detected by a following signal conditioning instrument:  
Value of the DC signal <3.5 mA.

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

1. The ambient temperature range is between -40°C and +60°C.
2. The vibration monitoring HE100.02 may only be operated in a certified intrinsically safe circuit according to Ex ib IIC / Ex ib IIIC.
3. Integration into the potential equalization is carried out via the installation.
4. The operating instructions must be observed.



# IECEX Certificate of Conformity

Certificate No.: **IECEX PTZ 18.0009X**

Page 4 of 4

Date of issue: 2024-05-15

Issue No: 2

## **DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

**This issue, Issue 2, recognises the following changes; refer to the certificate annex to view a comprehensive history:**

1. Update of entity parameters (Pi) parameters for the intrinsically safe variant (02)
2. Update of instruction manuals.
3. Following appropriate assessment to demonstrate compliance with the latest technical knowledge IEC 60079-11 Ed.6 (2011) was replaced by IEC 60079-11 Ed.7 (2023).

## **Annex:**

[IECEX PTZ 18.0009X Issue 2 Annexe.pdf](#)

Annexe to: IECEx PTZ 18.0009X Issue 2

Applicant: HAUBER-Elektronik GmbH

Apparatus: HE100.01, HE100.02, HE101.01, HE102.01 and HE103.01



Vibration control equipment models HE100.01, HE100.02, HE101.01, HE102.01 and HE103.01

**HE100.01** rated values

Max. input voltage of vibration monitoring:  $U_n$  10 V to 30 V

Max. input current of vibration monitoring:  $I_n$  4 mA to 25 mA

**HE100.02**

Supply and signal circuit in type of protection Intrinsic Safety Ex ib IIC or IIIC:

Only for the connection to a certified intrinsically safe circuit.

Max. input voltage of vibration monitoring:  $U_i$  30 V DC

Max. input current of vibration monitoring:  $I_i$  100 mA DC

Max. input power of vibration monitoring:  $P_i$  600 mW

Max. input capacity of vibration monitoring:  $C_i$  44 nF

Max. input inductance of vibration monitoring:  $L_i$  0  $\mu$ H

**HE101.01** rated values

Max. input voltage of vibration monitoring:  $U_n$  10 V to 30 V

Max. input current of vibration monitoring:  $I_n$  8 mA to 50 mA

**HE102.01** rated values

Max. input voltage of vibration monitoring:  $U_n$  10 V to 30V

Max. input current of vibration monitoring:  $I_n$  4mA to 25mA

**HE103.01** rated values

Max. input voltage of vibration monitoring:  $U_n$  10 V to 30V

Max. input current of vibration monitoring:  $I_n$  4mA to 25mA

Electrical Data:

HE100.01		
Max. input voltage vibration control:	$U_n$	10 V to 30 V
Max. input current vibration control:	$I_n$	4 mA to 25 mA
HE100.02		
Power supply and signal circuit		
At the ignition protection level intrinsic safety Ex ib IIC or IIIC only for connection with a certified intrinsic safe circuit.		
Maximum values:		
Max. input voltage vibration control:	$U_i$	30 V DC
Max. input current vibration control:	$I_i$	100 mA DC
Max. input power vibration control:	$P_i$	800 mW
Input capacitance vibration control:	$C_i$	44 nF
Input inductance vibration control:	$L_i$	0 $\mu$ H
HE101.01		
Max. input voltage vibration control:	$U_n$	10 V to 30 V
Max. input current vibration control:	$I_n$	8 mA to 50 mA
HE102.01		
Max. input voltage vibration control:	$U_n$	10 V to 30 V
Max. input current vibration control:	$I_n$	4 mA to 25 mA

Date: 15 May 2024

Page 1 of 2

CSA Group Testing & Certification Inc.  
178 Rexdale Boulevard,  
Toronto, Ontario M9W 1R3

Annexe to: IECEx PTZ 18.0009X Issue 2

Applicant: HAUBER-Elektronik GmbH

Apparatus: HE100.01, HE100.02, HE101.01, HE102.01 and HE103.01



HE103.01		
Max. input voltage vibration control:	Un	10 V to 30 V
Max. input current vibration control:	In	4 mA to 25 mA

## Full certificate change history

Issue 1 – this Issue introduced the following changes:

- i. Introduction of a bigger distance ring between bottom and top enclosure, which will be enlarged to cover this ring, without an influence on the type of protection and minor drawing updates.
- ii. Administrative changes to the product naming convention. Models HE102 and HE103 are updated to HE102.01 and HE103.01 respectively.
- iii. Addition of similar enclosure with new branding.

Issue 2 – this Issue introduced the following changes:

- i. Update of entity parameters (Pi) parameters for the intrinsically safe variant (HE100.02)
- ii. Update of instruction manuals.
- iii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge IEC 60079-11 Ed.6 (2011) was replaced by IEC 60079-11 Ed.7 (2023).